Outcome Study for the Evaluation of the Modular Grants Program

May 2005

Prepared by Westat under Contract # GS-23F-8144H

Background on the Modular Grant Application Process

- June 1, 1999 NIH initiated the modular grant application process
- Consistent with the philosophy of a “grant-in-aid” approach to research support (as opposed to the contract mentality of “buying” research)
- NIH and WESTAT staff involved Dr. Demsey, Dr. Harmon, Dr. McGarvey

Goals of the Modular Grant Application Process

- Goals:
  - Focus the efforts of peer reviewers, principal investigators, institutional officials, and NIH staff on the science of the applications (rather than on the itemized budget)
  - Reduce administrative burden for all stakeholders and simplify the grant administration process
  - Accommodate principal investigators' need for flexibility

History of the Modular Grant Application Process Evaluation

- Nov 2001 – Modular Evaluation Workgroup developed a report on guidelines for the evaluation of the modular process
- Feb 2002 – Peer Review Oversight Group (PROG) approved report; Phase I Feasibility Study funds made available
- April 2003 – Phase I feasibility study began
- Jan/Feb 2004 – PROG members review Phase I results and approve survey instruments
- March 2004 – Phase I presentation to Extramural Program Management Committee (EPMC) requesting feedback on surveys
- April 2004 – Phase II outcome evaluation study began
- May 2005 – Phase II presentation and materials delivered to NIH

Phase II Outcome Study Purpose

- Overall purpose
  - Determine if the modular grants application process met its intended long-term program goals as first described in 1998
  - Determine if stakeholders understand the modular grant application process

Samples: Census Groups

- Used a census for two stakeholder groups
  - NIH Scientific Review Administrators (N=372)
    - Center for Scientific Review (CSR) and Non-CSR Scientific Review Administrators in NIH Health Scientist Administrator (HSA) database as of August 2004
  - Institutions (Institutional Officials) (N=327)
    - Institutions that applied for 10 or more modular grants, excluding foreign institutions (but including Canada); used National Council for University Research Administrators (NCURA) database or institution web site to find highest ranking person (e.g., Director of Office of Sponsored Research); gave highest ranking person option to let another staff member more knowledgeable take the survey

Samples: Non-census Groups

- Used a systematic random sample for three stakeholder groups
  - Principal investigators
    - Principal investigators that had submitted a modular grant application between September 1999 and March 2004
  - Peer reviewers
    - NIH Peer reviewers serving as of December 2003 and those who had rotated off during the previous 2 years
  - NIH program and grants management staff
    - Program staff in NIH Health Scientist Administrator (HSA) database as of August 2004
    - Grants management officers and grants management specialists listed in Grants Management Advisory Committee (GMAC) Directory
- Oversampled non-census groups to account for:
  - 60% response rate
  - 15% “bounce back” (undeliverable) emails for non-NIH employees

Sample Sizes

Stakeholder Group	Population Size	Sample Size (# of surveys administered)
Principal Investigators	31,180	1,676
Peer Reviewers	2,836	753
Scientific Review Administrators	372	372
Program and Grants Management Staff	1,213	488
Institutional Officials	327	327

Data Collection Schedule: Fall 2004

	Pre-notification Letter Mailed	Survey Notification Email	Reminder Email #1	Reminder Email #2	Telephone Prompting
SRAs	Sept. 15	Sept. 20	Sept. 30	Oct. 8	Oct. 18
PRs, PGMS, IOs	Sept. 22	Sept. 28	Oct. 8	Oct. 18	Oct. 28
PIs	Sept. 27	Oct. 5	Oct. 15	Oct. 25	Nov. 4

