National Institutes of Health

How can NIH strengthen stewardship through the development of robust measures for assessing the impact of its investments?

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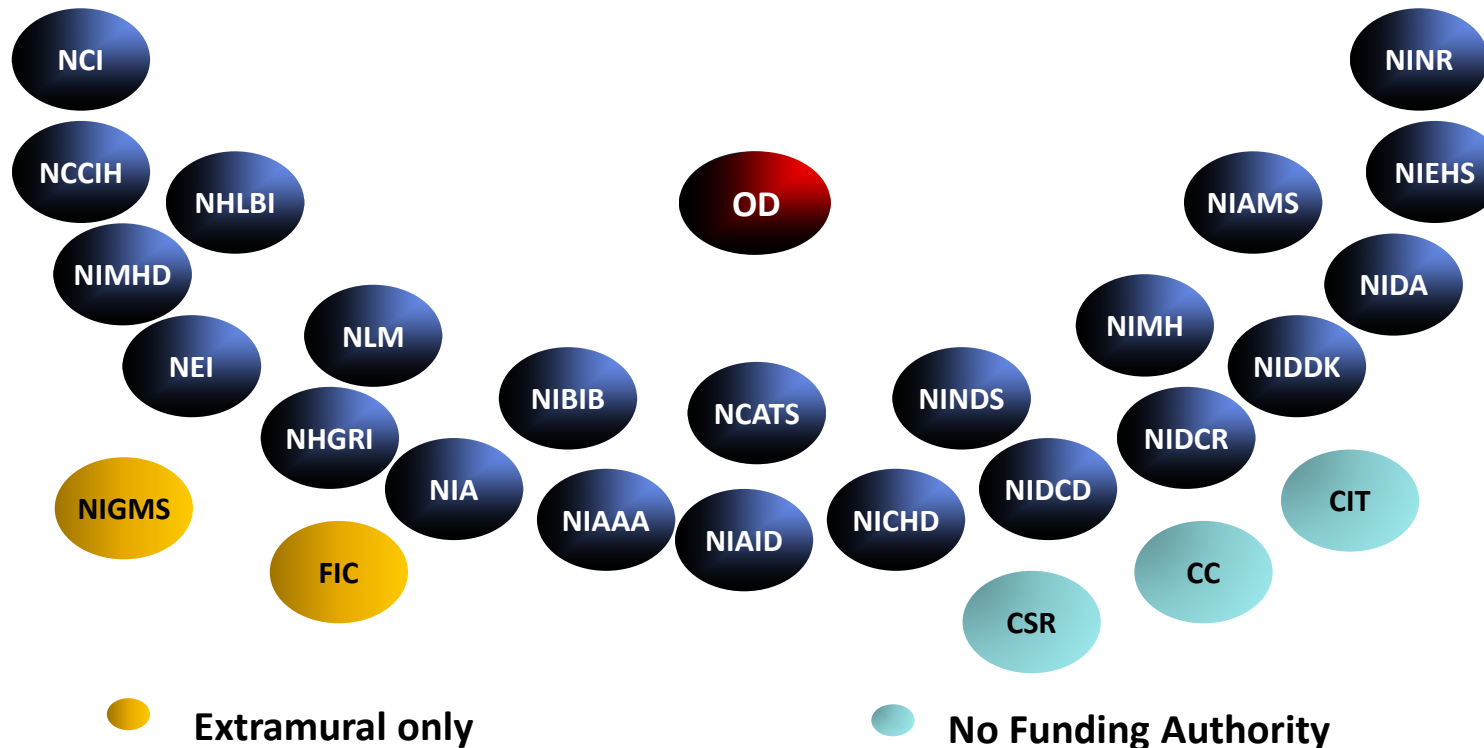Office of the Director

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The National Institutes of Health

- Mission: seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce illness and disability

- Budget: $48 billion
  - 83% extramural research
    - almost 50,000 competitive grants to more than 300,000 researchers at more than 2,500 universities, medical schools, and other research institutions in every state
  - Approximately 11% intramural projects
    - conducted by nearly 6,000 scientists in its own laboratories, most of which are on the NIH campus in Bethesda, Maryland
  - Remaining 6% covers research support, administrative, and facility construction, maintenance, or operational costs

