

News from the National Institute of General Medical Sciences (NIGMS)

WHAT ARE "REINVENTION ACTIVITIES"? HOW IS THE NIH PARTICIPATING? WHAT CHANGES CAN BE EXPECTED AT THE NIH? HOW CAN I GET CURRENT INFORMATION?

In 1993 Vice President Gore authored a report describing a "decade long process of reinvention . . . (to) transform the habits, culture, and performance of all federal organizations." This coincided with NIH Director Dr. Harold Varmus' recognition that the funding climate for biomedical research has changed dramatically from the past, and that there was a need to rethink how the NIH goes about its extramural business of reviewing and funding grants (see "A Time of Change at NIH: An Interview with Harold Varmus" *J. NIH Research*, 7:28-32, 1995.) Consequently, the NIH is a participant in several "Reinvention Laboratories" designed to examine how NIH presently conducts its business, and how it can improve in the future by updating the processes by which grants are handled and experimenting with ways to do more work better with fewer people.

Reinvention activities at the NIH fall broadly into three categories: the grant submission and peer review processes, actions taken after grants are awarded, and internal NIH processes. Some of the concepts being explored and tested as reinvention activities include those listed below. Some of these features are still in the initial stages of development, some are being run as pilot experiments, and some have been now been implemented NIH-wide.

- Electronic Grant Submission (pilot underway): administrative information is submitted directly to the NIH, where it is matched to standardized data for that institution; the scientific portion of the application, including graphical and other original information, is matched up to complete the submission
- Electronic Invention Reporting (EDISON, pilot underway): invention reporting data is communicated electronically via a Netscape interface and captured into software designed to receive, store, track, sort, report and communicate information
- Electronic Reporting of Trainee Appointments (pilot underway): identification and updating of current trainees' information is reported through a World Wide Web interface as appointments are made to institutional training grants (T32s)
- Electronic Posting of Information about NIH Extramural Programs (partially implemented): grantees can access current notices of interest on the NIH Home Page, which is found at <http://www.nih.gov>, as well as the NIH Guide to Grants and Contracts, the CRISP database (which lists all awarded NIH grants and contracts via NIH GOPHER), the NIH telephone directory, and institute-specific home pages

- Streamlined Review Process (formerly called Triage, fully implemented): all applications receive complete scientific evaluations by the reviewers, but only applications judged to be in the top one-half are discussed and scored at the study section meetings; those in the bottom half are not discussed or scored (this is by unanimous group consent, and even one dissent can bring an application up for discussion)
- Modified Summary Statements (fully implemented): applicants now receive the reviewers' unedited critiques; a resume and summary of discussion is added if the study section's deliberations yield group conclusions at the meeting that are not reflected in the reviewers' prepared comments
- Expedited release of summary statements (partially implemented): summary statements for unscored applications are mailed directly from the Division of Research Grants, in order to get feedback to the applicants faster than before
- Identification of High Risk/High Impact Research (fully implemented): study section members have the option to designate applications that propose research that has a high risk of achieving success, but has the potential to have high scientific impact in a scientific area
- Restructuring Peer Review Groups (fully implemented): the Division of Research Grants has reorganized into a smaller number of groups according to broad scientific areas; this provides the flexibility to run study sections as subgroups and swap reviewers or bring in expertise as required for a particular group of applications or for a new or growing scientific discipline
- Review of Fellowship Applications (fully implemented): fellowships are now reviewed in regular study sections along with research grants, assuring that the appropriate scientific expertise will be available for the applications
- New System for Scoring Grant Applications (under development): an NIH-wide group is evaluating better methods for assessing the overall merit of grant applications, and may recommend individual scores for scientific significance, technical feasibility, and creativity/novelty, etc. The ability of decision-makers to make discriminating judgements, based upon reports in the psychobiometrics literature, will be considered when deciding the scoring increments.
 - * *This is one of the most interesting topic currently under discussion and could affect everyone. Pay attention as it develops. Feedback from the grantee community will be sought prior to implementation of the changes.*
- Rounded Reporting of Priority Scores and Percentiles (pilot underway at NIGMS): one institute is experimenting with rounded priority scores reported to the nearest ten and rounded percentiles reported to the nearest odd integer; this generates 50 different percentile rankings rather than 1001, and eliminates improbable distinctions in the merit of applications

¹ Future topics for this column: small business grants, career awards, training opportunities at the NIH, NIGMS program announcements. Comments to: longr@gml.nigms.nih.gov.

- Streamlining Advisory Council Reviews (pilot underway at NIAID): one institute is experimenting with faster pay procedures for applications of extremely high scientific merit by mail balloting the advisory council members
- Limiting Amended Applications (under development): presently there is no distinction in outcome for applications with minor flaws versus those with major problems; possibly intrinsically weak applications that consume reviewers' and applicants' time would be reduced by limiting the number of reapplications
- "Just-in-Time" Data Collection (pilot underway): collection of information required for funding a grant (e.g. animal use approval) is postponed until just prior to the award being made, thus eliminating the need to collect this information for all applications
- Modular Grants (pilot underway in NHLBI): one institute is experimenting with an award with a preset, fixed budget level according to the estimated total amount of money required to accomplish the scientific aims; this is currently being implemented for an RFA with specific, announced scientific goals
- Consolidation of Career (K) Awards (fully implemented): the Career (K) award mechanism were revamped and made uniform across the NIH in order to eliminate confusion, and to make clear the background and experience level required and individual career development focus of each award

- Changes in FIRST (R29) Awards (under development): the First Independent Research and Transition (FIRST, R29) Award budget limit (presently \$350,000/5 years) and time commitment requirement (presently 50% effort) are being reevaluated so as to keep the award mechanism viable and useful for entry level investigators
- Eliminating Paperwork for the Non-Competing Award Process (fully implemented): the annual budget page has been eliminated, and only updates in personnel or in other outside sources of support are required.

All reinvention activities at the NIH operate under the oversight of the Extramural Reinvention Committee, chaired by the NIH Deputy Director for Extramural Research Dr. Wendy Baldwin. Reports on the reinvention activities with descriptions of the experiments and assessments of their outcomes and current status are posted on the NIH home page at <http://www.nih.gov>. Select "Grants and Contracts", then "Notices—Full Text". Dr. Baldwin welcomes your feedback on these reports or on ongoing NIH reinvention activities via e-mail to DDER@NIH.GOV. Take advantage of this chance to comment!

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