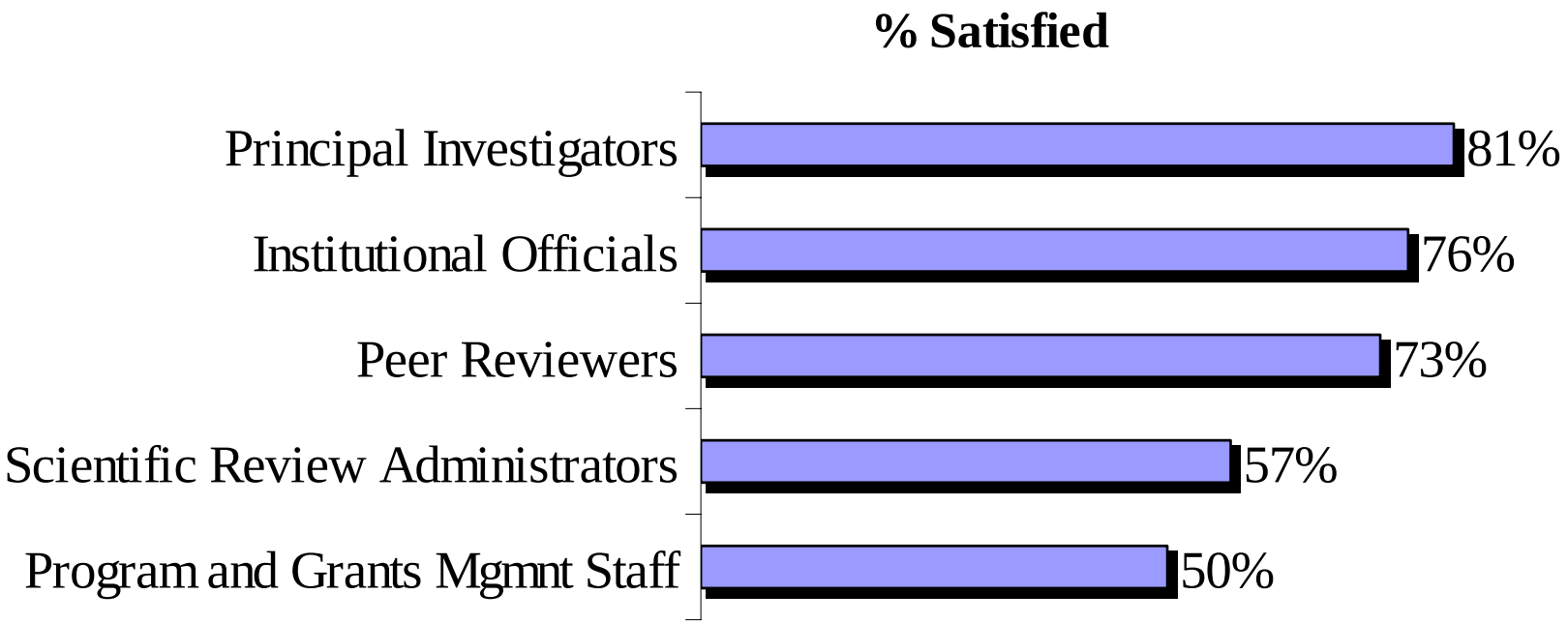
Final Sample Sizes and Response Rates

Stakeholder Group	Final Sample Size*	Completed Surveys	Response Rate
Institutional Officials	288	227	78.8%
Peer Reviewers	671	497	74.1%
Scientific Review Administrators	285	209	73.3%
Program and Grants Management Staff	355	247	69.6%
Principal Investigators (PIs)	1,439	949	65.9%
PIs – Recipients of Modular Grants	879	644	73.3%
PIs – Unfunded Applicants	560	305	54.5%

*Includes only eligible respondents

Overall Satisfaction with Modular Grants

Overall, how satisfied are you with the modular grant application process?



Reasons Stakeholders Like Modular Grants

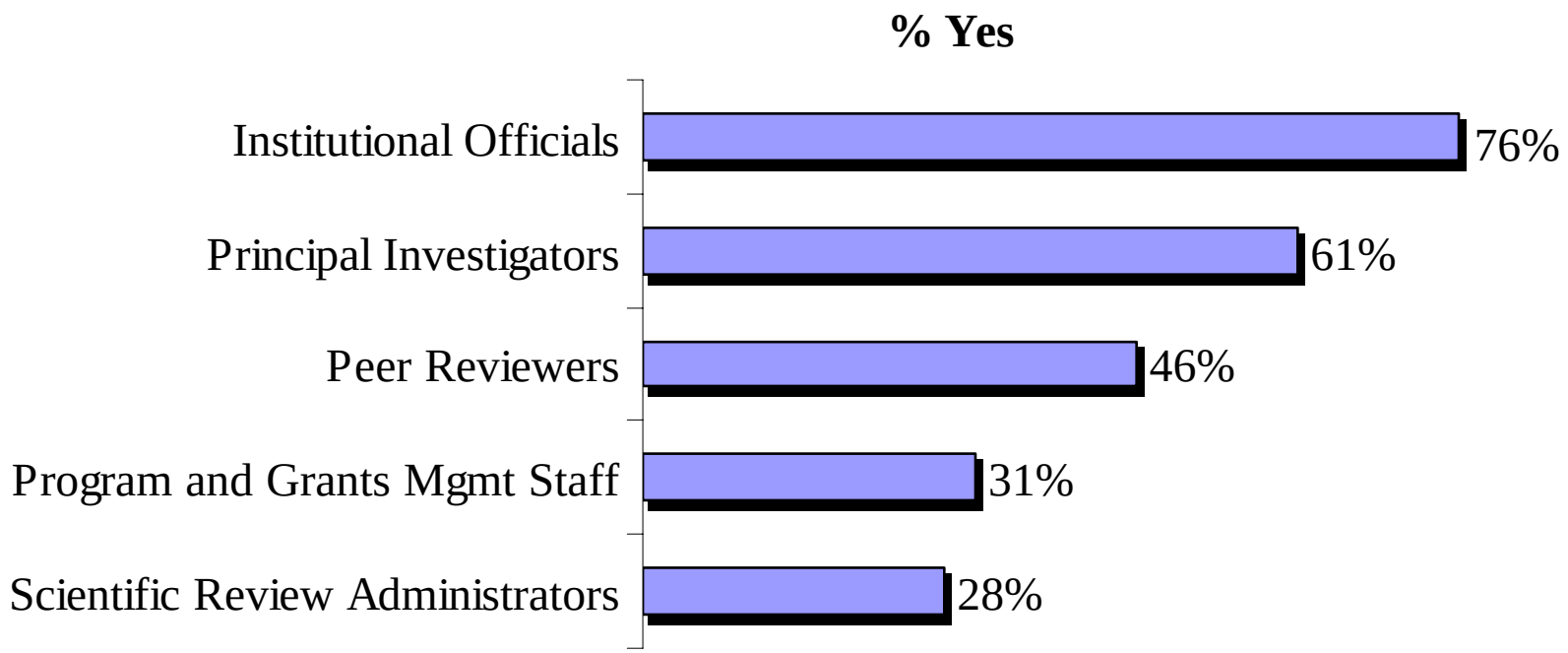
- Themes from open-ended comments
  - Don't have to submit detailed budget, budget justification, or Other Support pages (PIs, IOs)
  - Saves time…
    - in preparing the application (PIs)
    - during review and study section discussions (PRs, SRAs)
    - since there is less paperwork to fill out (e.g., don't have to complete cost analysis) (PGMS)
    - because less time is spent reviewing budgets for proposals (IOs)
  - Allows PIs to concentrate on science (PIs); focuses study section meetings on science (PRs, SRAs)

