A PROFILE OF FEDERAL-GRANT ADMINISTRATIVE BURDEN AMONG FEDERAL DEMONSTRATION PARTNERSHIP FACULTY

A Report of the Faculty Standing Committee of the Federal Demonstration Partnership

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FOREWORD

This report is based on a survey undertaken by the Faculty Standing Committee of the Federal Demonstration Partnership (FDP). The study was coordinated by Robert S. Decker, Ph.D., Principal Investigator, Northwestern University; Jerry Stuck, Ph.D., Past Executive Director of the FDP; and David Wright, the present FDP Executive Director.

The FDP first surveyed faculty about 15 years ago in order to assess the effectiveness of the newly implemented "expanded authorities" that had been negotiated between FDP member institutions, federal granting agencies, and the Office of Management and Budget. In particular, that survey aimed to determine whether changes in the regulations affecting prior approvals, pre-award costs, no-cost extensions, and the carryover of unexpended funds had saved faculty time, and whether such saved time had been reinvested in research activities.

The current study originated with Marv Paule, whose work as chair of the FDP Faculty Standing Committee led to the development of the FDP-funded 2005 Faculty Workload Survey – designed to assess the extent to which faculty conducting federal grant research over the past 15 years have experienced undue administrative burden as a result of new federal regulations and changes in cost-accounting standards.

This report is designed to give readers a complete and accurate synopsis of the 2005 Faculty Workload Study and its findings, which will be used to help reduce administrative burden among faculty. The goal is to develop new strategies for making federally funded research more efficient and productive without sacrificing accountability and compliance with federal regulations.

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The input of many individuals ensured the richness and relevance of this study, and we would like to express our appreciation to the many people who made valuable contributions.

In particular, we acknowledge the guidance provided by Jerry Stuck and David Wright, the past and present executive directors of the FDP during the study period. In addition, we thank Merrilea Mayo of the Government-University-Industry Research Roundtable at the National Academy of Sciences, Geoffrey Grant at the National Science Foundation, and Peter Dunn of Purdue University for their steadfast support of the process and their participation in the report's review. FDP Chair Nancy Wray, of Dartmouth College, was unflagging in her support of this survey; Scott Crawford and his colleagues at the Survey Sciences Group LLS (in Ann Arbor, Michigan) administered the survey and provided technical notes for the report; and many others contributed valuable ideas, critiques, and general encouragement.

Finally, we extend our gratitude to the thousands of faculty who participated in the study, and we thank those institutional officials, research administrators, and faculty members without whose cooperation the study could not have been completed.

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EXECUTIVE SUMMARY

Faculty members at U.S. universities and research institutions perform research upon which the nation's technological and economic health depends. A good many of these researchers are supported by federal funding, a source of considerable magnitude that produces numerous benefits. But these benefits could be expanded yet further. In particular, by learning how much the administrative tasks linked to federal-grant management are limiting researchers' available time to conduct the very research being funded, we may identify ways to restore some of that time and thereby increase the research performed by federally-funded faculty.

During the fall of 2005, the Faculty Standing Committee of the Federal Demonstration Partnership (FDP) teamed with FDP member institutions to administer the Faculty Workload Survey, an online questionnaire to collect evidence from faculty regarding the source and extent of administrative burden associated with the management of federal research grants. This study, one of the first of its kind, was directed to faculty employed at the nation's top research institutions, where the lion's share of federal research has traditionally taken place. The FDP provided funding to collect this baseline data, the results of which will be used to inform its recommendations for maximizing the time spent by faculty on active research[1] without having to compromise research accountability and compliance with federal regulations. This report outlines the findings from the survey, discusses the potential implications, and enumerates some steps that might be taken by research institutions and federal agencies.

The Nature of Faculty Research

Faculty-led and –conducted research comprises a variety of related activities, including planning and performing studies and experiments, analyzing data, developing new models and theories, advising and supervising students at all academic levels as they conduct research, collaborating with research colleagues, and disseminating research results to the public by writing journal articles and conference papers, by presenting research at conferences and technical meetings, and by giving seminars and talks at diverse venues. In addition to these "direct" research activities, faculty researchers also undertake activities that enable and support their research projects, including managing personnel, purchasing equipment and laboratory supplies, and complying with institutional rules and State and Federal laws that govern research (e.g., rules governing research on human subjects, research using and care of animal subjects, restricted access of foreign nationals to certain technologies, and safe handling of hazardous materials). Furthermore, faculty collectively commit substantial effort to research-related service activities such as organizing professional meetings, peer-review of research articles and grant proposals, and service on compliance committees and panels.

When research is supported by Federal funds, faculty researchers commit to additional tasks intended to guarantee effective use and stewardship of those funds, such as writing periodic scientific progress reports, providing financial reports, and certifying the effort of research participants.

[1] In this study, "active research" includes pursuits such as reviewing literature, designing studies, running experiments, collecting/analyzing data, writing up findings, and publishing or presenting research.

The "indirect" research activities – those that support and enable research and those that ensure compliance with applicable rules, regulations, and policies – are essential for the safety and welfare of research participants, sponsors, and the public. However, they constitute a set of burdens on researchers that, if not handled efficiently, can diminish the time available for the research itself. This report seeks to estimate the time spent by faculty researchers on a subset of these burdens – the burdens associated with carrying out federally-funded research projects – and to estimate the amount of additional time that would be spent by faculty on research if these burdens could be reduced. The data presented here is intended to help identify best practices and to suggest alternative work processes that can maintain adherence to rules, regulations, policies, and laws while maximizing the faculty time available for research and thereby maximizing the nation's return on its research investment.

Response Patterns

Responses from 6,081 faculty researchers working at FDP member research institutions are included in this report. Senior faculty with backgrounds in the hard sciences (e.g., biological/life sciences, health sciences, physical sciences, and engineering), employed at institutions with more than $200 million in federal-grant funding, made up the majority of this respondent group. Most were male faculty[2] working at institutions affiliated with medical schools. The race/ethnicity of over three-quarters of the respondents was White, Non-Hispanic. Almost half of those surveyed received research grants from the National Institutes of Health, and approximately one-third from the National Science Foundation. Ninety percent of the respondents served as principal investigators (PIs) on federal research grants during the 2004-2005 academic year. Many respondents (44 percent) reported multiple roles, functioning both as PIs and co-PIs. Some 10 percent served exclusively as co-PIs during this time period. (See full report, pages 3-4.)

Key Findings

The survey's results suggested that multiple discrete activities linked to federal research-grant management create a cumulative burden that reduces the amount of time available for faculty to engage in active research. And the most striking aspect of the results was the general uniformity of responses about such administrative burden and the need for research-project assistance that could provide some relief.

- Of the time that faculty committed to federal research, 42 percent was devoted to pre- and post-award administrative activities – not to active research.
- The overall top burdens reported by faculty included grant progress-report submissions, personnel hiring, project-revenue management, equipment and supply purchases, IRB protocols and training, training personnel and students, and personnel evaluations.[3]

[2] Sixty-eight percent of the faculty respondents indicated that they were male, 25 percent female, and 7 percent did not indicate their gender.

[3] The list of burdens in the Faculty Workload Survey featured tasks that must typically be carried out as part of federally funded grant research time. The survey gathered a limited amount of information about pre-award tasks.

- A second set of burdens experienced only by a subset of faculty, but rated as particularly burdensome, included IRB compliance issues, HIPAA compliance issues, and IACUC protocols, training and compliance issues.

- Ninety-five percent of respondents believed that they could devote additional time to active research if they had more assistance with research-related administrative tasks.

- Seventy-six percent of respondents were willing to reallocate direct costs to provide for research-required administrative support.

- Survey respondents suggested in their written comments (see full report, pages 25-26, and Appendix B) that:
    - The time required to complete administrative tasks is a result of both federal agency and local institutional policies, procedures, and systems.
    - The management of some administrative duties would require the help of highly knowledgeable assistants.
    - Many tasks should be streamlined or made uniform across institutions and federal funding agencies in order to lower the time required for completion.

Most of the remainder of this Executive Summary highlights key findings from each section of the report.

Grants Awarded/Grant Funding

Faculty reported the number of current grants on which they worked as a PI or co-PI, as well as the total direct-cost funding received as PIs during the 2004-05 academic year. Several findings are highlighted below (see full report, page 5).

- FDP respondents, on average, received funding as the PI on 1.7 federal research grants and as the co-PI on 1.0 federal research grants.

- Full professors were awarded significantly more federal research grants as the PI than were associate and assistant professors.

- Underrepresented minorities in the respondent group were awarded significantly more federal research grants as co-PIs than were the Asian faculty and the White, Non-Hispanic faculty; there was no significant difference between these groups on grants awarded as PI.

- Respondents' average total direct-cost funding was $434,753. The median was $213,000.

- Full professors reported more than twice as much total direct-cost funding as assistant professors did.

Time and Effort Expended on Research and Research Administration

While faculty respondents reported spending 58 percent of their average work week conducting research, 65 percent of that time (i.e., 38 percent of the average work week) was specifically dedicated to federal research grant projects (see full report, page 7).

- FDP researchers spent an average of 42 percent of their time for federal research projects (i.e., 16 percent of their average workweek) on research-related administrative tasks, about equally divided between pre- and post-award activities.[4]
- Collectively, survey respondents spent a substantial amount of time on administrative tasks directly linked to their federal research projects. Based on a conservative estimate of the average salaries/benefits of the 6,081 faculty survey respondents, this represents an investment of over $85 million in administrative task management.[5]

Administrative Burden

While no single burden stands out as the greatest problem (or suggests a single potential solution), the findings indicate there are many burdens that affect large numbers of faculty and others that affect smaller numbers, but often affect them deeply (see Figure 1). Despite differences both in institutional and individual work environments, FDP faculty respondents reported a similar set of top administrative burdens[6] associated with the management of their federal research grants.

Listed below in descending order are the top research-related burdens as reported by the majority of faculty surveyed:

1. Grant progress-report submissions
2. Personnel hiring
3. Project-revenue management
4. Equipment and supply purchases
5. IRB protocols and training
6. Training personnel and students
7. Personnel evaluations

[4] Pre-award activities primarily included writing/submitting proposals and budgets, applying for approvals, developing protocols, and drafting safety/security plans. Post-award activities included purchasing supplies/equipment, supervising budgets, managing personnel, complying with regulations, monitoring safety/security plans, and writing reports.

[5] This estimate is based on respondents' average salary rates by academic rank x 1.25 (benefits) x 16 percent (percent of average work week spent on administrative research tasks). The estimate represents the joint costs to federal agencies funding research projects (for time chargeable to grants) and to institutions (for time not chargeable to grants).

[6] Top burdens represent administrative tasks assigned the highest mean ratings (i.e., 2.5 and above) by faculty based on a 5-point scale ranging from 1=None to 5=A great deal of burden.

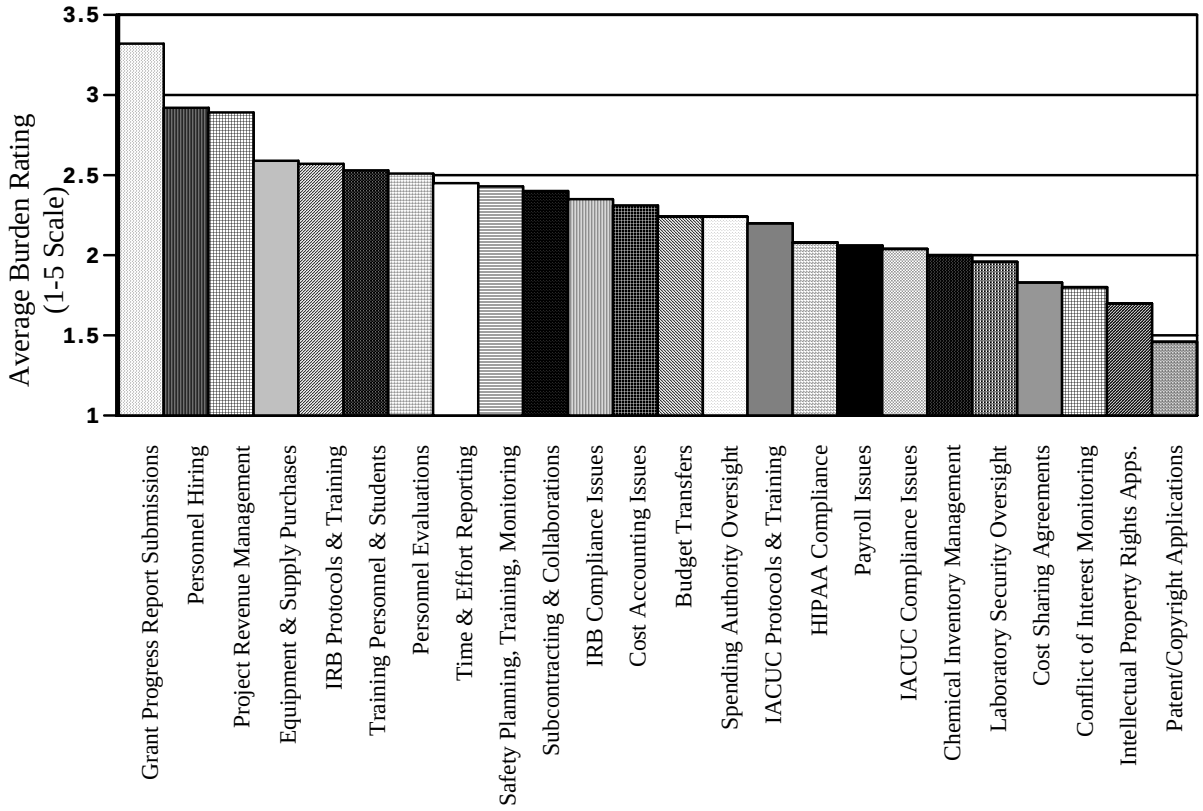


Figure 1. Average Burden Level (1=no burden; 3=some; 5=a great deal of burden)

Some variation did exist in the types of tasks rated as most burdensome across funding agencies (i.e., USDA, DOC, DOD, DOE, DOI, ED, HHS, EPA, NASA, NIH, NSF),[7] although part of this variation no doubt related to differences across research disciplines (see full report, pages 11-12). Considering differences across funding agencies:

- With minor exceptions, faculty respondents rated grant progress-report submissions, personnel hiring, and project-revenue management as the three most burdensome tasks across funding agencies.[8] Other than the top burden (grant progress reports), the order of the remaining two burdens varied by funding agency.

[7] Departments of Agriculture (USDA), Commerce (DOC), Defense (DOD), Energy (DOE), Interior (DOI), Education (ED), and Health and Human Services (HHS), as well as the Environmental Protection Agency (EPA), National Aeronautical Space Administration (NASA), National Institutes of Health (NIH), and National Science Foundation (NSF).

[8] Exceptions were HHS-funded faculty, who listed their top three burdens as grant reports, IRB protocols/training, and equipment/supply purchases; and DOC-funded faculty, who reported grant reports, equipment/supply purchases, and IACUC protocols/training as most burdensome.

- Respondents funded by six federal agencies (DOD, DOE, DOI, EPA, NASA, USDA) associated some of their highest levels of burden with equipment and supply purchases.

- Those funded by four of the agencies (DOC, DOI, ED, EPA) reported that subcontracting and collaborations created some of their highest levels of burden.

Variation by Subgroup

The survey's responses were generally uniform across faculty subgroup populations. Slight variations did exist, however (see report, pages 13-14).[9]

- Public versus private institutions: Faculty at public institutions reported significantly greater burden related to financial responsibilities than did faculty at private institutions. The latter group reported greater burden linked to conflict of interest, laboratory safety and inventory, and use of animal and human subjects (IACUC, IRB, HIPAA).

- Carnegie classification: Faculty at medical schools generally reported higher levels of burden and a broader cross-section of burdens than did faculty employed by other types of institutions.

- Federal-funding level: In most cases, level of burden did not significantly differ by funding level. However, faculty working at institutions with less than $10M in annual federal funding reported significantly more burden related to payroll issues and HIPAA regulations, and faculty at institutions with $150M to $200M in federal funding reported significantly more burden related to cost-sharing agreements.

- Administrative duties: Faculty with administrative duties[10] reported greater burden across the majority of tasks than did faculty without such responsibilities.

- Academic rank: Level of burden varied by academic rank, with assistant and associate professors rating five tasks – safety planning, training, and monitoring; equipment/supply purchases; training personnel/students; IRB protocols and training; and IRB compliance issues – more burdensome than did full professors. Of these tasks, the IRB and HIPAA activities took the greatest amount of research time away from associate professors. Both full and associate professors rated personnel evaluations, budget transfers, cost-sharing agreements, spending-authority oversight, and subcontracting and collaborations as particularly burdensome; full professors reported spending more time on conflict-of-interest monitoring.

- Race/ethnicity: Burden among underrepresented minority and Asian/Pacific Islander faculty exceeded burden experienced by White, Non-Hispanic faculty across more than two-thirds of the measures.

[9] All comparisons reported have a difference that is statistically significant ($p<0.001$). Statistically significant yet less substantial subgroup differences ($p-<0.01$, $p<0.05$) are not included in this report.

[10] Of this group, one-third served as center directors, 15 percent as department chairs, and 47 percent as administrators with a wide range of other responsibilities (see footnote in Appendix A, Table 1).

- Gender: Women reported significantly higher levels of burden than did men on more than half of the administrative tasks.

Assistance with Administrative Tasks

Faculty reported very low levels of institutional support across most administrative tasks, with only financial tasks receiving average scores of "some assistance" or above (see full report, pages 17-18). In addition to significant variation by disciplinary context, differences were reported within the following faculty subgroups:

- Respondents at institutions without a medical school received less assistance than did faculty at institutions with a medical-school affiliation (14 out of 24 tasks)
- Instructional faculty received less assistance than did clinical or research faculty (13 out of 24 tasks)

Reallocating Time and Grant Money for Research Assistance[11]

- Ninety-eight percent of respondents reported that at least some of the time they spent managing federal grants could be conducted by administrative personnel.

- On average, faculty anticipated that having research-project assistance would save 28 percent of the time they typically invested in grant management.

- Sixty-five percent of the respondents believed that they could devote at least two additional hours each week to active research if they had more assistance with administrative tasks.

- Seventy-six percent of respondents would choose to reallocate some direct costs for research administrative support.

Perceptions of the Climate for Research

A four-point scale ranging from “agree strongly” to “disagree strongly” was used to determine the degree of faculty concurrence with several statements regarding their perceptions of the climate for academic research. Highlights of the findings are shown in Figure 2. (For complete results, see pages 22-23 of the full report.)

[11] For additional results, see pages 19-20 of the full report.

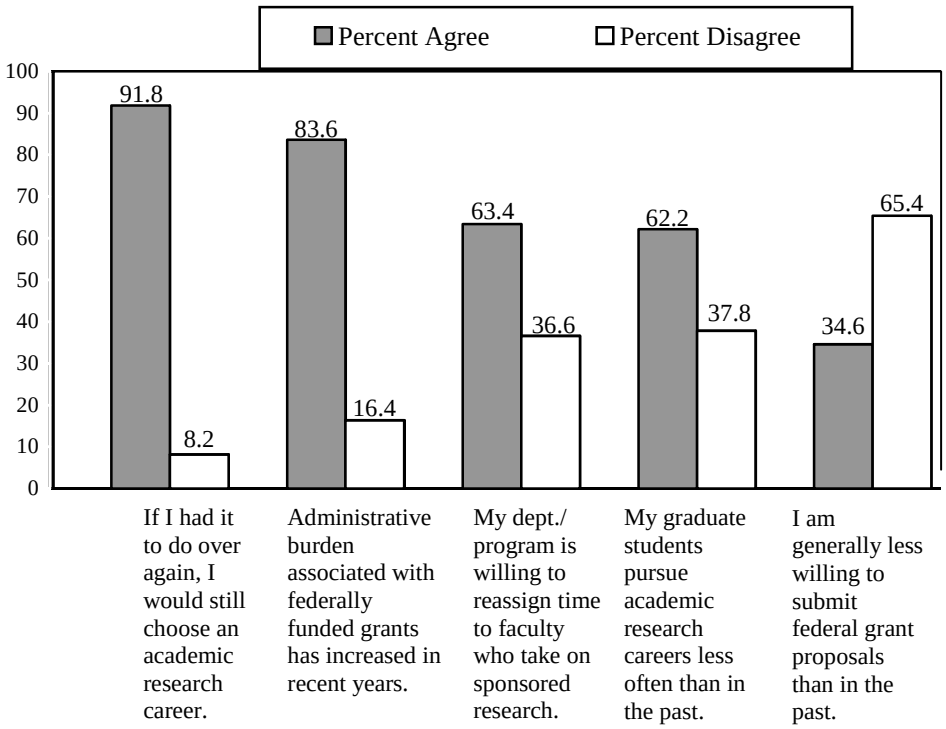


Figure 2. Faculty Perceptions of the Climate for Academic Research

Conclusions

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 for actively engaging in research. While no single burden stands out as the greatest problem (or suggests a single potential solution), the findings indicate that there are many burdens that affect large numbers of faculty and others that affect smaller numbers, but affect them deeply. For example, 6 of the 24 administrative tasks related to federal-grant management took away "a moderate amount" or "a great deal" of research time, according to many FDP faculty respondents. Most faculty surveyed said they received minimal assistance with all 24 tasks.

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. And the problem may be even more severe. FDP faculty members report that the burden has increased in recent years, given new regulations related to homeland security and new mechanisms for financial accountability. In addition, a commonly expressed concern is that American graduate students in many disciplines are choosing to avoid the academic career path, once they gain their degrees, because they perceive that the quality of academic work life and the opportunity to make a scientific difference have decayed relative to industrial research opportunities.

There is hope, however. The FDP has demonstrated administrative simplification in the past that met the interests both of federal agencies and research institutions, and our current study suggests similar potential, particularly for the identification of best practices that can be adopted more broadly. For example, we found moderate variation in the level of burden related to IRB and HIPAA protocols across several institutions with medical schools. This shows that some institutions have been more successful than others in meeting federal-agency requirements while reducing the time that faculty must take from active research in order to address administrative tasks.

Potential Solutions

We suggest three main sets of actions to help moderate the cumulatively high level of faculty administrative burden in conducting federally funded research.

1. Demonstrations that can be conducted by the FDP.
    - Demonstrate the general effects of allowing faculty to extend use of direct costs to pay for research project management assistance.[12]
    - Demonstrate the effects of specific solutions (e.g., research project management support staff specifically for IACUC protocols or standardizing IRB applications) that address targeted high-burden cases.
    - Demonstrate streamlined and standardized project-reporting for deliverables such as agency progress reports and IRB/IACUC reports.
    - Demonstrate the effects of greater use of just-in-time components for grant proposals.

2. Solutions requiring federal action outside of the FDP.
    - Re-evaluation of the cap on indirect-cost recovery in order to allow greater university support for research project management costs. This could involve a simple cap change or a change in the formula so that the "A" part of the F&A expenses would be subdivided into separate categories with separate caps.
    - Modify A-21 language to explicitly allow direct-cost allocation for research project management assistance.
    - Create a new classification of "allowable" assistance within the A-21 guidelines (e.g., develop a "compliance coordinator" function).

3. Other activities that can be pursued by the FDP.
    - Develop a clearinghouse of best practices for reducing administrative burden among research institutions, as well as among agencies. The data collected in this report's survey can be a start toward identifying such best practices.
    - Repeat this faculty administrative-burden survey periodically (say, every 5-8 years) to measure trends, assess improvements, and identify new challenges.

[12] We note that direct charging of project coordinators and other research project management personnel "may already be appropriate where the nature of the work performed under a particular project requires an extensive amount of administrative or clerical support which is significantly greater than the routine level of such services provided by academic departments" [February 1994 Talesnik interpretation from OMB Office of Grants Management]. Nonetheless, many institutions have expressed concern about whether auditors will allow such expenses for smaller projects even if they have significant project management requirements.

I. INTRODUCTION

In 1988, a number of research universities and federal funding agencies established a partnership – now known as the Federal Demonstration Partnership (FDP) – to monitor research administration requirements and tools in an effort to boost faculty research productivity and research institution productivity more generally. The FDP has since evolved into a consortium of some 99 research universities and institutions and 13 federal agencies that fund research. In 1991, the FDP implemented a series of fundamental changes in the administration of federally funded research grants to universities. These changes included prior spending authority, pre-award costs/transition funding, no-cost extensions, and the carry-over of unexpended funds. The implementation of these administrative changes not only gave universities and their faculty considerable flexibility in managing federal grant dollars but also enhanced research efficiency. Nevertheless, over the ensuing decade, new administrative responsibilities for faculty and research administrators have been promulgated that, at least anecdotally, appear to have eroded research productivity. The actual effects of these new administrative tasks are only now being systematically measured.

During the fall of 2005, the FDP Faculty Standing Committee teamed with member institutions to administer the Faculty Workload Survey, an online questionnaire aimed at quantifying the time spent by faculty in the management and execution of their federal research grants. This report outlines the survey's findings, discusses their potential implications, and explores alternatives aimed at freeing up faculty research time without reducing research accountability and compliance or increasing the overall cost of the research enterprise.

The FDP was especially interested in considering how federal requirements (e.g., granting-agency rules and OMB regulations) and institutional responses to these requirements influenced the time faculty members spent on active research, as opposed to research administration, on projects funded by federal agencies.[13] Survey recipients – faculty working in 69 FDP member institutions – were therefore asked to report on their research activity and on the impact of various federally required administrative tasks on that activity.

The report begins with a profile of the survey's respondents, followed by descriptive analyses of its results. Faculty research burden and productivity are examined in aggregate and also in relation to traditional measures such as academic rank, disciplinary affiliation, tenure status, administrative duty, funding agency, Carnegie classification, and level of institutional funding for federal research grants.

[13] In this study, "active research" includes pursuits such as reviewing literature, designing studies, running experiments, collecting/analyzing data, writing up findings, and publishing or presenting research.

II. CHARACTERISTICS OF FDP FACULTY RESPONDENTS

Ninety percent of respondents to the 2005 Faculty Workload Survey served as principal investigator (PI) on at least one federal research grant during the 2004-2005 academic year, and 10 percent served only as co-principal investigator (co-PI). Many respondents (44 percent) reported having multiple roles, functioning both as PIs and co-PIs during this time period.

A large majority of survey respondents (71 percent) worked at institutions that offer a comprehensive array of doctoral programs and that also support a medical school (Appendix A, Table 1). Correspondingly, most of the respondents (67 percent) worked at institutions receiving over $200 million in federal grant funding each year. Seventy-one percent of the respondents were employed at public institutions and 28 percent at private institutions.

Faculty members in the hard sciences constituted a majority of the respondents. Almost half of the entire group indicated their principal field of research as the Biological or Life Sciences (33 percent) or Health Sciences (15 percent). Physical Sciences and Engineering faculty members represented 12 percent and 10 percent of the respondents, respectively. Approximately one-quarter of the respondents came from the fields of Agriculture, Computer Sciences, Education, Mathematics, Psychology, and Social Sciences.

Over a third of the respondents (36 percent) served in administrative roles during the 2004-05 academic year. Of this group, one-third served as center directors, 15 percent as department chairs, and 47 percent as administrators with a wide range of other responsibilities (see footnote, Appendix A, Table 1). The survey also asked faculty to describe their principal activity; they answered research (71 percent), instruction (18 percent), patient care (3 percent) and “other” (8 percent).

With regard to rank and tenure status, 54 percent of the respondents were professors, 24 percent were associate professors, and 22 percent were assistant professors (see Appendix A, Table 2). Sixty-seven percent of the respondents were tenured, 22 percent were on a tenure track but not tenured, 10 percent were not on a tenure track, and 1 percent said there was no tenure system at their institution.

Sixty-eight percent of the survey respondents indicated that they were male, 25 percent indicated female, and 7 percent did not indicate their gender. Individuals who identified as White, Non-Hispanic represented 77 percent of the respondents; Asian/Pacific Islanders were 9 percent; Hispanics 2 percent; Black, Non-Hispanics 1 percent, and American Indian/Alaskan Natives 1 percent. Four percent indicated “Other” for race/ethnicity and 6 percent did not respond to this survey item. Given the small number of respondents in several categories, American Indian/Alaskan Native; Black, Non-Hispanic; and Hispanic respondents are combined into one subgroup labeled “underrepresented minorities” for several of the analyses included in this report. (See Appendix A, Tables 1 and 2, for further details).

The agencies that funded the highest percentage of respondents (counting individuals, not grants or dollars) were the National Institutes of Health (49 percent) and the National Science Foundation (32 percent). In addition, a substantial number of faculty members were funded by

the Departments of Agriculture (USDA), Commerce (DOC), Defense (DOD), Energy (DOE), Interior (DOI), Education (ED), Health and Human Services (HHS), as well as the Environmental Protection Agency (EPA) and National Aeronautical and Space Administration (NASA). Fewer than 2 percent of the respondents received funding from other federal departments and agencies.[14] See Appendix A (Table 3) for additional information regarding the characteristics of faculty respondents by federal funding agency.

[14] Departments of Homeland Security, Housing and Urban Development, Justice, State, Transportation, and Veterans' Affairs as well as the Institute of Museum and Library Services, National Endowment for the Arts, and National Endowment for the Humanities.

III. WORK ACTIVITIES OF FDP FACULTY RESPONDENTS

Federal Research Grants Awarded

On average, FDP respondents received funding as PIs on 1.7 federal research grants and as co-PIs on 1.0 federal research grants during the 2004-05 academic year. In addition, faculty members employed at institutions receiving between $150 and $200 million in grants each year served as PIs on significantly more federal research grants (an average of 2.0 per year) than did faculty working at institutions receiving either more than $200 million or less than $150 million in annual grant funding. Not surprisingly, research faculty received more federal grants as PIs (1.8) than did instructional faculty (1.5) or clinical faculty (1.0). (See Appendix A, Tables 4-5, for further detail.)

Variation by disciplinary affiliation was evident as well. Engineering and physical sciences faculty served as PIs on the greatest number of research grants (2.1 and 2.0, respectively).

The survey results also indicated that:

- Full professors were awarded significantly more federal research grants as PIs than were associate and assistant professors.
- Full and associate professors were awarded significantly more federal research grants as co-PIs than were assistant professors.
- Underrepresented minorities were awarded significantly more federal research grants as co-PIs than Asian faculty and White, Non-Hispanic faculty (there was not a statistically significant difference in the number of grants as PI).

Respondents' average total direct-cost funding was just under $435,000. The median funding level was $213,000 (Appendix A, Tables 6-7). Average grant funding did not significantly differ when examined by most measures of institutional and individual work context (i.e., public versus private, Carnegie classification, federal-grant funding level, race/ethnicity, gender). However, faculty with administrative roles and full professors reported approximately twice as much average total direct-cost funding compared to other faculty in the study.

Allocation of Time

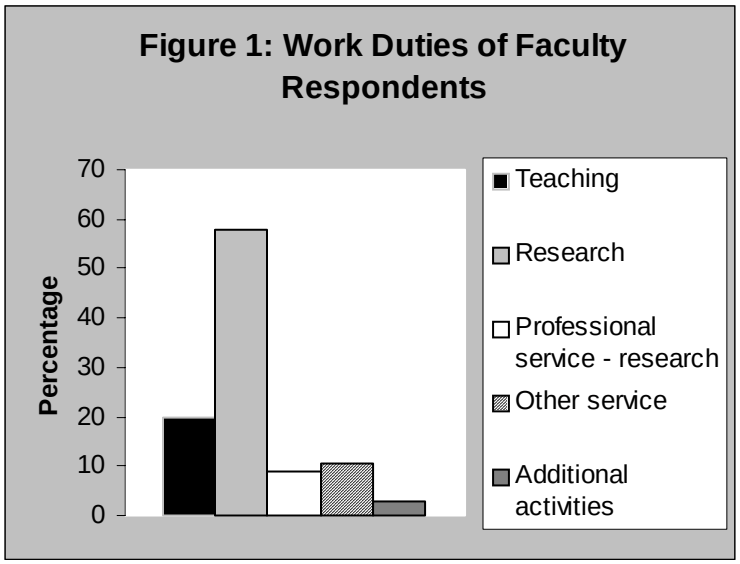
FDP faculty respondents reported that the majority (58 percent) of their average work week was spent on research activities.[15] Teaching[16] comprised the second-largest fraction (20 percent) of their time. Remaining work hours were devoted to research-related professional service[17] (9 percent), other service activities[18] (11 percent), and additional activities[19] (3 percent). Figure 1 illustrates these findings.

[15] Research activities mainly included conducting research, preparing articles/presentations, seeking federal and non-federal outside funding, and managing grants, as well as mentoring student researchers and postdoctoral fellows.

[16] Teaching activities ("classroom teaching") included tasks such as preparing for class, teaching, grading, advising/mentoring students, and developing new curricula.

[17] Research-related professional service included work with professional associations/societies, peer review of grants or manuscripts, participation in special research panels, as well as service on research regulatory committees such as IRB, IACUC, and research safety.

[18] Other service included clinical, departmental, university, and community projects.



When viewed by subgroups, the time allocations of FDP faculty varied (see Appendix A, Tables 8-9). At public institutions, respondents reported that about 56 percent of their time was spent on research activities during the 2004-05 academic year; at private institutions, that figure was 63 percent.

When viewed by Carnegie classification, faculty working at doctoral-focused institutions spent less time on research (52 percent) than did faculty working at comprehensive universities with medical schools (59 percent) or at health centers (66 percent). In addition, faculty working in the areas of health sciences, psychology, and biological or life sciences spent a considerably larger fraction of their time on research activities (60, 62, and 65 percent, respectively) than did faculty working in other disciplinary contexts. These differences appear to largely reflect variation in the research missions across institutions and disciplinary work contexts.

