NIH Update for the Council of Councils

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Overview

• FY 2013 budget
• Substance use, abuse, and addiction research
• Communications toolkit
• Implementation updates:
  – Biomedical Workforce
  – Increasing the Diversity of the NIH-Funded Workforce
  – Data and Informatics
The Future of Substance Use, Abuse, and Addiction-Related Research at the NIH
Trans-NIH Substance Use, Abuse, and Addiction Functional Integration

• Based on the activities of the past two years, including the significant strides by NIDA and NIAAA to coordinate substance use, abuse, and addiction research, NIH decided that functional integration is the best option to pursue to support this important area of research.

• We believe that we can meet the goals of the SMRB recommendations – to change the status quo – through functional integration. The NIH Neuroscience Blueprint is an example of successful functional integration. [http://neuroscience.nih.gov/](http://neuroscience.nih.gov/)

• Also, given the unique budgetary challenges we face in the coming months, NIH needs to focus its energies on the entire biomedical research enterprise.
Trans-NIH Substance Use, Abuse, and Addiction Functional Integration

• Membership from across the NIH
• Steering Committee of NCI, NIAAA, and NIDA Directors to lead the Functional Integration
• NCI, NIAAA, and NIDA Council participation
• Designated staff from NCI, NIAAA, and NIDA (along with other ICs) to support the Functional Integration
• Clear metrics that assist ongoing evaluation to ensure meeting the mission
  – Monitor respective investments in the Functional Integration Resource Pool
  – Strategic Plan will serve as a Blueprint for Functional Integration Steering Committee; additional program-specific metrics to be developed once specific goals are identified
Next Steps

• Implement a regular series of planning and monitoring discussions for the “NIH Substance Use, Abuse, and Addiction Functional Integration Steering Committee” consisting of appropriate senior leadership from NIAAA, NIDA, NCI

• Determine additional areas of intramural research program integration

• Determine appropriate schedule for Joint Council meetings

• Report on progress of activities to all three Councils at the January/February meetings

• Search for permanent NIAAA Director
NIH Communications Initiative
Communications: Arguments for Change

• Budget Climate: Economic times demand a strong case for the value of NIH research
• Communications Climate: Fragmented media world requires a cohesive NIH identity
• Community Climate: Diverse stakeholders with competing interests, but common goals
Public Recognition

- 50% (Do not know)
- 19% (FDA)
- 13% (Other)
- 9% (NIH)
- 6% (HHS)
- 3% (CDC)

Source: Research Enterprise Poll
February 2010 Charlton Research Company
for Research!America
NIH’s Fragmented Approach to Public Communication
Quotes from Members

The NIH is “one of the best-kept secrets in Washington.”

— Rep. Mike Simpson (R-ID)
The Challenge

• Communicate the value of NIH research with maximum impact.

Key Strategies

• Fortify NIH identity

• Mobilize NIH stakeholders (grantees, professional and voluntary organizations)

• Leverage traditional and social media
Clear Connection to NIH
NIH Communications Toolkit

• Core Messages/Talking Points
• “Elevator Speech”
• NIH Fact Sheet/PowerPoint slides
• Visual Identity Guidelines
• Standard Operating Procedures for Media Activities
• Best Practices: Working with Grantee Institutions
  – Planning Ahead
  – Funding Acknowledgment
• Best Practices: Working with Stakeholder Organizations
  – Information-Sharing
  – NIH-hosted meetings
  – Collaborating on Local and National Events
  – Coordinated Announcements with Multiple Institutions
Sustaining the Future of U.S. Biomedical Research
Advisory Committee to the Director (ACD) Recommendations

NIH Implementation Plans in Response to the recommendations presented in June 2012 (full reports available at http://acd.od.nih.gov/meetings.htm)

• Biomedical Research Workforce
• Diversity of the Biomedical Research Workforce
• Data and Informatics
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Reform the PhD system or close it down

There are too many doctoral programmes, producing too many PhDs for the job market. Shut some and change the rest, says Mark C. Taylor.

Does the U.S. Produce Too Many Scientists?

American science education lags behind that of many other nations, right? So why does it produce so many talented young researchers who cannot find a job in their chosen field of study?

By Beryl Lieff Benderly
Biomedical Research Workforce: The Challenges We Must Solve

• Increasingly difficult to launch traditional, independent academic research career:
  – Rising number of Ph.D.s
  – Number of established researchers staying longer in field

• Long training time, relatively low early-career salaries make biomedical research careers less attractive than other professions

• Training programs offer little preparation for careers outside academia—despite decreasing likelihood of finding an academic position
Biomedical Research Workforce Initiative

• Innovative training approaches
• Awards that encourage independence
• NIH support for postdoctoral stipend/benefits and faculty salary
• Comprehensive tracking system for trainees
• Review and coordination activities

Workforce Initiative: Next Steps

• Establish ACD working group on clinician scientists

• Finalize plans for FY13 activities (e.g., RFAs, refine implementation plans)