Reasons Stakeholders Do Not Like Modular Grants

- Themes from open-ended comments
  - Institutions often require a detailed budget in addition to a modular budget which means preparing a modular grant application is actually more time consuming (PIs, IOs)
  - Adding subcontractor/consortium indirect costs to project direct costs (PIs, PRs, IOs)
  - Limit of $250,000 (PIs, IOs)
  - Can't assess overlap (no Other Support pages) (PIs, PRs, PGMS)
  - Difficult to evaluate true cost of research (PRs, SRAs, PGMS)
  - Difficult to make recommended cuts/justify budget reductions (PRs, SRAs, PGMS)
  - Budgets are inflated (PRs, SRAs, PGMS)
  - Lack of detail prevents NIH staff from doing their job properly (oversight is lost) (PGMS)
  - Can't be sure F&A is calculated correctly (PGM)
  - Modular process confuses PIs (PGMS, IOs)
  - PIs don't monitor funds appropriately (IOs)

Raising the Modular Grant Limit

Would you prefer the modular grant limit be higher than $250,000?



Reasons Stakeholders Want the Modular Grant Limit Raised

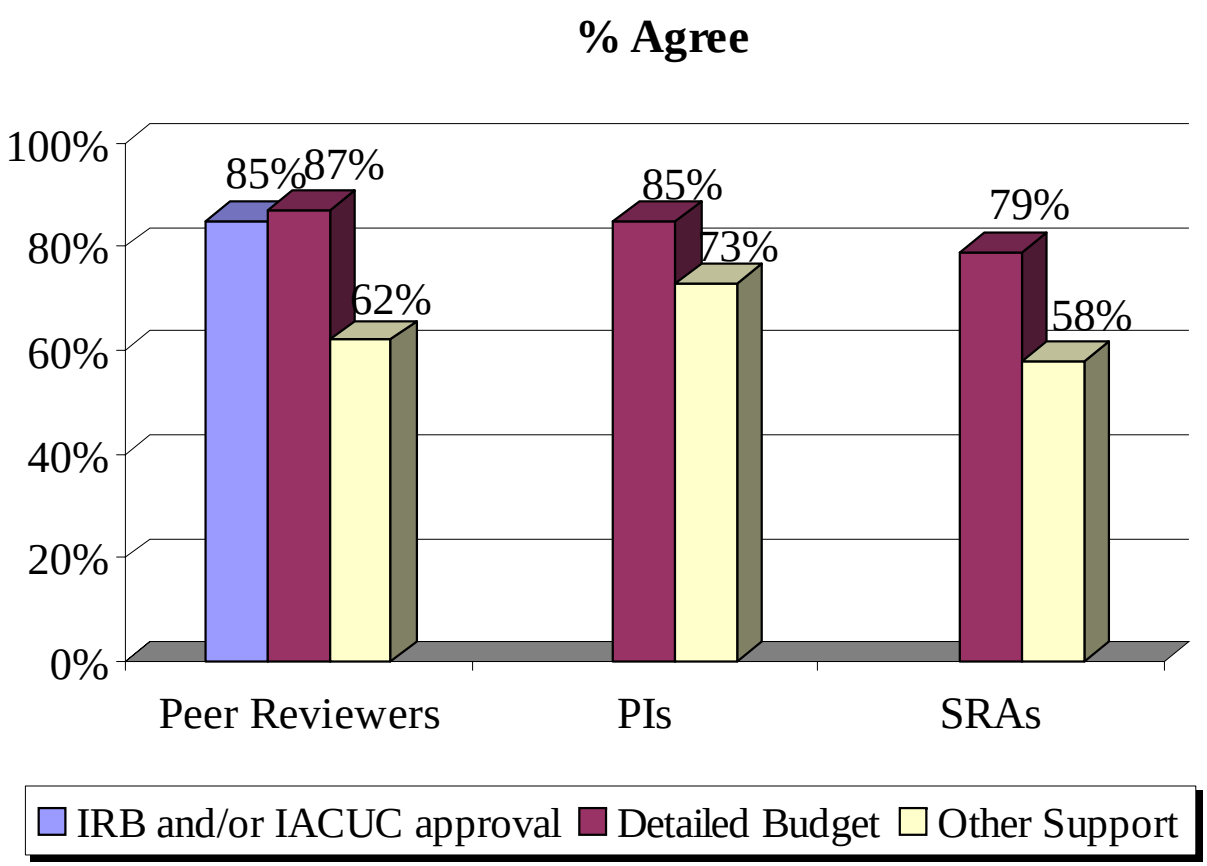
- Themes from open-ended comments
  - Cost of research has increased since implementation, dollar amount hasn't kept up with inflation, cost of living (all stakeholders)
  - Would facilitate research collaboration (PIs, PRs, IOs)
  - Currently certain types of research are inherently excluded (e.g., clinical trials, large animals, transgenic animals, large pieces of equipment, multi-site) (all stakeholders)
  - Easier to have just one budget system (IOs)
  - PIs will no longer restrict their research to $250,000 (to avoid having to submit a detailed budget) (IOs)

Reasons Stakeholders Do Not Want the Modular Grant Limit Raised

- Themes from open-ended comments
  - Higher limit would lead to fewer awards (PIs, PRs)
  - Raising the limit would encourage PIs to ask for more money (since many simply ask for the largest amount available) (PIs, PRs, SRAs, IOs)
  - Proposed budgets greater than $250,000 should stay detailed because..
    - PIs should be held more accountable for more expensive research (PIs, PRs, IOs)
    - Reviewers need this information to conduct quality reviews of more expensive studies (PRs, SRAs)
    - Raising the limit would not allow for proper stewardship of more expensive projects (PGMS)
  - Proposals with larger budgets can always use nonmodular format (all stakeholders)