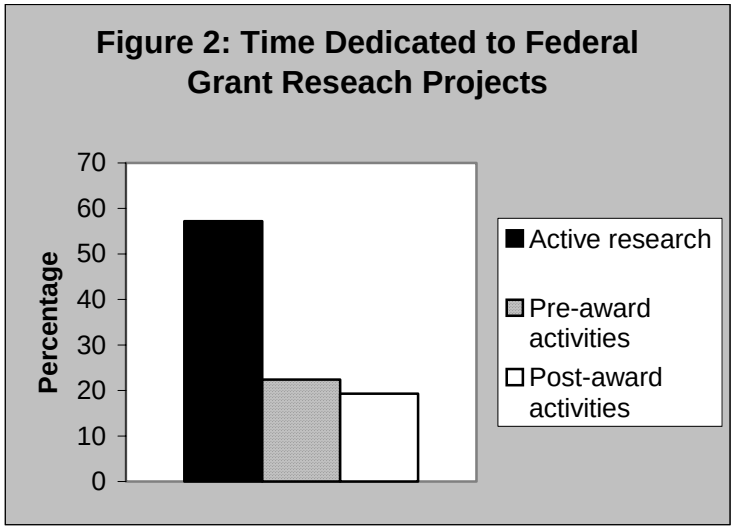
In terms of seniority, assistant professors spent more time on research activities (63 percent) than did associate or full professors (58 and 56 percent, respectively). Variation was also evident by race/ethnicity, with average research time ranging from 56 percent among underrepresented minority faculty to 61 percent among faculty of Asian/Pacific Island descent. Women spent more time engaged in research than did men (59 versus 57 percent).

Time and Effort Expended on Research

On average, faculty devoted 65 percent of their available research time (i.e., 38 percent of their total work week) to federally funded research activities. FDP researchers typically spent 42 percent of this time (i.e., 16 percent of the work week) on research-related administrative tasks, which were divided almost equally between pre-award (22.4 percent of the time spent on federally funded research activities) and post-award (19.3 percent) activities.[20] Time spent on

[19] Additional activities ("other") included work not subsumed by any of the aforementioned time-allocation categories.
[20] Pre-award activities primarily included writing/submitting proposals and budgets, applying for approvals, developing protocols, and drafting safety/security plans. Post-award activities included purchasing supplies/equipment, supervising budgets, managing personnel, complying with regulations, monitoring safety/security plans, and writing reports.

active research on these federally-funded projects amounted to 22 percent of the total work week (57 percent of the 65 percent of research time (which itself averages 58 percent of the total work week) that is devoted to federally-funded projects). (See Appendix A, Tables 10-11, for more detail.)



When examined across institutional contexts, the most substantial difference in the percentage of research time spent on federal research was between faculty working at public institutions and those employed by private institutions. Public-institution faculty spent an average of 63 percent of their research time on federal-grant research while private-institution faculty devoted 70 percent. Faculty employed at doctoral institutions without medical schools spent 61 percent of their research time on federal research. In contrast, those working at medically focused institutions invested 67 percent.

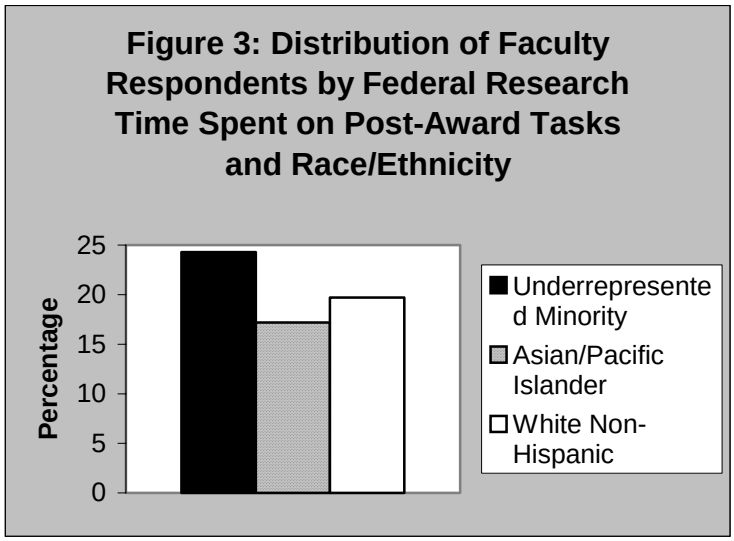
Disciplinary affiliation and principal activity accounted for some substantial differences in percentage of research time spent on federal-grant work. Physical sciences, computer sciences, and biological/life sciences faculty spent the most research time engaged in federal-grant research while agriculture, education, and social sciences faculty devoted the least. Faculty who reported research as their principal activity spent significantly more of their research time (69 percent) on federal research than did faculty with primarily clinical duties (38 percent). When examined by individual work characteristics, faculty on the tenure track but not tenured and underrepresented-minority faculty spent the least amount of their total research time on federal grant work (63 and 58 percent, respectively).

Differences in percentage of federal research time spent on pre- and post-award tasks were minimal, with virtually no substantial variation in time spent on pre-award tasks when examined by Carnegie classification, public/private affiliation, or federal funding level. Faculty at private institutions reported spending less of their federal research time on post-award activities, and accordingly more time on active research.

Mathematics faculty dedicated a substantially greater percentage of their federal time to active research than did other faculty members, and correspondingly less time on both pre-award and

post-award grant management. Agriculture faculty reported the highest total time devoted to pre-award and post-award grant management (49 percent), and therefore the least amount of time to active research. Engineering faculty reported the highest pre-award grant management time (26 percent), and Education faculty reported the greatest percentage of time (29 percent) on post-award activities.

Underrepresented minority faculty spent less of their research time on active federally funded research (52 percent) than did faculty of Asian/Pacific Island descent (59 percent). Time spent on pre-award tasks varied by only 2-3 percent when examined by academic rank and tenure status, with assistant professors and faculty on the tenure track (but not tenured) devoting the most time to these tasks. However, Asian/Pacific Islanders reported spending less of their federal research time on post-award activities (17 percent) compared to underrepresented minority faculty (24 percent). [See Figure 3.]



IV. ADMINISTRATIVE BURDEN AND SUPPORT

Administrative Burden

Respondents were asked to assess the amount of burden they experienced from 24 common tasks related to managing grants. Respondents scored each burden by estimating the time taken away from active research on a 5-point scale ranging from 1=None to 5=A great deal of burden. [21] We examine the burdens in two ways. Figure 4 shows the average response of all respondents for the level of burden for each task. This average shows the cumulative severity of the burden –

[21] Note: All of the survey questions related to administrative burden included a "not applicable" response option, with burden coded as 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

i.e., the combination of the severity and the number of people who experience it. By this measure, the top burdens identified were:

1. Grant progress report submissions
2. Personnel hiring
3. Project revenue management
4. Equipment and supply purchases
5. IRB protocols and training
6. Training personnel and students
7. Personnel evaluations

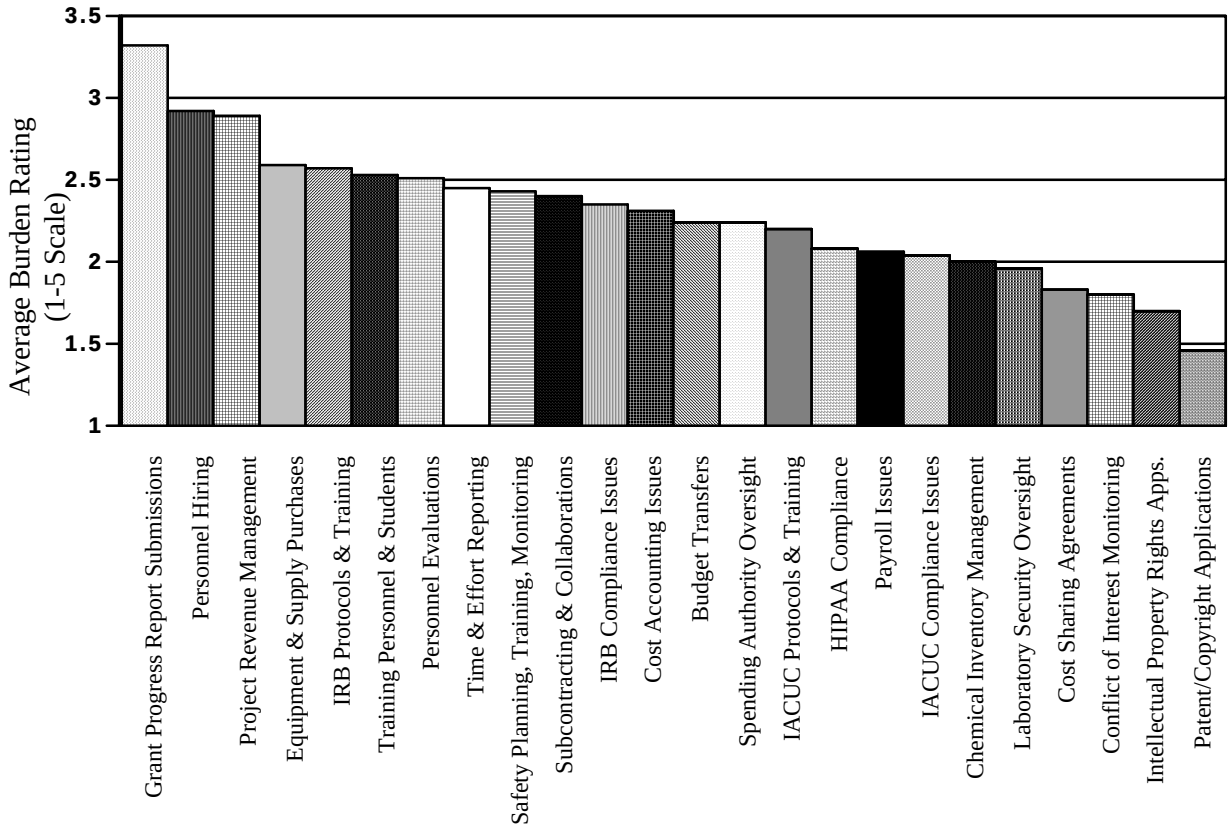


Figure 4. Average Burden Level

Despite the diverse institutional and work contexts of individual FDP faculty respondents, they reported similar sets of top administrative burdens[22] associated with federal research grants. (See Appendix A, Table 12.)

[22] Top burdens represent administrative tasks assigned the highest mean ratings (i.e., 2.5 and above) by faculty based on a 5-point scale ranging from 1=None to 5=A great deal of burden. The list of burdens in the Faculty Workload Survey featured tasks that

Figure 5 (see also Appendix A Table 13) looks only at the severity of each burden for those faculty who experience that particular burden; i.e., the figure does not include faculty who reported no time taken away from active research for that burden. While the prior analysis measures the possible cumulative benefit from relieving a benefit, this one examines the burdens that cause the greatest disruption to faculty, even if only to a smaller number of faculty (such as those performing human subjects or animal research). As the figure shows, the top burdens change substantially here, with IRB, IACUC, and HIPAA regulations appearing prominently among the top burdens.

Listed below, in descending order, are the burdens that received the highest average ratings as reported by this subset of faculty:

1. IRB protocols and training
2. IACUC protocols and training
3. Training personnel and students
4. Grant report submissions
5. IRB compliance issues
6. IACUC compliance issues
7. Personnel hiring
8. Project revenue management
9. HIPAA compliance
10. Subcontracting and collaborations
11. Safety planning and monitoring
12. Equipment and supply purchases

Figure 5 presents a complete listing of burdens ranked by faculty who reported that those specific tasks took at least some time away from their active research (see also, Appendix A Table 13).

must typically be carried out as part of federally funded grant research time. The survey gathered a limited amount of information about proposal preparation and other pre-award tasks.

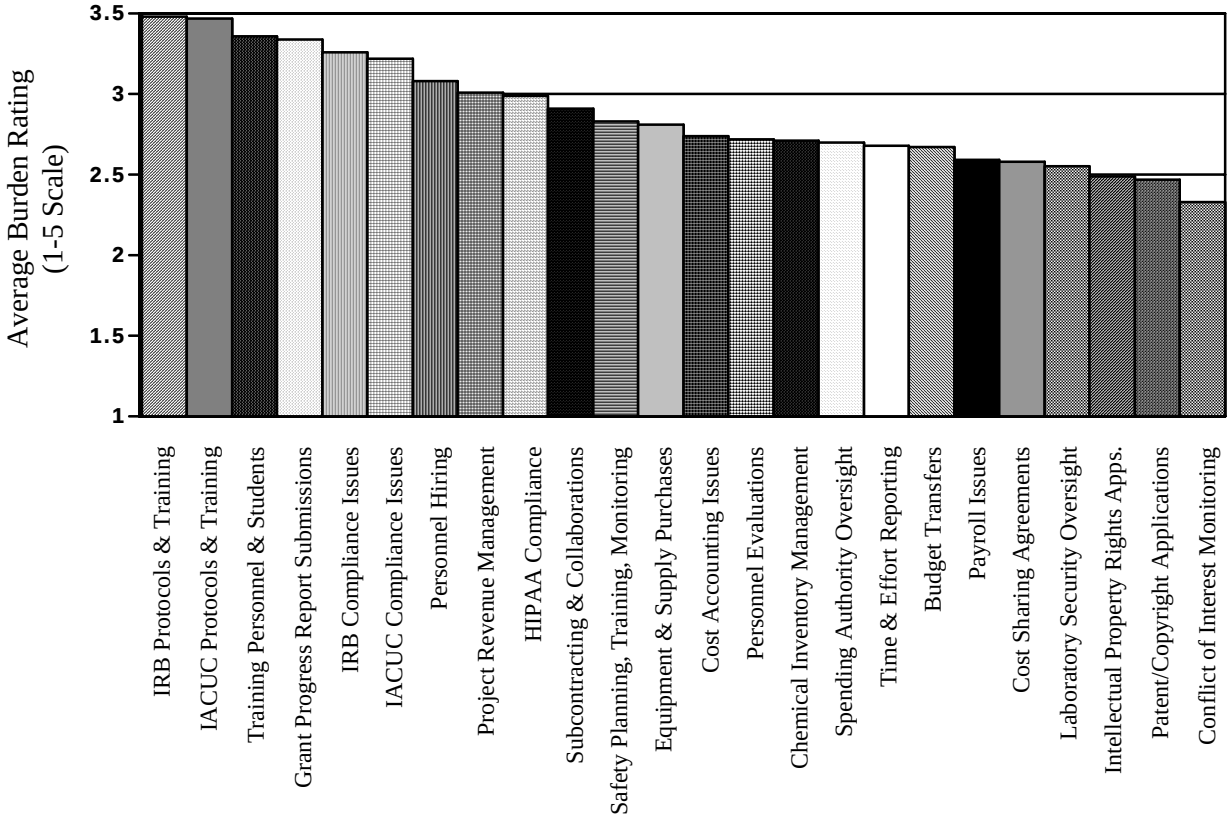


Figure 5. Variations in Burden Level Among Faculty Reporting More than "None"

Variations in Top Burdens across Federal Funding Agencies

Variation existed in the types of tasks rated as most burdensome across funding agencies (i.e., USDA, DOC, DOD, DOE, DOI, ED, HHS, EPA, NASA, NIH, NSF),[23] although some of this variation no doubt related to differences across research disciplines (see following text; Table 1; and Appendix A, Table 14). Regarding differences across funding agencies:

- With minor exceptions, faculty respondents rated grant progress-report submissions, personnel hiring, and project-revenue management as the three most burdensome tasks across funding agencies.[24] Other than the top burden (grant progress reports), the order of the remaining two burdens varied by funding agency.

[23] Departments of Agriculture (USDA), Commerce (DOC), Defense (DOD), Energy (DOE), Interior (DOI), Education (ED), and Health and Human Services (HHS), as well as the Environmental Protection Agency (EPA), National Aeronautics and Space Administration (NASA), National Institutes of Health (NIH), and National Science Foundation (NSF).

[24] Exceptions were HHS-funded faculty, who listed their top three burdens as grant reports, IRB protocols/training, and equipment/supply purchases, respectively; and DOC-funded faculty, who reported grant reports, equipment/supply purchases, and IACUC protocols/training as most burdensome.

- Faculty funded by DOI found equipment and supply purchases, subcontracting and collaborations, and cost accounting issues particularly burdensome.

- Respondents funded by EPA reported a high level of burden stemming from equipment and supply purchases, and subcontracting and collaborations.

- Faculty who received funding from USDA reported considerable burden related to equipment and supply purchases, and time and effort reporting.

- DOC-funded faculty reported high levels of burden caused by subcontracting and collaborations as well as by IACUC protocols and training.

- NIH-funded faculty rated both IACUC protocols/training and the training of personnel and students as particularly burdensome tasks, along with IRB protocols/training and IRB compliance issues.

- Equipment and supply purchases were also rated highly by faculty funded by DOD, DOE, and NASA.

- Faculty funded by HHS and ED reported that IRB protocols and training were high-level burdens along with IRB and HIPAA compliance issues.

- Subcontracting and collaborations were particularly burdensome for faculty who received funding from ED.

Table 1. Variations in Extent of Burden Across Federal Funding Agencies

Federal Agencies for which Average Level of Burden Reported was 2.7 or above	Administrative Burden
DOC, DOD, DOE, DOI, ED, EPA, HHS, NASA, NIH, NSF, USDA	• Grant progress report submissions • Personnel hiring • Project revenue management (all except the Department of Commerce)
DOD, DOE, DOI, EPA, NASA, USDA	• Equipment and supply purchases
DOC, DOI, ED, and EPA	• Subcontracting and collaborations
ED, HHS, and NIH	• IRB protocol and training
DOC and NIH	• IACUC protocols and training
HHS and NIH	• IRB compliance issues
DOI	• Cost accounting issues
HHS	• HIPAA compliance
NIH	• Training personnel and students
USDA	• Time and effort reporting

In their open-ended responses, faculty members offered a number of compliments and suggestions regarding specific federal agencies. For additional findings, see Appendix B.

Variations in Burden Across Subgroups

The most striking aspect of the survey results is a general uniformity of responses – across faculty subgroup populations – regarding administrative burden and research project assistance. Nevertheless, slight variations existed (See also Appendix A, Tables 15 to 26):[25,26]

- Public versus private institutions: Faculty at public institutions reported significantly greater burden related to financial responsibilities than did faculty at private institutions. The latter group reported greater burden linked to conflict of interest, laboratory safety and inventory, and use of animal and human subjects (IACUC, IRB, HIPAA).

- Carnegie classification: Faculty at medical schools generally reported higher levels of burden and a broader cross-section of burdens than did faculty employed by other types of institutions.

- Federal funding level: In most cases, level of burden did not significantly differ by institutional funding level. However, faculty working at institutions with less than $10M in annual federal funding reported significantly more burden related to payroll issues and compliance with HIPAA regulations, and faculty at institutions with $150M to $200M in federal funding reported significantly more burden related to cost-sharing agreements.

- Administrative roles: Faculty with administrative roles[27] reported greater burden than faculty without such responsibilities across the majority of tasks.

- Academic rank: Level of burden varied by academic rank, with assistant and associate professors rating five tasks – safety planning, training, and monitoring; equipment/supply purchases; training personnel/students; IRB protocols and training; and IRB compliance issues – more burdensome than did full professors. Of these tasks, the IRB and HIPAA activities took the greatest amount research time away from associate professors. Both full and associate professors rated personnel evaluations, budget transfers, cost-sharing agreements, spending-authority oversight, and subcontracting and collaborations as particularly burdensome; full professors alone reported spending more time on conflict-of-interest monitoring.

- Race/ethnicity: Burden among underrepresented minority and Asian/Pacific Islander faculty exceeded burden experienced by White, Non-Hispanic faculty across more than two-thirds of the measures.

- Gender: Women reported significantly higher levels of burden than did men on more than half of the administrative tasks.

[25] All subgroup differences discussed in the remainder of the report were calculated based on aggregated data collected from *all* faculty respondents.

[26] All comparisons reported have a difference that is statistically significant ($p<0.001$). Statistically significant yet less substantial subgroup differences ($p-<0.01$, $p<0.05$) are not included in this report.

[27] Of this group, 33 percent served as center directors, 15 percent as department chairs, and 47 percent as administrators with a wide range of other responsibilities (see footnote in Appendix A, Table 1).

Highest Levels of Burden Across Subgroups

Variation existed in the types of faculty experiencing the highest levels of burden. When examined by institutional characteristic (i.e., public/private, Carnegie classification, institution funding level, disciplinary affiliation, administrative roles, or principal activity), the following faculty respondents reported the highest levels of burden:

- Faculty researchers in all disciplines *except* engineering and mathematics reported high levels of burden related to project-revenue management.

- Personnel hiring was particularly burdensome for faculty affiliated with the following disciplines: agriculture, biological/life sciences, education, health sciences, physical sciences, and psychology.

- High levels of burden related to equipment and supply purchases were reported by faculty at doctoral-focused institutions and institutions with funding of $100M-$150M. In addition, agriculture and biological/life sciences faculty reported particularly high levels of burden in this area.

- IRB protocols and training created the greatest burden for faculty working at private institutions and medical schools as well as those employed in the social sciences. Faculty members with administrative roles were also highly burdened with these tasks.

- IRB compliance issues created comparatively high levels of burden for faculty working at medical institutions or in a clinical appointment, as well as for those in the health sciences and psychology.

- Personnel evaluations were highly burdensome for agriculture and engineering faculty as well as those with administrative roles.

- HIPAA compliance created the greatest burden for clinical faculty, health science faculty, and those working at medical schools.

Table 2 provides more detail on subgroup variation among faculty experiencing the highest levels of reported burden.

Table 2. Variations in Highest Level of Burden by Subgroup

Subgroups Reporting Average Level of Burden as 2.7 or Above	Administrative Burden
Private colleges/universities	IRB protocols and training
Medical institutions	IACUC protocols and training IRB protocols and training IRB compliance issues HIPAA compliance
Doctoral-focused institutions	Equipment and supply purchases
Institutional funding of $100M-$150M	Equipment and supply purchases
All disciplinary subgroups except engineering and mathematics	Project-revenue management
All disciplinary subgroups except computer sciences, engineering, mathematics, and social sciences	Personnel hiring
Agriculture	Equipment and supply purchases Time and effort reporting Personnel evaluations
Biological/life sciences	Safety planning, training, and monitoring Equipment and supply purchases IACUC protocols and training IACUC compliance issues Training personnel and students
Engineering	Patent/copyright applications Time and effort reporting Personnel evaluations Subcontracting and collaborations
Education	Subcontracting and collaborations
Health sciences	IRB compliance issues HIPAA compliance
Physical sciences	Equipment and supply purchases
Psychology	IRB compliance issues
Social sciences	IRB protocols and training
Faculty with administrative roles	Personnel evaluations IRB protocols and training
Clinical faculty	IRB compliance issues HIPAA compliance

When burdens are examined by individual faculty characteristics, the results indicate that:

- IRB protocols and training appear to be particularly burdensome for female faculty, lower ranking faculty, non-tenured faculty, and underrepresented minority faculty.
- IRB compliance issues appear particularly burdensome for female faculty and those either not on the tenure track or with no tenure system at their institution.
- Equipment and supply purchases create comparatively higher levels of burden for lower ranking faculty, faculty on the tenure track but not tenured, and non-white faculty.
- The training of personnel and students is a particularly burdensome task for assistant professors, faculty on the tenure track but not tenured, and non-white faculty.

Variations in Burden Across Institutions

A review of data from institutions with more than 100 survey respondents indicates fairly uniform levels of burden across the majority of administrative tasks. Some differences were reported, however, regarding burden stemming from IRB protocols and training, IRB compliance issues, and HIPAA compliance (see Figures 6-8). Differences in institutional contexts (e.g., public vs. private, Carnegie classification, and federal funding level), as well as variation in response rates across institutions, likely play at least some role in shaping reported faculty burden levels.

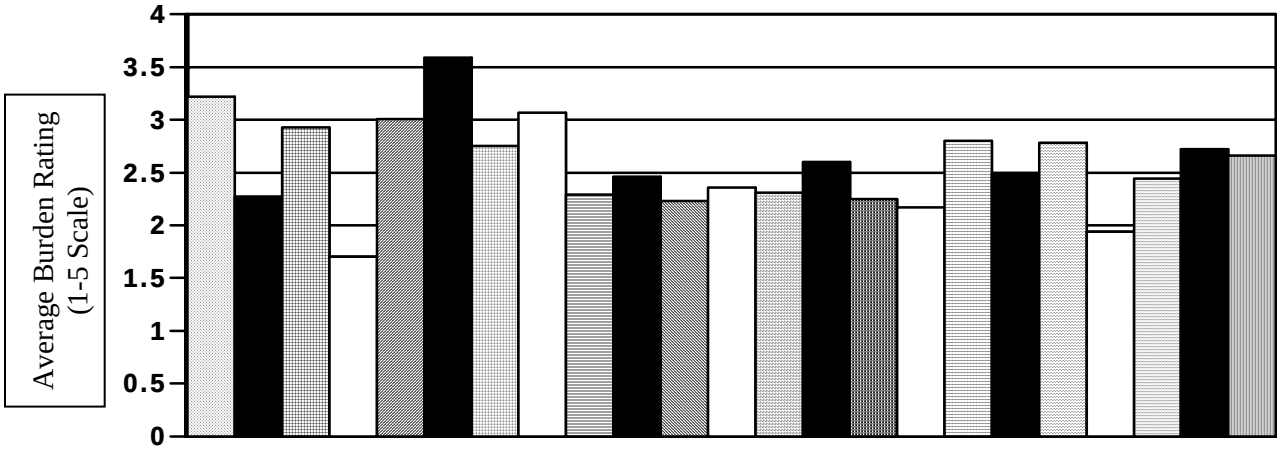


Figure 6. Example of Variation in Burden: IRB Protocols and Training across Institutions with More than 100 Respondents

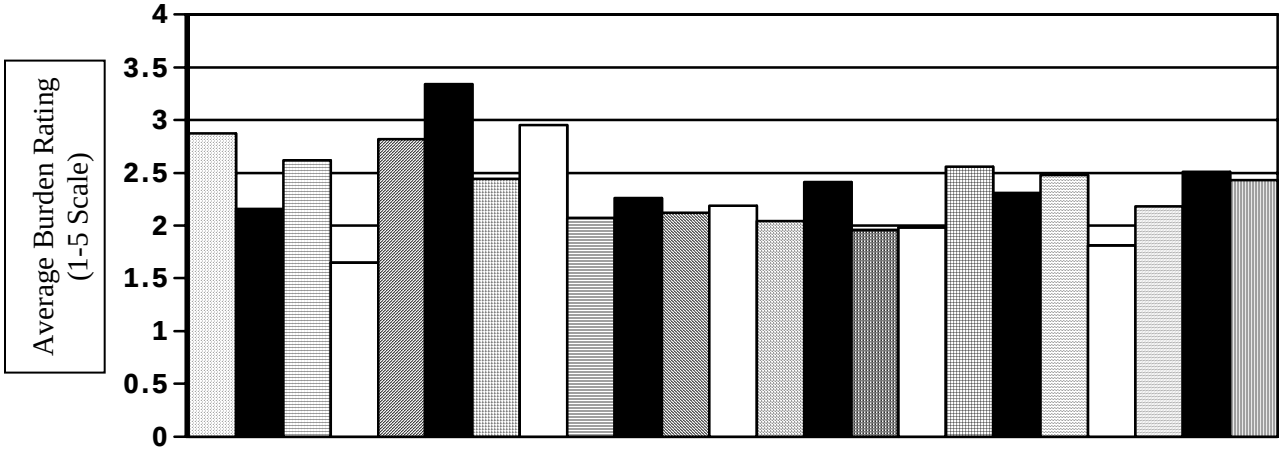


Figure 7. Example of Variation in Burden: IRB Compliance Issues across Institutions with More than 100 Respondents

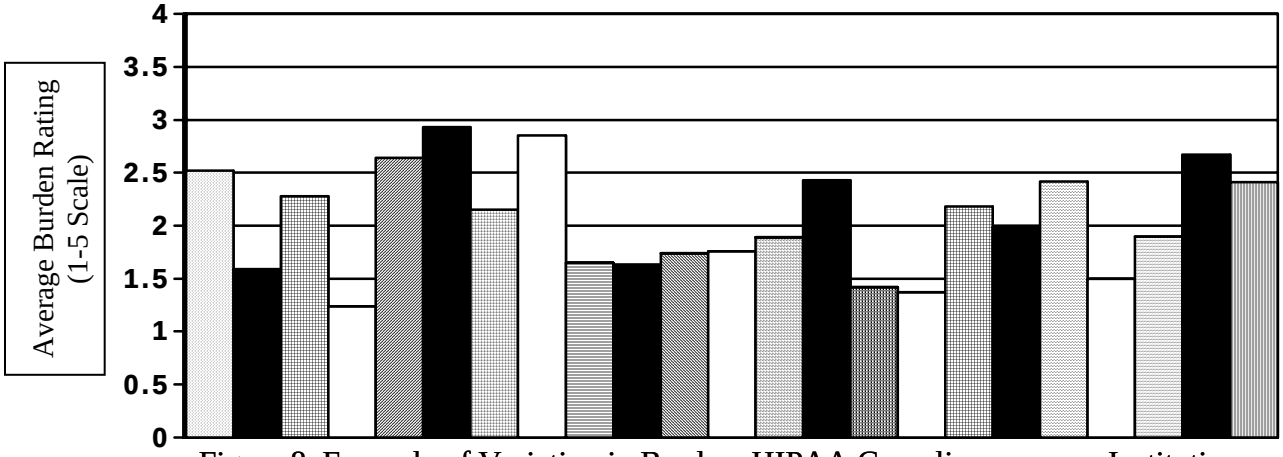


Figure 8. Example of Variation in Burden: HIPAA Compliance across Institutions with More than 100 Respondents

Assistance with Administrative Tasks

Faculty were asked how much administrative assistance they received with each of the 24 tasks for which burden was measured, and responded on a scale from 1=none through 5=a great deal of assistance. Faculty reported low levels of institutional support across most administrative tasks. Only for seven of the 24 burdens (payroll issues (3.72), budget transfers (3.63), cost accounting issues (3.56), cost-sharing agreements (3.38), project revenue management (3.18), spending authority oversight (3.09), and subcontracting and collaborations (3.01)) did respondents report an average level of assistance of at least 3 (3=some assistance). The overall top burden of grant progress report submissions scored 2.09 (2=very little assistance). We should note that these are not independent measures, as respondents may perceive the highest burden as a result of the lack of assistance and vice versa.

A summary of statistically significant differences[28] in level of assistance provided to faculty is given in Appendix A, Tables 27-38. In addition to significant variation by disciplinary context, differences were reported within the following faculty subgroups:

- Respondents at institutions without a medical school received less assistance than did faculty at institutions with a medical-school affiliation (statistically significant differences on 14 out of 24 tasks)
- Instructional faculty received less assistance than did clinical or research faculty (13 out of 24 tasks)

The following faculty also reported receiving significantly lower levels of assistance, though the differences across these subgroups were smaller than those noted above:

- Assistant and associate professors received comparatively lower levels of support than did full professors (13 out of 24 tasks)

[28] Note: All reported differences in this report are statistically significant ($p<0.001$).

- Faculty with no administrative roles received lower levels of support than those who did have administrative responsibilities (12 out of 24 tasks)
- Faculty on the tenure track, but not tenured, compared to those who were not on the tenure track or those who were working at institutions without a tenure system (6 out of 24 tasks)

In addition, faculty employed by private institutions received somewhat less help than did those working at public institutions on 5 of the 24 tasks (i.e., grant progress report submissions, safety planning/training/monitoring, personnel evaluations, cost-sharing agreements, and HIPAA compliance). Respondents employed by institutions with less than $10M in federal funding also received a bit less help with three of the tasks: payroll issues, budget transfers, and project revenue management. Women received slightly less assistance than did men regarding three administrative activities: patent/copyright applications, personnel hiring, and time and effort reporting.

Overall, the institutional work contexts of faculty researchers (public/private designation, Carnegie classification, funding level, disciplinary affiliation, administrative roles, and principal activity) played a greater role than did individual faculty characteristics (academic rank, tenure status, race/ethnicity, and gender) in determining level of assistance with administrative tasks.

V. REALLOCATION OF TIME AND GRANT MONEY FOR ASSISTANCE

Ninety-seven percent of respondents reported that at least some of the time they spend managing grants could be conducted by administrative personnel. More than one-third of the respondents (36 percent) believed that 21-50 percent of the time they spent managing federal grants could be so delegated. Another 16 percent of the respondents reported that they could transfer 51 percent or more of their grants management to others. On average, faculty thought that approximately 28 percent of their time spent on grants management could be handled by administrative personnel. Ninety-five percent of respondents believed they could devote more time to active research if they had more assistance with administrative tasks. Sixty-five percent said that they could thus secure at least three additional hours each week to active research.

Seventy-six percent of respondents reported that they would choose to reallocate direct costs to administrative support if they were afforded this option. Within this group, some 13 percent of faculty would so reallocate less than 2 percent of their federal-grants funding, 39 percent would reallocate 2-7 percent, and slightly more than 24 percent would choose to devote 8 percent or more.

In your opinion, what percentage of the time you spend managing federal grants could be conducted by administrative personnel in your department, program, and/or research center?

0%	Less than 10%	11-20%	21-30%	31-40%	41-50%	51-60%	More than 60%
2.5%	23.4%	22.7%	17.4%	8.8%	9.6%	6.3%	9.3%

How much additional time could you devote to active research if you had more assistance with administrative tasks linked to federal grant management?

None	0-2 hrs/wk	3-4 hrs/wk	5-6 hrs/wk	7-8 hrs/wk	9-10 hrs/wk	More than 10 hrs/wk
5.1%	29.6%	28.2%	17.4%	8.8%	5.2%	5.8%

If you could reallocate direct costs to administrative support, what percent of your federal grant funding would you like to assign for this purpose?

None	Less than 2%	2% - 4%	5% - 7%	8% - 10%	More than 10%
23.7%	12.6%	19.0%	20.2%	15.5%	9.0%

Variation across Faculty Subgroups

Faculty in the health sciences reported the greatest percentage of time spent on management of federal grants that could otherwise be conducted by administrative personnel; this faculty group also reported the highest number of additional hours per week that such delegation could free for active research (see Appendix A, Tables 39-40). In addition, education faculty would reallocate the highest percentage of direct costs to administrative support, with health sciences faculty

second highest. Finally, education and psychology faculty reported the greatest potential increase in time available for active research if they had additional support for grant management.