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Peer review and funding decisions

- Mandated by statute in accordance with section 492 of the Public Health Service Act and federal regulations governing "[Scientific Peer Review of Research Grant Applications and Research and Development Contract Projects](#)"

- First level of review for most applications: Center for Scientific Review

- Second level of review: Advisory Council/Board

- Applications that are scientifically meritorious, based on review, and recommended by an Institute or Center's National Advisory Council are considered for funding

- Final funding decisions are made by the Institute or Center Directors

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Seeking research partners:
Evidence Project Portal: Open Opportunity

How can NIH strengthen stewardship through the development of robust measures for assessing the impact of its investments?

Proposed research area 1:

- How can NIH improve on identifying desired outcomes and measuring impact related to its mission?

  a) Beyond bibliometric measures, what are the indicators of scientific success?

  b) What approaches can be used to capture successful/impactful scientific strategies and new tools and methods, and are these approaches scalable?

  c) What measures can NIH use to capture both incremental knowledge gains and failures that ultimately contribute to scientific success?

  d) What approaches can NIH use to measure impact of different categories of science (e.g., basic, translational, clinical) and the technology and operations used to support the science?

  e) Are there better ways for NIH to trace dissemination of clinical research findings into:

      i. Care received by patients?

      ii. Use by clinical communities and healthcare providers?

      iii. Use by public health agencies other than NIH?

  f) How can NIH capture the economic impact of its outcomes? How does NIH-funded research lead to increased productivity and give rise to new industries?

  g) How can these approaches best inform strategies for funding research, resources, and training?

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Proposed research area 2:

- Are there methods that NIH can use to better predict and identify scientific opportunities (e.g., the emergence of gene editing technology)?

Proposed research area 3:

- Are there approaches that could inform NIH funding decisions by measuring scientific quality, rigor, and reproducibility?

Proposed research area 4:

- What evidence can NIH use to inform its efforts to optimize its investment in recruiting, training, and sustaining a diverse U.S. biomedical, behavioral, and social sciences research workforce?

    a) What data and methods may be used to capture trainee career outcomes?

    b) How can NIH evaluate its efforts to expand and diversify the U.S. biomedical, behavioral, and social sciences research workforce through engagement activities?

Proposed research area 5:

- What evidence does NIH need to improve the clinical research ecosystem? What would inform a re-envisioning of the clinical trials system to maximize quality, participant experience, accessibility, timeliness, and impact on clinical care?

  a) How can NIH ensure there is equitable representation of the U.S. populations in its funded clinical research so health disparities are not compounded in underrepresented populations?

Proposed research area 6:

- What evidence could inform steps NIH can take to ensure progress in research on overcoming health disparities and strengthen partnerships with underserved communities and practitioners?

Proposed research area 7:

- How should NIH assess risk in its research portfolio? What is the right amount of risk for NIH to accept as a steward of public funds?

    a) Does the NIH funding system foster sufficient risk-taking to encourage researchers to explore high-risk research? If not, are there ways to test novel funding approaches that could be implemented at scale?

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Open opportunity

- Anticipated deliverables
  - A report summarizing findings and potential measures that NIH could implement to strengthen its decision-making evidence base and suggested methods for collecting those measures
  - Presentation of findings to NIH decision-makers

- Planned use of results
  - NIH would consider the findings and methods described in the report for adoption within existing stewardship activities
  - Further develop data, methods, and approaches to increase the use of evidence in policymaking

- Funding
  - NIH does not have funds available to support any research projects arising from these efforts

Data sources: Research Portfolio Online Reporting Tools (RePORT)

Next Steps

- Expressions of Interest:
  - Provide a statement, not to exceed 2 pages, by August 12, 2024, that includes:
    - Brief scope of work. Which of the questions would you work on and how would you approach the project?
    - If any, identify potential challenges/hurdles and what you would anticipate needing from NIH to overcome them.
    - What would you need from NIH to get started?
    - If there is any other information you would like NIH to consider, please share.
  - Email your expression of interest and a copy of a recent CV to ODMetascience@od.nih.gov by August 12, 2024

Questions?

Project point of contact:

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