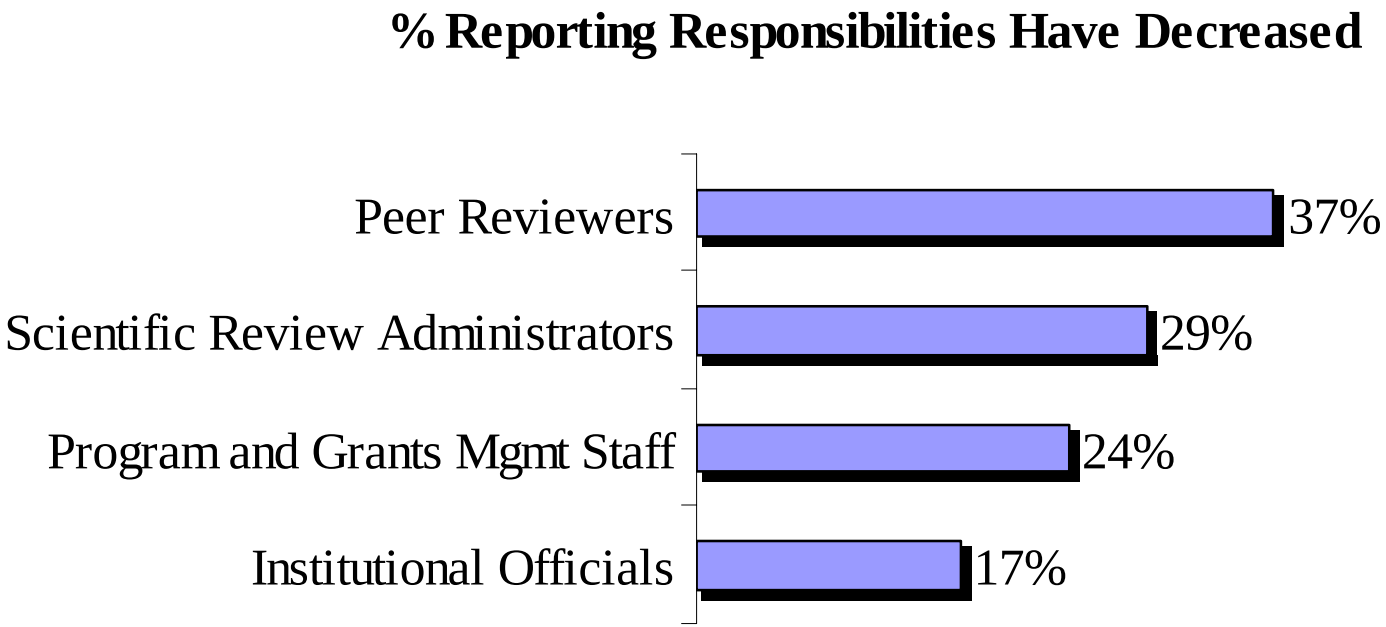
Assessing Scientific Merit

I/Peer reviewers can assess the scientific merit of a modular grant application without…



Changes in Job Responsibility Due to Modular Grants

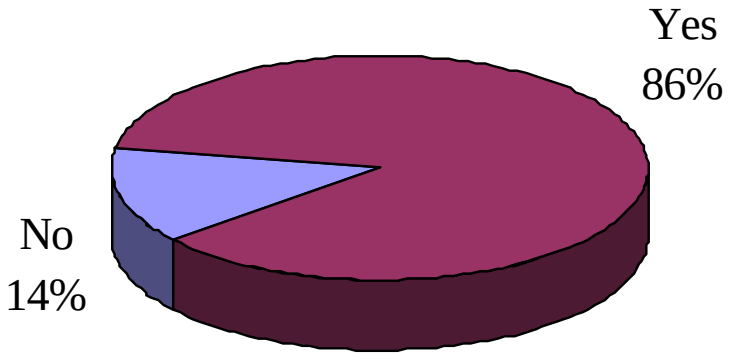
As a direct result of the modular grant application process, my responsibilities have decreased



Institutions Require Detailed Budgets

Does your office or any other office at your university/research center require principal investigators to submit detailed budgets for review even if they are applying for an NIH modular grant?