Faculty with administrative roles reported that, with more support from administrative personnel, they could devote more additional hours to active research each week than faculty without such duties could. Such faculty were also willing to allocate a significantly greater percentage of direct costs to administrative support than those who did not have administrative roles would allocate. A possible explanation for this difference is that faculty with administrative roles may have greater experience using such administrative personnel.

Finally, gender differences in response to these survey items were noteworthy. Women reported that more administrative support would allow them a significantly higher number of additional hours per week for active research than men reported. Women would also allocate a significantly greater percentage of direct costs to administrative support compared to men. These gender differences are significant after controlling for rank.

As described in the previous section, women responding to the survey reported less administrative assistance than did men on a number of different tasks. Gender differences with regard to institutional support have been documented in several studies (Hopkins, 1999). Allowing direct funding to cover administrative support may therefore have important implications for women faculty members in particular as they seek ways to more effectively manage their research programs.

Faculty Comments

In their written comments, some faculty expressed concerns about the use of direct costs to enhance administrative support. First, some were concerned that their universities would cut their existing institutional support, arguing that PIs should be able to cover most of it out of direct costs from their federal grants.

> *"If direct costs were to be permitted for administrative help, it is almost a certainty that the University would further cut back on the little administrative help already provided (faculty would be told to use their own direct costs to cover all administrative needs). … One potential solution, given the restraints in funding, is to designate a portion of the indirect costs specifically for support of the administrative needs of individual investigators and to require institutions to document that those funds are going to support individual investigators (as opposed to getting swallowed up by general university 'overhead,' which is so far over the heads of faculty that it is of no direct benefit)."*

Other respondents believed that the limited qualifications and training of existing support staff caused researchers to spend excessive amounts of time on administrative tasks. When this is the case, allowing direct-cost reallocation for additional administrative support may not solve the real problem.

> *"It seems that the assumption is that my institution or department will provide quality administrative support. I believe that my institution and department provide much of the services that I need to administer grants – the problem is that the quality is not that good. . . . [I]f I could allocate direct costs to administrative services, I don't for a minute believe that service would improve. … A real 'market economy' move would be to allow principal investigators to withhold a significant fraction of indirect costs when the institutions don't deliver."*

> *"Most of the time that I lose to grant administration is due to poor training of staff within the university making it difficult to process awards, execute subcontracts, and access funds (pay vendors)."*

A related concern centered on whether PIs would retain enough control over direct costs to realize significant help from increased support.

> *"It may be best to give the PI the flexibility to hire administrative help. They can help with grant management, preparation of progress-report manuscripts, ordering, and hiring. More money to departments may not do the job and the funded PIs will have no control over that money."*

VI. PERCEPTIONS OF THE CLIMATE FOR RESEARCH

In concluding the survey, a four-point scale ranging from "disagree strongly" to "agree strongly" was used to determine the degree of faculty concurrence with nine statements regarding their perceptions of the climate for academic research (see Table 3).

Table 3. Average Distribution of Faculty Respondents by Perceptions of Research Climate[1]

Item	Number	Mean	Percent Agree
If I had it to do over again, I would still choose an academic research career.	5652	3.63	91.8
Sponsored research activity is a primary factor in this department's promotion and tenure policies.	5640	3.62	91.8
In my department, research is rewarded more than teaching.	5639	3.55	91.1
Administrative burden associated with federally funded grants has increased in recent years.	5351	3.22	83.6
If direct-cost grant dollars were available to support federal grant administration in my department/program, I would be able to spend more time on active research.	5484	2.97	75.6
My department/program is willing to reassign time to faculty who take on sponsored research.	4971	2.73	63.4
My graduate students pursue academic research careers less often than in the past.	4444	2.76	62.2
In my department/program, I have the option of buying out of teaching assignments.	4619	2.48	52.6
I am generally less willing to submit federal grant proposals than in the past.	5598	2.04	34.6

[1] Coded: 1=Disagree strongly, 2=Disagree somewhat, 3=Agree somewhat, 4=Agree strongly.

A large majority of faculty (91 percent) agreed that research is rewarded more than teaching in their department and that sponsored research activity is a primary factor in departmental promotion and tenure policies (92 percent). However, far fewer reported that they have the option of buying out of teaching assignments (53 percent agreed) or that their department is willing to reassign time to faculty who take on sponsored research (63 percent agreed).

While 84 percent agreed that the administrative burden associated with federally funded grants has increased in recent years, only 35 percent were now less willing to submit federal grant proposals. Over 75 percent of respondents also believed that they would be able to spend more time on active research if direct-cost grant dollars were available to support grant administration.

Finally, 92 percent of respondents agreed that if they had it to do over again, they would still choose an academic research career. Nevertheless, they expressed concern about the future strength of the American academy, with 62 percent reporting that their graduate students pursue academic research careers less often than in the past.

Variation across Faculty Subgroups

Faculty members who did not have administrative roles were less likely than those with administrative roles to have the option of buying out of teaching assignments. They were also less likely to feel that they could spend more time on research if direct-cost dollars were available, and less likely to choose an academic research career again if given the chance.

Faculty working in three areas expressed higher than average concern regarding the climate for academic research:

- Agriculture faculty were less likely than average to report that they have the option of buying out of teaching assignments. Their units were also less willing to reassign time to faculty who take on sponsored research. These faculty were less willing than in the past to submit grant proposals and more likely to report that their graduate students pursue academic research careers less often.

- Biomedical and life sciences faculty were less likely than average to report that they have the option of buying out of teaching assignments, and they indicated less willingness to submit grant proposals than in the past. They were also more likely to report that their graduate students pursue academic research careers less often.

- Health sciences faculty were the most likely to report that administrative burden associated with federally funded grants has increased in recent years. They were also more likely than average to say that their graduate students pursue academic research careers less often.

Faculty Concerns

Appendix B provides representative open-ended responses – i.e., comments that were voluntary and not in answer to any particular survey questions – regarding faculty members' perceptions of the research climate. The topics they addressed can be grouped into four categories: 1) the effect of the current research climate on science; 2) the effect of the current research climate on faculty personally; 3) the extent of the research management burden; and 4) the future of the academy.

The following four comments capture many of the ideas that were expressed about these topics.

> *"A major problem with administrative/compliance burdens is not simply the time but also the erosion of creativity and individual initiative. This is hard to address by a survey, but is the most important factor in driving the best students away from scientific careers."*

> *"Universities reward and encourage obtaining lots of research funding. The emphasis is clearly on dollar amounts, not on quality of science. The federal government is a willing partner in this graveyard spiral, where more and more money is thrown into the system but the quality of science is going down. The emphasis on quantity rather than quality is everywhere: number of research dollars, number of papers, number of graduate students, etc. Salaries are directly tied to these numbers. Where is the encouragement for tackling high-risk, high-quality fundamental research? If that research does not take place in*

universities, then where? Universities have turned into research contractors. Advancing knowledge and understanding, and higher education, are not the goals anymore. The goal is to have the largest amount of research spending."

"I discourage grad students from entering the research stream – it is an awful quality of life with many, many evenings and weekend hours spent away from family to do the work that the university should be doing for us. As the federal demands have gone up, the university has not provided any help; but it has to come from somewhere. We are picking up the slack – on our own time, as there is not enough time in a 40-hour week to come close to meeting all of our commitments. So the 100 percent time is in reality about 150 percent and that is not just for me but for anyone who is successful. I would never have gone into this field if I had known what it would be like, and we talked our kids out of research completely. At this rate, we will lose our edge in the next decade or so."

"If I were just beginning my career, I would not go into an area of research that involves laboratory animals, nor one that requires such an enormous burden of grant-writing. Many of our doctoral students are making that decision and are turning to other professional opportunities. The scientific manpower problem in this country is going to become a major crisis in coming years as students, seeing the struggles that their mentors go through trying to keep their research funded, elect not to take the same career path. This certainly cannot be news to those who are concerned about these issues, but perhaps this survey will add more weight to the information available to policymakers and the Congress about this very serious matter."

VII. THEMES FROM OPEN-ENDED RESPONSES

As noted above, at the end of the survey respondents were asked to "Please take a moment to provide us with additional comments." A tally of all the concerns and recommendations expressed, taken from more than 250 pages of open-ended faculty responses, is provided in Table 4.

Table 4. Tallies of Recommendations and Concerns Expressed in Open-Ended Responses

Recommendations regarding:	**Number of Comments**
1. The idea of direct-cost redirection	25
2. Specific funding agencies	7
Concerns regarding:	**Number of Comments**
1. Grant proposal/award process	213
2. Use of direct-cost funds for administrative support, primarily that a) indirect-cost funds should cover this, or b) the university might misuse direct-cost funds just as they often misuse indirect-cost funds	89
3. Extent of IRB burden	75
4. Extent of administrative burden that faculty experience, primarily that a) institutions provide very little administrative support, or b) federal burden is too great	66
5. Future of the academy	46
6. Extent of IACUC burden	41
7. Effect of the current research climate on faculty motivation and productivity	29
8. Administrative burden of university regulations	26
9. Extent of HIPAA burden	24
10. Effect of the current research climate on science	16
11. Reporting	12
12. Gender issues	9
13. Accounting/finance	8
14. Non-tenure-track faculty issues	6
15. International research/students	3
16. Technology	2

The most common concern expressed in the open-ended responses was about the grant proposal and award process. Faculty reported spending a tremendous amount of time writing long proposals that they believed had little likelihood of being funded. And even if they were funded, the low funding level and short duration of most grants still required that faculty members continue to write additional proposals.

The second most common area of concern – given the sum of comments involving Items 3, 5, and 6 above – was IRB, IACUC, and HIPAA regulations. Many respondents reported that these regulations are crippling research and that the current system is not designed to handle multi-site studies efficiently.

The third most common concern was the potential for negative outcomes that could result if direct-cost funds were available to cover administrative support:

- Institutions might cut the minimal administrative support that is available now, arguing that PIs should cover this expense out of their direct cost funds.
- Administrative support staff members are often unqualified and poorly trained. Even with the reallocation of direct-cost funds, PIs still might not have the authority to hire and adequately oversee staff members.
- Grant money would be diverted from research at the same time that total available federal research dollars continue to decline.
- A significant amount of the administrative burden (e.g., grant proposal writing and IRB/IACUC/HIPAA requirements) could not be managed by a staff person. The PI or another researcher must do these tasks.
- Faculty members might lose more control over their funding. Many do not trust institutional administrators to support them or to look out for their interests if direct-cost funds for administrative support were not managed directly by the PI.

Appendix B includes several representative quotes involving these three areas of concern, as well as respondents' recommendations for change. This appendix also includes faculty comments regarding reporting requirements, accounting issues, technology support, and special needs related to international research and international students.

VIII. LIMITATIONS

While this study is one of the largest studies of faculty workload, and to our knowledge the largest study of research management burden ever conducted, and while it has substantial statistical power, we want to clearly identify some of the key limitations of the study.

- The population studied is not representative of faculty overall and suffers from both sampling and self-selection bias. Faculty were drawn only from among participating FDP institutions (which are disproportionately larger research institutions) and from lists of funded faculty generated by those institutions. Faculty who have already stopped receiving funding, or never gained funding, are not included. Also, faculty who, whether due to overload or other reasons, refused to answer the survey may represent a different viewpoint.
- The survey instrument was limited in the questions it posed. We include a sample of free-text comments because respondents felt strongly enough to address issues we did not present to them and to elaborate on items where they felt multiple-choice responses were inadequate.
- The survey does not attempt to assess the value of the activities that create grant management burdens. Accordingly, we can only identify tasks that consume time, not specifically tasks that waste time. We leave it for future work to assess whether the goals behind those tasks are themselves worthwhile, and if so, whether there is a more efficient way to achieve them.

IX. CONCLUSIONS

The results of this study suggest that faculty spend on research management a substantial percentage of the time they could devote to active research. Unfortunately, there is no single overwhelming burden that could be alleviated to reverse the trend. Rather, the burdens are an accumulation of many different factors which originate from three primary sources:

(1) Federal policies and procedures. Federal requirements, some of which apply even to unfunded research, and some of which are specific to individual agencies, together comprise a substantial grant mangagement burden for faculty. For example, grant progress reporting elicited comments from many faculty. Some questioned whether the effort expended was worthwhile ("I spend too much time filling out progress reports that are read by 2 people [as opposed to real papers that are available to everybody … hopefully read by more than 2!]") and others simply pleaded for standardization ("The inconsistency across federal agencies in the amount of detail and frequency of progress reports is horrific – truly – since we see them from multiple agencies."). Similar comments about the burdens associated with IRB compliance, IACUC, HIPAA, and various other requirements point to a substantial cumulative burden.

Though the survey focused primarily on post-award research management tasks (i.e., ones that could be appropriately allocated to sponsored project), respondents repeatedly commented on the amount of time spent writing proposals. Researchers say they spend a great deal of time writing long proposals for short-term, low-level funding that they feel has little chance of being awarded. Add to this the questions over why material submitted elsewhere (or not needed unless an award is issued) is often required in the proposal, in a different format, and the respondents have identified an area with substantial potential for burden reduction.

Finally, and most dramatically, the cumulative burden affects the willingness of experienced researchers to remain in academic research careers. "The total impact of the regulatory burden – e.g., IRB, HIPAA, and conflict of interest – are several orders of magnitude greater than when I began clinical research in 1981," wrote a respondent. "These changes, which have reduced by about 50 percent the amount of research that gets done, are a major factor in my decision to discontinue clinical research next year."

(2) Institutional policies and procedures. Many respondents pointed to examples where institutional policies or procedures increased the burdens associated with managing research. As one respondent observed: "Our institution places a great deal of regulatory burden on investigators that is NOT required by the federal government (the modular budget for NIH grants, for example, is an excellent policy but doesn't help us here because our University requires detailed budgets). In addition, the regulatory burden with respect to IACUC regulations at this institution far exceed federal guidelines (NIH and USDA), and border on abusive to investigators. There is a lot of federally funded faculty time going into meeting these burdens that takes away from research."

Similar comments questioned the quality of institutional support. As a respondent wrote: "Having observed the research administration scene for many years at three universities both as

investigator and dean, I am struck by the failure of administration to recognize their duty to facilitate – not impede – faculty research."

(3) The systemic lack of support for research management. Respondents divided the blame for this lack of support between institutions and federal requirements – particularly the implementation of OMB Circular A-21. As one respondent observed: "In many cases agencies disallow certain expenditures claiming it is part of indirect costs. But yet it may not be and it appears there's no way to rectify that. A catch-22 situation for many PIs."

The shared responsibility for lack of support may be most evident when considering that three-quarters of faculty indicated a willingness to reallocate direct cost funds to pay for administrative support, yet the second-most frequent written comment was an expression of concern over whether that support would really help the faculty member and not simply be lost to the institution.

While no single burden stands out as the greatest problem, our findings indicate that there are many problems, the sum of which creates a burden that affects large numbers of faculty.

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. On average, faculty spent 42 percent of their time ensuring compliance with federal or institutional administrative requirements. Many of the associated processes do not fall within the faculty members' main areas of expertise, yet they are expected to be experts at managing issues related to affirmative action, accounting, keyboarding, and a myriad of other tasks. Meanwhile, given that multiple administrative tasks are spread out over each day, faculty find it difficult to carve out the blocks of time needed to perform and write about their research.

The problem is potentially becoming even more severe. FDP faculty have observed that the burden has increased in recent years – which is not surprising, given new regulations related to homeland security as well as new attention to, and mechanisms for, financial accountability. In addition, a commonly expressed concern is that American graduate students in many disciplines are choosing to avoid the academic career path, once they complete their degrees, because they perceive that the quality of academic life and the opportunity to make a scientific difference have decayed relative to industrial research opportunities. Furthermore, underrepresented minority faculty, who are already difficult to recruit and retain (Moreno et al., 2006) experienced greater burden from most administrative tasks, and women faculty experienced both greater burden and lower levels of administrative support. Many faculty clearly feel that the burdens of administering federally-funded research are threatening the health of our national research enterprise.

There is hope, however. The FDP has demonstrated administrative simplifications in the past that met the legitimate interests of federal agencies as well as research institutions. And now, by having identified top burdens as well as which faculty are most burdened, the FDP – as a partnership of research institutions and government agencies – can set about prioritizing ways to reduce burden and improve productivity among academic researchers. Such institutional/agency

interaction creates the potential for identification of best practices that could be adopted more broadly.

Meanwhile, a number of institutions are themselves working toward the development of best practices. When survey responses were compared across institutions with medical schools that had more than 100 respondents, the levels of burden related, for example, to IRB and HIPAA protocols did vary, showing that some institutions seem to be successfully addressing these problems.

X. RECOMMENDATIONS

Given the results of our survey, we offer three main sets of recommended actions to help address the high level of faculty administrative burden in conducting federally funded research.

1. *Demonstrations that can be conducted by the FDP*.
    - Demonstrate the general effects of allowing faculty to use some of their direct costs to pay for research project management assistance.
    - Demonstrate the effects of specific solutions that address targeted high-burden cases (e.g., research project management support staff specifically for IACUC protocols or standardizing IRB applications).
    - Demonstrate streamlined and standardized project-reporting for deliverables such as agency progress reports and IRB/IACUC reports.
    - Demonstrate the effects of greater use of just-in-time components for grant proposals.

Demonstration projects could potentially focus on faculty researchers within a single discipline, at institutions with similar organizational structures or funding levels, and where substantial burden has been reported. At some point, the FDP may also want to consider how disciplinary differences in faculty burden affect research productivity.

Although allowing faculty to use some of their direct costs to obtain research project management assistance offers one potential solution, it is likely that other approaches will also be needed; making such determinations will require the involvement both of institutional and federal-agency representatives. Such a committee could outline a plan that tackles each of the highly ranked burdens identified in this report. It could also conceptualize remedies that separately address federal and institutional burden as well as burden that intersects both entities. Another suggestion is to gather feedback from partners in industry to explore how the presence or absence of caps on administrative costs can affect research productivity.

2. *Solutions requiring federal action outside of the FDP.*
    - Remove or adjust the cap on indirect-cost recovery so as to allow greater university support for research project management costs. This could involve a simple cap change or a change in the formula so as to subdivide the “A” part of F&A expenses into separate categories with separate caps.
    - Modify A-21 language to explicitly allow direct-cost allocation for research project management assistance.
    - Create a new classification of “allowable” assistance within the A-21 guidelines (e.g., develop a “compliance officer” function).

The concerns of faculty should be taken into consideration whenever any changes in regulatory language are up for consideration. For example, the results of this study indicate that many faculty members have concerns about allowing direct-cost dollars to cover administrative support. They argue that report writing, IRB, personnel hiring, and training are not tasks that administrative assistants can easily manage. Faculty are also concerned that because money available for actual research is already too limited, allowing direct-cost dollars to be allocated to

administrative support may further diminish such support that institutions currently provide to faculty members through indirect-cost recovery. Given these considerations, it becomes apparent that any adjustments made to the A-21 guidelines should try to minimize unintended consequences, perhaps by incorporating clear specifications and establishing enforcement mechanisms. In any case, institutional officials charged with monitoring federal regulations and compliance issues will need to be included in this process.

3. *Other activities that can be pursued by the FDP*.
    - Develop a clearinghouse of best practices for reducing administrative burden among research institutions, as well as among agencies. The data collected in this report's survey can be a start toward identifying such best practices.
    - Repeat this faculty administrative burden survey periodically (e.g., every 5-8 years) to measure trends, assess improvements, and identify new challenges.

The FDP may want to encourage those institutions that manage burden well to model their best practices. It will be important to keep in mind, however, that there are many reasons why variation exists in the support available to academic researchers across institutions. Each one has its own sponsored programs history, level of competence in departments, and expectations at the central office level. Faculty members who primarily teach often have less experience with federal grants management and little or no clerical support, which means they need much more support. Often the level of support available boils down to how much any given administration is willing to commit in the way of human resources, at what level, and within what type of organizational structure. Similarly, the manner in which institutions implement regulations can present varying pictures to faculty on different campuses.

This preliminary study was conceptualized and implemented by a small committee of FDP faculty with limited financial resources. While it provides valuable information on which to base refinements in grant-administration regulations and procedures, additional research is needed to further explore the issues and themes identified.

For example, this report's findings can be used to inform study of faculty research burden and assistance at emerging research institutions (ERIs), which were not well represented in the study. Given that faculty working at ERIs are likely to have less access to administrative support than faculty employed by more research-intensive institutions, an investigation of this sort would offer a logical extension of the project. Another example of further study would be a more thorough understanding of faculty with administrative roles; given the levels of burden reported here, such understanding is greatly needed.

Follow-on studies could also be designed to target faculty members conducting research in a select group of disciplinary areas; or to extend our knowledge of academic researchers off the tenure track (e.g., part-timers, instructors, lecturers, adjunct faculty), as well as those with non-faculty appointments (such as research scientists), who are interested in furthering their research careers. And given concerns regarding the retention of women and underrepresented minorities in science and engineering, it could prove useful to consider additional measures aimed at reducing the grant-administration burdens that directly affect these groups of researchers.

Finally, it is important to note that, regardless of which alternatives are explored, university and agency cooperation will be essential to improving the environment for federally funded research.

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	Number	Percentage
All Institutions	6081	100.0
Institutional Control		
Public	4330	71.2
Private	1727	28.4
Other	24	.4
Carnegie Classification		
Comprehensive Doc w/Med	4293	70.6
Comprehensive Doc w/o Med	913	15.0
Doctoral – Focused	321	5.3
Medical	511	8.4
Post-Baccalaureate	41	.7
Not indicated	2	.0
Institutional Funding		
Less than $10M	339	5.6
$10M - $25M	105	1.7
$25M - $50M	6	.1
$50M - $75M	114	1.9
$75M - $100M	89	1.5
$100M - $150M	721	11.9
$150M - $200M	596	9.8
Over $200M	4078	67.1
Not indicated	33	.5
Disciplinary Affiliation		
Agriculture	269	4.4
Biological or Life Sciences	1992	32.8
Computer Sciences	164	2.7
Education	139	2.3
Engineering	618	10.2
Health Sciences	897	14.8
Mathematics	164	2.7
Physical Sciences	733	12.1
Psychology	264	4.3
Social Sciences	334	5.5
Other	507	8.3
Administrative Roles		
Yes[1]	2174	35.8
No	3907	64.2
Principal Activity		
Clinical	170	2.8
Research	4326	71.2
Instructional	1067	17.6
Other	518	8.4

[1] Associate deans (N=99), department chairs (N=332), center directors (N=715), and various other faculty administrators (N=1028) including assistant deans, clinic or program administrators, department administrators, academic coordinators or administrators, research coordinators or administrators, center administrators (various), laboratory administrators, advisors, and project managers/administrators.

Table 2. Percentage Distribution of Faculty Respondents, by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Number	Percentage of Analysis Sample
Academic Rank		
Full Professor	3260	53.6
Associate Professor	1460	24.0
Assistant Professor	1361	22.4
Tenure Status		
Tenured	4063	66.8
On tenure track, but not tenured	1311	21.6
Not on tenure track	366	6.0
No tenure system for my faculty status	249	4.1
No tenure system at this institution	88	1.4
Not indicated	4	.1
Race/Ethnicity		
American Indian/Alaskan Native	28	.5
Asian/Pacific Islander	556	9.1
Black non-Hispanic	64	1.1
Hispanic	141	2.3
White non-Hispanic	4690	77.1
Other	83	1.4
Not indicated	333	8.5
Gender		
Male	4140	68.1
Female	1532	25.2
Not indicated	409	6.7

Table 3. Distribution of Faculty Respondents by Sources of Federal Research-Grant Funding

		Number of Respondents Funded Per Federal Agency
DHS	Department of Homeland Security	15
DOC	Department of State	115
DOD	Department of Defense	656
DOE	Department of Energy	477
DOI	Department of the Interior	117
DOJ	Department of Justice	25
DOS	Department of State	47
DOT	Department of Transportation	63
ED	Department of Education	172
EPA	Environmental Protection Agency	184
HHS	Department of Health and Human Services	462
HUD	Department of Housing and Urban Development	6
IMLS	Institute of Museum and Library Services	11
NASA	National Aeronautics and Space Administration	337
NEA	National Endowment for the Arts	8
NEH	National Endowment for the Humanities	24
NIH	National Institutes of Health	3010
NSF	National Science Foundation	1921
USDA	Department of Agriculture	512
VA	Department of Veterans' Affairs	74
Other	Various agencies	271

Note: Many faculty members reported receiving grant funding from more than one federal agency.

Table 4. Average Number of Federal Research Grants Received, by PI or Co-PI Status, Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	PI Status	Co-PI Status
All Institutions	1.71	.95
Institutional Control	NS	NS
Public	1.69	.93
Private	1.75	.98
Carnegie Classification	**	NS
Comprehensive Doc w/Med	1.74	.96
Comprehensive Doc w/o Med	1.63	.85
Doctoral – Focused	1.82	.96
Medical	1.53	1.03
Institution Funding	***	*
Less than $10 - $100M	1.55	.83
$100M - $150M	1.61	.91
$150M - $200M	2.03	1.07
Above $200M	1.70	.96
Disciplinary Affiliation	***	***
Agriculture	1.84	1.06
Biological or Life Sciences	1.75	.84
Computer Sciences	1.77	1.04
Education	1.34	.63
Engineering	2.07	1.03
Health Sciences	1.49	1.19
Mathematics	1.33	.66
Physical Sciences	2.03	.93
Psychology	1.50	.91
Social Sciences	1.36	.86
Other	1.49	1.05
Administrative Roles	***	***
Yes	1.93	1.05
No	1.59	.89
Principal Activity	***	***
Clinical	.97	1.20
Research	1.79	.99
Instructional	1.54	.78
Other	1.63	.84

***p<.001, **p<.01, *p<.05, NS=not statistically significant (notation reflects statistical difference among categories)

Table 5. Average Number of Federal Research Grants Received, by PI or Co-PI Status, Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	PI Status	Co-PI Status
Academic Rank	***	***
Full Professor	1.95	1.00
Associate Professor	1.54	.96
Assistant Professor	1.31	.81
Tenure Status	***	***
Tenured	1.86	.95
On tenure track, but not tenured	1.40	.82
Not on tenure track	1.25	1.17
No tenure system for my faculty status	1.55	1.19
Race/Ethnicity	NS	***
Underrepresented Minority[1]	1.49	1.15
Asian/Pacific Islander	1.72	.94
White non-Hispanic	1.72	.93
Gender	***	NS
Male	1.79	.96
Female	1.51	.90

***p<.001, NS=not statistically significant

[1] American Indian/Alaskan Native, Black non-Hispanic, Hispanic, Other.

Table 6. Average and Median Total Direct-Cost Funding (TDC) from Federal Research Grants Received, by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	TDC Funding from Federal Grants (PI)		
	Median	Mean	SD
All Institutions	$213,000	$434,753	$1,387,627
Institution control		NS	
Public	$200,000	$411,782	$1,480,205
Private	$250,000	$488,472	$1,124,544
Carnegie Classification		NS	
Comprehensive Doc w/Med	$225,000	$460,181	$1,382,471
Comprehensive Doc w/o Med	$175,000	$367,459	$1,905,439
Doctoral – Focused	$218,000	$376,997	$515,646
Medical	$250,000	$393,267	$436,265
Institution Funding		NS	
Less than $10 - $100M	$200,000	$369,088	$715,126
$100M - $150M	$200,000	$364,252	$535,982
$150M - $200M	$225,000	$477,583	$1,285,638
Above $200M	$220,000	$451,931	$1,249,206
Disciplinary Affiliation		*	
Agriculture	$100,000	$244,453	$493,343
Biological or Life Sciences	$250,000	$429,213	$955,954
Computer Sciences	$200,000	$306,528	$416,795
Education	$212,000	$444,119	$544,134
Engineering	$200,000	$464,458	$2,303,585
Health Sciences	$295,000	$541,267	1,275,971
Mathematics	$61,000	$236,183	$753,227
Physical Sciences	$175,000	$535,391	$2,416,080
Psychology	$250,000	$446,535	$905,712
Social Sciences	$101,266	$355,185	$754,943
Other	$176,027	$332,986	$651,088
Administrative Roles		***	
Yes	$295,000	$638,508	$2,005,519
No	$200,000	$321,027	$848,543
Principal Activity		***	
Clinical	$200,000	$278,015	$344,223
Research	$250,000	$490,790	$1,597,646
Instructional	$149,649	$242,977	$323,246
Other	$180,000	$379,136	$723,355

***p<.001, *p<.05, NS=not statistically significant

Table 7. Average and Median Total Direct-Cost Funding (TDC) from Federal Research Grants Received, by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	TDC Funding from Federal Grants (PI)		
	Median	Mean	SD
Academic Rank		***	
Full Professor	$260,000	$560,320	$1,821,722
Associate Professor	$200,000	$337,543	$515,432
Assistant Professor	$150,000	$224,804	$358,665
Tenure Status		***	
Tenured	$250,000	$484,696	$1,400,321
On tenure track, but not tenured	$157,000	$248,698	$382,038
Not on tenure track	$200,000	$381,535	$756,853
No tenure system for my faculty status	$225,000	$677,578	$3,756,124
Race/Ethnicity		*	
Underrepresented Minority[1]	$160,000	$320,738	$527,623
Asian/Pacific Islander	$200,000	$314,229	$544,578
White non-Hispanic	$225,000	$462,298	$1,546,453
Gender		NS	
Male	$225,000	$457,888	$1,537,695
Female	$200,000	$386,903	$1,028,925

***p<.001, *p<.05, NS=not statistically significant

[1] American Indian/Alaskan Native, Black non-Hispanic, Hispanic, Other.

Table 8. Average Distribution of Faculty Respondents' Time Allocations, by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	Percentage of Time Spent				
	Teaching Activities	Research Activities	Professional Service - Research	Other Service	Additional Activities
All Institutions	19.7	57.9	9.1	10.5	2.8
Institutional Control	***	***	NS	***	***
Public	21.8	55.9	9.2	10.1	3.2
Private	14.7	62.9	9.0	11.6	1.9
Carnegie Classification	***	***	NS	***	NS
Comprehensive Doc w/Med	19.0	58.7	9.2	10.6	2.7
Comprehensive Doc w/o Med	25.6	53.0	9.4	8.9	3.2
Doctoral – Focused	27.0	51.7	9.0	9.1	3.3
Medical	9.4	65.6	8.4	13.6	3.1
Institution Funding	***	NS	NS	***	NS
Less than $10 - $100M	18.9	57.3	9.1	11.5	3.3
$100M - $150M	21.0	57.4	8.9	9.9	3.0
$150M - $200M	21.3	57.7	9.7	8.7	2.8
Above $200M	19.3	58.2	9.1	10.7	2.8
Disciplinary Affiliation	***	***	***	***	***
Agriculture	19.2	51.7	8.7	9.1	11.7
Biological or Life Sciences	14.5	65.3	9.5	9.2	1.7
Computer Sciences	26.5	53.0	10.2	9.0	1.3
Education	28.6	44.3	10.0	12.7	4.6
Engineering	27.9	52.2	9.2	8.7	2.0
Health Sciences	11.4	60.3	8.2	16.9	3.4
Mathematics	30.8	50.4	9.2	8.1	1.9
Other	24.1	53.2	8.7	10.2	4.2
Physical Sciences	27.3	51.9	9.1	9.5	2.1
Psychology	16.8	61.8	9.8	9.9	1.4
Social Sciences	24.4	52.4	9.0	10.2	3.8
Administrative Roles	***	***	***	***	***
Yes	16.8	52.4	9.8	15.7	5.4
No	21.3	61.0	8.8	7.6	1.4
Principal Activity	***	***	NS	***	***
Clinical	6.3	33.4	8.4	48.8	3.2
Research	16.3	64.9	9.2	8.2	1.5
Instructional	37.1	42.9	8.9	9.5	1.7
Other	16.6	38.9	9.3	19.4	16.1

***p<.001, *p<.05, NS=not statistically significant

Table 9. Average Distribution of Faculty Respondents, by Time Allocation, Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Percentage of Time Spent				
	Teaching Activities	Research Activities	Professional Service - Research	Other Service	Additional Activities
Academic Rank	NS	***	***	***	***
Full Professor	19.5	55.8	10.0	11.1	3.7
Associate Professor	19.8	57.7	9.3	11.2	2.3
Assistant Professor	19.9	63.3	7.0	8.4	1.4
Tenure Status	***	***	***	***	***
Tenured	21.3	55.0	9.9	10.7	3.3
On tenure track, but not tenured	21.3	61.4	7.6	8.3	1.4
Not on tenure track	8.5	67.6	6.9	13.9	3.2
No tenure system for my faculty status	7.4	68.9	8.3	12.4	3.1
Race/Ethnicity	**	***	NS	***	***
Underrepresented Minority[1]	21.8	56.2	9.1	10.0	3.2
Asian/Pacific Islander	21.2	61.4	9.0	7.3	1.1
White non-Hispanic	19.4	57.6	9.2	11.0	2.9
Gender	NS	**	NS	*	NS
Male	19.9	57.4	9.2	10.8	2.8
Female	19.4	59.2	9.0	9.9	2.8

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] American Indian/Alaskan Native, Black non-Hispanic, Hispanic, Other.