• Initiate implementation plans
Advisory Committee to the Director (ACD) Recommendations

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• Biomedical Research Workforce
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Greater Diversity in Research Workforce is Needed

Race, Ethnicity, and NIH Research Awards

Donna K. Ginther, Walter T. Schaffer, Joshua Schnell, Beth Masimoro, Faye Liu, Laurel L. Haak, Raynard Kington

The initial surprise was that R01 proposals from black Ph.D. scientists (including 45% non-U.S. citizens) were extremely rare. They totaled only 1.4% of all applications, compared with 3.2% for Hispanics and 16% for Asian scientists. (By contrast, African Americans make up about 13% of the U.S. population.) About 60% of all proposals

NIH Uncovers Racial Disparity in Grant Awards

STUDY AT A GLANCE

| 83,188 | R01 applications from Ph.D.s analyzed |
| 40,069 | Unique Ph.D. investigators |
| 1149 | R01 applications from black Ph.D.s |
| 337 | Expected awards to black applicants if same success chance as whites |
| 185 | Actual awards to black applicants |
Diversity of the NIH-Funded Research Workforce

Sources: US Census Report 2010; IMPACII; AAMC
Diversity: The Challenges We Must Solve

• No one set of initiatives will diversify the NIH-funded workforce overnight – this will take time
• There is tremendous mistrust in many of the communities that we must engage with and we must work hard to gain their trust
• Any effort will require the collaboration and cooperation of extramural partners
• Diversifying the NIH-funded workforce and ensuring the fairness of the peer review system are collective responsibilities across the NIH because we will all benefit
Diversity Initiative: Goals

The two main goals of this initiative are:

1. to increase the diversity of the NIH-funded workforce because we have compelling evidence that this will help us accomplish our mission
2. to ensure that all applicants are treated fairly in the peer review system
Diversity Initiative: Overarching Strategy

Four interrelated approaches will be implemented:

• The NIH **Building Infrastructure Leading to Diversity** (BUILD) Program
• The National Research Mentoring Network (NRMN)
• Ensuring Fairness in Peer Review
• Increased Engagement by all NIH Leadership

Diversity Initiative: Next Steps

• Create an NIH Steering Committee Working Group on Diversity, thus making diversity a core consideration of NIH governance

• Recruit a permanent Chief Officer for Scientific Workforce Diversity

• Finalize plans for FY13 activities (e.g., workshops, RFAs, refine implementation plans)

• Initiate implementation plans
Advisory Committee to the Director (ACD)

Recommendations

NIH Implementation Plans in Response to the recommendations presented in June 2012 (full reports available at http://acd.od.nih.gov/meetings.htm)

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• Diversity of the Biomedical Research Workforce
• Data and Informatics
A final key strategic challenge is to ensure that NIH culture changes are commensurate with recognition of the key role of informatics and computation for every IC’s mission. Informatics and computation should not be championed by just a few ICs, based on the personal vision of particular leaders. Instead, NIH leadership must accept a distributed commitment to the use of advanced computation and informatics toward supporting the research portfolio of every IC.
Data and Informatics: The Challenges We Must Solve

- We must create an adaptive and highly collaborative environment, both within NIH, and the extramural community, to enable optimal use of Big Data.
- We must create a governance structure that aligns scientific leadership with resource management and oversight.
- By analogy to Peer Review and support for the CSR, we must commit to a shared governance and resource plan to ensure the use and ownership of Big Data among all NIH ICs.
Data/Informatics:
Overarching Strategy and Goals

• Two initiatives being proposed to overcome roadblocks
  – Big Data to Knowledge (BD2K) – enable the biomedical research enterprise to maximize the value of biomedical data
  – InfrastructurePlus – create an adaptive environment at NIH to sustain world class biomedical research

• Both led by Trans-NIH Advisory Data Councils
  – Councils chaired by the NIH CIO and Associate Director for Data Science (to be recruited)
  – Councils report to the NIH Director through NIH Steering Committee
**BD2K: Four-part Initiative**

I. Facilitating Broad Use of Biomedical Big Data
II. Developing and Disseminating Analysis Methods and Software
III. Enhancing Training for Biomedical Big Data
IV. Establishing Center of Excellence for Biomedical Big Data

InfrastructurePlus: Four/Five-part Initiative

I. NIH High Performance Computational Environment
II. Adopt Agile and Cost-Effective Hosting and Storage Approaches
III. Modernize the NIH Network
IV. Implement an Information-Rich Environment of Systems, Applications, and Tools
V. Proposed Expansion of Informatics Research in the Clinical Center – for further discussion

Data Initiatives: Next Steps

• Constitute Governing Boards (Advisory Data Councils) for the proposed initiatives

• Recruit a permanent Associate Director for Data Science

• Finalize plans for FY13 activities (e.g., workshops, RFAs, refine implementation plans)

• Initiate implementation plans