Institutional Official Responses

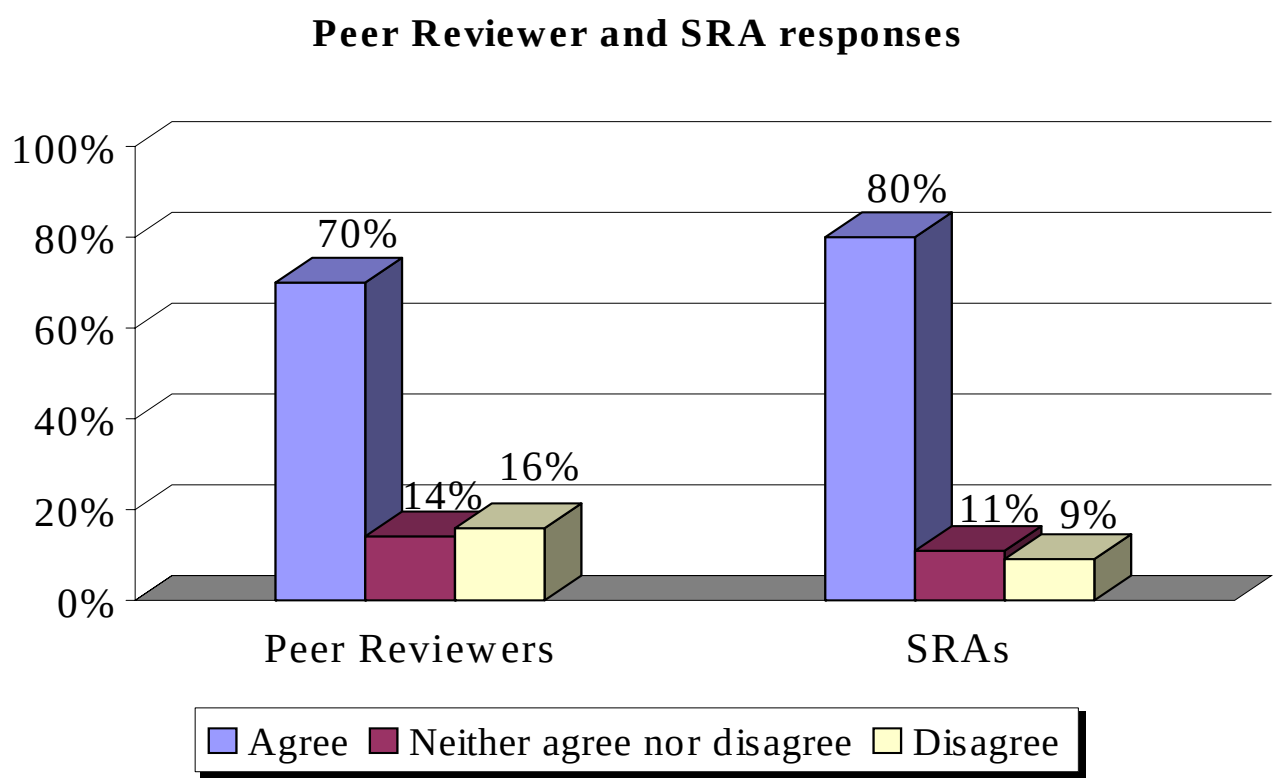


Reasons Institutions Require a Detailed Budget

- Themes from open-ended comments made by institutional officials
  - Information needed for accounting system, finance department, internal planning
  - PIs need to develop a detailed budget to help plan their research; will help PIs determine dollar amount needed
  - Ensures all costs are accounted for, no financial risk to the institution, make sure the PI includes all necessary costs
  - Helps departments monitor their expenditures; need to know what commitments were made by the PI, need to be sure PIs don't overcommit personnel and resources
  - Need detailed budget to calculate F&A correctly; need to make sure proposals are compliant with A21 regulations

Budget Discussions

As a direct result of the modular grant application process, discussions about the budget in my study section are much more limited



Study Section Meeting Time

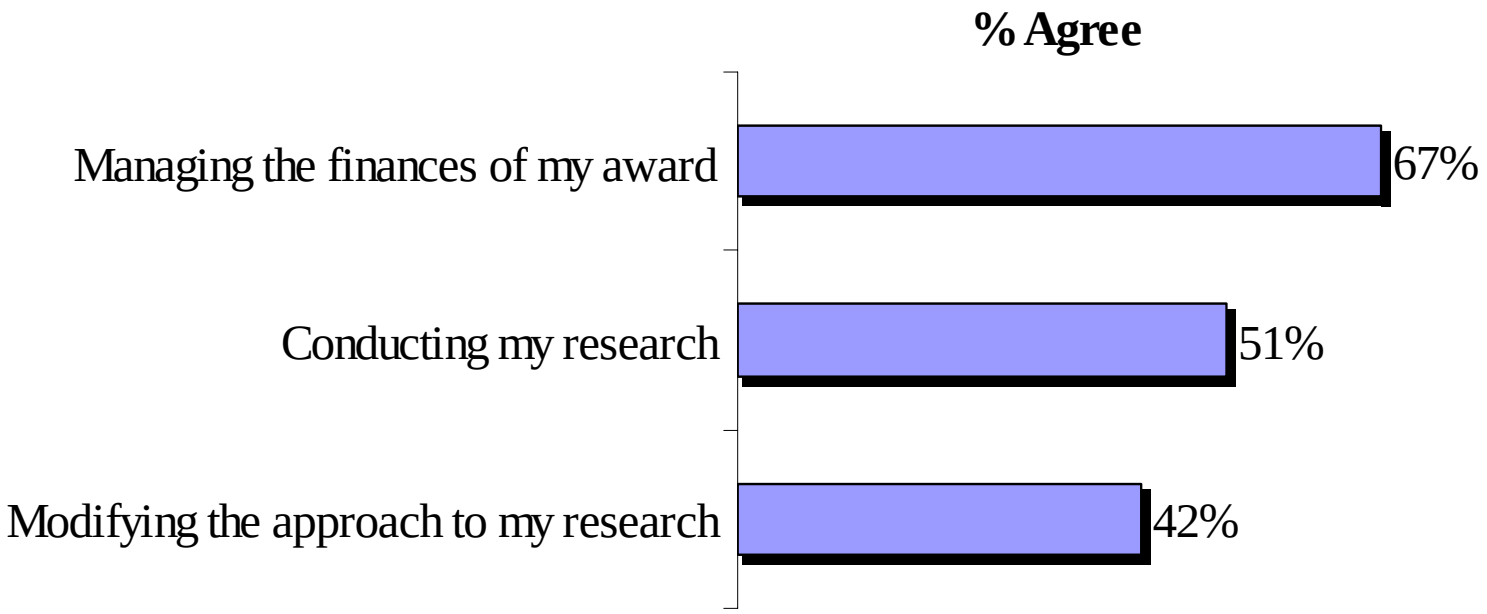
On average, how much study section meeting time was devoted to discussing an applicant's proposed budget before and after the implementation of the modular grant application process?