Table 10. Average Distribution of Faculty Respondents' Research Time Spent on Federally Funded Grant Research, by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	Percentage of Total Research Time Spent on Federally Funded Grant Research	Percentage of Time Spent on Federally Funded Grant Research Activities		
		Active Research	Pre-Award Activities	Post-Award Activities
All Institutions	65.1	57.2	22.4	19.3
Carnegie Classification	***	*	**	*
Comprehensive Doc w/Med	65.9	56.9	22.4	19.1
Comprehensive Doc w/o Med	60.9	58.2	21.1	19.2
Doctoral – Focused	62.6	55.5	21.7	21.7
Medical	66.9	54.8	24.4	18.9
Institutional Control	***	***	NS	***
Public	63.2	56.4	22.4	20.1
Private	69.8	59.1	22.3	17.6
Institution Funding	**	**	NS	***
Less than $10 - $100M	61.2	54.6	22.9	21.2
$100M - $150M	64.2	56.1	22.8	19.6
$150M - $200M	64.5	56.6	22.6	20.3
Above $200M	65.9	57.9	22.2	18.9
Disciplinary Affiliation	***	***	***	***
Agriculture	44.0	49.8	25.5	23.9
Biological/ Life Sciences	71.5	57.3	23.5	18.3
Computer Sciences	72.1	63.1	20.2	14.8
Education	52.2	51.8	18.1	28.6
Engineering	58.9	50.9	25.9	21.8
Health Sciences	63.7	55.0	22.4	21.0
Mathematics	65.8	78.5	12.1	8.8
Physical Sciences	73.3	60.6	21.3	17.5
Psychology	66.5	58.1	20.2	19.9
Social Sciences	52.4	63.3	17.9	18.3
Other	57.4	55.7	22.9	20.2
Administrative Roles	***	***	NS	***
Yes	61.5	54.6	22.6	21.4
No	67.1	58.7	22.3	18.2
Principal Activity	***	***	**	***
Clinical	38.0	52.7	23.9	21.4
Research	69.4	57.9	22.6	18.5
Instructional	57.5	57.8	20.8	20.2
Other	52.8	51.5	23.3	23.1

***p<.001, **p<.01, NS=not statistically significant

Table 11. Percentage Distribution of Faculty Respondents' Research Time Spent on Federally Funded Grant Research, by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Percentage of Research Time Spent on Federally Funded Grant Research	Percentage of Time Spent on Federally Funded Grant Research Activities		
		Active Research	Pre-Award Activities	Post-Award Activities
Academic Rank	***	***	***	*
Full Professor	66.7	58.1	21.5	19.2
Associate Professor	63.0	56.0	22.7	20.0
Assistant Professor	63.5	56.2	24.4	18.7
Tenure Status	***	NS	***	NS
Tenured	65.5	57.6	21.7	19.5
On tenure track, but not tenured	62.5	56.0	24.6	18.6
Not on tenure track	65.5	58.1	21.9	19.4
No tenure system for my faculty status	71.2	56.7	22.4	19.7
Race/Ethnicity	***	***	NS	***
Underrepresented Minority[1]	57.8	52.3	23.5	24.3
Asian/Pacific Islander	62.3	58.9	23.9	17.2
White non-Hispanic	66.0	57.8	22.4	19.7
Gender	NS	***	*	**
Male	65.3	58.4	22.3	19.2
Female	65.2	55.9	23.4	20.6

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] American Indian/Alaskan Native, Black non-Hispanic, Hispanic, Other.

Table 12. Average Distribution of Faculty Respondents' Administrative Burden[1]

Administrative Task	Number of Responses	Mean
Grant Progress-Report Submissions	5790	3.32
Personnel Hiring	5658	2.92
Project-Revenue Management	5705	2.89
Equipment and Supply Purchases	5356	2.59
IRB Protocols and Training	4285	2.57
Training Personnel and Students	4153	2.53
Personnel Evaluations	5624	2.51
Time and Effort Reporting	5662	2.45
Safety Planning, Training, Monitoring	5149	2.43
Subcontracting and Collaborations	5375	2.40
IRB-Compliance Issues	4266	2.35
Cost-Accounting Issues	5565	2.31
Spending Authority Oversight	5489	2.24
Budget Transfers	5526	2.24
IACUC Protocols and Training	2210	2.20
HIPAA Compliance	4136	2.08
Payroll Issues	5532	2.06
IACUC-Compliance Issues	2208	2.04
Chemical-Inventory Management	4909	2.00
Laboratory-Security Oversight	5023	1.96
Cost-Sharing Agreements	5273	1.83
Conflict of Interest Monitoring	5630	1.80
Intellectual-Property Rights Apps.	5286	1.70
Patent/Copyright Applications	5158	1.46

[1] Burden Coded: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

Table 13. Average Distribution of Faculty Respondents' Administrative Burden – Excludes Respondents Who Reported Task Took No Time Away from Active Research[1]

Administrative Task	N	Mean	Percent Reporting Task Takes "Moderate Amount" or "Great Deal of Time" Away from Active Research	Number of Faculty Affected
IRB Protocols and Training	2703	3.48	48.6	1325
IACUC Protocols and Training	1883	3.47	49.0	923
Training Personnel and Students	2695	3.36	44.2	1186
Grant Progress-Report Submissions	5734	3.34	42.1	2408
IRB-Compliance Issues	2538	3.26	39.3	990
IACUC-Compliance Issues	1819	3.22	37.9	691
Personnel Hiring	5237	3.08	30.5	1624
Project-Revenue Management	5368	3.01	27.9	1503
HIPAA Compliance	2243	2.99	29.7	673
Subcontracting and Collaborations	3931	2.91	25.5	1022
Safety planning and Monitoring	4017	2.83	21.0	840
Equipment and Supply Purchases	4712	2.81	19.8	942
Cost-Accounting Issues	4208	2.74	18.6	800
Chemical-Inventory Management	2882	2.71	16.8	490
Personnel Evaluations	4960	2.72	15.8	794
Spending-Authority Oversight	4000	2.70	17.0	680
Time and Effort Reporting	4884	2.68	16.0	781
Budget Transfers	4104	2.67	15.7	657
Payroll Issues	3685	2.59	13.6	516
Cost-Sharing Agreements	2776	2.58	13.1	361
Laboratory Security Oversight	3104	2.55	11.5	372
Intellectual-Property Rights Applications.	2471	2.49	10.2	247
Patent/Copyright Applications	1622	2.47	9.2	146
Conflict-of-Interest Monitoring	3389	2.33	6.0	203

[1] Burden Coded: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal. This table only includes those who indicated that the task took at least "a little" time away from their active research (i.e. respondents who reported "none" for a particular task were excluded from the analysis).

Table 14. Average Distribution of Faculty Respondents' Administrative Burden[1] by Selected Funding Agencies

	DOC (N=115)	DOD (N=656)	DOE (N=477)	DOI (N=117)	ED (N=172)	EPA (N=184)
Grant Progress-Report Submissions	3.51	3.62	3.62	3.43	3.54	3.48
Conflict-of-Interest Monitoring	1.84	1.83	1.73	1.75	1.82	1.92
Patent/Copyright Applications	1.33	1.78	1.61	1.24	1.25	1.48
Intellectual-Property Rights Applications	1.48	1.94	1.68	1.44	1.48	1.64
Safety Planning, Training, Monitoring	2.41	2.39	2.45	2.35	1.82	2.56
Chemical-Inventory Management	2.00	1.89	1.96	1.87	1.28	2.06
Laboratory-Security Oversight	2.00	2.00	2.01	1.81	1.55	2.08
Equipment and Supply Purchases	2.19	2.84	2.84	2.88	2.39	2.75
Personnel Hiring	3.11	3.01	2.97	3.16	3.17	3.01
Time and Effort Reporting	2.36	2.55	2.49	2.58	2.68	2.60
Personnel Evaluations	2.63	2.54	2.49	2.60	2.64	2.61
Payroll Issues	1.86	2.20	2.16	2.56	2.42	2.28
Budget Transfers	1.63	2.44	2.39	2.65	2.57	2.65
Cost-Accounting Issues	2.44	2.52	2.40	2.76	2.62	2.54
Cost-Sharing Agreements	1.79	2.01	2.06	2.30	2.26	2.25
Project-Revenue Management	1.56	3.17	3.07	3.43	3.23	3.08
Spending-Authority Oversight	1.33	2.45	2.32	2.51	2.68	2.45
Subcontracting and Collaborations	2.82	2.66	2.49	2.80	2.90	2.92
IACUC Protocols and Training	2.96	2.00	1.27	1.92	1.11	1.96
IACUC Compliance Issues	2.64	1.88	1.23	1.79	1.15	1.81
Training Personnel and Students	2.42	2.47	2.16	2.46	2.01	2.44
IRB Protocols and Training	2.44	2.19	1.32	1.58	3.00	2.22
IRB-Compliance Issues	2.54	2.01	1.31	1.47	2.66	1.95
HIPAA Compliance	2.50	1.78	1.23	1.35	1.99	1.72

[1] Burden Coded: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

Table 14 (continued). Average Distribution of Faculty Respondents' Administrative Burden[1] by Selected Funding Agencies

	HHS (N=462)	NASA (N=337)	NIH (N=3010)	NSF (N=1921)	USDA (N=512)	Other (N=271)
Grant Progress-Report Submissions	3.38	3.40	3.27	3.28	3.50	3.63
Conflict-of-Interest Monitoring	1.90	1.75	1.86	1.64	2.03	1.97
Patent/Copyright Applications	1.35	1.47	1.51	1.45	1.49	1.46
Intellectual-Property Rights Applications	1.62	1.57	1.83	1.57	1.74	1.75
Safety Planning, Training, Monitoring	2.29	2.16	2.64	2.18	2.57	2.39
Chemical-Inventory Management	1.78	1.72	2.23	1.77	2.20	1.82
Laboratory-Security Oversight	1.79	1.82	2.10	1.79	2.13	1.90
Equipment and Supply Purchases	2.23	2.72	2.59	2.65	2.74	2.43
Personnel Hiring	3.08	2.79	2.99	2.79	3.17	2.93
Time and Effort Reporting	2.60	2.36	2.46	2.33	2.74	2.66
Personnel Evaluations	2.68	2.45	2.62	2.35	2.69	2.31
Payroll Issues	2.13	2.09	2.04	2.05	2.17	2.23
Budget Transfers	2.41	2.40	2.18	2.22	2.54	2.39
Cost-Accounting Issues	2.43	2.40	2.29	2.28	2.55	2.44
Cost-Sharing Agreements	1.89	2.01	1.75	1.82	2.17	2.23
Project-Revenue Management	2.99	2.99	2.86	2.86	3.03	3.06
Spending-Authority Oversight	2.41	2.28	2.25	2.13	2.43	2.43
Subcontracting and Collaborations	2.65	2.50	2.38	2.31	2.64	2.70
IACUC Protocols and Training	2.04	1.51	2.72	1.45	2.07	2.07
IACUC Compliance Issues	1.92	1.46	2.48	1.39	1.92	1.96
Training Personnel and Students	2.33	2.06	2.81	2.20	2.53	2.39
IRB Protocols and Training	3.30	1.70	2.99	1.84	2.07	3.00
IRB-Compliance Issues	2.94	1.61	2.73	1.69	1.91	2.75
HIPAA Compliance	2.75	1.42	2.49	1.31	1.49	2.28

[1] Burden Coded: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

Table 15. Average Distribution of Faculty Respondents' Administrative Burden[1] by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	Grant Progress-Report Submissions	Conflict-of-Interest Monitoring	Patent/ Copyright Applications	Intellectual-Property Rights Applications
All Institutions	3.32	1.80	1.46	1.70
Institutional Control	NS	***	*	**
Public	3.32	1.77	1.46	1.68
Private	3.31	1.86	1.48	1.73
Carnegie Classification	NS	***	**	***
Comprehensive Doc w/Med	3.32	1.82	1.46	1.70
Comprehensive Doc w/o Med	3.35	1.60	1.41	1.60
Doctoral – Focused	3.41	1.73	1.50	1.68
Medical	3.39	2.02	1.54	1.83
Institutional Funding	*	NS	NS	NS
Less than $10 - $100M	3.34	1.75	1.42	1.63
$100M - $150M	3.37	1.74	1.48	1.67
$150M - $200M	3.40	1.82	1.45	1.67
Above $200M	3.29	1.81	1.47	1.72
Disciplinary Affiliation	***	***	***	***
Agriculture	3.62	2.15	1.50	1.80
Biological/Life Sciences	3.24	1.83	1.56	1.91
Computer Sciences	3.35	1.61	1.48	1.60
Education	3.33	1.65	1.23	1.41
Engineering	3.58	1.81	3.58	1.81
Health Sciences	3.33	2.02	1.40	1.72
Mathematics	2.94	1.46	1.16	1.20
Physical Sciences	3.34	1.55	1.43	1.44
Psychology	3.23	1.68	1.10	1.24
Social Sciences	3.12	1.63	1.07	1.23
Other	3.38	1.81	1.26	1.50
Administrative Roles	***	***	**	**
Yes	3.41	1.91	1.51	1.75
No	3.27	1.74	1.44	1.66
Principal Activity	**	***	***	***
Clinical	3.25	2.08	1.43	1.82
Research	3.30	1.80	1.49	1.74
Instructional	3.37	1.69	1.37	1.51
Other	3.38	1.92	1.45	1.65

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Burden Coded: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

Table 16. Average Distribution of Faculty Respondents' Administrative Burden[1] by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Grant Progress-Report Submissions	Conflict-of-Interest Monitoring	Patent/ Copyright Applications	Intellectual-Property Rights Applications
Academic Rank	*	***	*	NS
Full Professor	3.34	1.84	1.48	1.70
Associate Professor	3.35	1.79	1.45	1.72
Assistant Professor	3.23	1.69	1.43	1.67
Tenure Status	NS	**	NS	NS
Tenured	3.34	1.81	1.47	1.69
On tenure track, but not tenured	3.25	1.73	1.46	1.72
Not on tenure track	3.27	1.81	1.37	1.60
No tenure system for my faculty status	3.32	1.82	1.39	1.64
Race/Ethnicity	***	NS	***	***
Underrepresented Minority[2]	3.51	1.79	1.44	1.63
Asian/Pacific Islander	3.42	1.87	1.71	1.86
White non-Hispanic	3.29	1.78	1.42	1.66
Gender	NS	*	***	NS
Male	3.31	1.81	1.50	1.70
Female	3.32	1.77	1.35	1.66

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Coded: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

[2] American Indian/Alaskan Native, Black non-Hispanic, Hispanic.

Table 17. Average Distribution of Faculty Respondents' Administrative Burden[1] by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	Safety Planning, Training, Monitoring	Chemical-Inventory Management	Laboratory-Security Oversight	Equipment and Supply Purchases
All Institutions	2.43	2.00	1.96	2.59
Institutional Control	**	*	NS	***
Public	2.41	1.99	1.96	2.64
Private	2.47	2.03	1.95	2.47
Carnegie Classification	***	***	***	***
Comprehensive Doc w/Med	2.44	2.01	1.95	2.56
Comprehensive Doc w/o Med	2.21	1.81	1.86	2.66
Doctoral – Focused	2.41	2.05	1.95	2.75
Medical	2.66	2.24	2.13	2.59
Institutional Funding	NS	NS	NS	*
Less than $10 - $100M	2.44	2.00	1.96	2.65
$100M - $150M	2.53	2.12	2.04	2.70
$150M - $200M	2.48	2.06	2.03	2.65
Above $200M	2.40	1.98	1.93	2.56
Disciplinary Affiliation	***	***	***	***
Agriculture	2.56	2.19	2.19	2.75
Biological/Life Sciences	2.79	2.52	2.25	2.79
Computer Sciences	1.37	1.00	1.32	2.46
Education	1.57	1.08	1.20	2.08
Engineering	1.87	1.98	2.47	1.88
Health Sciences	2.49	1.92	1.91	2.30
Mathematics	1.04	1.00	1.00	1.71
Physical Sciences	2.21	1.80	1.84	2.75
Psychology	2.34	1.22	1.69	2.37
Social Sciences	1.55	1.04	1.19	1.82
Other	2.21	1.68	1.72	2.44
Administrative Roles	*	NS	NS	*
Yes	2.40	1.97	1.96	2.53
No	2.44	2.02	1.95	2.62
Principal Activity	***	***	***	***
Clinical	2.54	1.97	1.89	2.26
Research	2.49	2.09	2.01	2.61
Instructional	2.21	1.73	1.80	2.60
Other	2.22	1.81	1.83	2.48

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Burden Coded: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

Table 18. Average Distribution of Faculty Respondents' Administrative Burden[1] by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Safety Planning, Training, Monitoring	Chemical-Inventory Management	Laboratory-Security Oversight	Equipment and Supply Purchases
Academic Rank	***	*	NS	***
Full Professor	2.37	2.00	1.95	2.55
Associate Professor	2.46	2.03	1.99	2.60
Assistant Professor	2.52	1.98	1.93	2.70
Tenure Status	***	NS	NS	***
Tenured	2.39	2.01	1.97	2.59
On tenure track, but not tenured	2.52	2.00	1.95	2.71
Not on tenure track	2.46	1.89	1.84	2.32
No tenure system for my faculty status	2.41	1.85	1.85	2.40
Race/Ethnicity	***	***	***	***
Underrepresented Minority[2]	2.63	2.13	2.15	2.72
Asian/Pacific Islander	2.76	2.35	2.25	2.83
White non-Hispanic	2.38	1.96	1.91	2.56
Gender	***	***	***	NS
Male	2.40	1.99	1.94	2.60
Female	2.49	2.04	1.99	2.56

***p<.001, *p<.05, NS=not statistically significant

[1] Burden Coding: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

[2] American Indian/Alaskan Native, Black non-Hispanic, Hispanic.

Table 19. Average Distribution of Faculty Respondents' Administrative Burden[1] by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	Personnel Hiring	Time and Effort Reporting	Personnel Evaluations	Payroll Issues
All Institutions	2.92	2.45	2.51	2.06
Institutional Control	NS	***	NS	***
Public	2.94	2.48	2.52	2.11
Private	2.88	2.37	2.50	1.94
Carnegie Classification	**	NS	***	NS
Comprehensive Doc w/Med	2.93	2.44	2.51	2.04
Comprehensive Doc w/o Med	2.80	2.44	2.42	2.10
Doctoral – Focused	3.04	2.49	2.55	2.19
Medical	2.99	2.53	2.69	2.03
Institutional Funding	NS	*	NS	***
Less than $10 - $100M	2.99	2.43	2.56	2.20
$100M - $150M	2.98	2.52	2.53	2.09
$150M - $200M	2.97	2.57	2.59	2.19
Above $200M	2.90	2.43	2.49	2.01
Disciplinary Affiliation	***	***	***	***
Agriculture	3.12	2.89	2.72	2.18
Biological/Life Sciences	3.05	2.44	2.61	1.98
Computer Sciences	2.46	2.20	2.12	1.96
Education	3.09	2.58	2.62	2.44
Engineering	2.03	2.88	2.93	2.63
Health Sciences	3.04	2.58	2.65	2.11
Mathematics	1.98	1.80	1.67	1.54
Physical Sciences	2.74	2.25	2.36	1.99
Psychology	2.97	2.40	2.53	2.13
Social Sciences	2.60	2.22	2.20	1.86
Other	2.88	2.53	2.52	2.11
Administrative Roles	***	***	***	***
Yes	3.10	2.60	2.73	2.22
No	2.82	2.36	2.39	1.97
Principal Activity	***	***	***	NS
Clinical	2.94	2.61	2.67	2.09
Research	2.96	2.44	2.53	2.04
Instructional	2.74	2.40	2.35	2.09
Other	2.99	2.62	2.64	2.16

***p<.001, **p<.01, NS=not statistically significant

[1] Burden Coded: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

Table 20. Average Distribution of Faculty Respondents' Administrative Burden[1] by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Personnel Hiring	Time and Effort Reporting	Personnel Evaluations	Payroll Issues
Academic Rank	**	NS	***	NS
Full Professor	2.91	2.47	2.55	2.07
Associate Professor	2.98	2.49	2.56	2.08
Assistant Professor	2.88	2.37	2.37	2.00
Tenure Status	**	***	***	**
Tenured	2.93	2.48	2.54	2.09
On tenure track, but not tenured	2.93	2.38	2.40	2.02
Not on tenure track	2.76	2.40	2.51	1.85
No tenure system for my faculty status	2.81	2.41	2.52	2.00
Race/Ethnicity	***	***	***	***
Underrepresented Minority[2]	3.02	2.65	2.60	2.29
Asian/Pacific Islander	3.12	2.71	2.69	2.26
White non-Hispanic	2.89	2.41	2.49	2.02
Gender	**	*	**	NS
Male	2.89	2.43	2.49	2.05
Female	3.00	2.51	2.59	2.08

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Burden Coding: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

[2] American Indian/Alaskan Native, Black non-Hispanic, Hispanic.

Table 21. Average Distribution of Faculty Respondents' Administrative Burden[1] by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Budget Transfers	Cost-Accounting Issues	Cost-Sharing Agreements	Project-Revenue Management
All Institutions	2.24	2.31	1.83	2.89
Institutional Control	***	**	***	***
Public	2.28	2.35	1.90	2.93
Private	2.14	2.22	1.66	2.80
Carnegie Classification	*	NS	*	NS
Comprehensive Doc w/Med	2.22	2.29	1.80	2.87
Comprehensive Doc w/o Med	2.28	2.29	1.90	2.89
Doctoral – Focused	2.39	2.50	1.97	3.05
Medical	2.20	2.38	1.86	2.94
Institutional Funding	*	**	***	*
Less than $10 - $100M	2.32	2.35	1.86	2.97
$100M - $150M	2.29	2.41	1.88	3.00
$150M - $200M	2.33	2.44	1.94	2.98
Above $200M	2.21	2.27	1.80	2.85
Disciplinary Affiliation	***	***	***	***
Agriculture	2.59	2.62	2.29	3.04
Biological/Life Sciences	2.14	2.25	1.70	2.83
Computer Sciences	2.08	2.11	1.50	2.74
Education	2.58	2.65	2.11	3.18
Engineering	2.50	2.33	2.48	2.49
Health Sciences	2.29	2.40	1.92	2.93
Mathematics	1.79	1.70	1.35	2.14
Physical Sciences	2.18	2.21	1.81	2.87
Psychology	2.13	2.24	1.53	2.88
Social Sciences	2.13	2.18	1.71	2.75
Other	2.37	2.46	1.96	2.98
Administrative Roles	***	***	***	***
Yes	2.39	2.46	2.04	3.02
No	2.15	2.23	1.71	2.82
Principal Activity	**	NS	***	NS
Clinical	2.33	2.40	2.01	2.77
Research	2.21	2.30	1.78	2.88
Instructional	2.27	2.32	1.88	2.90
Other	2.42	2.38	2.10	2.99

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Burden Coded: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

Table 22. Average Distribution of Faculty Respondents Administrative Burden[1] by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Budget Transfers	Cost-Accounting Issues	Cost-Sharing Agreements	Project-Revenue Management
Academic Rank	***	NS	***	NS
Full Professor	2.27	2.30	1.88	2.90
Associate Professor	2.26	2.37	1.83	2.93
Assistant Professor	2.15	2.27	1.71	2.83
Tenure Status	***	**	***	NS
Tenured	2.28	2.33	1.88	2.91
On tenure track, but not tenured	2.19	2.31	1.74	2.87
Not on tenure track	2.05	2.12	1.70	2.76
No tenure system for my faculty status	2.08	2.30	1.78	2.85
Race/Ethnicity	**	***	***	***
Underrepresented Minority[2]	2.30	2.41	1.94	3.06
Asian/Pacific Islander	2.37	2.47	2.00	3.00
White non-Hispanic	2.21	2.28	1.80	2.87
Gender	**	*	NS	***
Male	2.22	2.29	1.83	2.85
Female	2.30	2.38	1.83	3.01

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Burden Coding: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

[2] American Indian/Alaskan Native, Black non-Hispanic, Hispanic.

Table 23. Average Distribution of Faculty Respondents' Administrative Burden[1] by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	Spending-Authority Oversight	Subcontracting and Collaborations	IACUC Protocols and Training	IACUC-Compliance Issues
All Institutions	2.24	2.40	2.20	2.04
Institutional Control	***	**	***	***
Public	2.28	2.43	2.12	1.99
Private	2.15	2.32	2.38	2.17
Carnegie Classification	*	NS	***	***
Comprehensive Doc w/Med	2.22	2.39	2.23	2.07
Comprehensive Doc w/o Med	2.21	2.38	1.68	1.60
Doctoral – Focused	2.28	2.41	2.05	1.89
Medical	2.38	2.51	2.79	2.56
Institutional Funding	*	NS	NS	NS
Less than $10 - $100M	2.31	2.42	2.21	2.05
$100M - $150M	2.37	2.47	2.25	2.13
$150M - $200M	2.29	2.40	2.22	2.07
Above $200M	2.20	2.38	2.20	2.03
Disciplinary Affiliation	***	***	***	***
Agriculture	2.47	2.67	2.07	1.93
Biological/Life Sciences	2.21	2.22	3.01	2.73
Computer Sciences	1.83	2.26	1.06	1.02
Education	2.54	2.84	1.13	1.13
Engineering	2.20	3.14	2.48	2.62
Health Sciences	2.39	2.60	2.29	2.13
Mathematics	1.57	1.64	1.06	1.06
Physical Sciences	2.11	2.22	1.14	1.14
Psychology	2.07	2.41	1.65	1.57
Social Sciences	2.02	2.46	1.08	1.07
Other	2.32	2.67	1.65	1.60
Administrative Roles	***	***	NS	NS
Yes	2.43	2.61	2.16	2.02
No	2.13	2.28	2.23	2.06
Principal Activity	***	***	***	***
Clinical	2.30	2.42	2.29	2.15
Research	2.22	2.40	2.39	2.20
Instructional	2.22	2.31	1.53	1.45
Other	2.47	2.56	1.76	1.73

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Burden Coded: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

Table 24. Average Distribution of Faculty Respondents' Administrative Burden[1] by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Spending-Authority Oversight	Subcontracting and Collaborations	IACUC Protocols and Training	IACUC-Compliance Issues
Academic Rank	***	***	NS	NS
Full Professor	2.29	2.44	2.14	2.02
Associate Professor	2.26	2.45	2.27	2.10
Assistant Professor	2.08	2.22	2.28	2.06
Tenure Status	***	*	NS	NS
Tenured	2.30	2.42	2.16	2.02
On tenure track, but not tenured	2.12	2.27	2.30	2.08
Not on tenure track	2.09	2.47	2.09	1.96
No tenure system for my faculty status	2.13	2.46	2.17	2.07
Race/Ethnicity	***	NS	*	*
Underrepresented Minority[2]	2.38	2.56	2.09	2.08
Asian/Pacific Islander	2.37	2.42	2.40	2.22
White non-Hispanic	2.21	2.38	2.19	2.03
Gender	***	***	*	NS
Male	2.22	2.33	2.18	2.04
Female	2.30	2.57	2.27	2.06

***p<.001, *p<.05, NS=not statistically significant

[1] Burden Coding: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

[2] American Indian/Alaskan Native, Black non-Hispanic, Hispanic.

Table 25. Average Distribution of Faculty Respondents' Administrative Burden[1] by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	Training Personnel and Students	IRB Protocols and Training	IRB-Compliance Issues	HIPAA Compliance
All Institutions	2.53	2.57	2.35	2.08
Institutional Control	***	***	***	***
Public	2.51	2.45	2.25	1.94
Private	2.58	2.83	2.57	2.38
Carnegie Classification	***	***	***	***
Comprehensive Doc w/Med	2.52	2.61	2.37	2.11
Comprehensive Doc w/o Med	2.30	2.10	1.92	1.54
Doctoral – Focused	2.54	2.25	2.04	1.60
Medical	2.95	3.11	2.92	2.77
Institutional Funding	NS	**	*	***
Less than $10 - $100M	2.63	2.65	2.41	2.22
$100M - $150M	2.63	2.42	2.23	1.95
$150M - $200M	2.57	2.39	2.21	1.85
Above $200M	2.50	2.61	2.38	2.12
Disciplinary Affiliation	***	***	***	***
Agriculture	2.59	1.79	1.75	1.37
Biological/Life Sciences	3.02	2.41	2.23	2.16
Computer Sciences	1.90	1.94	1.70	1.32
Education	2.13	3.06	2.83	1.81
Engineering	1.36	1.33	1.62	1.39
Health Sciences	2.43	2.58	3.28	3.00
Mathematics	1.63	1.19	1.12	1.10
Physical Sciences	1.97	1.26	1.21	1.13
Psychology	2.04	3.69	3.22	2.58
Social Sciences	1.72	3.00	2.63	1.77
Other	2.33	2.61	2.32	2.01
Administrative Roles	NS	***	***	***
Yes	2.53	2.71	2.51	2.22
No	2.53	2.47	2.24	1.99
Principal Activity	***	***	***	***
Clinical	2.37	2.68	3.51	3.27
Research	2.63	2.61	2.38	2.15
Instructional	2.18	2.17	1.96	1.56
Other	2.40	2.49	2.24	1.84

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Burden Coded: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

Table 26. Average Distribution of Faculty Respondents' Administrative Burden[1] by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Training Personnel and Students	IRB Protocols and Training	IRB-Compliance Issues	HIPAA Compliance
Academic Rank	***	***	***	***
Full Professor	2.43	2.40	2.22	1.96
Associate Professor	2.61	2.78	2.54	2.24
Assistant Professor	2.73	2.71	2.42	2.18
Tenure Status	***	***	***	***
Tenured	2.49	2.41	2.23	1.94
On tenure track, but not tenured	2.74	2.70	2.41	2.18
Not on tenure track	2.35	3.11	2.79	2.57
No tenure system for my faculty status	2.47	3.04	2.78	2.55
Race/Ethnicity	***	***	*	NS
Underrepresented Minority[2]	2.76	2.83	2.50	2.12
Asian/Pacific Islander	2.84	2.34	2.18	2.03
White non-Hispanic	2.49	2.58	2.35	2.08
Gender	***	***	***	***
Male	2.50	2.37	2.19	1.96
Female	2.63	3.05	2.72	2.38

***p<.001, *p<.05, NS=not statistically significant

[1] Burden Coding: 1=None, 2=A little, 3=Some, 4=Moderate amount, 5=A great deal.

[2] American Indian/Alaskan Native, Black non-Hispanic, Hispanic.

Table 27. Average Distribution of Faculty Respondents' Administrative Assistance[1] by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	Grant Progress-Report Submissions	Conflict-of-Interest Monitoring	Patent/ Copyright Applications	Intellectual-Property Rights Applications
All Institutions	2.09	1.84	2.17	2.22
Institutional Control	***	NS	*	*
Public	2.05	1.82	2.13	2.18
Private	2.16	1.87	2.26	2.29
Carnegie Classification	***	***	**	*
Comprehensive Doc w/Med	2.10	1.83	2.20	2.24
Comprehensive Doc w/o Med	1.99	1.78	2.02	2.13
Doctoral – Focused	1.94	1.81	2.13	2.13
Medical	2.27	2.02	2.29	2.28
Institutional Funding	NS	NS	NS	NS
Less than $10 - $100M	2.10	1.84	2.07	2.14
$100M - $150M	2.16	1.93	2.16	2.16
$150M - $200M	2.03	1.76	1.99	2.11
Above $200M	2.09	1.83	2.21	2.26
Disciplinary Affiliation	***	***	***	***
Agriculture	1.82	1.67	2.07	2.20
Biological/Life Sciences	2.08	1.83	2.37	2.39
Computer Sciences	1.83	1.64	2.21	2.09
Education	2.46	2.08	1.74	2.00
Engineering	1.94	1.91	1.94	1.91
Health Sciences	2.39	1.96	2.08	2.22
Mathematics	1.84	1.62	1.41	1.39
Physical Sciences	1.86	1.79	2.09	2.09
Psychology	2.67	1.74	1.35	1.43
Social Sciences	2.23	1.78	1.36	1.45
Other	2.14	1.84	1.87	2.03
Administrative Roles	***	***	**	*
Yes	2.25	1.93	2.25	2.30
No	2.00	1.79	2.12	2.17
Principal Activity	***	**	***	***
Clinical	2.35	1.97	2.02	2.14
Research	2.08	1.82	2.22	2.26
Instructional	2.01	1.80	1.93	1.98
Other	2.25	1.98	2.24	2.31

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Assistance Coding: 1=No assistance, 2=Very little assistance, 3=Some assistance, 4=A great deal of assistance, 5=Complete assistance.

Table 28. Average Distribution of Faculty Respondents' Administrative Assistance[1] by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Grant Progress-Report Submissions	Conflict-of-Interest Monitoring	Patent/ Copyright Applications	Intellectual-Property Rights Applications
Academic Rank	*	NS	NS	NS
Full Professor	2.11	1.84	2.20	2.23
Associate Professor	2.08	1.84	2.11	2.15
Assistant Professor	2.04	1.82	2.16	2.25
Tenure Status	***	***	NS	NS
Tenured	2.08	1.84	2.18	2.21
On tenure track, but not tenured	2.03	1.82	2.19	2.29
Not on tenure track	2.32	1.86	1.97	2.08
No tenure system for my faculty status	2.21	1.90	2.03	2.10
Race/Ethnicity	NS	NS	NS	NS
Underrepresented Minority[2]	2.12	1.88	2.04	2.06
Asian/Pacific Islander	2.10	1.94	2.22	2.24
White non-Hispanic	2.10	1.83	2.16	2.22
Gender	*	**	***	NS
Male	2.10	1.86	2.21	2.24
Female	2.07	1.77	2.01	2.15

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Assistance Coding: 1=No assistance, 2=Very little assistance, 3=Some assistance, 4=A great deal of assistance, 5=Complete assistance.

[2] American Indian/Alaskan Native, Black non-Hispanic, Hispanic.

Table 29. Average Distribution of Faculty Respondents' Administrative Assistance[1] by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	Safety Planning, Training, Monitoring	Chemical-Inventory Management	Laboratory-Security Oversight	Equipment and Supply Purchases
All Institutions	2.53	2.45	2.35	2.70
Institutional Control	***	NS	**	NS
Public	2.49	2.41	2.30	2.70
Private	2.63	2.52	2.45	2.70
Carnegie Classification	**	NS	***	***
Comprehensive Doc w/Med	2.56	2.48	2.36	2.73
Comprehensive Doc w/o Med	2.41	2.32	2.21	2.55
Doctoral – Focused	2.43	2.37	2.25	2.48
Medical	2.61	2.51	2.57	2.92
Institutional Funding	*	*	**	NS
Less than $10 - $100M	2.48	2.43	2.32	2.66
$100M - $150M	2.51	2.38	2.32	2.71
$150M - $200M	2.43	2.38	2.13	2.60
Above $200M	2.56	2.47	2.39	2.73
Disciplinary Affiliation	***	***	***	***
Agriculture	2.65	2.50	2.30	2.55
Biological/Life Sciences	2.68	2.59	2.44	2.77
Computer Sciences	1.69	1.11	2.03	2.77
Education	1.72	1.45	1.75	2.66
Engineering	2.50	2.45	2.59	2.47
Health Sciences	2.53	2.41	2.46	2.79
Mathematics	1.24	1.13	1.27	2.11
Physical Sciences	2.51	2.41	2.22	2.66
Psychology	2.14	1.71	2.09	2.78
Social Sciences	1.60	1.31	1.66	2.46
Other	2.40	2.37	2.26	2.65
Administrative Roles	*	*	*	***
Yes	2.61	2.42	2.42	2.82
No	2.49	2.41	2.30	2.64
Principal Activity	***	***	**	***
Clinical	2.56	2.56	2.54	2.67
Research	2.57	2.49	2.37	2.73
Instructional	2.33	2.15	2.13	2.54
Other	2.58	2.55	2.44	2.79

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Assistance Coding: 1=No assistance, 2=Very little assistance, 3=Some assistance, 4=A great deal of assistance, 5=Complete assistance.

Table 30. Average Distribution of Faculty Respondents' Administrative Assistance[1] by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Safety Planning, Training, Monitoring	Chemical-Inventory Management	Laboratory-Security Oversight	Equipment and Supply Purchases
Academic Rank	***	NS	NS	***
Full Professor	2.60	2.50	2.38	2.78
Associate Professor	2.51	2.37	2.30	2.63
Assistant Professor	2.40	2.41	2.30	2.60
Tenure Status	NS	NS	NS	NS
Tenured	2.56	2.46	2.33	2.73
On tenure track, but not tenured	2.48	2.45	2.37	2.63
Not on tenure track	2.50	2.39	2.34	2.70
No tenure system for my faculty status	2.34	2.25	2.33	2.61
Race/Ethnicity	NS	NS	NS	NS
Underrepresented Minority[2]	2.50	2.40	2.39	2.58
Asian/Pacific Islander	2.60	2.47	2.40	2.63
White non-Hispanic	2.53	2.46	2.34	2.72
Gender	NS	NS	NS	*
Male	2.56	2.45	2.36	2.74
Female	2.48	2.46	2.31	2.64

***p<.001, *p<.05, NS=not statistically significant

[1] Assistance Coding: 1=No assistance, 2=Very little assistance, 3=Some assistance, 4=A great deal of assistance, 5=Complete assistance.

[2] American Indian/Alaskan Native, Black non-Hispanic, Hispanic.

Table 31. Average Distribution of Faculty Respondents' Administrative Assistance[1] by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	Personnel Hiring	Time and Effort Reporting	Personnel Evaluations	Payroll Issues
All Institutions	2.87	2.62	1.93	3.72
Institutional Control	*	*	***	*
Public	2.87	2.59	1.90	3.70
Private	2.89	2.71	2.01	3.77
Carnegie Classification	***	***	***	***
Comprehensive Doc w/Med	2.91	2.62	1.95	3.78
Comprehensive Doc w/o Med	2.78	2.50	1.86	3.56
Doctoral – Focused	2.64	2.51	1.72	3.57
Medical	2.92	2.95	2.07	3.74
Institutional Funding	NS	*	**	***
Less than $10 - $100M	2.81	2.52	1.91	3.49
$100M - $150M	2.86	2.67	1.93	3.68
$150M - $200M	2.79	2.48	1.79	3.63
Above $200M	2.90	2.65	1.96	3.78
Disciplinary Affiliation	***	***	***	***
Agriculture	2.83	2.36	1.84	3.61
Biological/Life Sciences	2.89	2.68	1.88	3.85
Computer Sciences	2.99	2.67	1.86	3.90
Education	2.91	2.95	2.29	3.79
Engineering	2.42	2.64	2.87	2.56
Health Sciences	2.95	2.74	2.20	3.70
Mathematics	2.53	2.07	1.70	3.23
Physical Sciences	2.89	2.54	1.76	3.69
Psychology	2.68	2.61	1.87	3.72
Social Sciences	2.88	2.62	1.98	3.63
Other	2.78	2.56	1.96	3.61
Administrative Roles	***	***	***	*
Yes	2.97	2.76	2.10	3.70
No	2.82	2.55	1.84	3.74
Principal Activity	***	NS	***	***
Clinical	2.74	2.45	2.18	3.50
Research	2.89	2.64	1.94	3.77
Instructional	2.78	2.55	1.79	3.57
Other	2.95	2.72	2.79	2.54

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Assistance Coding: 1=No assistance, 2=Very little assistance, 3=Some assistance, 4=A great deal of assistance, 5=Complete assistance.

Table 32. Average Distribution of Faculty Respondents' Administrative Assistance[1] by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Personnel Hiring	Time and Effort Reporting	Personnel Evaluations	Payroll Issues
Academic Rank	***	***	***	***
Full Professor	2.93	2.71	2.00	3.76
Associate Professor	2.82	2.55	1.86	3.70
Assistant Professor	2.79	2.49	1.84	3.66
Tenure Status	NS	*	***	NS
Tenured	2.89	2.64	1.96	3.74
On tenure track, but not tenured	2.89	2.52	1.82	3.69
Not on tenure track	2.87	2.65	2.10	3.70
No tenure system for my faculty status	2.92	2.66	1.84	3.70
Race/Ethnicity	*	***	NS	***
Underrepresented Minority[2]	2.83	2.43	1.84	3.65
Asian/Pacific Islander	2.78	2.49	1.99	3.36
White non-Hispanic	2.89	2.65	1.94	3.78
Gender	***	***	**	*
Male	2.91	2.66	1.96	3.72
Female	2.79	2.54	1.87	3.76

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Assistance Coding: 1=No assistance, 2=Very little assistance, 3=Some assistance, 4=A great deal of assistance, 5=Complete assistance.

[2] American Indian/Alaskan Native, Black non-Hispanic, Hispanic.

Table 33. Average Distribution of Faculty Respondents' Administrative Assistance[1] by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	Budget Transfers	Cost-Accounting Issues	Cost-Sharing Agreements	Project-Revenue Management
All Institutions	3.63	3.56	3.38	3.18
Institutional Control	NS	NS	***	NS
Public	3.61	3.54	3.33	3.17
Private	3.68	3.60	3.50	3.20
Carnegie Classification	**	**	***	**
Comprehensive Doc w/Med	3.68	3.60	3.46	3.21
Comprehensive Doc w/o Med	3.54	3.42	3.08	3.06
Doctoral – Focused	3.43	3.40	3.24	3.05
Medical	3.62	3.58	3.44	3.21
Institutional Funding	***	**	**	***
Less than $10 - $100M	3.46	3.41	3.19	3.04
$100M - $150M	3.60	3.51	3.32	3.20
$150M - $200M	3.50	3.44	3.30	3.06
Above $200M	3.69	3.61	3.44	3.21
Disciplinary Affiliation	***	***	***	***
Agriculture	3.63	3.47	3.31	3.02
Biological/Life Sciences	3.71	3.63	3.52	3.26
Computer Sciences	3.59	3.54	3.36	3.13
Education	3.69	3.61	3.38	3.31
Engineering	1.93	3.60	3.60	3.49
Health Sciences	3.64	3.62	3.52	3.30
Mathematics	3.24	3.22	3.05	3.07
Physical Sciences	3.62	3.54	3.22	3.13
Psychology	3.59	3.46	3.22	3.03
Social Sciences	3.54	3.58	3.44	3.15
Other	3.56	3.44	3.26	3.10
Administrative Roles	NS	NS	***	**
Yes	3.68	3.59	3.40	3.24
No	3.61	3.54	3.37	3.14
Principal Activity	*	**	***	NS
Clinical	3.35	3.33	3.22	3.08
Research	3.65	3.59	3.43	3.19
Instructional	3.56	3.46	3.23	3.09
Other	3.71	3.58	3.36	3.27

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Assistance Coding: 1=No assistance, 2=Very little assistance, 3=Some assistance, 4=A great deal of assistance, 5=Complete assistance.

Table 34. Average Distribution of Faculty Respondents' Administrative Assistance[1] by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Budget Transfers	Cost-Accounting Issues	Cost-Sharing Agreements	Project-Revenue Management
Academic Rank	***	*	NS	***
Full Professor	3.68	3.61	3.41	3.26
Associate Professor	3.61	3.52	3.32	3.10
Assistant Professor	3.55	3.46	3.35	3.08
Tenure Status	NS	NS	**	**
Tenured	3.65	3.58	3.38	3.21
On tenure track, but not tenured	3.58	3.49	3.37	3.07
Not on tenure track	3.63	3.57	3.46	3.21
No tenure system for my faculty status	3.59	3.57	3.33	3.22
Race/Ethnicity	***	***	***	***
Underrepresented Minority[2]	3.59	3.42	3.38	3.18
Asian/Pacific Islander	3.26	3.28	3.00	2.98
White non-Hispanic	3.13	3.05	2.21	2.26
Gender	**	NS	NS	NS
Male	3.64	3.57	3.37	3.20
Female	3.64	3.55	3.44	3.14

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Assistance Coding: 1=No assistance, 2=Very little assistance, 3=Some assistance, 4=A great deal of assistance, 5=Complete assistance.

[2] American Indian/Alaskan Native, Black non-Hispanic, Hispanic.

Table 35. Average Distribution of Faculty Respondents' Administrative Assistance[1] by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	Spending-Authority Oversight	Subcontracting and Collaborations	IACUC Protocols and Training	IACUC-Compliance Issues
All Institutions	3.09	3.01	2.19	2.24
Institutional Control	NS	NS	NS	*
Public	3.07	2.98	2.17	2.21
Private	3.14	3.08	2.23	2.31
Carnegie Classification	***	**	***	***
Comprehensive Doc w/Med	3.12	3.05	2.19	2.25
Comprehensive Doc w/o Med	2.95	2.86	2.14	2.15
Doctoral – Focused	3.03	2.82	2.06	2.17
Medical	3.23	3.07	2.31	2.35
Institutional Funding	NS	NS	NS	NS
Less than $10 - $100M	2.96	2.88	2.15	2.19
$100M - $150M	3.12	2.96	2.18	2.21
$150M - $200M	2.96	2.95	2.25	2.27
Above $200M	3.13	3.04	2.20	2.26
Disciplinary Affiliation	***	***	***	***
Agriculture	3.02	3.07	2.27	2.38
Biological/Life Sciences	3.17	3.04	2.32	2.38
Computer Sciences	3.10	2.90	1.45	1.37
Education	3.12	3.10	1.38	1.38
Engineering	3.20	3.05	2.94	2.86
Health Sciences	3.19	3.17	2.24	2.25
Mathematics	2.74	2.58	1.08	1.08
Physical Sciences	3.05	2.86	1.72	1.74
Psychology	2.97	2.91	1.85	1.94
Social Sciences	3.15	3.07	1.40	1.40
Other	3.01	3.01	2.08	2.13
Administrative Roles	***	***	*	NS
Yes	3.14	3.11	2.26	2.28
No	3.07	2.94	2.16	2.22
Principal Activity	*	**	***	***
Clinical	2.90	3.01	2.37	2.38
Research	3.13	3.03	2.22	2.28
Instructional	2.97	2.86	1.97	2.00
Other	3.09	3.08	2.13	2.14

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Assistance Coding: 1=No assistance, 2=Very little assistance, 3=Some assistance, 4=A great deal of assistance, 5=Complete assistance.

Table 36. Average Distribution of Faculty Respondents' Administrative Assistance[1] by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Spending-Authority Oversight	Subcontracting and Collaborations	IACUC Protocols and Training	IACUC-Compliance Issues
Academic Rank	**	***	***	***
Full Professor	3.14	3.06	2.25	2.31
Associate Professor	3.04	2.96	2.15	2.17
Assistant Professor	3.04	2.91	2.09	2.16
Tenure Status	NS	NS	**	**
Tenured	3.10	3.02	2.21	2.26
On tenure track, but not tenured	3.05	2.94	2.11	2.16
Not on tenure track	3.14	3.11	2.22	2.29
No tenure system for my faculty status	3.14	2.97	2.30	2.27
Race/Ethnicity	***	***	NS	NS
Underrepresented Minority[2]	3.16	2.89	2.19	2.22
Asian/Pacific Islander	2.84	2.74	2.24	2.26
White non-Hispanic	2.38	2.40	2.39	2.42
Gender	NS	NS	NS	NS
Male	3.10	3.00	2.22	2.26
Female	3.08	3.01	2.10	2.20

***p<.001, **p<.01, NS=not statistically significant

[1] Assistance Coding: 1=No assistance, 2=Very little assistance, 3=Some assistance, 4=A great deal of assistance, 5=Complete assistance.

[2] American Indian/Alaskan Native, Black non-Hispanic, Hispanic.

Table 37. Average Distribution of Faculty Respondents' Administrative Assistance[1] by Institutional Funding, Disciplinary Affiliation, Administrative Roles, and Principal Activity

	Training Personnel and Students	IRB Protocols and Training	IRB-Compliance Issues	HIPAA Compliance
All Institutions	2.36	2.38	2.37	2.39
Institutional Control	NS	NS	*	***
Public	2.35	2.36	2.35	2.32
Private	2.38	2.41	2.41	2.50
Carnegie Classification	***	NS	**	***
Comprehensive Doc w/Med	2.39	2.39	2.37	2.41
Comprehensive Doc w/o Med	2.21	2.26	2.28	2.11
Doctoral – Focused	2.13	2.30	2.29	2.15
Medical	2.48	2.47	2.48	2.55
Institutional Funding	NS	NS	NS	NS
Less than $10 - $100M	2.39	2.45	2.43	2.50
$100M - $150M	2.32	2.33	2.36	2.32
$150M - $200M	2.35	2.46	2.40	2.42
Above $200M	2.37	2.36	2.36	2.38
Disciplinary Affiliation	***	***	***	***
Agriculture	2.49	2.45	2.42	2.36
Biological/Life Sciences	2.54	2.45	2.46	2.50
Computer Sciences	1.37	2.14	2.02	1.76
Education	2.04	2.44	2.46	2.53
Engineering	2.00	2.00	2.30	2.20
Health Sciences	2.47	2.50	2.48	2.54
Mathematics	1.44	1.24	1.22	1.36
Physical Sciences	1.79	1.84	1.83	1.73
Psychology	1.91	2.25	2.22	2.15
Social Sciences	1.85	2.30	2.27	2.12
Other	2.09	2.40	2.41	2.45
Administrative Roles	NS	***	***	***
Yes	2.39	2.52	2.51	2.50
No	2.34	2.28	2.27	2.31
Principal Activity	***	***	***	***
Clinical	2.41	2.65	2.68	2.68
Research	2.40	2.37	2.36	2.39
Instructional	2.09	2.25	2.23	2.13
Other	2.34	2.52	2.48	2.50

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Assistance Coding: 1=No assistance, 2=Very little assistance, 3=Some assistance, 4=A great deal of assistance, 5=Complete assistance.

Table 38. Average Distribution of Faculty Respondents' Administrative Assistance[1] by Academic Rank, Tenure Status, Race/Ethnicity, and Gender

	Training Personnel and Students	IRB Protocols and Training	IRB-Compliance Issues	HIPAA Compliance
Academic Rank	**	***	***	**
Full Professor	2.44	2.45	2.44	2.43
Associate Professor	2.31	2.38	2.37	2.39
Assistant Professor	2.23	2.20	2.20	2.28
Tenure Status	NS	***	***	***
Tenured	2.39	2.41	2.40	2.37
On tenure track, but not tenured	2.26	2.20	2.22	2.29
Not on tenure track	2.36	2.55	2.53	2.64
No tenure system for my faculty status	2.38	2.36	2.36	2.41
Race/Ethnicity	NS	NS	NS	*
Underrepresented Minority[2]	2.22	2.39	2.33	2.34
Asian/Pacific Islander	2.38	2.27	2.22	2.20
White non-Hispanic	2.39	2.40	2.40	2.43
Gender	NS	*	*	NS
Male	2.36	2.42	2.41	2.39
Female	2.36	2.30	2.30	2.40

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] Assistance Coding: 1=No assistance, 2=Very little assistance, 3=Some assistance, 4=A great deal of assistance, 5=Complete assistance.

[2] American Indian/Alaskan Native, Black non-Hispanic, Hispanic.

Table 39. Shifting the Administrative Burden – Responses by Institutional Context

	Percent of time spent managing grants that could be handled by administrator	Additional hours/week could devote to research if had more administrative assistance	Percent of direct costs would reallocate to administrative support
All Institutions	27.6	4.0	3.6
Institutional Control	NS	NS	*
Public	27.3	4.0	3.7
Private	28.5	4.0	3.3
Institutional Funding	NS	*	NS
Less than $10 - $100M	29.8	4.4	3.9
$100M - $150M	28.6	4.1	3.7
$150M - $200M	27.1	4.1	3.4
Above $200M	27.2	3.9	3.6
Institutional Classification	***	**	**
Comprehensive Doc w/ Med	27.3	4.0	3.6
Comprehensive Doc w/o Med	26.4	3.9	3.6
Doctoral - Focused	27.3	4.0	3.8
Medical	31.7	4.5	4.1
Disciplinary Affiliation	***	***	***
Agriculture	24.9	3.9	3.4
Biological or Life Sciences	27.9	4.2	3.2
Computer Sciences	25.2	3.1	3.9
Education	25.7	4.4	5.2
Engineering	25.8	4.2	3.8
Health Sciences	32.0	4.8	4.7
Mathematics	21.2	1.4	2.8
Physical Sciences	24.0	3.4	2.9
Psychology	29.1	4.4	4.3
Social Sciences	29.0	3.3	4.1
Other			
Administrative Roles	***	***	***
Yes	29.9	4.6	4.2
No	26.3	3.7	3.3

***p<.001, **p<.01, *p<.05, NS=not statistically significant

Note: Mean percentages for these survey items were obtained by extrapolating from the ranges used for the response options.

Table 40. Shifting the Administrative Burden – Responses by Individual Faculty Characteristics

	Percent of time spent managing grants that could be handled by administrator	Additional hours/week could devote to research if had more administrative assistance	Percent of direct costs would reallocate to administrative support
Academic Rank	**	NS	***
Full Professor	26.7	4.0	3.5
Associate Professor	28.8	4.2	3.9
Assistant Professor	28.3	3.9	3.6
Tenure Status	NS	NS	*
Tenured	27.2	4.0	3.6
On tenure track, but not tenured	28.1	4.0	3.7
Not on tenure track	29.3	4.1	4.0
No tenure system for my faculty status	27.2	4.5	4.0
Race/Ethnicity	NS	NS	NS
Underrepresented Minority[1]	27.0	4.3	3.4
Asian/Pacific Islander	26..3	4.1	3.1
White non-Hispanic	27.5	4.0	3.7
Gender	NS	***	***
Male	27.3	3.9	3.5
Female	28.2	4.4	4.0

***p<.001, **p<.01, *p<.05, NS=not statistically significant

[1] American Indian/Alaskan Native, Black non-Hispanic, Hispanic, Other.

Note: Mean percentages for these survey items were obtained by extrapolating from the ranges used for the response options.

APPENDIX B:
OPEN-ENDED THEMES AND RESPONSES

At the conclusion of the survey, respondents were given the opportunity to "take a moment to provide us with additional comments." Given that hundreds of faculty complied, the comments shown in the following pages are intended to be typical of their concerns. All recommendations and agency-specific remarks, however, are included in this appendix.

Faculty Support for, Concerns About, and Recommendations Regarding Direct-Cost Redirection

Support for Direct-Cost Redirection

I am so glad you are looking at this issue. I have been enormously frustrated here by the amount of administrative oversight I need to put in to make sure that even the simplest of things get done correctly. If I could guarantee that there were adequate administrative resources here by putting them into a grant budget I feel it would create an environment that is much more conducive to producing top-quality research.

I spend 2 days a week at least on the activities described in this questionnaire. Federal support for departmental oversight of much of this would improve my productivity dramatically.

I have been an independent investigator (faculty) for 16 years, and have been funded by NIH for almost all of that time. The amount of time I spend on regulations (IACUC, safety, etc.) has increased DRAMATICALLY, and I am positively overwhelmed by the burden. When I hire technicians/lab managers, I seek SCIENTISTS, not people who are skilled at drone administrative tasks. Accordingly, I am stuck with this burden (if I want it done correctly and in a timely manner). Something has to be done!

It is important to note that many of my answers included the concept that many administrative tasks are managed by personnel who report to me. This is absolutely critical to my successful research program. On the other hand, as a result of federal policy a number of years ago ... these individuals are not supported on regular federal grants. We must find ways to find discretionary funds to fund them. Those funds are quickly disappearing and as a result these individuals may disappear. ... At that point my productivity will be drastically affected and the only solution would be if my grants had direct funds for these support personnel.

I currently have 5 percent or so of the grant devoted to administrative support. This is indeed money well spent. Internal audits have validated the accounting and personnel procedures. It is both helpful and reassuring that professionals can deal with the myriad and arcane problems.

I am fortunate enough to have a technician paid for by the college. This relieves me from many of the burdens noted — such as safety plans, safety training, reporting, ordering, etc. I could not survive without this support. Those that do not have in-house support should be able to include it on the proposals. The continuity and time savings is invaluable and frees me to do teaching and research.

Concerns Regarding the Use of Direct-Cost Funds for Administrative Support

Where Are Indirect Cost-Funds Being Spent?

I'm not clear why I was asked about direct-cost allocations for grants administration. Elite universities charge more than 60 percent overhead, which should cover all this administrative stuff. The real question is why do the NIHs (and other funders) allow universities to get away with charging 60 percent overhead and not providing adequate support. In my opinion, its fraudulent; the University charges sky-high overhead, then exaggerates the cost of lights and buildings so that it can subsidize under-funded activities, leaving the faculty with less and less administrative support.

For what it's worth, I think the bigger issue regarding availability of money for administrative support is where does all that overhead go? and that's more of an institution-specific problem. At the same time, though, given agency involvement in setting the accepted overhead rates, it would be nice to see some kind of agency pushback to try to make this aspect more transparent. But, again, I'm not sure any of this is relevant to this particular survey!

Support Personnel Could Not Provide Needed Assistance

The major time issues involve approvals and paperwork required by on campus offices (such as IACUC) that cannot be dealt with by an administrator. I spend a large amount of my time responding to their requests "for clarification" and ensuring that my paperwork actually makes it through their bureaucracy.

I have no confidence that I could find individuals who could accomplish these myriad, unrelated, and rapidly changing tasks expediently. They simply take too long to teach others to do, they are so numerous and idiosyncratic, and they are veritable moving targets (i.e., each time I am asked to document a compliance activity, it has been updated just enough so that the previous iteration I had carefully saved on disk is now of no value).

My Department lacks the in-house staff with the capabilities or skill set necessary to do the grant administration called for in federal grants. Thus I end up not only doing the work I intended to do on the grant but also trying to do what staff should be assigned to do, assuming they were qualified to do so.

Insufficient Direct-Cost Funds to Allocate for Administrative Support

Due to funding caps and across the board budget cuts, my direct costs are insufficient to cover existing expenses, so it would not be possible to reallocate them to cover administrative expenses. That is part of the reason that I have to spend so much of my research time on grant management activities. However, if additional funds were available, or I could use indirect costs that currently do very little to provide a research infrastructure at my institution, I would be extremely grateful and my productivity would be significantly enhanced.

I indicated that I do not want to redirect my grant funds into administration. This was not because I can't use help on administrative stuff but rather because my grants have been cut to the point where I am just barely managing to do the work and I really do not have any fluff in my budgets that could be redirected. So I end up with a choice between spending time on the part of myself and my research personnel to meet the administrative burdens, or taking away personnel money and going to pay some administrator to do the stuff at the cost of reduced research personnel. Neither constitutes an acceptable answer to the administrative burden problem.

Recommendations Regarding Use of Direct-Cost Funds for Administrative Support

It seems that the assumption is that my institution or department will provide quality administrative support. I believe that my institution and department provide much of the services that I need to administer grants — the problem is that the quality is not that good. [I]f I could allocate direct costs to administrative services, I don't for a minute believe that service would improve. … A real market economy move would be to allow principal investigators to withhold a significant fraction of indirect costs when the institutions don't deliver.

If direct costs were to be permitted for administrative help, it is almost a certainty that the University would further cut back on the little administrative help already provided (faculty would be told to use their own direct costs to cover all administrative needs). As it is, most investigators use their lab techs to perform many administrative duties; as much as 50 percent of a lab tech's time is spent in this fashion for a given grant. This is time taken away from productive research. Without an increase in funds (either direct or indirect), the problem of eroding the time spent in research will not be solved. One potential solution, given the restraints in funding, is to designate a portion of the indirect costs specifically for support of the administrative needs of individual investigators and require institutions to document that those funds are going to support individual investigators (as opposed to getting swallowed up by general university "overhead," which is so far over the heads of faculty that it is of no direct benefit).

I believe that INDIRECT costs should pay for administrative costs, unless a line item in the grant is set aside for administration. I write this because if a percentage is set aside, it will be taken by the department, but administrative support will not be provided. THIS is a major problem ... v[ery] little access to administrative support. I guess if I could go back, I would designate a specific sum for administrative support, but I have no guarantee that the department would honor it unless it was a position solely within my lab as a full or part-time. Also, the department would have to allocate space, something they would be loath to do.

A question was asked re: DIRECT costs to be applied from federal grants to assist w/ oversight, but that would mean precious resources away from already strained direct cost budgets. INSTEAD, a more useful approach may be what percentage of indirect costs should be mandated to go toward grant management assistance/personnel, which then is no longer the burden of the PI to ensure, but instead it becomes the institution/college's responsibility to ensure they are meeting federal requirements for providing PI's support.

The term “reallocate” sounds like the total budget would be the same. I would want to be able to propose as part of a grant submission that I hire an administrator as part of the directs and this would increase the budget. The University is not going to lower the indirect rate and they are not going to increase the administrative support staff, so we need to be able to hire direct administrative support staff.

If scientists must compete for money let administrators compete as well. This could easily and reasonably be accomplished by granting the PI the money and letting him negotiate with the institution how much they take.

Faculty Concerns and Recommendations Regarding the Grant Award Process

Grant Proposals Require a Tremendous Amount of Time

The greatest single impediment to effective use of my research time is the wasted weeks spent writing, submitting, and resubmitting proposals to programs that have been bled dry.

I need four grants to do one primary program – wasteful of my time in writing and reviewing proposals, stressful, and wasteful of government sponsor’s time. Not enough dollars per grant. I spend more time writing grant proposals than papers, which is ridiculous.

One of the biggest barriers with federal grants has become the waiting process to obtain funds. It is an enormous time burden for submission and then nearly a 9 month process for a first review which is almost always not funded. So the funding application cycle is typically 1 to 1.5 years at best – then the budget is frequently cut by 15 – 20 percent, meaning that one has to initially pad or remove part of the activities.

By far the largest burden taking away substantial time from research is the low funding level. It forces me to resubmit perfectly good grants. Most recently, I obtained the highest score in a study section on a grant I submitted, but there were insufficient funds to cover the grant, forcing me to resubmit this grant in the next funding cycle. If funding levels are so low that even single percentile scores are insufficient to obtain funding, then all your focus on administrative burden is pointless.

Recommendations Regarding Grant Proposals

Applications

To reduce burden, grant application submission should go to an all electronic format using highly standardized forms that you don't have to piece together. More attention should be paid to requiring home departments to allow a faculty member the time specified on a particular grant. The percentage efforts specified on grants are often no more than a farce, and everyone knows it. For example, my K award specifies a minimum percent effort, but my department requires me to deviate from that for teaching. I am in a hard tenure track line and am paying my own salary with the K award, but the department pockets the salary money that should come to my research program.

One of the most frustrating things with grant applications is that each agency asks for the same information, but uses different forms. Identical electronic forms for each agency would significantly streamline this aspect of grant application (why can't they all copy NSF?).

Too much time is spent on applying for federal research money. In Europe applications are considerably shorter. Also, the time until a funding decision is reached or, if the application is successful, when funding becomes available, is too long.

Review Process

All federal RFPs should include a pre-proposal stage to screen out subjects that have little chance of success. I've had many proposals receive great ad-hoc reviews only to be rejected by the Panel for reasons that should have been identified more explicitly in the RFP.

The biggest difficulty I have as a young professor is the fact that NIH takes so long to review proposals. We typically miss an entire grant cycle waiting for reviews. I would suggest that there be two levels of proposals and two levels of reviews. Small proposals (direct costs < 125K per year) should be reviewed quickly (and could be shorter) while larger proposals would be reviewed in more detail.

The biggest time sink is the preparation of grant applications. Much of this effort is wasted since most grants don't get funded. A more thought-out two-stage process: the bulk of the idea is submitted but the regulatory details and certifications and detailed budgets (which are hugely complicated by ever-changing full cost accounting rules) wait until a proposal is approved (at least provisionally).

It is essential that greater efforts be made to ensure continuity in the review of NIH grants. There is an increasing proportion of cases in which new reviewers are assigned to an A2 application, resulting in completely new sets of criticism that an applicant cannot respond to because A3 applications are not permitted. This is causing serious demoralization and discouraging many junior faculty (as well as graduate students and postdocs who are witnessing the consequences). It would also be very helpful if one of the reviewers assigned to a grant was given the role of

advocate specifically to avoid criticisms that may be unwarranted, and to guard against unfair or inconsistent reviews.

The main problem with NIH grants is that they are so detailed and you know that the study section is going to focus on minor details rather on the science that the preparation time becomes very long. On my last NIH grant I spent three months on grant preparation. In a similar three month period I made significant discoveries that resulted in two high impact papers.

My main concerns with the federal grant application process is related to how reviews are conducted. I've had the experience of responding to a first-round of reviews, only to receive a second-round of reviews that are very contradictory with the first, or that flag concerns that were not raised in the first round. Too much time goes into preparing federal grants to risk not getting the same (or mostly the same) group of reviewers.

In addition to managing those grants received, the time spent waiting for grant review, scores and funding decisions to be made in the first place is a great inconvenience for someone whose career hinges on receiving a grant. This process needs to be sped up or at the very least deadlines should be adhered to more strictly.

Funding Duration and Amount

The 3 year grant cycle is way too short. … I feel that I am on a short leash, and that I always need to drop risky, long-term projects in favor of less important work that will yield results in the short-term, otherwise my funding will be cut.

A key issue here is grant duration and amount. Because award amounts have been stagnant, and long-term awards are uncommon, many more proposals are being written and reviewed today than before, enormously burdening the research community in the process. If award size and duration increased, research quality will go up. This is worth a try even with static science budgets, because of the trade off between quality and quantity.

You have to have a big chunk of the work finished to write a successful federal grant proposal — this is wrong. A few phone calls and 2 pages of text gets me $100k/yr from industry — why should I bother with large proposals and closed-minded reviewers at NSF? My university has dismal financial management tools for professors so the burden to me is not federal rules but my employer's reluctance to treat professors as intelligent beings. I need fewer federal regulations on what I spend money on to get the job done.

The time spent in contract administration and proposal writing has increased by at least four times over the last twenty years. This is not necessarily the result of more requirements but of the shrinking funds. The average award per project is actually much less than it was twenty years ago, while all costs have increased dramatically. Research is terribly under-funded and not valued by the federal government. There is a lack of continuity in funding and lack of suitable expertise/manpower in the funding agencies. The government should recognize that many research avenues need to be explored to get to profitable ones. There is no coherent research policy in this country and this is very dangerous for the future. Scientists should spend time

thinking about and working on science rather than on the management of grants. The individuals should have fewer grants with larger amounts. Adding personnel to help with management will have little impact, because often one needs technical competence to manage the research, and such people are not easy to hire.

Wrong Types of Research Being Funded

Excessive emphasis is placed on individual achievement as a principal investigator to ascend the promotion and tenure ladder in academic health science centers (AHSC). Investigator financial independence is no longer a valid criterion for productivity (see IOM (2005) Bridges to Independence) and therefore a basis for justifying award of P&T. The IOM (2005) report clearly states that capacity to produce fundable grant applications and peer-reviewed publications as part of INTERDISCIPLINARY TEAMS OF INVESTIGATORS is the valid criterion by which to judge productivity in the present funding environment. AHSCs that remain wedded to an outdated academic model of personal (vs. team) achievement place extreme pressure on individual faculty to undertake projects with little contributory value, but with higher chances of funding success, in order to cover compensation prior to award of tenure. The average age of such financial independence has risen into the age range 40-45, which falls well into one's period of greatest productivity. Lack of job security is devastating on many faculty members' physical/mental health, and relationships with family and friends. AHSCs, the PHS agencies, and the federal administration have failed to change with the times. They jeopardize the future of the US clinical research enterprise (see COGR reports, Sung (2003) JAMA, and Crowley (2004) JAMA). This crisis is neither inevitable nor unresolvable. The principal barrier at present to implementing solutions is lack of political will.

Some federal funding agencies (e.g., DARPA, DoD) tend to excessively reward operators that run huge research grant programs (or over 10 grants simultaneously). The support of individual investigators is strongly neglected by the federal research funding agencies, which are all moving towards supporting large centers, at the expense of individual investigator grants.

The biggest mistake currently being made in federal funding is the de-emphasis on individual peer reviewed grants, especially in the physical sciences. This applies to both the number and the amounts of funding that can be realistically obtained for supporting research groups and sustain them at cutting edge of their fields. This will adversely affect both the technological base for future INNOVATIVE developments and the standard of higher education that are so important in determining the future economic welfare of this country. Higher education is NOT a business but an investment in the future of this country. The foolish over-emphasis on big projects and center funding, winner take all funding and increased emphasis of commercial exploitation of University intellectual property will prove a catastrophe for this country. The research enterprise at Universities is being totally distorted due to these factors instead of emphasizing innovation. Congress should stop pressuring higher education in this manner. It is simply a terrible mistake in the long run. In addition, the percentage of federal funding that is being mandated and pork barreled without effective peer review is the cause of enormous waste and is counterproductive.

I started my faculty career in Canada (though I'm an American) and have always liked the model they have in NSERC: a significant fraction of funding is small amounts direct to researchers,

rather than projects. This funding forms a reliable base on which one can initiate collaborations that can pursue funding for larger projects. It is amazing how much research is accomplished by having some freedom to pursue promising avenues that were not anticipated.