Study Section Meeting Time (# of minutes)
Devoted to Discussing An Applicant's Proposed Budget
(Peer Reviewer Responses)

Before Modular Grants		After Modular Grants		**Mean** reduction	**Median** reduction
Mean	Median	Mean	Median	(# of minutes)	(# of minutes)
8.5	5.0	5.2	3.0	**3.3**	**2.0**

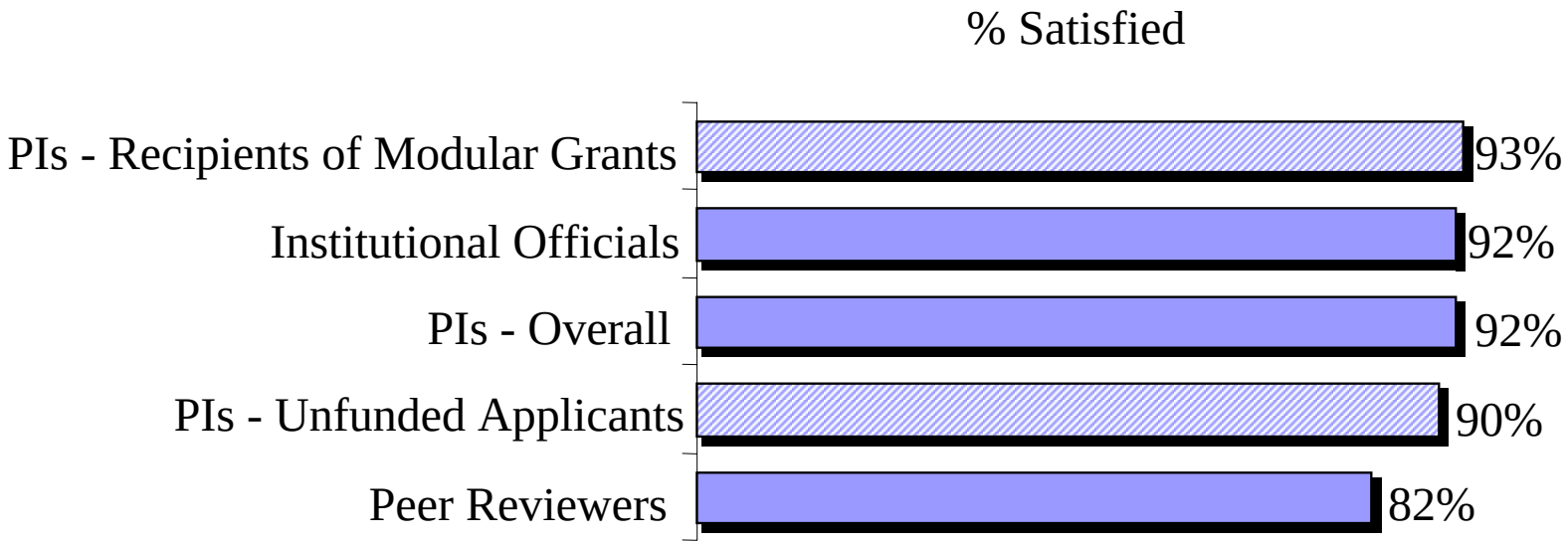
PI Flexibility

A modular grant provides me with more flexibility in terms of…



Satisfaction with Information Received from NIH Staff

Satisfaction with Information Received from NIH staff about the Modular Grant Application Process



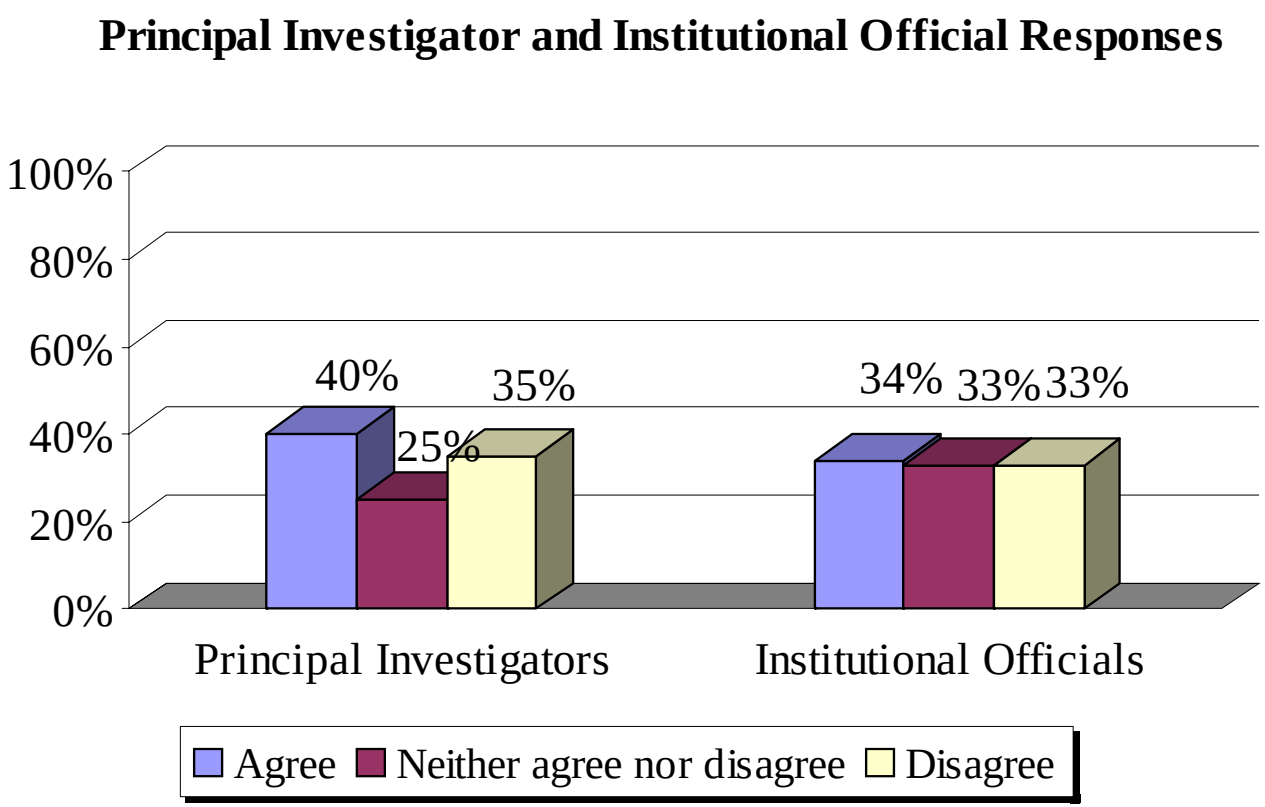
Best and Least Understood Features of the Modular Grant Application Process