Faculty Concerns and Recommendations Regarding IRB, IACUC, and HIPAA Regulations

Extent of IRB Burden

Both IRB and HIPPA concerns make the process of developing multi-center studies a morass and often compromise external validity with no concomitant gains by subjects. The process of adhering to an oversight mechanism designed for higher risk research adds unnecessary complexity to the research effort, adds much more frustration than I had previously experienced in my quarter century of research activities, and impedes the research process by adding delays that are 2 to 3 times longer than I have ever seen.

The total impact of the regulatory burden, e.g., IRB, HIPAA, and conflict of interest, are several orders of magnitude greater than when I began clinical research in 1981. These changes over the past 25 years have reduced by ~50%, the amount of research that gets done. The inefficiency is a major factor in my decision to discontinue clinical research next year (2006) and focus on health services research.

As someone within about 10 years of retirement, I find myself thinking of that in terms of how many more projects I will need to fight through the IRB.

One of my major concerns regarding grants management, particularly with compliance issues in biohazard, animal welfare or human subjects, is that the regulations in each of these areas is both ambiguous and continually evolving. This in practice means that they require individuals who really know specific details for the appropriate regs and that they make a concerted effort to keep up with not only federal but state regs. In this institution, this often means completely different people who often give conflicting advice when we have to have compliance that spans both biohazard and human subjects — for instance biohazard and animal welfare or to satisfy OSHA and state requirements. One of the reasons why I indicated that I had minimal animal welfare issues for the year 04-05 is because I had already restructured my research program so that I did not have to maintain my animal IACUC protocol on top of my IRB and biohazard approvals. It probably was not the best decision to make in the interests of science. However, trying to keep up with putting in a new animal or IRB protocol every time I put in a new grant application or a non-competing renewal with slight changes in titles or modifications in protocols or where I would use the same samples or use a common protocol (e.g. making mAb ascities or immunization protocol) but asked a different set of questions just became ridiculous.

Demographic/ethnic distribution requirements of subjects in clinical studies, although good in theory, are unattainable and arbitrary.

The IRB process in this nation is out of control. It is a huge burden for universities to administer and to PIs, especially where non-clinical interventions are concerned. It is costly to administer,

and is on the verge of undermining academic freedom and freedom of speech. I will never do another study involving human subjects again, and I am someone who helps administer IRB policies on my campus. I am the messenger that many faculty members would like to shoot.

The OMB clearance process or human subject research is not only time-consuming but can delay the project by several months. Delays in moving paperwork (submission packets) from the funding agency to OMB add to the delay. These delays add cost for which we are not reimbursed. On two federally funded research projects I have to submit my human subjects research protocols to OMB as well as to 2 or 3 institutional IRBs. A second issue is caused by delays between notification of award and contract finalization — this can often take 3 or 4 months and delays our hiring of research personnel, and the start of the research.

IRB Recommendations

There should be a cap of a fixed number of hours dedicated to compliance/safety training/HIPAA/IRB, etc. It seems that people think of a new requirement and think that just adding another 5 hour mandatory training session is not a big deal. They should be forced to come up with ways to squeeze the training in a fixed number of hours per year.

The costs of the regulatory burden is having such a chilling effect on young clinical investigators that they are turning away from academic research precisely at a moment of unbelievable opportunity. Furthermore, the majority of these new regulatory burdens have added little to the safety of the process they were meant to help. Thus, research administration needs to understand that efficiency is not the enemy of safety. Streamlining the regulatory environment can be done with no loss of safety.

Things are out of control regarding IRB issues for large research domains where it is obvious that human subjects are not in any danger. There should be stratification. Certain lines of research have obvious risks and should be treated separately from other lines of research that are innocuous. The training required in the two cases should also be different.

I think another way to deal with the huge amount of time I spend on IRB applications, amendments, etc. would be to require institutions to use standard forms that are similar — or the same as federal grant application forms — and to encourage institutions to utilize IRB Authorization Agreements more often in the case of multi-site studies.

If there is not an improvement in the IRB process for clinical research, I believe many investigators will abandon this area of endeavor and concentrate on direct patient care. Something has got to be done about the ever changing demands of the IRB and their inconsistent approach to protocol review and informed consent form design.

The major problem with human subjects research is the time involved in IRB approvals reapprovals, compliance. A National standardized program of IRB approval would greatly aid efforts in multi-site research. I spend the majority of my time working out differences between institutions for IRB compliance on the SAME project. It’s a HUGE waste of time.

Extent of IACUC Burden

I am a devout supporter of humane treatment of research animals or any animal for that matter. Having said that, it is my strong opinion that the regulatory laws and paperwork regarding such are hindering research endeavors disproportionately more than they prevent harm to innocent animals. The cost to taxpayers of the regulation in time and real monies is staggering. Many of these animals are considered vermin in society and US laws allow their poison and painful destruction by a variety of methods yet millions of tax dollars are spent on governmental control of their use in research.

The IACUC burden, for me at least, has completely and absolutely overwhelmed all time savings achieved by shorter progress reports and modular grants. Those provide great savings. But, the IACUC protocol I have to write is as long as an NIH grant and a horrible waste of my time, the campus veterinarian's time and the IACUC's time. Moreover, the animal use protocol management is so stringent, that it would be virtually impossible to do any fast moving innovative research following new developments without violating the approved IACUC protocol. This may apply to me more than other investigators because of the species I employ, but the generalities are bound to be true across the board for investigators working on topics involving numerous live animals as subjects.

Focus on federal regulations! As one example, the Animal Care requirements are excessive. Ordering a few more mice (to compensate for a contamination, extra training, or a power failure) takes an amendment that has to be approved. At the end of a protocol period, this actually stops research! Madness! This is just one example. The strong federal reactions to even minor infractions have also developed a no-flexibility mentality. We are turning into FEMA!!! Science requires flexibility, as long as there is a reasonable explanation. However, we are now treated as if we are working in a shoe factory — where everything is predetermined and no adjustments are required. The impact this attitude will have on US science (and our economy) will not be trivial!!

IACUC Recommendations

Dealing with IACUC issues has been a significant burden, which is increasing, not decreasing. The federal government needs to rationalize and streamline the IACUC process and set some clear standards as to what is and what is not the purview of IACUCs. There should be a central, standardized NIH administered IACUC process for basic protocol review. Local IACUCs should be restricted to monitoring compliance. They definitely should not have the authority to pass judgment on the scientific merit of a research project. Particularly in the case of research with non-human primates, IACUC initiated impediments are driving researchers out of the field.

Extent of HIPAA Burden

The addition of a clinical protocol that has to be approved within DMID has added an extra 25% minimum of work to an already very heavy administrative workload. Coordinating between overseas site requirements, NIH requirements and university requirements is very difficult and extremely time-consuming.

HIPAA requirements have also seriously hampered our ability to recruit subjects so they make it even harder to and more expensive to do a project and raise serious concerns about the generalizability of results. When those problems are viewed within the context of the paranoia about OHRP and constantly changing local requirements that plague every annual review and any project amendments, just dealing with the IRB can easily become a full-time job. I work at least 80 hours/week. And my scholarly productivity has suffered because of the number of meetings, task forces, and strategy sessions I have to attend in order to keep a project going and get a proposal submitted.

In my line of research, HIPAA-related requirements have become especially burdensome. Although HIPAA does not preclude us from doing the same type of research we did before HIPAA, it creates tremendous hurdles that require many hours of effort and pleading to overcome. Despite this effort, we are still often unable to get the full cooperation of covered entities that could cooperate with us, and would have cooperated with us prior to HIPAA. The result is that our research has become more expensive and lower quality (because we can no longer obtain fully representative samples across multiple covered entities in the community).

I think HIPAA is one of the biggest problems in limiting accrual. We are severely hampered here by institutions not following HIPAA which allows activities preparatory to research but the hospital does not. We need to rely on busy staff to screen so it either doesn't get done or gets done sporadically. Also the IRBs across sites with different and sometimes competing demands require a person close to 50 percent for multi-site studies. It's become a nightmare.

HIPAA Recommendations

Current NIH policy regarding administrative support for federally funded research is cynical and a joke and everyone knows it! Such support is supposed to come from indirect costs but I know of no institution where that actually happens. Any and all such problems always fall on our (the investigators') shoulders. Plus, with collaborations at multiple medical institutions, I must employ someone full-time just to handle IRB and HIPAA (which some study sections just do not understand), and every hospital we collaborate with is different in their requirements. If there were uniformity, at least it would be easier. HIPAA regulations, which were supposed to deal with the insurance industry, have only made my problems finding appropriate subjects for my research not only harder but have also made it more difficult to stick to rigorous acceptance standards.

The Administrative Burden of University Regulations

University concern about federal auditing requirements has increased our work load noticeably in the past few years.

Our institution places a great deal of regulatory burden on investigators that is NOT required by the federal government. The modular budget for NIH grants, for example, is an excellent policy but doesn't help us here because our University requires detailed budgets. In addition, the regulatory burden with respect to IACUC regulations at this institution far exceeds federal guidelines (NIH and USDA), and border on abusive to investigators. There is a lot of federally funded faculty time going into meeting these burdens that takes away from research.

The university paperwork is overwhelming and the greatest deterrent to time on research.

I actually take more issue with the existing institutional "support" for administrative tasks. It is often not support at all and is often inefficient as well as ineffective. Written policies that are not comprehensible, that change frequently without notice, and the impossibility of obtaining consistent responses to questions necessitating multiple submissions of the same documents for approval, etc., waste a good deal more of my time than the actual requirements imposed by federal funding sources.

Having observed the research administration scene for many years at 3 universities both as investigator and Dean, I am struck by the failure of administration to recognize their duty to facilitate (not impede) faculty research.

Faculty Concerns Regarding the Current Research Climate

Negative Effect of the Current Research Climate on Science

A major problem with administrative/compliance burdens is not simply the time, but also the erosion of creativity and individual initiative. This is hard to address by a survey, but is the most important factor in driving the best students away from scientific careers.

In the face of NIH cutbacks, I am facing my division shifting more grant administrative tasks back to me. I am strongly committed to continuing my research but am very concerned that I am not receiving enough return on my indirects to support the administration of my grants. I am an MD who is R01 funded. My margin is very slim. I see most MDs going into private practice and not seeing research as a viable career choice.

I believe that we are in a crisis situation. As a more senior faculty researcher with over 200 publications and an active, productive lab, I face the very real prospect of having to close down my research program for lack of funds. A recent resubmission to NIGMS was perhaps the best grant application I've ever submitted. It got very positive critiques. Nevertheless, it was triaged. It was noted that it did not show exceptional innovativeness, even though almost all of the proposed experiments were based on new techniques that we have pioneered. There seems to be a serious decreased valuation on study sections for solid, in-depth research and a premium on sexy, trendy, and what I believe is somewhat superficial research. I believe that some of the most

solid researchers in the country, even those of us who have successfully obtained uninterrupted research funding for over 25 years, face the likelihood of closing our labs due to lack of funds. For those of us in our early 60s, this means in effect terminating our research careers. This is a major disaster for the country, crippling the basic science and technology machine just when other countries are becoming much more competitive.

Universities reward and encourage obtaining lots of research funding. The emphasis is clearly on dollar amounts, not on quality of science. The federal government is a willing partner in this graveyard spiral where more and more money is thrown into the system but the quality of science is going down. The emphasis on quantity rather than quality is everywhere: number of research dollars, number of papers, number of graduate students, etc. ... Salaries are directly tied to these numbers. Where is the encouragement for tackling high-risk, high-quality fundamental research? If that research does not take place in Universities then where? Universities have turned into research contractors. Advancing knowledge and understanding and higher education are not the goals anymore. The goal is to have the largest amount of research spending.

Negative Effect of the Current Research Climate on Faculty Motivation and Productivity

I discourage grad students from entering research stream — it is an awful quality of life with many, many evenings and weekend hours spent away from family to do the work that the university should be doing for us. As the fed demands have gone up, the university has not provided any help. It has to come from somewhere. We are picking up the slack — on our own time as there is not enough time in a 40 hour week to come close to meeting all of our commitments. So the 100 percent time is in reality about 150 percent and that is not just for me but for anyone who is successful. I would never have gone into this field if I had known what it would be like, and we talked our kids out of research completely. At this rate we will lose our edge in the next decade or so.

I pity the young faculty members in this day and age who have to work themselves so hard in the face of decreasing federal funding for research and increasing numbers of applicants. The point is rapidly approaching for many faculty members where the effort will no longer be worth the cost to themselves and their families.

I and my colleagues submit more federal grants than ever before, and although I remain committed to academic science, I question that career choice more often than I ever expected that I would.

The diversity of tasks I am expected to carry out has increased to the extent that it is overwhelming and has taken a toll on my personal life. I am exhausted all the time and flit from one badly executed task to the next.

Recent audits at several universities have caused a pendulum swing that has nearly crippled our ability to perform research. Instead of being supported, we are just told no, no, no. But no alternative solutions are provided so we either grind to a halt, or have to spend our time tilting at windmills. Many of us are getting burned out about the whole atmosphere within the university

now. One last thing. My understanding is that auditors are funded by a percentage of the disallowed expenses discovered. That seems to me to be a huge conflict of interest. I hope my information is incorrect, but if not, I think a different funding mechanism for auditors would be strongly advised to remove the perceived conflict of interest.

The Extent of Administrative Burden

Thanks for doing this survey, as the frustration in not being able to hire the administrative help we need is a) making me leave my department, and b) wasting the most productive years of my academic life. I calculate that I waste 35-40 percent of my time doing work that could be done by others. Ultimately this slows down my current research and potential research productivity.

My regular work week is approximately 70 hours. Therefore, my level of effort is well over 100 percent, if one has a base work week of 40 hours. To balance the teaching, service, and other responsibilities with an active research program as I have had for the past ten years, a 40 hour work week is not sufficient.

It is no longer possible for MDs to practice clinically and do research. They have cut out the services that would enable us to get our research done — nurses that take phone calls from parents and outside docs, etc. You need another entirely separate survey to approach the workload issues of medical researchers.

In 1970 I could devote 80+ hours per week to research. Now it is less than 20 hours per week because of all the forms we need to fill out.

The Future of the Academy Is Bleak

Domestic graduate students are far less likely to pursue academic careers than nonresident students. The most common explanation I hear is that the competitive grants program seems daunting to them and they doubt their ability to compete successfully enough to get tenure at an academic institution. The lack of funding is a significant deterrent for domestic students continuing their studies. Consequently, approximately 85 percent of our doctoral students in engineering are international students. The lack of federal funding for research is significantly impacting our ability to attract qualified US residents to graduate school. The current situation, and I am at a top tier university, is critical.

My students and technicians do not see the excitement and joy of science any longer. They simply see regulation and administration. I believe this is going to cause an incredible brain drain in the coming years. The best of the best will simply not be inspired to pursue careers in academic research (especially biomedical). Moreover, I expect that more PIs will opt to retire early, at least from the research component of their responsibilities.

If I were just beginning my career, I would not go into an area of research that involves laboratory animals, nor one that requires such an enormous burden of grant writing. Many of our

doctoral students are making that decision and are turning to other professional opportunities. The scientific manpower problem in this country is going to become a major crisis in coming years as students see the struggles that their mentors go through trying to keep their research funded and elect not to take the same career path. This certainly cannot be news to those who are concerned about these issues, but perhaps this survey will add more weight to the information available to policy makers and the Congress about this very serious matter.

The research burden — i.e., the preparation necessary to perform research, both animal and human (and I do both) — has in my opinion increased exponentially since I began as an assistant professor in 1997 and this burden keeps on being thrust back to the PI in order we are told to have accountability. If this continues it is highly likely that PIs will spend more time on administering research than on the creative aspects of science that are critical if any meaningful research is to be performed in the US in the future. While federal funding in real terms has declined recently, the bureaucracy associated with the funding has continued to increase. Taken to its logical conclusion the future of US science looks very uncertain at this point and I sense that students while they love research are not going to be attracted to academic careers where their future is uncertain and the very thing they entered academia for — the desire to use their curiosity and creativity to further scientific knowledge and advance human health — will become secondary to their ability to survive as administrators. In my opinion we are heading in the wrong direction.

If I was younger, I would bail. Private sector was difficult, but the recognition was based upon objective performance criteria, outcomes were tangible, and pay was higher (in my case 100% greater) than compensation at a university. If this continues, the only individuals interested in research careers will be those looking to emigrate to the United States.

Time spent acquiring and administrating grants is an important factor discouraging graduate students from academic careers (particularly women). When they watch what it takes to be successful at a major research university they do not want the low salary and crazy lifestyle.

Back when I started as a PI (1982), the Office of Naval Research was interested in supporting research that trained graduate students. Now they are mission oriented and the funding for core programs has vanished. I can no longer count on funding that will last long enough to train a Ph.D. student, so I can no longer take Ph.D. students that do not have some other source of support. Instead, I can do application oriented research (for which there is much more funding), train MS students, and use professional staff to provide continuity on applied projects. A lot has changed in academic science and engineering, especially in the past decade. It is becoming fairly clear that America’s leadership in science and technology is coming to an end.

Gender Issues

I am not sure what is meant by direct costs for federal grant administration. The bottom line is that I don’t have a secretary to do anything for me. Thus, I xerox, print out letters, fax, etc., everything. I go to the library to get references. If I am lucky, someone sends out my grant or paper via the mail (although usually I am packing it up and sometimes bringing it to the mail

room). I do all my own referencing of documents/papers/grants. I format my grants and make my own figures for grants and papers. There is no one to delegate all of this to. The research assistant on my grants is busy with research – she does not have time to assist me in this administrative way. My grants office interacts with NIMH, but they aren't going to xerox for me. In part this is a gender issue — I notice more men in my department get more people to do things for them. In part, this is the problem with academic medicine — there are no resources to make things more efficient. You have to do it yourself.

There is an unpleasant gender element that is pretty transparent — in general the males get more grants because they are rewarded by the institution with more resources (they are often the "center" directors) and therefore can generate more NIH funding for all the obvious reasons. The signals being sent to students in the biomedical and life sciences are dreadful and if I were one right now I would sure run the other way unless something changes.

In my institution administrative support and help in grant submission is much greater for male faculty.

Issues Faced by Non-Tenure Track Faculty

Again, my situation is different than many other persons probably responding to this survey. I am a non-compensated affiliated researcher who is supported strictly by soft or grant funds and contract work. In this day and age, there are more people who are not in tenured or tenure track positions who are submitting federal grants or being ** subcontracted ** to implement a grant or act as a subcontractor on a federal grant. This is not acknowledged by this study. For those of us on projects affiliated with the University the entire idea that we are going to get administrative support for the administration and management of a grant is ludicrous. It just means more time at work to get the administrative and management work done in addition to the time to conduct the research or implement the project.

Reporting Concerns

Again, the requirement to post published manuscripts is a waste of valuable time by both PIs and administrative assistants. This should not be encouraged.

Web form entry and other forms are convenient for those receiving the forms, but can be horrific for those completing them. For example, it takes 8 or 9 entries for every publication for NSF Fastlane. Thus, it took a WEEK to enter the publications and other information from just one (very productive) grant. That is just silly and wasteful, and is just one example.

It takes a lot of time to comply with the ever changing requirements to submit proposals and reviews. (Yesterday and this morning it took me over two hours to upload a review to NSF Fastlane; this included an hour of telephone conversation with a Fastlane technician.) Longer term grants alleviate this problem to some extent.

I did not see anywhere in this survey a place to tell you what reporting requirements are completely out of hand. You only asked whether we'd rather do them or whether we'd rather commit more of the very limited federal funding dollars to doing them. This is a ridiculous situation. Examples: We write Prior Research Results sections in every grant proposal. Yet while I have been doing research the NSF has added online final project reporting which asks dozens of separate questions on human resources impact, K-12 education, patents, etc. One of the worst parts is the requirement to separate FINDINGS from ACTIVITIES. (Activity - we did this expts. Findings - we learned such and such. It is completely ridiculous trying to write these in two separate sections when you do a dozen experiments.) Why does our usual Prior Results section in our grant proposals no longer suffice? You are making us write reams of material that NO ONE READS!

My major complaint is not about needing more admin support (which seems to be the focus of this survey). Rather, the number of reporting requirements have changed and become significantly more time-consuming within the last 3 years. a) Travel reporting is burdensome. I would prefer a per diem approach. b) This university radically increased the number of online training certifications. All members of research teams (down to grad students) must carry out an online certification exercise. I find these requirements to be proliferating and do not genuinely promote the claimed goal of education about ethical and fiscal responsibility. We should receive a packet of information. The current system does not transfer much information to us researchers. c) It seems as if our time is being scrutinized more and more. Many of us work well over 60 hours a week, but nonetheless are required to account for our time in terms of hours on research vs. teaching vs. sponsored research, etc. While I can understand that federal payment of summer salary should require careful documentation and be auditable, I don't understand why I have to account for research time that is not drawing federal funding.

The inconsistency across federal agencies in the amount of detail and frequency of progress reports is horrific — truly — since we see them from multiple agencies. … If they all essentially followed the NIH annual reporting this would be fabulous! Helpful to investigators and the university itself.

I spend too much time filling out progress reports that are read by 2 people (as opposed to real papers that are available to everybody … hopefully read by more than 2!)

Rather than paying for staff to help with this, the agencies should improve their websites to deal with administration and reporting. NSF has done well in this, but much more is needed.

Accounting/Financial Concerns

Federal funding agencies should force all receiving institutions to treat federal funded research dollars separate from state funding. The stupidity and burden of managing grants often arises when federal research dollars that I raised are treated in the very same way as expenses of the State Correctional Facilities, i.e. purchasing rules, employment rules, etc. There should be federal guidelines and rules that supersede State rules.

Purchase of supplies, travel and equipment could be streamlined by providing researchers with a grant-related credit card with the records going to the grant administrators at the institutions.

In many cases agencies disallow certain expenditures claiming it is part of indirect costs. But yet it may not be and it appears there's no way to rectify that. A catch 22 situation for many PIs. (e.g. our University does not officially support TeX or provide any services, which is the main method use to publish !!! Hence I and my graduate students spend many hours typing in TeX documents, likewise doing illustrations etc. At national labs where I worked in the past this was all part of the support services and I spent my time on research and writing papers — not typing manuscripts etc.)

I think that A21 disallowable expenses are a gigantic problem since there are almost no discretionary funds available in Universities today. What genius thought that a scientist would not need to buy pens, printer cartridges, paper, and lab books with grant funds? Similarly very little money trickles down from indirect costs to pay for secretarial and administrative costs for individual scientists. Both of these rules, i.e A21 circular restrictions and indirect cost calculations providing secretarial and administrative support, are completely unrealistic.

I've been both industrially and federally (mostly DOD) funded throughout my career. The main problem I see with federal funding is the insistence that funding be consumed on schedule regardless of the substantive issues. I quit trying to support grad students for this reason, because I could not plan on suitable students being available to make it worth the trouble of dealing with the hassle with the budget surplus if they weren't.

The summer salary from grants system at NSF is set up as a research disincentive because you can only get 2 months of salary regardless of how many months you work in the summer on grants. They essentially force you to work for free.

I pursue research support from industry rather than the government. The proposal process is much smoother with fewer hassles. The feedback is more direct. Budget allocations and line item transfers are more straightforward.

A big hidden burden comes from the uncertainty of funding EVEN after a grant has been awarded. Not knowing if the support will actually come is nerve racking and disturbs the research greatly. Currently I have a federal grant that has been put on hold in the MIDDLE of the project. ... We hope that the money will come soon but what if it doesn't come? Should we start firing students and staff? or wait? We rarely have the luxury to have backup plans. I consider this a much bigger burden than having to write reports.

Concerns Regarding International Research/International Students

The number of foreign students and postdocs in federally funded research is rising exponentially. Many programs are now more than 60 percent foreign. These students do not qualify for any other federal assistance (REU, etc.) and must be paid for ONLY from federal grants. The administrative load for monitoring INS compliance, obtaining visas, entry permits, permits to

work at national laboratories, work permits, legal help, etc., for these students is staggering. There is no help at the moment in any federal program to deal with this issue.

In this era of ready international communications, I suspect there are many researchers who wish to maintain active studies with collaborators in other countries. Federal regs on grants are a MAJOR barrier to project success, to the extent that they may be interpreted to hold non-US institutions to US rules (e.g., take an English-language ethics exam for the IRB, no reimbursement possible for some international travel, no overhead to international partners, serious conflicts at US customs over research materials, unclear system for international FWA).

I do a lot of international research and administrative support for all kinds of visa applications and processing (especially in post-9/11 environment) as well as general communications. Getting things set up for people going back and forth, etc., is ESSENTIAL. This ought to be considered as a straightforward funding category.

Concerns about Technology Support/Funds

A growing part of the administrative chores is managing computers and information technology. I have a file server for my lab group, 7 desktop computers, and 5 laptop computers. All of these need regular maintenance, software licenses, software upgrades, networking, backup protection, etc. I have to do most of this myself. There is no more admin help for most tasks I do.

Relax the new restrictions on the purchase of computer equipment on direct cost funds. If a PI has no nonfederal funds, it becomes almost impossible to purchase new computer equipment for the lab and for the PI. An up to date laptop for the PI is the most important piece of equipment and is used for everything involved in research program, from writing grants and papers to storing data to writing reports, etc.

Need for System of Best Practices

There does not seem to be a system of best practices for central grant administration, which could help substantially. The people involved could benefit from better training. They could also significantly benefit from automation. They are far too dependent on tedious manual vs. computer based processes. Manually signed forms are required — digital signatures are not used, as they have been for many years in industry.

Agency-Specific Compliments and Recommendations

<u>Compliments Regarding Specific Funding Agencies</u>

The main burden on my time is IRB stuff. The modular budget, etc. — changes made by NIH over the last few years — have been VERY helpful. Now if we can only tone down IRB.

The actual NIH grant submission process has gotten easier over the past decade, and the abbreviated continuation reports required have been a great relief compared to when I started research in the late 1970s.

NSF is very good to work with — its electronic grant submission and administration are efficient and transparent. It would be great if the other federal funders could use NSF as a model.

The more we can couple publishing refereed journal papers with evidence of progress, the better. This is indeed encouraged by NSF and EPA.

NASA and NSF have been exemplary, in my opinion, in allowing P.I.s to get on with research with a minimum of hassle. Our research foundation also has been given authority to handle NASA and NSF grants locally with a minimum of permission-seeking from Washington. This has been very helpful and useful.

The NSF Fastlane system has been marvelous (after a couple of rough start-up years). The time I used to spend on tedious paperwork is much reduced. One improvement I'd like to see is a substantial reduction of the time between notification of grant approval and the arrival of funds.

Hats off to NSF support office for applicants. Their help service was by far the best in helping me foresee administrative needs.

Recommendations

DARPA

DARPA has turned to short term research and development oriented work. Funding for basic research has shown to be a wiser investment in the past. DARPA should get back to that.

VA

The bureaucratic overhead in the Department of Veterans Affairs is a huge drain on time and effort for researchers. Many mandatory activities make little or no sense for researchers, and a one-size-fits-all mentality geared to clinicians and administrators as opposed to researchers dominates decisions. Plus, the fact that VA researchers are hired on a funds-available basis with far less job security than mindless VA bureaucrats fosters a climate of second-class citizenry that makes federal research far less attractive than other university-based research.

NIH

Perhaps the most vexing part of grant management is figuring out how to do the electronic submissions and electronic reporting. For example, I have a single NIH grant (now in its 28th year) and forget from one year to the next how to navigate the Commons web site. There is absolutely no reason to require a new password each year, since this is hardly top secret stuff.

The problem is not so much with tasks that can be turfed to administrators, but tasks that I need to do myself. The most incredible example comes from volunteering to review for an NIH panel. This is an incredible time-sink that I consider a public service, I hate doing these. But what makes it worse is the probably 5 hours I've spent trying to figure out 4 (count 'em) 4 different web-based registration systems just to be able to be reimbursed for airfare. 1. DUNS (Dun and Bradstreet number) 2. CCR (Federal contractor registration) 3. NIH ERA Commons (where you post evaluations) 4. IAR (thread-based comment page)

While I like the idea of saving me time as an investigator, the often confusing staff contacts and assignments at NIH and the constant changes in NIH personnel and paperwork are more frustrating every year.

As for the problem of excessive time spent in writing and re-writing grants, it is essential that greater efforts be made to ensure continuity in the review of NIH grants. There are an increasing proportion of cases in which new reviewers are assigned to an A2 application, resulting in completely new sets of criticisms that an applicant cannot respond to because A3 applications are not permitted. This is causing serious demoralization and discouraging many junior faculty (as well as graduate students and postdocs who are witnessing the consequences). It would also be very helpful if one of the reviewers assigned to a grant was given the role of advocate specifically to avoid criticisms that may be unwarranted, and to guard against unfair or inconsistent reviews.

The amount of wasted time and effort from top to bottom is incredible. The very latest is a 9 page document to follow so the government can pay you $200 for reviewing NIH grants. I'm just not going to do it anymore. The US government is out of control with this nonsense.

The time I spend working on IRB-related issues, both submitting and renewing protocols and maintaining compliance, is the chief regulatory activity that I spend time on that cannot be delegated to administrative staff. I have delegated about half of the total, but the rest I must do. This time has increased exponentially over the past few years and significantly hampers the ability to get things done. Both because of the time it takes, but also because of all the time lags waiting for either the NIH (for vulnerable subjects) or IRBs to respond/approve. In sum, productivity on my R01 is significantly hampered by IRB issues. Standardized NIH consent forms and protocol format would GREATLY facilitate this process, especially as relates to multi-center human research

I have to submit NIH grant applications under the conditions of my employment. Administrative problems have not increased greatly. Obtaining a good review of an NIH grant application has become much more difficult. Multiple reviewers often go in different directions, and their points of view are not reconciled. I am given three pages by NIH to respond to multiple reviews that have many, many particular criticisms. The bottom line is that the applicant has a much harder time revising an application. Much time has to be spent trying to guess what changes might meet with the reviewers' approval.

Factors that are only partially out of NIH control are leading to a huge windfall for consulting services with corresponding waste of institutional resources on paperwork and ancillary

personnel. Examples include [1] seminars and internal audits for compliance on HIPAA — a law which I believe adds close to zero added privacy protection over civil tort law for me and my patients yet adds a colossal financial burden to my institution, [2] overly strict compliance with limitation of fund use for a given grant proposal. While the latter is perfectly reasonable for a contract, it is inappropriate for grants. Some amount of leeway is necessary to allow free pursuit of the next set of concepts for a lab (egregious cases excepted) without inducing institutional anxiety regarding severe penalties (and resultant resource-wasting associated with hiring consulting firms and compliance related paperwork).

NSF

Since NSF is the major source of funding in my area of research, the extremely low hit ratio (of about 5 percent) is very discouraging. And so is the very questionable decision process, which is steered by Program Managers who have too much power and have been there for far too long.

The biggest problem with federally sponsored research (at NSF) is failure to adhere to review panel rankings, and the strategic over-reliance on NSF to conduct and lead the lion's share of competitive crop-related research, where emphasis on science heavily overshadows the need for application. We need a similarly sized (large or larger!) budget for accomplishing real applied goals, not just chasing scientific rabbits in one direction and then another. That way, both short- and long-term US needs will be addressed.

Requirements for inclusion of education and outreach in, especially, NSF proposals have created not just an extra administrative overhead, but also additional required activities that take away from research. I have seen a relatively low level of return on all this investment.

NSF needs to make the fastlane process for submitting yearly or final progress reports on active or expired grants as easy as it is to submit the proposals for these grants. PIs should be provided the opportunity to upload a single file or set of files of their own design which contain the desired information to complete these progress/annual reports.

PHS (Public Health Service)

Consider eliminating the concordance certification required for PHS grants using animals.

TRIO (Department of Education)

Federal Oversight of TRIO programs has been increasingly oppressive over the past three or so years and this has added a tremendous burden to budget management as Directors nationwide cannot rely that the law, the regulations and EDGAR will be adhered to as they have been written. The Office of TRIO programs seems to be able to make changes in regulations as they see fit without consultation with anyone, and this becomes confusing and has caused an undue hardship in reporting requirements and asking for special permissions for budget transfers that do not adhere to expanded authorities.

USDA

This questionnaire did not ask how much time is taken from research to prepare grant applications that are never funded. This is huge. Combined with the time of reviewers, panel members, etc., the cost of handing out money at the scope which USDA has it available is extremely high. The money would be much more productively used overall if it were simply given in equal shares to those researchers working on agricultural research. This would save enormous overhead time and provide a distribution of returns on investment that would likely be very similar to that obtained with the present system — but there would be significantly more dollars available to research due to the elimination of all the grant-writing and -reviewing overhead costs.

The survey misses the number one waste of academic research effort related to federal grants from the department of agriculture. The department of agriculture has many, many more dollars devoted to in-house research than it does to competitive grant programs. As a result, academic researchers spend a great deal of time, often using limited operating funds, seeking <$300k multi-year federal agriculture grants with funding rates below five percent. In the meantime, our USDA counterparts, often across the street or even in the same building and doing essentially the same work, are funded at a level of $350,000 per scientist, annually, on the basis of in-house "proposals" that receive nominal critical review and have funding rates of essentially 100 percent. That's politics, not research, and you would have a big impact on what research could be accomplished with the public's money if you could shift more USDA research funds into competitive programs.

Most of my federal research money comes through USDA Co-op agreements, which specifically exclude indirect costs and payment of graduate student tuition. My institution and other educational institutions with which I subcontract have over the past several years changed their policies and now include graduate student tuition remission charges in their fringe benefits calculations. Failure of the universities and the federal government to come to any agreement on handling fringe benefits in a way legally compatible with the USDA co-op regulations means I can no longer hire graduate students at my institution, nor can I subcontract with other institutions to hire graduate students. This has been a major interference with my ability to recruit qualified personnel for my research program, and greatly increases the administrative time it takes me to hire and subcontract with non-student job categories for people with appropriate skills. It also makes my and other institutions less willing than before to encourage seeking co-op agreement funding, rather than other kinds of grants, or to support administration of co-ops. Some change, such as allowing a small amount of indirect costs (even 5 percent would help), or negotiating some general agreement on a way to hire graduate students with a separate fringe benefit rate that does not include tuition, would ease my administrative burden and would make co-op funding through land grant universities more welcome to institutions in general.