- Best understood features:
  - All forms for modular grant applications are available on the NIH web site
  - Biographical sketches need to be prepared for all key personnel
  - Individual salary information is not required for personnel

- Least understood features:
  - Total consortium/contractual costs need to be estimated for each year, rounded to the nearest $1,000
  - Modular grant awards are eligible for administrative supplements (i.e., noncompeting supplemental funding)

Perception of Funding Likelihood for Modular Compared to Nonmodular Grant Applications

I think/PIs believe a modular grant is more likely to be funded than a nonmodular grant



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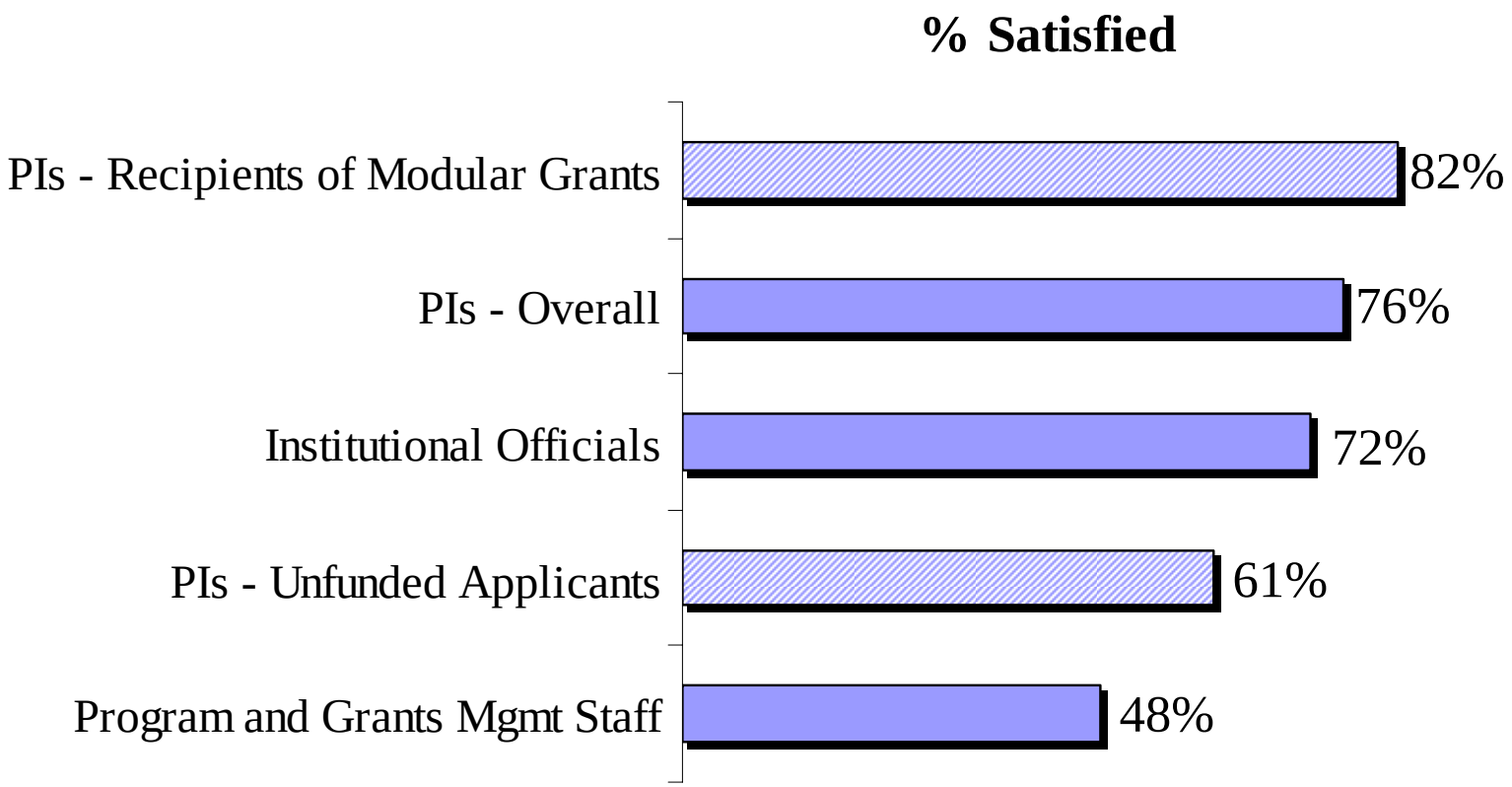
National Institutes of Health