APPENDIX C:
TECHNICAL NOTES

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APPENDIX C:
TECHNICAL NOTES

Project Design

The FDP Faculty Workload Survey was conducted as a Web survey. Institutional recruitment began in the summer of 2005, when the administrative and faculty representatives from each of the 99 FDP member institutions were asked to assist with coordination of the data collection. Representatives received a complete data-collection packet, including both the faculty questionnaire and instructions for compiling a list of faculty.

Approval was obtained from Northwestern University's Institutional Review Board (IRB), with Dr. Robert Decker serving principal investigator for the study. Additional IRB approval was also obtained, when necessary, from each participating school.

Of the total number invited, 73 institutions agreed to participate in the survey administration. Each participating institution provided an electronically formatted list with names, e-mail addresses, and office phone numbers of eligible faculty. Individual faculty-member participation was solicited via an invitation letter containing background information about the FDP, the study, how to log in the Web survey using a unique ID number, and the consent process. An estimated completion time of 20-30 minutes was given so that respondents could budget their time accordingly. A number of the participating universities elected to provide an e-mail pre-notification to the sampled faculty members. Following the initial contacts (the pre-notification letter and invitation e-mail), respondents were sent up to four e-mail reminders that ceased upon completion of the survey, after a refusal to participate, or following the determination that a respondent was ineligible.

Written communications sent to campus representatives and participating faculty are presented for review later in this appendix.

Survey Instrument

The survey consisted of approximately 20 questions of varying formats — including multiple choice, text entry, and fill-in questions — to measure faculty characteristics, workload, time allocations, and perceptions of the work climate (see Appendix D for a copy of the survey). Members of the FDP suggested many of the survey topics. Where possible, questions were included from faculty surveys previously conducted by other federal agencies and research organizations. For example, a few items were based on several iterations of survey questions used within the National Study of Postsecondary Faculty (NSOPF) conducted by the U.S. Department of Education and UCLA's Higher Education Research Institute Faculty Survey.

In the spring of 2004, 72 faculty researchers employed at 13 different institutions completed a pilot version of the FDP Workload Survey. E-mail pre-notification letters, invitations to participate in the study, and reminder notes were sent exclusively via electronic mail to prompt faculty and to communicate with respondents. All the respondents completed questionnaires

through Internet access. The results of the pilot test informed the revision of the survey instrument and administration of the full study. Post-pilot revisions included: reformatting the burden-related questions to read more clearly; adding questions to better limit the sample to full-time, federally funded faculty; and adding questions to examine issues of administrative support.

With the exception of the requirement to comply with the informed-consent procedure for the study, respondents — both for the pilot and full survey — had the option of not answering questions. And in both cases, all respondents encountered the same questions, response options, and ordering of material. The results of the final data analysis were found to directly mirror the initial findings of the pilot study, with seven of the top burdens identified in the pilot emerging as significant burdens in the full study.

The FDP logo was presented in the upper left-hand corner of the screen, with contact information for the study presented in the upper right-hand corner. “Previous” and “next” buttons were provided on the screen to allow respondents to navigate forward or back through the survey, in case they wished, for example, to change any previous responses. An example of the general on-screen appearance of the survey is shown in Appendix D.

Data Collection

The Web-based survey was hosted at Survey Sciences Group, in Ann Arbor, Michigan. Data collection commenced on 10/07/2005, and was completed on 12/19/2005. The survey was self-administered and self-paced.

The survey was conducted in two waves, the first wave corresponding to those schools that elected to send advanced pre-notifications. Formal invitation e-mails were sent on 10/19/05 and reminders, if needed, were sent on 10/24/05, 11/02/05, 11/08/05, and 11/14/05.

For the second wave, invitation e-mails were sent on 11/02/05 and reminders, if needed, were sent on 11/07/05, 11/11/05, 11/16/05, and 11/21/05.

Sample Selection

Ninety-nine institutions were invited to participate in the study. Of these, 73 agreed to participate and 69 (~70% of the total number invited) provided usable data.

Of the 30 institutions that did not submit usable data for the study:

- Two institutions directly refused to participate because they did not want faculty surveyed or because they were uncomfortable providing e-mail contact information for the faculty sample.
- Some agreed to participate, but did not reply to follow-up requests for information.
- Some institutions could not get IRB approval in time.
- Four institutions had no cases remaining in the analysis sample because none of the faculty names that were provided met the eligibility requirements.

The faculty sample was selected from a list of names provided by the participating institutions. While the desire was to make this study a census of all eligible respondents within the FDP, a simple random sample was selected instead so as to reduce the overall cost. First, we separated the sampling universe into two strata: institutions with 100 or fewer eligible respondents; and institutions with more than 100 eligible respondents. We selected all respondents who were eligible from among the stratum that contained 100 or fewer respondents per institution. We then sampled from among the remaining institutions at a rate of 70.4 percent. Eligible faculty met the following criteria:

- Full-time faculty appointment of at least one month in during the 2004-05 academic year.
- A PI or co-PI on at least one federally funded grant during that year.
- An assistant, associate, or full professor during that year.
- Employed by one of the 99 institutions that participate in the FDP.

Response Rates

Regarding response rate calculations, we use the American Association for Public Opinion Research (AAPOR) Standard Definitions as a guide. Thus in discussing a response rate we cite an RR number such as RR1 or RR4. These labels specifically reference the response-rate-calculation algorithms described in the 2004 edition of the AAPOR guide.

Of the 99 FDP institutions invited to participate in the 2005 FDP Faculty Workload Survey, 69 provided usable data. Larger and more research-oriented institutions with high volumes of federal funding were more likely to participate than were emerging research institutions (ERIs),[1] which had a very low response rate. Indeed, the final data analysis only includes responses from 28 faculty members employed by institutions with emerging research programs.

Many characteristics of the FDP survey respondents resemble those of the NSOPF:04 survey respondents. Overall, though, the FDP respondents were much more research-oriented and somewhat more senior in rank. For a more detailed comparison between NSOPF and FDP faculty respondents, see Table C1.

Of the 23,325 respondents invited to participate in the study, 8,692 responded in some way. Among those who responded, however, we were able to determine that 2,064 were not eligible to participate (often, because they had been inadvertently included in the contact lists submitted by participating institutions). This resulted in an eligibility rate of 76.3 percent, and a raw response rate of RR2=31.2 percent [2] (in which responders include eligible complete cases as well as eligible partial cases). We expect that this eligibility rate reflects the difference between institutions' methods of storing their records on federally funded researchers and the exact respondent characteristics sought by the FDP.

[1] An ERI is an FDP member institution, often undergraduate in nature, with a small but growing research enterprise of typically less than $15,000,000 in annual federally supported R&D expenditures.

[2] Response Rate 2, or RR2 (from the 2006 AAPOR Standard Definitions guide) refers to the number of valid interviews (eligible completes and partials) divided by the number of valid interviews (eligible completes and partials) plus the total number of eligible non-interviews (such as refusals or non-contacts) plus all cases of unknown eligibility (non-respondents).

It might be assumed that the eligibility rate among non-respondents is at least comparable to that of respondents (76.3 percent). But our actual hypothesis is that the rate of eligibility among non-respondents is likely to be lower than among respondents, as many non-respondents likely self-screened out of the process after reading about the purpose of the study in the invitation materials. However, because we have no method of estimating their eligibility precisely, we will use the known responder eligibility as an estimate to develop a revised response rate. This revised rate comes to RR4=37.0 percent.[3]

The average time to complete the survey was approximately 20 minutes, with a median time of 17 minutes and mode of 15 minutes. Cases in which respondents took longer than 60 minutes were excluded from the mean and median computations, but the mode calculation included all completed cases. Individuals who took longer than one hour to complete the survey likely moved away from their computers, leaving the survey idle for a period of time. Partial respondents were not included in the calculation of time to complete, as they do not represent the total time to finish taking the survey. Given that some faculty did not answer every question, the size of the respondent group somewhat varies from question to question.

Cooperation Rate

Another variable we monitored was the cooperation rate (AAPOR CP1),[4] which provided us with a measure of how cooperative respondents proved to be once they were identified as eligible. In this study, 81.2 percent (CP1) of all respondents completed the survey once they were identified as eligible. Given this high rate, we can be confident that any bias introduced by non-response is more likely to have resulted from the invitation and decision-to-participate process rather than from eligible respondents' reluctance to complete the survey once started.

If we believe that non-respondents were more likely to be ineligible than respondents, we should be able to detect some differences in eligibility rates between known groups that also have different response rates. Specifically, we know that the response rates varied significantly by school. (In this study, RR2 ranged from 0 to 57.1 percent and RR4 ranged from 0 to 62.5 percent, depending on the school.) So if it is true that sample eligibility had an influence on response rate, we should see a correlation between response rates and eligibility rates by school. First, we find that there is a significant range of eligibility rates as well — from 50.0 to 98.3 percent of the total sample. And indeed we do find a significant correlation. If we order the schools from lowest to highest response rate, and look only at the bottom half (34 schools), we find that 21(61.8 percent) of those 34 schools were also in the bottom half of the eligible sample.

[3] Response Rate 4, or RR4 (from the 2006 AAPOR Standard Definitions guide) refers to the number of valid interviews (eligible completes and partials) divided by the number of valid interviews (eligible completes and partials) plus the total number of eligible non-interviews (refusals, non-contacts, etc.) plus the proportion of cases of unknown eligibility that are estimated to be ineligible, based upon the eligibility rate of the cases of known eligibility (non-respondents x eligibility rate). This response rate is a more reasonable assessment of the entire population, as it attempts to account for ineligible non-respondents.

[4] Cooperation Rate 1, or CP1 (from the 2006 AAPOR Standard Definitions guide) refers to the total number of eligible, complete interviews divided by the total number of eligible complete and incomplete interviews plus non-interviews that involve having successfully identified and contacted an eligible potential respondent (refusals, break-offs, etc.).

The number of ineligible cases represented 8.9 percent of the total sample. Cases deemed ineligible involved individuals who were not faculty members or who did not receive federal grant funds (Table C2). Ineligibility rates by school are reported in Table C3.[5]

Of the eligible respondents, there were 463 refusals, resulting in a refusal rate of 2.2 percent.[6] Refusals involved individuals who explicitly stated that they wished not to participate. Refusal rates by school over the total number of eligible cases are reported in Table C4.

Data Analysis

Only full-time faculty who held federal grants during 2004-2005 were included in the analysis sample. Deans, part-time faculty, and non-faculty research scientists were excluded. Faculty who met the inclusion criteria were retained in the analysis sample, which included those with status as full-time faculty members, those who received federal grant funding during 2004-2005, and all full, associate, and assistant professors (if ranks were used at their institution).

Faculty with administrative duties (36.0 percent of respondents) were operationally defined as those serving as department chairs, associate deans, center directors, program directors, or in other positions with formal administrative responsibilities. FDP reporting categories were used to determine federal funding levels for each of the participating institutions. Administrative burden was calculated only for federal agencies that provided research funds to at least 100 of the faculty respondents during the 2004-2005 academic year.

Chi-square tests were used to determine whether significant differences existed between survey items that resulted in the collection of nominal and ordinal data (e.g., gender, race/ethnicity, academic rank, burden items). For items using continuous-level data (e.g., number of work hours, grant funding), analyses of variance were used to compare the responses.

In order to appropriately report the significance of the results, we have to understand the relationship between sample size and statistical power. Increases in sample size increase statistical power — the probability of detecting significance. Given the size of our analysis sample (6,081 respondents), a more conservative approach was taken with regard to reporting statistical significance in this study. Therefore, all statistically significant differences are reported at the $p<0.001$ level.

Additional analyses focused on faculty perceptions of the climate for research. Comparisons were made based on Likert-type scale ratings coded from “1=strongly disagree” to “4=strongly agree.” Qualitative analysis — of open-ended responses — was also undertaken at the end of the survey. A statement requesting that respondents “Please take a moment to provide us with additional comments” resulted in more than 250 pages of faculty comments. These data were thematically analyzed and the results triangulated across researchers.

[5] The rate of ineligibility is the number of known ineligible cases over the entire sample. The rate of eligibility is the number of possibly eligible cases (this includes non-respondents, which are cases of “unknown eligibility”).

[6] Refusal Rate 1, or REF1 (from the 2006 AAPOR Standard Definitions guide) refers to the number of eligible refusals divided by the number of valid interviews (eligible completes and partials) plus the total number of eligible non-interviews (refusals, non-contacts, etc.) plus all cases of unknown eligibility (non-respondents).

Limitations

There is variation in the degree of rigor with which institutions collect and verify their data. Thus, institutional differences in the quality of sample lists that were provided to the FDP resulted in variations in the quality of data in the final sample of faculty. We attribute this, in part, to institutional policies governing sponsored-programs data collection, which can have profound effects on the method of recording funded-grant data.

The survey response rate was lower than optimal. But we found that restrictions in access to institutional data prohibited our implementing a non-response study to determine the representativeness of respondents across faculty subgroups (e.g., by disciplinary affiliation, academic rank, tenure status, race/ethnicity, or gender).

Open-ended responses from a few respondents raised concerns about whether one survey item pertained to the total number of federal grant funds *received* or to the total number of federal grants *awarded* during the 2004-2005 academic year. Given the large number of survey respondents and the uniformity of response patterns, it is unlikely that any such confusion resulted in substantial alterations to the aggregated response patterns, but readers should interpret these results with at least some degree of caution.

A few faculty also commented that they had mistakenly selected the “None” rather than “N/A” response option when answering the first few administrative-burden questions because “None” appeared first in the list of response options. For this reason, we undertook an extensive review of the response patterns for all administrative-burden and -assistance items included on the survey. We found no irregularity in the pattern of “None” and “N/A” responses for these questions — i.e., no indication that “None” was selected at a particularly high rate for the first few burden/assistance items on the survey. Indeed, considerable variation existed in the frequency of “None” versus “N/A” responses when viewed across survey items, and the ratio of “None” versus “N/A” responses also varied considerably within questions. It is worth mentioning that the survey respondents viewed these choices 48 times in the course of completing the survey. Given the sophistication of this group of respondents — researchers with a higher-than-average exposure to surveys — the possibility of confusion also seems smaller than one would expect when compared to the general population.

Table 1. Comparison of FDP and NSOPF:04 Faculty Respondents

Item	FDP Faculty Workload Survey	NSOPF:2004
Sample	Full-time faculty at 4-year institutions	Full-time faculty at 4-year institutions
Principal Activity	51% Research 19% Instructional 13% Equal teaching/research 24% Administration 3% Other	
Academic Rank	58% Professor 28% Associate professor 11% Assistant professor 3% Other	
Tenure Status	76% Tenured 17% On tenure track but not tenured 6% Not on tenure track 1% No tenure status for my faculty status	47% Tenured 22% On tenure track but not tenured 27% Not on tenure track 5% No tenure status for my faculty status
Race/Ethnicity	92% White non-Hispanic 3% Black non-Hispanic 6% Hispanic 6% Asian/Pacific Islander 3% American Indian/Alaskan Native	80% White non-Hispanic 5% African American/Black 3% Hispanic 10% Asian/Pacific Islander 2% other
Gender	71% Male 29% Female	68% Male 32% Female

Table 2. Response Rate, Eligibility, Complete and Partial Counts w/AAPOR RR2 and RR4 for each School

	Total Number of Eligible Respondents	Total Completes	Total Partials	AAPOR RR#2	AAPOR RR#4
Bradley University	4	0	1	25.00%	40.00%
Brown	143	62	7	48.25%	51.49%
Case Western Reserve	569	135	28	28.65%	31.02%
Colorado State University	465	127	12	29.89%	39.49%
Columbia	1,298	232	62	22.65%	32.39%
Cornell	433	129	14	33.03%	41.09%
Dana Farber Cancer Institute	63	20	2	34.92%	39.71%
Dartmouth	177	63	7	39.55%	44.25%
Duke	631	179	21	31.70%	34.33%
Florida Atlantic	53	14	2	30.19%	33.59%
Florida International University	59	11	3	23.73%	24.94%
Florida State University	221	84	18	46.15%	54.08%
Georgetown	148	49	5	36.49%	37.65%
Johns Hopkins	209	39	7	22.01%	31.18%
Kent State	67	20	2	32.84%	37.50%
Mass. General Hospital	1,258	108	48	12.40%	21.15%
Med. University of South Carolina	174	57	9	37.93%	39.61%
Morgan State	7	4	0	57.14%	62.50%
North Carolina State	160	52	10	38.75%	41.87%
Northwestern	341	145	14	46.63%	49.18%
Oregon Health and Science University	544	111	16	23.35%	31.35%
Penn State	1,286	281	29	24.11%	33.09%
Purdue	804	140	32	21.39%	29.05%
Research Foundation SUNY	385	118	29	38.18%	42.35%
Rhode Island College	1	0	0	0.00%	0.00%
San Diego State University Foundation	110	32	6	34.55%	39.74%
Southern Illinois University, Edwardsville	8	0	1	12.50%	22.22%
Texas A&M Research Foundation	81	29	6	43.21%	47.62%
Texas A&M	15	2	0	13.33%	23.53%
Texas Agricultural Experiment Station	114	36	3	34.21%	39.43%
Texas Engineering Experiment Station	182	48	6	29.67%	35.88%
Texas State University, San Marcos	21	10	0	47.62%	55.12%
Texas Tech.	73	24	3	36.99%	40.26%
University of Arizona	754	167	26	25.60%	33.29%
University of Arkansas for Medical Sciences	161	51	8	36.65%	41.55%
UCLA	233	47	8	23.61%	25.75%
UC System Wide-Davis	496	149	33	36.69%	40.29%
University of Chicago	409	90	16	25.92%	29.29%
University of Cincinnati	383	98	13	28.98%	35.54%
University of Florida	705	229	31	36.88%	42.13%
University of Hawaii	114	37	5	36.84%	39.50%
University of Houston	99	33	3	36.36%	37.58%
University of Illinois, Chicago	347	68	13	23.34%	26.99%
University of Illinois, Urbana-Champaign	597	201	28	38.36%	45.59%
University of Kansas	158	55	6	38.61%	45.01%
Univ. of Maryland Center for Environmental Science	42	17	1	42.86%	46.32%
University of Maryland, College Park	557	135	18	27.47%	34.24%
U Mass, Amherst	161	38	3	25.47%	28.93%
University of Michigan	946	301	32	35.20%	39.35%
University of Minnesota	392	155	25	45.92%	48.69%

University of Missouri	317	91	13	32.81%	38.86%
University of Nevada, Las Vegas	54	15	0	27.78%	36.07%
University of North Carolina, Chapel Hill	500	179	20	39.80%	44.49%
University of North Carolina, Wilmington	76	28	2	39.47%	49.43%
University of North Florida	21	3	0	14.29%	24.00%
University of North Texas	44	16	0	36.36%	41.67%
University of North Texas Health & Science Center	36	18	0	50.00%	52.63%
University of Oklahoma	98	25	4	29.59%	34.72%
University of Rochester	218	88	10	44.95%	47.28%
University of South Florida	148	53	7	40.54%	44.78%
Univ. of Texas Health Science Center at San Antonio	142	43	7	35.21%	37.78%
University of Texas Medical Branch	183	60	11	38.80%	41.94%
University of Texas, Austin	431	140	18	36.66%	40.79%
University of Washington	234	71	21	39.32%	45.29%
University of Wisconsin, Madison	765	286	39	42.48%	49.52%
Washington State University	182	60	7	36.81%	43.08%
Washington University	545	190	15	37.61%	41.15%
Yale	414	130	15	35.02%	36.50%
UCSB	195	32	7	20.00%	23.40%
Total	21,261	5,760	868	31.17%	37.03%

Table 3. Ineligibility Counts and Percent of Ineligibles and Eligibles Over the Per-School Sample

	# of Ineligible Faculty	Rate of Ineligibility of Sample	# of Eligible Faculty	Rate of Eligibility of Sample
Bradley University	1	20.00%	4	80.00%
Brown	10	6.54%	143	93.46%
Case Western Reserve	20	3.40%	569	96.60%
Colorado State University	81	14.84%	465	85.16%
Columbia	196	13.12%	1,298	86.88%
Cornell	63	12.70%	433	87.30%
Dana Farber Cancer Institute	5	7.35%	63	92.65%
Dartmouth	16	8.29%	177	91.71%
Duke	26	3.96%	631	96.04%
Florida Atlantic	3	5.36%	53	94.64%
Florida International University	1	1.67%	59	98.33%
Florida State University	41	15.65%	221	84.35%
Georgetown	3	1.99%	148	98.01%
Johns Hopkins	29	12.18%	209	87.82%
Kent State	5	6.94%	67	93.06%
Mass. General Hospital	149	10.59%	1,258	89.41%
Med. University of South Carolina	5	2.79%	174	97.21%
Morgan State	1	12.50%	7	87.50%
North Carolina State	9	5.33%	160	94.67%
Northwestern	18	5.01%	341	94.99%
Oregon Health and Science University	66	10.82%	544	89.18%
Penn State	185	12.58%	1,286	87.42%
Purdue	90	10.07%	804	89.93%
Research Foundation SUNY	29	7.00%	385	93.00%
Rhode Island College	1	50.00%	1	50.00%
San Diego State University Foundation	10	8.33%	110	91.67%
Southern Illinois University, Edwardsville	1	11.11%	8	88.89%
Texas A&M Research Foundation	7	7.95%	81	92.05%
Texas A&M	2	11.76%	15	88.24%
Texas Agricultural Experiment Station	10	8.06%	114	91.94%
Texas Engineering Experiment Station	18	9.00%	182	91.00%
Texas State University, San Marcos	4	16.00%	21	84.00%
Texas Tech.	4	5.19%	73	94.81%
University of Arizona	90	10.66%	754	89.34%
University of Arkansas for Medical Sciences	14	8.00%	161	92.00%
UCLA	7	2.92%	233	97.08%
UC System Wide-Davis	32	6.06%	496	93.94%
University of Chicago	20	4.66%	409	95.34%
University of Cincinnati	41	9.67%	383	90.33%
University of Florida	66	8.56%	705	91.44%
University of Hawaii	5	4.20%	114	95.80%
University of Houston	2	1.98%	99	98.02%
University of Illinois, Chicago	18	4.93%	347	95.07%
University of Illinois, Urbana-Champaign	82	12.08%	597	87.92%
University of Kansas	20	11.24%	158	88.76%
University of Maryland Center for Environmental Science	3	6.67%	42	93.33%
University of Maryland, College Park	60	9.72%	557	90.28%
U Mass, Amherst	8	4.73%	161	95.27%
University of Michigan	67	6.61%	946	93.39%
University of Minnesota	22	5.31%	392	94.69%
University of Missouri	33	9.43%	317	90.57%

University of Nevada, Las Vegas	7	11.48%	54	88.52%
University of North Carolina, Chapel Hill	44	8.09%	500	91.91%
University of North Carolina, Wilmington	16	17.39%	76	82.61%
University of North Florida	3	12.50%	21	87.50%
University of North Texas	4	8.33%	44	91.67%
University of North Texas Health and Science Center	2	5.26%	36	94.74%
University of Oklahoma	8	7.55%	98	92.45%
University of Rochester	10	4.39%	218	95.61%
University of South Florida	12	7.50%	148	92.50%
Univ. of Texas Health Science Center at San Antonio	6	4.05%	142	95.95%
University of Texas Medical Branch	10	5.18%	183	94.82%
University of Texas, Austin	31	6.71%	431	93.29%
University of Washington	27	10.34%	234	89.66%
University of Wisconsin, Madison	111	12.67%	765	87.33%
Washington State University	21	10.34%	182	89.66%
Washington University	34	5.87%	545	94.13%
Yale	10	2.36%	414	97.64%
UCSB	9	4.41%	195	95.59%
Total	2,064	8.85%	21,261	91.15%

Table 4. Refusal Rate, Eligibility, and Hard and Soft Refusal Counts w/AAPOR REF1 for each School

	Total Number of Eligible Respondents	Hard Refusals	Soft Refusals	% Refused
Bradley University	4	0	0	0.00%
Brown	143	3	0	2.10%
Case Western Reserve	569	7	1	1.41%
Colorado State University	465	19	0	4.09%
Columbia	1,298	25	2	2.08%
Cornell	433	12	0	2.77%
Dana Farber Cancer Institute	63	0	0	0.00%
Dartmouth	177	4	2	3.39%
Duke	631	10	0	1.58%
Florida Atlantic	53	3	0	5.66%
Florida International University	59	2	0	3.39%
Florida State University	221	5	1	2.71%
Georgetown	148	7	0	4.73%
Johns Hopkins	209	4	0	1.91%
Kent State	67	0	0	0.00%
Mass. General Hospital	1,258	36	0	2.86%
Med. University of South Carolina	174	3	0	1.72%
Morgan State	7	0	0	0.00%
North Carolina State	160	4	0	2.50%
Northwestern	341	7	0	2.05%
Oregon Health and Science University	544	11	0	2.02%
Penn State	1,286	41	0	3.19%
Purdue	804	15	0	1.87%
Research Foundation SUNY	385	8	0	2.08%
Rhode Island College	1	0	0	0.00%
San Diego State University Foundation	110	3	0	2.73%
Southern Illinois University, Edwardsville	8	0	0	0.00%
Texas A&M Research Foundation	81	1	0	1.23%
Texas A&M	15	0	0	0.00%
Texas Agricultural Experiment Station	114	1	0	0.88%
Texas Engineering Experiment Station	182	2	0	1.10%
Texas State University, San Marcos	21	1	0	4.76%
Texas Tech.	73	0	0	0.00%
University of Arizona	754	13	0	1.72%
University of Arkansas for Medical Sciences	161	3	0	1.86%
UCLA	233	6	0	2.58%
UC System Wide-Davis	496	18	0	3.63%
University of Chicago	409	6	0	1.47%
University of Cincinnati	383	9	0	2.35%
University of Florida	705	11	0	1.56%
University of Hawaii	114	0	0	0.00%
University of Houston	99	2	0	2.02%
University of Illinois, Chicago	347	8	0	2.31%
University of Illinois, Urbana-Champaign	597	9	0	1.51%
University of Kansas	158	6	0	3.80%
Univ. of Maryland Center for Environmental Science	42	2	0	4.76%
University of Maryland, College Park	557	13	0	2.33%
U Mass, Amherst	161	2	0	1.24%
University of Michigan	946	18	0	1.90%
University of Minnesota	392	7	0	1.79%
University of Missouri	317	8	0	2.52%

University of Nevada, Las Vegas	54	0	0	0.00%
University of North Carolina, Chapel Hill	500	10	0	2.00%
University of North Carolina, Wilmington	76	2	0	2.63%
University of North Florida	21	1	0	4.76%
University of North Texas	44	0	0	0.00%
University of North Texas Health and Science Center	36	0	0	0.00%
University of Oklahoma	98	2	0	2.04%
University of Rochester	218	4	0	1.83%
University of South Florida	148	4	0	2.70%
University of Texas Health Science Center at San Antonio	142	2	0	1.41%
University of Texas Medical Branch	183	1	0	0.55%
University of Texas, Austin	431	7	0	1.62%
University of Washington	234	6	0	2.56%
University of Wisconsin, Madison	765	13	0	1.70%
Washington State University	182	4	0	2.20%
Washington University	545	11	0	2.02%
Yale	414	10	0	2.42%
UCSB	195	5	0	2.56%
Total	21,261	457	6	2.18%

Support Materials

{FDP Header w/ logo}

June 20, 2005

Dear Colleague,

This fall, the Federal Demonstration Partnership (FDP) Faculty Subcommittee on Administrative Burden will administer a Web-based survey to explore the impact of recent changes in federal regulations on the time faculty spend pursuing active research. The results of this study will be used to make recommendations to the Office of Management and Budget (OMB) for streamlining research administrative burdens, without reducing research accountability and compliance with federal regulations. As part of this effort, the FDP will survey all federally funded research faculty working as Principal Investigators at each of the nearly 100 FDP member institutions. The survey has an estimated completion time of 20 minutes and will be administered on the Web.

I am writing to ask for your help with this important project. FDP has contracted with Survey Sciences Group LLC (SSG) of Ann Arbor, Michigan to carry out the survey administration. As an official administrative representative, the FDP needs you to assist in the preparation of this study by acting as a liaison between your institution and the FDP/SSG research team.

Specifically, we ask that you assist us by obtaining a list of federally funded researchers at your institution. The Principal Investigator on this study has been listed as Dr. Robert S. Decker, at Northwestern University. The study has received approval through Northwestern University's Institutional Review Board; however, we anticipate that some institutions may require a local IRB/Human Subjects review and approval. To help facilitate this process, we have included a copy of the Northwestern IRB approval with this letter.

Please review the enclosed ***Instructions for Obtaining Researcher List*** for the specifics required. We request that you provide your institution list to the research team by August 1, 2005.

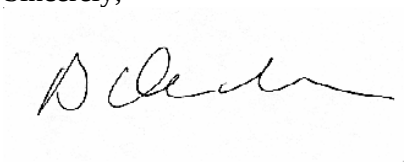
While your assistance is voluntary, it is critical to the success of this study to obtain a representative sample of institutions and faculty within the FDP community. Data collection procedures and questionnaires have been developed to minimize burden on institution staff. We are also sending a copy of this letter to the FDP faculty representative at your institution so that s/he may be available to assist you in these efforts. Our records indicate that the FDP faculty representative at your institution is Name of Faculty Representative.

Please contact the research team at SSG toll free at 1-800-774-0142 (dial extension 450) or e-mail fdp@fdpsurvey.org if you have any questions or do not expect to be available in the coming weeks to assist with this process. If you have questions or comments concerning the study or this request, you may also contact Bob Decker directly at (312) 908-7946 or r-decker@northwestern.edu. For FDP questions, please contact Jerry Stuck, FDP Executive Director, at jstuck@nas.edu or (202) 334-1495.

You can expect to receive a follow-up communication via e-mail direction from the Survey Sciences Group research team in the near future. They will provide additional materials that you may find useful in helping us with this project.

I appreciate your interest in this important and useful study, and I thank you in advance for your participation. When the project is completed, FDP will send you a copy of the final report.

Sincerely,



Robert S. Decker, PhD
Northwestern University
Chairperson, Faculty Subcommittee
on Research Administrative Burden
Federal Demonstration Partnership

cc: FDP Faculty Representative
Enc.

Instructions for Obtaining Researcher List

For the conduct of this study, we will require a list of all faculty who qualify as follows:

- They must have received federal funding as a principal investigator to conduct research during the 2004/2005 school year.
- They must have a faculty appointment.

To conduct the survey, several contact variables will be needed. This information will ONLY be used to contact these individuals for participation in this study. Letters will be mailed to each respondent introducing them to the study, and then invitations and reminders will be e-mailed to each respondent. Telephone number will only be used to contact the respondent if there is reason to believe that the other two modes of contact are not getting through.

This file may be provided in Excel, tab delimited text format, Access database, or SPSS formats. If your institution would like to provide the data in a different format, please include as much detail as possible regarding the format used and we will do our best to accommodate the format desired.

Contact the SSG team at 1-800-774-0142, and dial extension 450, if you have any questions while navigating this process.

We are asking for the following variables:

Variable Name	**Additional Variable Description**
First Name	
Middle Name	
Last Name	
Salutation	(Mr./Mrs./Dr./etc.)
Rank/Title	Job Rank/Title
Institution	The name of your institution.
School	The name of the school or affiliated research center where the respondent works.
Program	The name of the program or department where the respondent works.
E-mail	Full e-mail address
Mail Street1	Street address (line 1) of mailing address.
Mail Street2	Street address (line 2) of mailing address.
Mail City	City of mailing address.
Mail State	State of mailing address.
Mail Zip	Zip of mailing address
Phone1	Primary phone number.
Phone2	Secondary phone number. (if available)

Along with this list, please provide any supportive documentation you may have that will help us understand any of the variables provided. For example, if your campus maintains a variable that identifies the program or department, and the variable is coded numerically, please include the code frame so that we may identify the meaning of the codes.

Please do not e-mail this file. E-mail is not a secure means of communicating confidential records. The SSG team will be in contact shortly with instructions on how to electronically submit the file. *If you have the file ready to go before they have made contact, please contact them at fdp@fdpsurvey.org or at 1-800-774-0142, extension 450.*

Historical Perspective of the FDP Faculty Burden Survey

Almost 15 years ago, the Federal Demonstration Project (now the Federal Demonstration Partnership, FDP) surveyed faculty of FDP institutions to evaluate the worth of the "expanded authorities" that had recently been negotiated between the FDP universities, participating federal agencies and the Office of Management and Budget (OMB). The principal focus of the survey was to determine whether changes in the regulations affecting prior approvals, pre-award costs, no-cost extensions, and the carryover of unexpended funds had saved faculty time and whether such a time savings had been re-invested in research activities.

Over twenty-five hundred faculty responded to the survey indicating that the new, more flexible policies saved researchers significant time, of which about 90% was refocused at scholarly activity and of that, 73% of the liberated time was spent directly on research. These observations implied that the research productivity of FDP faculty would be increased by such changes in federal grant policies. However, anecdotal comments from some of the surveyed faculty indicated that much of the freed-up time that resulted from the implementation of the "expanded authorities" was likely to be re-allocated to other research administrative tasks, like IRB, IACUC and research safety issues to mention just a few.

This issue has been discussed over the intervening period in several different venues but never quantified by the FDP. Since the first survey, a number of new federal regulations have added to the faculty workload and reduced the amount of time that faculty spend on active research. In addition, changes in cost accounting standards no longer offer most faculty the option of using a portion of their direct costs to shift the ever increasing administrative workload to departmental staff. By way of response, the FDP Faculty Subcommittee on Administrative Burden will undertake a survey of research faculty at FDP member institutions to study this important workload issue.

Federal Demonstration Partnership
Faculty Workload Study

CONSENT FORM

The purpose of this research is to find out how federal requirements (e.g., granting agency rules and OMB regulations) influence the time you are able to spend in active research. Participation in the study involves the completion of a web survey sponsored by the Federal Demonstration Partnership, National Academies of Science, Washington D.C. Responses to the survey will greatly inform our effort to examine current research policies. We will survey 10,000-20,000 research faculty working at 80 research institutions throughout the United States.

Your participation in this study is voluntary and there are no penalties for not participating. You are free to skip any survey questions that you feel uncomfortable answering. While your participation in the study will involve no cost to you, you will also not be paid for your participation.

You should recognize that participation in this research may result in a loss of privacy, since persons other than the investigator(s) might view your study records. Unless required by law, only the study investigator, members of the investigator's staff, representatives of the Federal Demonstration Partnership, the Northwestern University Institutional Review Board, and representatives from the Office for Human Research Protections (DHHS) will have authority to review your study records. They are required to maintain confidentiality regarding your identity.

The results of this survey will be collected in a centralized computer at the Survey Science Group, LLC, Ann Arbor, Michigan. Identifying information and survey responses will be kept in two separate databases and strict policies will be enforced to ensure that information is never linked in a single file. Any final reports of study findings will be based on grouped data and will not reveal your identity or your individual records. Results of this study may be used for publications or presentations at scientific meetings.

The researchers on this project believe that there are no short- or long-term negative effects associated with your participation. Should you have questions regarding your rights as a research participant, please contact Dennis West, Chair for Administrative Review, IRB for Northwestern, at either 312-503-3571 or dwest@northwestern.edu .

If you have any questions about this study, please contact:
Robert Decker, Ph.D., Principal Investigator

Chair, FDP Faculty Subcommittee on Research Administrative Burden

Feinberg School of Medicine, Tarry 12-733,756
Northwestern University
303 E. Chicago Ave. 60611
Phone: (312) 908-7946
r-decker@northwestern.edu

I have read and understand the information presented above. I hereby consent to participate in the study.

Yes No

LOCAL PRENOTE

SUBJECT: Upcoming Important Survey

Dear Colleagues:

As some of you may know, the Federal Demonstration Partnership (FDP) is a cooperative initiative among 10 federal agencies and 98 academic institutions designed with the goal of reducing administrative burdens associated with research grants and contracts. Over the years, the FDP helped bring about no-cost extensions and other related burden reducing policies. Their work can directly improve your experiences with federal research grants and contracts.

In the coming days, federally funded researchers at our campus will be asked to participate in a very important study that will be used to make recommendations to the Office of Management and Budget (OMB) for streamlining research administrative burdens, without reducing research accountability and compliance with federal regulations. The FDP has contracted with Survey Sciences Group LLC (SSG) of Ann Arbor, Michigan to carry out the survey administration.

The upcoming Web-based survey is a chance for your voice to be heard as recommendations are made to the OMB so that they can effectively evaluate the efficiency of their research-related administrative processes. Gaining the knowledge of your experiences through this survey will give the FDP the appropriate tools to make suitable recommendations to OMB.

Please find a few moments to respond to this survey so that our institution can be accurately represented in the results.

More information about the survey can be found on the FDP web site at http://www.thefdp.org/Fac_Workload_Survey.html.

Thank you for your consideration.

[FACULTY REP]

MAILED PRENOTE

September 30, 2005

Dear [FIRST],

You have been selected by your Institution's Federal Demonstration Partnership Administrative Representative to participate in a survey recently developed by the Federal Demonstration Partnership (FDP). We are interested in finding out how federal requirements (e.g., granting agency rules and OMB regulations) influence the time you are able to spend actively conducting research. We are administering this survey to faculty engaged in federally funded research projects across a variety of institutional settings. The data received from this survey will influence recommendations made to the Office of Management and Budget (OMB) for reforming research related burdens without decreasing research accountability and compliance with federal regulations. Your participation is critical in finding the correct balance of research and its related burdens

We have contracted with the Survey Sciences Group, LLC, in Ann Arbor, Michigan to assist us with the conduct of this Web-based survey.

Please participate in the Federal Demonstration Partnership's Faculty Workload Survey by completing the following three steps:

1. **Go to http://www.fdpsurvey.org**
2. **Enter the following ID: [INSERT RESPID]**
3. **Follow the instructions on the screen!**

Research faculty working at research institutions across the United States are participating. Depending on your answers, participating should take between 20 and 30 minutes. Though your participation in this study is voluntary and there are no penalties for not participating, we would greatly appreciate your help as we try and understand how to minimize faculty burden in order to make research more efficient.

We appreciate your interest in this important and useful study, and thank you for your participation in advance. If you have questions or comments concerning this study please feel free to contact the research team at FDP@fdpsurvey.org .

Sincerely,

Robert S. Decker
Chairperson, Faculty Subcommittee
On Research Administrative Burden
Northwestern University

E-MAIL INVITE

FROM: Robert S. Decker

REPLY TO: FDP@fdpsurvey.org

SUBJECT: FDP Faculty Workload Survey!

An exciting research project is being conducted of federally funded faculty at nearly 100 major research institutions in the United States this fall! You have been selected by your University's Federal Demonstration Partnership Administrative Representative to participated in a survey recently developed by the Federal Demonstration Partnership (FDP). We are interested in finding out how federal requirements (e.g., granting agency rules and OMB regulations) influence the time you are able to spend actively conducting research. We are administering this survey to faculty engaged in federally funded research projects across a variety of institutional settings. Your participating is critical to the success of this survey as your responses will influence recommendations made to the OMB on reducing research-related administrative burdens.

To participate now, please follow these three steps:

1. Go to http://www.fdpsurvey.org
2. Enter the following ID: {UserDate:RESPID}
3. Follow the instructions on the screen!

If you have any problems accessing the survey, please e-mail FDP@fdpsurvey.org and reference the Federal Demonstration Partnership Faculty Workload Survey.

When we tested this questionnaire, we found that most were able to complete it within 20 or 30 minutes.

Your participation in this study is voluntary and there are not penalties for not participating. You are free to skip any questions you feel uncomfortable answering. The results of the survey will be collected in a centralized computer at the Survey Sciences Group, LLC, Ann Arbor, Michigan. Identifying information and survey responses will be kept in two separate databases and strict policies will be enforced to ensure that information is never linked in a single file. Any final reports of study findings will be based on grouped data and will not reveal your identity or your individual records. Results of this study may be used for publications or presentations at scientific meetings.

Your participation is confidential. Only the study investigator's staff, representatives of the Federal Demonstration Partnership, the Northwestern University Institutional Review Board, and representatives from the Office for Human Research Protections (DHHS) will have the authority to review your study records. They are required to maintain confidentiality regarding your identity.

We appreciate your interest in this important and useful study, and thank you in advance for your participation. Please feel free to contact the research team with any questions or concerns at FDP@fdpsurvey.org

Thank you,

Robert S. Decker
Chairperson, Faculty Subcommittee
On Research Administrative Burden
Northwestern University

E-MAIL REMINDER 1

FROM: Robert S. Decker

REPLY TO: FDP@fdpsurvey.org

SUBJECT: REMINDER: Help Decrease Research Related Burdens

As a federally funded researcher, have you ever felt that too much of your time is taken away from your active research in order to complete administrative tasks? We urge you to take part in this federally-sponsored survey which was created to find out how federal requirements (e.g., granting agency rules, and OMB regulations) affect the amount of time you are able to spend actively conducting research. The results of this survey will be used to make recommendations to the Office of Management and Budget (OMB) for reforming related burdens, without lessening research accountability and compliance with federal regulations. As you can see, your participation is critical to this survey's success!

This survey has been sponsored by the Federal Demonstration Partnership. Though this study is voluntary, your participation will greatly help our effort to examine and improve current research policies.

To participate now, please follow these three steps:

1. Go to http://www.fdpsurvey.org
2. Enter the following ID: {UserDate:RESPID}
3. Follow the instructions on the screen!

If you have any problems accessing the survey, please e-mail FDP@fdpsurvey.org and reference the Federal Demonstration Partnership Faculty Workload Survey in the subject line.

Your participation in this study is voluntary and there are not penalties for not participating. You are free to skip any questions you feel uncomfortable answering. Only the study investigator's staff, representatives of the Federal Demonstration Partnership, the Northwestern University Institutional Review Board, and representatives from the Office for Human Research Protections (DHHS) will have the authority to review your study records. They are required to maintain confidentiality regarding your identity.

The results of the survey will be collected in a centralized computer at the Survey Sciences Group, LLC, Ann Arbor, Michigan. Identifying information and survey responses will be kept in two separate databases and strict policies will be enforced to ensure that information is never linked in a single file. Any final reports of study findings will be based on grouped data and will not reveal your identity or your individual records. Results of this study may be used for publications or presentations at scientific meetings.

We appreciate your interest in this important and useful study, and thank you in advance for your participation. Please feel free to contact the research team with any questions or concerns at FDP@fdpsurvey.org.

Thank you,

Robert S. Decker
Chairperson, Faculty Subcommittee
On Research Administrative Burden
Northwestern University

E-MAIL REMINDER 2

FROM: Robert S. Decker
REPLY TO: FDP@fdpsurvey.org

SUBJECT: REMINDER: Views on Research Related Burdens

Because of your expertise in professional research, you have been selected to participate in an exciting study. You should have received a letter detailing the Federal Demonstration Partnership Faculty Workload Survey in the mail recently as well as an e-mail reminder. Your experiences are very important to us and will help shape recommendations made to the Office of Management and Budget (OMB) for reforming research related burdens without decreasing research accountability and compliance with federal regulations. It is participants such as you, with professional experience and informed judgments dealing with research related burdens that will make this survey a powerful tool for change.

The main purpose of this research is to find out how federal requirements (e.g., granting agency rules and OMB regulations) influence the time you are able to spend actively conducting research. Participation in the study involves the completion of a web survey sponsored by the Federal Demonstration Partnership. Though this study is voluntary, your participation will greatly help our efforts to examine and improve current research policies.

To participate now, please follow these three steps:

1. Go to http://www.fdpsurvey.org
2. Enter the following ID: {UserDate:RESPID}
3. Follow the instructions on the screen!

If you have any problems accessing the survey, please e-mail FDP@fdpsurvey.org and reference the Federal Demonstration Partnership Faculty Workload Survey in the subject line.

Once again, your participation in this study is voluntary and there are no penalties for not participating. You are free to skip any questions you feel uncomfortable answering. Only the study investigator's staff, representatives of the Federal Demonstration Partnership, the Northwestern University Institutional Review Board, and representatives from the Office for Human Research Protections (DHHS) will have the authority to review your study records. They are required to maintain confidentiality regarding your identity.

The results of the survey will be collected in a centralized computer at the Survey Sciences Group, LLC, Ann Arbor, Michigan. Identifying information and survey responses will be kept in two separate databases and strict policies will be enforced to ensure that information is never linked in a single file. Any final reports of study findings will be based on grouped data and will not reveal your identity or your individual records. Results of this study may be used for publications or presentations at scientific meetings.

We appreciate your interest in this important and useful study, and thank you in advance for your participation. Please feel free to contact the research team with any questions or concerns at FDP@fdpsurvey.org.

Thank you,

Robert S. Decker
Chairperson, Faculty Subcommittee
On Research Administrative Burden
Northwestern University

MAILED REMINDER

Dear {UserData:FIRST}{UserData:LAST},

As you may already know, you have been selected by your Institution's Federal Demonstration Partnership Administrative Representative to share your views about research related administrative burden. We urge you to take part in this federally-sponsored survey soon because it will be closing in the next few days. The survey was created to find out how federal requirements (e.g., granting agency rules, and OMB regulations) affect the amount of time you are able to spend actively conducting research. The results of this survey will be used to make recommendations to the Office of Management and Budget (OMB) for reforming related burdens, without lessening research accountability and compliance with federal regulations.

This survey has been sponsored by the Federal Demonstration Partnership. Though this study is voluntary, your participation will greatly help our effort to examine and improve current research policies.

To participate now, please follow these three steps:

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2. Enter the following ID: {UserData:RESPID}
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Your participation in this study is voluntary and there are not penalties for not participating. You are free to skip any questions you feel uncomfortable answering. Only the study investigator's staff, representatives of the Federal Demonstration Partnership, the Northwestern University Institutional Review Board, and representatives from the Office for Human Research Protections (DHHS) will have the authority to review your study records. They are required to maintain confidentiality regarding your identity.

The results of the survey will be collected in a centralized computer at the Survey Sciences Group, LLC, Ann Arbor, Michigan. Identifying information and survey responses will be kept in two separate databases and strict policies will be enforced to ensure that information is never linked in a single file. Any final reports of study findings will be based on grouped data and will not reveal your identity or your individual records. Results of this study may be used for publications or presentations at scientific meetings.

We appreciate your interest in this important and useful study, and thank you in advance for your participation. Please feel free to contact the research team with any questions or concerns at FDP@fdpsurvey.org.

Thank you,

Robert S. Decker
Chairperson, Faculty Subcommittee
On Research Administrative Burden
Northwestern University

E-MAIL REMINDER 3

FROM: Robert S. Decker

REPLY TO: FDP@fdpsurvey.org

SUBJECT: TIME IS RUNNING OUT--FDP Faculty Workload Survey!

The FDP Faculty Workload Study has been an overwhelming success! Thousands of researchers have participated across the nation, and we have received critically important information regarding the influence of federal requirements (e.g., granting agency rules, OMB regulations) on the amount of time research faculty can spend actively conducting research. We are only asking for approx. 20-30 minutes of your time.

You have been selected to contribute to this study based on your standing as a federally-funded researcher **because your** input is critical to the success of our project. By responding to the survey, you **will** have a wonderful opportunity to share your views and concerns about research faculty work life **with the FDP**. Your comments will be used to inform recommendations made to the Office of Management and Budget, so don't miss your chance to **participate**! You are still eligible to **contribute**, but time is running out. There is only one week left!

To participate now, please follow these three steps:

1. Go to http//www.ssgresearch.com/FDP/
2. Enter the following ID: {UserDate:RESPID}
3. Follow the instructions on the screen!

If you have any problems accessing the survey, please e-mail FDP@fdpsurvey.org and reference the Federal Demonstration Partnership Faculty Workload Survey in the subject line.

The purpose of this research is to find out how federal requirements (e.g., granting agency rules and OMB regulations) influence the time you are able to spend actively conducting research. This study is sponsored by the Federal Demonstration Partnership. Though this study is voluntary, your participation will greatly help our effort to examine current research policies.

We appreciate your interest in this important and useful study, and thank you in advance for your participation. Please feel free to contact the research team with any questions or concerns at FDP@fdpsurvey.org .

Thank you,

Robert S. Decker
Chairperson, Faculty Subcommittee
On Research Administrative Burden
Northwestern University

E-MAIL REMINDER 4

FROM: Robert S. Decker
REPLY TO: FDP@fdpsurvey.org
SUBJECT: FDP Faculty Workload Survey Closing Soon!

Don't miss your last opportunity to participate in the Federal Demonstration Partnership Faculty Workload Survey! The study will be coming to a close in the next few days, and though we've already had an overwhelming response, we still need your contribution. The results from this survey will be used to make recommendations to the Office of Management and Budget (OMB) for reforming related burdens while maintaining research accountability and federal standards. Therefore, your participation is extremely important and there are only a few days left to complete the survey.

To participate now, please follow these three steps:
1. Go to http://www.fdpsurvey.org
2. Enter the following ID: {UserDate:RESPID}
3. Follow the instructions on the screen!

If you have any problems accessing the survey, please e-mail FDP@fdpsurvey.org and reference the Federal Demonstration Partnership Faculty Workload Survey in the subject line.

The purpose of this research is to find out how federal requirements (e.g., granting agency rules and OMB regulations) influence the time you are able to spend actively conducting research. Participation in the study involves the completion of a web survey sponsored by the Federal Demonstration Partnership. Though this study is voluntary, your participation will greatly help our effort to examine current research policies.

Your participation in this study is voluntary and there are not penalties for not participating. You are free to skip any questions you feel uncomfortable answering. Only the study investigator's staff, representatives of the Federal Demonstration Partnership, the Northwestern University Institutional Review Board, and representatives from the Office for Human Research Protections (DHHS) will have the authority to review your study records. They are required to maintain confidentiality regarding your identity.

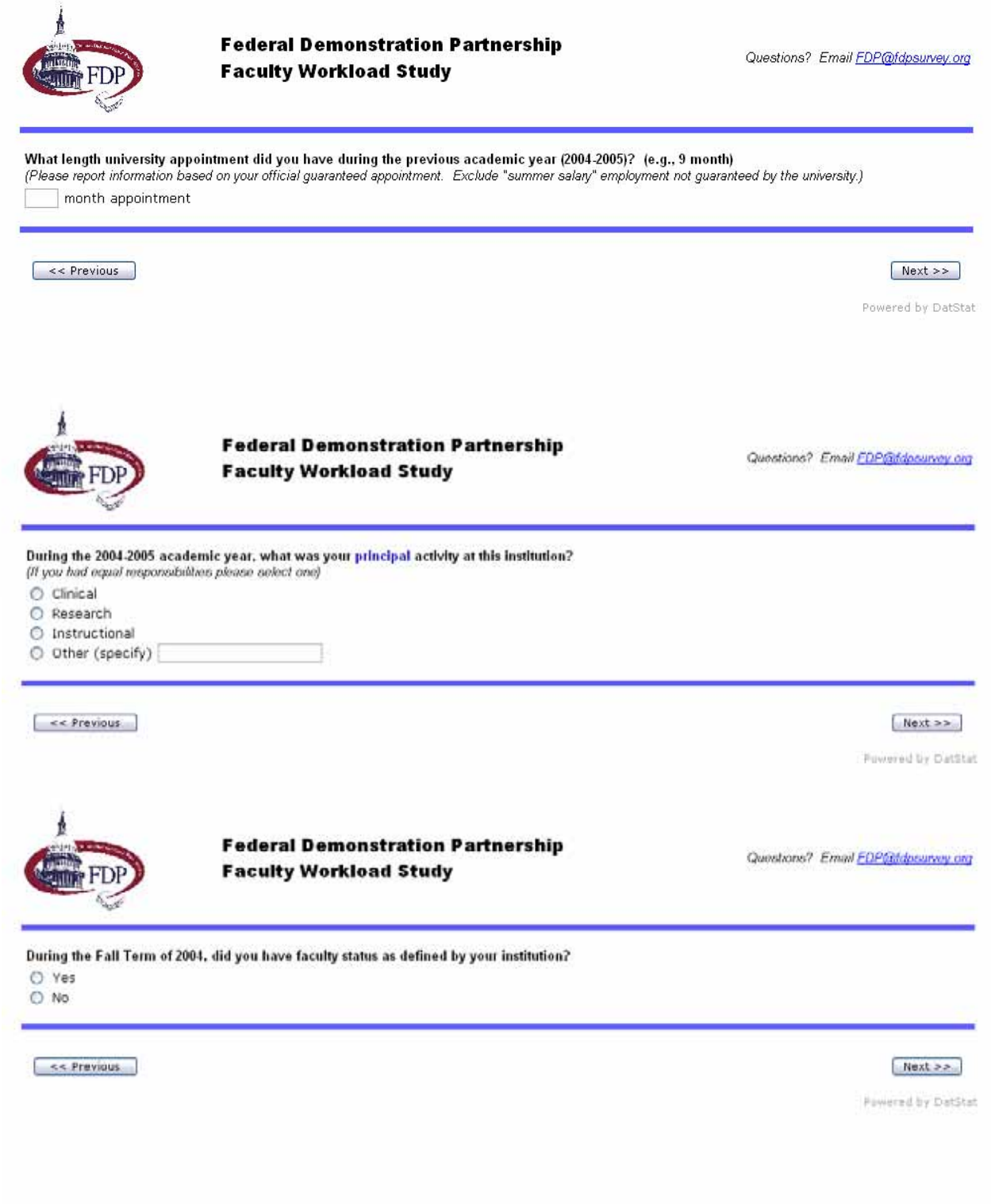
The results of the survey will be collected in a centralized computer at the Survey Sciences Group, LLC, Ann Arbor, Michigan. Identifying information and survey responses will be kept in two separate databases and strict policies will be enforced to ensure that information is never linked in a single file. Any final reports of study findings will be based on grouped data and will not reveal your identity or your individual records. .

We appreciate your interest in this important and useful study, and thank you in advance for your participation. Please feel free to contact the research team with any questions or concerns at FDP@fdpsurvey.org.

Thank you,

Robert S. Decker
Chairperson, Faculty Subcommittee
On Research Administrative Burden
Northwestern University

FDP Workload Study
Survey Instrument



Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

What length university appointment did you have during the previous academic year (2004-2005)? (e.g., 9 month)
(Please report information based on your official guaranteed appointment. Exclude "summer salary" employment not guaranteed by the university.)

[ ] month appointment

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

During the 2004-2005 academic year, what was your principal activity at this institution?
(If you had equal responsibilities please select one)

- ○ Clinical
- ○ Research
- ○ Instructional
- ○ Other (specify) [ ]

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

During the Fall Term of 2004, did you have faculty status as defined by your institution?

- ○ Yes
- ○ No

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@ifdosurvey.org

During Fall Term of 2004, did your institution consider you to be employed full time or part time?

- ○ Full time
- ○ Part time

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@ifdosurvey.org

What was your tenure status at this institution during the 2004-2005 academic year?

- ○ Tenured
- ○ On tenure track, but not tenured
- ○ Not on tenure track
- ○ No tenure system for my faculty status
- ○ No tenure system at this institution

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@ifdosurvey.org

During Fall Term of 2004, did you act in any of the following administrative roles (including permanent or interim appointments)?

- ○ Dean
- ○ Associate Dean
- ○ Department Chair
- ○ Center Director
- ○ Other (specify) _____
- ○ None of the above

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

Which of the following best describes your academic rank, title, or position at this institution during the 2004-2005 academic year?

- ○ Professor
- ○ Associate Professor
- ○ Assistant Professor
- ○ Other (specify)

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Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

What is your principal field of research?

- ○ Agriculture
- ○ Biomedical or Life Sciences
- ○ Computer Sciences
- ○ Education
- ○ Engineering
- ○ Health Sciences
- ○ Mathematics
- ○ Physical Sciences
- ○ Psychology
- ○ Social Sciences
- ○ Other (specify)

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Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

On average, what percentage of your time did you spend on the following activities during the previous academic year (2004-2005)? Allocate percentages based on time primarily spent within the indicated categories, recognizing that the categories are not mutually exclusive.
(Write in a percent on each line. If not sure, give your best estimate. Total should equal 100%)

	% of Time
Classroom Teaching	
preparing for class, teaching, grading, advising/mentoring students, developing new curricula, etc.	0 %
Research	
conducting research, preparing articles/presentations, seeking federal and non-federal outside funding, managing grants, etc.	0 %
mentoring student researchers and postdoctoral follows	0 %
Professional Service-Research	
providing service to professional associations/societies, peer review of grants or manuscripts, service on special research panels, etc.	0 %
providing service on research regulatory committees such as IRB (Institutional Review Board), IACUC (Institutional Animal Care and Use Committee), Research Safety Committee, etc.	0 %
Other Service	
providing clinical service, department and university service, community service, etc.	0 %
Other	
Other	0 %

TOTAL TIME: 0%

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Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

In the previous question, you reported that you spent 56% of your time in "Other" activities in the past academic year (2004/2005 academic year). Please describe those activities.

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Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

Please provide the total number of federal research grants you received during the past academic year (2004-2005) as a Principal Investigator.
(If you did not receive any grants for a specific category please enter "0")

total grants

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

What is the Total Direct Cost (TDC) funding amount that is represented by those 6 federal grants you received in the past academic year (2004-2005)?
Note: Include in your total only one year of TDC funding when factoring in multi-year research grants.
(If not sure, give your best estimate)

dollars (numeric only, no commas or ranges)

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

Please provide the total number of non-federal research grants you received during the past academic year (2004-2005) as a Principal Investigator.
(If you did not receive any grants for a specific category please enter "0")

total grants

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

What is the Total Direct Cost (TDC) funding amount that is represented by those 6 non-federal grants you received in the past academic year (2004/2005)?

Note: Include in your total only one year of TDC funding when factoring in multi-year research grants.
(If not sure, give your best estimate)

dollars (numeric only, no commas or ranges)

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

Now, thinking about grants on which you worked as a Co-Principal Investigator, please provide the total number of research grants you received as Co-Principal Investigator.
(If you did not receive any grants for a specific category please enter "0")

Federal grants	total grants
Non-Federal grants	total grants

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Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

The following questions will specifically focus on your federally-funded research grant activity.

Which of the following federal agencies funded your research grant projects during the past academic year (2004-2005)?
(Select ALL that apply)

- ☐ Environmental Protection Agency
- ☐ National Aeronautics and Space Administration
- ☐ National Endowment for the Arts
- ☐ National Endowment for the Humanities
- ☐ National Institutes of Health
- ☐ National Science Foundation
- ☐ U.S. Department of Agriculture
- ☐ U.S. Department of Commerce
- ☐ U.S. Department of Defense
- ☐ U.S. Department of Energy
- ☐ U.S. Department of Education
- ☐ U.S. Department of Health and Human Services
- ☐ U.S. Department of Interior
- ☐ U.S. Department of State
- ☐ U.S. Department of Transportation
- ☐ Other (specify)

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

On average, what percentage of the total time you spent on research during the 2004-2005 academic year was solely devoted to federally-funded research grant activities?

%

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdssurvey.org

Of the total time you spent on work related to federally funded grant research this past academic year (2004/2005), what percentage of time did you devote to each of the following activities?
(Please write in a percent on each line. If not sure, give your best estimate. Total should equal 100%)

0% of Time

Active Research reviewing literature, designing studies, running experiments, collecting/analyzing data, writing up findings, publishing and presenting research, etc.	0 %
Pre-Award Research Related Activities writing/submitting proposals & budgets, applying for approvals, developing protocols, drafting safety/security plans, etc.	0 %
Post-Award Research Related Activities purchasing supplies/equipment, supervising budgets, managing personnel, complying with regulations, monitoring safety/security plans, writing reports, etc.	0 %

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdssurvey.org

How much do each of the following administrative tasks related to federal grant management take time away from your active research.

	None	A little	Some	Moderate amount	A great deal	Not applicable
Grant Activities						
Grant progress report writing and submission	○	○	○	○	○	○
Conflict of interest reporting	○	○	○	○	○	○
Patent/copyright application	○	○	○	○	○	○
Intellectual property rights application (e.g., invention disclosure, NIH resource and data sharing, Materials Transfer Agreements, etc.)	○	○	○	○	○	○

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdosurvey.org

How much do each of the following administrative tasks related to federal grant management take time away from your active research.

	None	A little	Some	Moderate amount	A great deal	Not applicable
Laboratory Activities						
Safety planning, training and monitoring	○	○	○	○	○	○
Chemical inventory management (e.g., biohazards, select agents, radioisotopes, scheduled drugs)	○	○	○	○	○	○
Laboratory security oversight	○	○	○	○	○	○
Equipment and supply purchase	○	○	○	○	○	○

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdosurvey.org

How much do each of the following administrative tasks related to federal grant management take time away from your active research.

	None	A little	Some	Moderate amount	A great deal	Not applicable
Personnel Management						
Personnel hiring (human resources, visas, etc.)	○	○	○	○	○	○
Time and effort reporting	○	○	○	○	○	○
Personnel evaluation	○	○	○	○	○	○
Payroll management (e.g., personnel payroll; federal payroll certification)	○	○	○	○	○	○

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

How much do each of the following administrative tasks related to federal grant management take time away from your active research.

	None	A little	Some	Moderate amount	A great deal	Not applicable
Financial Responsibilities						
Budget transfers	○	○	○	○	○	○
Cost accounting (e.g., training, obtaining exemptions, monitoring allowable/unallowable costs)	○	○	○	○	○	○
Cost sharing requirements	○	○	○	○	○	○
Monitoring the budget to actual expenses	○	○	○	○	○	○
Spending authority oversight	○	○	○	○	○	○
Subcontracting and collaboration	○	○	○	○	○	○

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

How much do each of the following administrative tasks related to federal grant management take time away from your active research.

	None	A little	Some	Moderate amount	A great deal	Not applicable
Animal Subjects						
IACUC protocols and training	○	○	○	○	○	○
IACUC compliance issues	○	○	○	○	○	○
Personnel and student training	○	○	○	○	○	○

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

How much do each of the following administrative tasks related to federal grant management take time away from your active research.

	None	A little	Some	Moderate amount	A great deal	Not applicable
Human Subjects						
IRB protocol approval and training	○	○	○	○	○	○
IRB compliance issues	○	○	○	○	○	○
Personnel and student training	○	○	○	○	○	○
HIPAA compliance	○	○	○	○	○	○

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Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

Please describe any other administrative tasks related to federal grant management that take significant time away from your active research. Only include items that were not specifically addressed in the previous screens.

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

Please indicate the extent to which you receive assistance with each of the following administrative tasks related to federal grant management.

	No assistance	Very little assistance	Some	A great deal of assistance	Complete assistance (someone else manages this task for me)	Not applicable
Grant Activities						
Grant progress report writing and submission	○	○	○	○	○	○
Conflict of interest reporting	○	○	○	○	○	○
Patent/copyright application	○	○	○	○	○	○
Intellectual property rights application (e.g., invention disclosure, NIH resource and data sharing, Materials Transfer Agreements)	○	○	○	○	○	○

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

Please indicate the extent to which you receive assistance with each of the following administrative tasks related to federal grant management.

	No assistance	Very little assistance	Some assistance	A great deal of assistance	Complete assistance (someone else manages this task for me)	Not applicable
Laboratory Activities						
Safety planning, training and monitoring	○	○	○	○	○	○
Chemical inventory management (e.g., biohazards, select agents, radioisotopes, scheduled drugs)	○	○	○	○	○	○
Laboratory security oversight	○	○	○	○	○	○
Equipment and supply purchase	○	○	○	○	○	○

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Federal Demonstration Partnership
Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

Please indicate the extent to which you receive assistance with each of the following administrative tasks related to federal grant management.

	No assistance	Very little assistance	Some assistance	A great deal of assistance	Complete assistance (someone else manages this task for me)	Not applicable
Personnel Management						
Personnel hiring (human resources, visas, etc.)	○	○	○	○	○	○
Time and effort reporting	○	○	○	○	○	○
Personnel evaluation	○	○	○	○	○	○
Payroll management (e.g., payroll for personnel; federal payroll certification)	○	○	○	○	○	○

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Faculty Workload Study

Questions? Email FDP@fdpsurvey.org

Please indicate the extent to which you receive assistance with each of the following administrative tasks related to federal grant management.

	No assistance	Very little assistance	Some assistance	A great deal of assistance	Complete assistance (someone else manages this task for me)	Not applicable
Financial Responsibilities						
Budget transfers	○	○	○	○	○	○
Cost accounting (e.g., training, obtaining exemptions, monitoring allowable/unallowable costs)	○	○	○	○	○	○
Cost sharing requirements	○	○	○	○	○	○
Monitoring the budget to actual expenses	○	○	○	○	○	○
Spending authority oversight	○	○	○	○	○	○
Subcontracting and collaboration	○	○	○	○	○	○

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Please indicate the extent to which you receive assistance with each of the following administrative tasks related to federal grant management.

	No assistance	Very little assistance	Some assistance	A great deal of assistance	Complete assistance (someone else manages this task for me)	Not applicable
Animal Subjects						
IACUC protocols and training	○	○	○	○	○	○
IACUC compliance issues	○	○	○	○	○	○
Personnel and student training	○	○	○	○	○	○

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Please indicate the extent to which you receive assistance with each of the following administrative tasks related to federal grant management.

	No assistance	Very little assistance	Some assistance	A great deal of assistance	Complete assistance (someone else manages this task for me)	Not applicable
Human Subjects						
IRB protocol approval and training	○	○	○	○	○	○
IRB compliance issues	○	○	○	○	○	○
Personnel and student training	○	○	○	○	○	○
HIPAA compliance	○	○	○	○	○	○

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Please describe the extent to which you currently receive assistance with any other administrative tasks related to federal grant management that take significant time away from your active research. Only include items that were not specifically addressed in the previous screens.

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In your opinion, what percentage of the time you spend managing federal grants could be conducted by administrative personnel in your department, program and/or research center?

- ○ 0%
- ○ Less than 10%
- ○ 11-20%
- ○ 21-30%
- ○ 31-40%
- ○ 41-50%
- ○ 51-60%
- ○ More than 60%

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How much additional time could you devote to active research if you had more assistance with administrative tasks linked to federal grant management?

- ○ None
- ○ 0-2 hours per week
- ○ 3-4 hours per week
- ○ 5-6 hours per week
- ○ 7-8 hours per week
- ○ 9-10 hours per week
- ○ More than 10 hours per week

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If you could reallocate direct costs to administrative support, what percent of your federal grants-funding would you like to assign for this purpose?

- ○ None
- ○ Less than 2%
- ○ 2%-4%
- ○ 5%-7%
- ○ 8%-10%
- ○ More than 10%

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What is your gender?

- ○ Male
- ○ Female

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Please select the responses that best apply to your race/ethnicity
(Please Check All that Apply)

- ☐ American Indian/Alaskan Native
- ☐ African American/Black
- ☐ Asian
- ☐ Hispanic/Latino
- ☐ White/Caucasian
- ☐ Race/ethnicity not included above (specify) _____

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In what year were you born?

_____

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Please indicate the extent to which you agree or disagree with each of the following statements.

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly	Not Applicable
In my department/program, research is rewarded more than teaching.	○	○	○	○	○
In my department/program, I have the option of buying out of teaching assignments.	○	○	○	○	○
If direct-cost grant dollars were available to support federal grant administration in my department/program, I would be able to spend more time on active research.	○	○	○	○	○
If I had it to do over again, I would still choose an academic research career.	○	○	○	○	○
My department/program is willing to reassign time to faculty who take on sponsored research.	○	○	○	○	○

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Please indicate the extent to which you agree or disagree with each of the following statements.

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly	Not Applicable
I am generally less willing to submit federal grant proposals than in the past.	○	○	○	○	○
Administrative burden associated with federally-funded research grants has increased in recent years.	○	○	○	○	○
Sponsored research activity is a primary factor in this department's promotion and tenure policies.	○	○	○	○	○
My graduate students pursue academic research careers less often than in the past.	○	○	○	○	○

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Thank you for your time and effort in completing our survey. Please take a moment to provide us with additional comments. If you have none, please click on 'Submit Results' button.

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Thank you, this concludes the survey. You may now close your browser.

Thank you for sharing your views!

Visit the FDP website at: http://www.thefdp.org

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