Knowledge about Features of the Modular Grant Application Process

Features of the modular grant application process	% Indicating Feature is Clear				
	SRAs	PRs	PGMS	IOs	PIs
No routine escalation for future years	73.2	81.8	82.8	90.5	75.6
Additional modules can be requested to cover unusual cost fluctuations	78.3	78.7	78.5	91.9	59.7
Narrative budget justification needed for variation in modules requested	73.3	79.7	82.3	92.8	71.4
No Other Support form needed	67.6	77.0	73.0	88.5	80.2
Budget justification needed for personnel, consortiums, subcontracts	78.3	83.8	78.3	93.2	87.3
Individual salary information not required	91.7	94.7	89.2	95.5	90.2
Consortium/contractual costs est. each year, rounded to nearest $1000	*NA*	50.0	61.0	84.9	54.7
Total consortium/contractual costs included in modular direct cost total	81.0	77.6	88.8	98.2	71.1
Indirect costs are not calculated on equipment	*NA*	86.2	84.5	98.2	82.0
Biosketches needed for key personnel	98.0	98.6	96.7	97.3	97.3
Biosketches should include current and recent research project goals	79.5	87.6	76.3	81.2	83.9
Modular grant awards are eligible for administrative supplements	*NA*	47.3	83.4	62.7	42.2
Forms for modular grant applications are available on NIH website	92.2	95.9	95.0	98.6	95.9
Some form pages are different for modular and nonmodular applications	85.8	86.8	85.4	97.7	83.5

Overall Satisfaction with Just-in-Time

Overall, how satisfied are you with Just-in-Time?*



*Just-in-Time survey items were not included on peer reviewer or scientific review administrator surveys

Reasons Stakeholders Like Just-in-Time

- Themes from open-ended comments made by principal investigators, program and grants management staff, and institutional officials
  - Information submitted by PIs is up to date (PIs, PGMS, IOs)
  - Eases administrative burden and relieves stress – don't have to worry about IRB/IACUC approvals unless grant may be funded; gives PIs more time to prepare materials (PIs, PGMS, IOs)
  - Saves everyone time if grant is unlikely to be funded (including IRB and IACUC committee members) (PIs)
  - Less paperwork to deal with at time of submission (PIs, PGMS, IOs)
  - Ability to submit materials electronically through NIH Commons (PGMS, IOs)
  - Allows PIs to focus on science and not deal with other administrative aspects (e.g., Other Support pages, approvals)

Reasons Stakeholders Do Not Like Just-in-Time

- Themes from open-ended comments made by principal investigators, program and grants management staff, and institutional officials
  - Notice from NIH to get materials in is too short, resulting in “big rush” ”mad scramble” to obtain approvals, funding can get held up (PIs, PGMS, IOs)
  - Don’t like pushing and pressuring PIs (PGMS)
  - Institution requires approvals be obtained earlier than NIH (negates Just-in-Time benefits) (PIs)
  - Lack of coordination, lack of communication, and poor document tracking at NIH – consistently have to submit materials more than once (PIs, IOs); Sometimes more than one NIH staff member will contact the PI, problems tracking the information internally once received, makes NIH look disorganized (PGMS)
  - PIs receive Just-in-Time requests then are not funded – very disappointing and demoralizing for PIs (IOs); automated reminder is sent to too high a percentage of grant applicants, PIs get their hopes up (PGMS)
  - Problems with NIH “Commons” electronic submissions and NIH access – results in also having to submit hard copies (IOs)
  - NIH staff have to follow-up with PIs to track down missing materials (PGMS)

Conclusions

- Modular grant application process...
  - is generally well received in the extramural community, somewhat less well received by NIH staff
  - has achieved the goals of…
    - reducing administrative burden (most for peer reviewers and scientific review administrators than others)
    - focusing peer reviewers on the scientific content of the application
  - has resulted in less study section meeting time devoted to budget discussions
- Peer review can be performed well without a detailed budget or IRB/IACUC approval
- Extramural community is very satisfied with the information provided on the modular grant application process by NIH staff

Conclusions and Recommendations for Modular Grant Application Process

- While the modular grant application process solved some problems, it created others
  - Principal investigators required to prepare two budgets
    - Practices used to reduce burden of two budgets could be shared among institutional officials and/or learned and disseminated by NIH
  - Peer reviewers less able to conduct a good assessment without "Other Support" pages
    - Consider re-implementing "Other Support" pages or obtaining similar information at time of application submission
- Lack of understanding and misconceptions about some aspects of the modular grant application process
  - Use Phase II findings as a guide to developing more targeted on-line training and educational modules

Conclusions and Recommendations for Just-in-Time

- Just-in-Time is better received by extramural community than by NIH staff
- Procedures for requesting and receiving materials are problematic
  - Assign one contact person for working with principal investigators and institutional officials to get Just-in-Time materials in
  - Request materials from only one point person (PI? IO?) at an institution
  - Routinely test NIH "Commons" electronic submission and receipt functioning
  - Develop better document tracking system for materials that are received
- Too many people are notified that they may receive an award
  - Consider decreasing cutoff percentage
- Turnaround time for applicants to submit materials is too short
  - Consider notifying applicants earlier and/or providing them with more time when possible

On the Modular Grant Outcome Evaluation Web Site

- Introduction/Background
- Methodology
- Surveys
- Results
  - Overview
  - Highlight
  - Specific Topics
  - Main Themes from Open-Ended Comments
  - All Open-Ended Comments
  - All Survey Responses