

# Scientific Management Review Board History

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# NIH History



- 1930** Redesignated as the “National Institute of Health”
- 1937** NCI established
- 1944** NCI became a division of NIH
- 1946** Research Grants Office established
- 2006** NIH grew to 27 ICs  
SMRB established
- 2011** NCATS established per SMRB recommendation



# SMRB Background

- **Authorization:** NIH Reform Act of 2006
- **Purpose:** To advise NIH and HHS officials on the use of agency organizational authorities to:
  - Establish or abolish ICs
  - Reorganize offices within OD
  - Reorganize within and across ICs



# SMRB Membership



## Non-Federal:

\*Norman Augustine, *Lockheed*  
William Brody, *Salk*  
Gail Cassell, *PPD*  
Harvey Fineberg, *UCSF*  
Daniel Goldin, *Intellisis*  
Thomas Kelly, *Sloan*  
Deborah Powell, *UMN*  
William Roper, *UNC*  
Arthur Rubenstein, *UPenn*  
Solomon Snyder, *Hopkins*  
A. Eugene Washington, *UCLA*  
Huda Zoghbi, *Baylor*

## Federal:

Jeremy Berg, *NIGMS*  
Josephine Briggs, *NCCAM*  
Anthony Fauci, *NIAID*  
Richard Hodes, *NIA*  
Stephen Katz, *NIAMS*  
John Niederhuber, *NCI*  
Griffin Rodgers, *NIDDK*  
Susan Shurin, *NHLBI*  
Lawrence Tabak, *NIDCR*  
Francis Collins (*ex officio*), *NIH*

\*Chair



# Working Process

## Establish Working Group

- SMRB collectively identifies study topic and develops charge
- SMRB establishes WG (or subcommittee) to execute charge
  - Cochaired by Board Members
  - May invite non-Board Members to serve
  - May employ non-voting ad hoc consultants
  - Meets independently of full SMRB



# Working Process (cont.)

## **Study and Deliberate**

- WG engage non-Board Member outside experts via workshops, conferences, panel discussions and invited presentations to the group
- WG solicits public comments
- WG develops recommendations
- WG reports back to the full SMRB

## **Issue Report**

- Full SMRB votes to support, amend, or reject WG recommendations
- Recommendations in the form of a report to agency and department leadership



# Reports

**The Scientific Management Review Board has issued the following reports:**

- Deliberating Organizational Change and Effectiveness
- Substance Use, Abuse, and Addiction Research at NIH
- NIH Clinical Center
- Translational Medicine and Therapeutics
- Optimizing the NIH Small Business Innovation Research and Small Business Technology Transfer Programs
- Approaches to Assess the Value of Biomedical Research
- Pre-College Engagement in Biomedical Science
- NIH Grant Review, Award, and Management Process



# Reports

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- **Pre-College Engagement in Biomedical Science**
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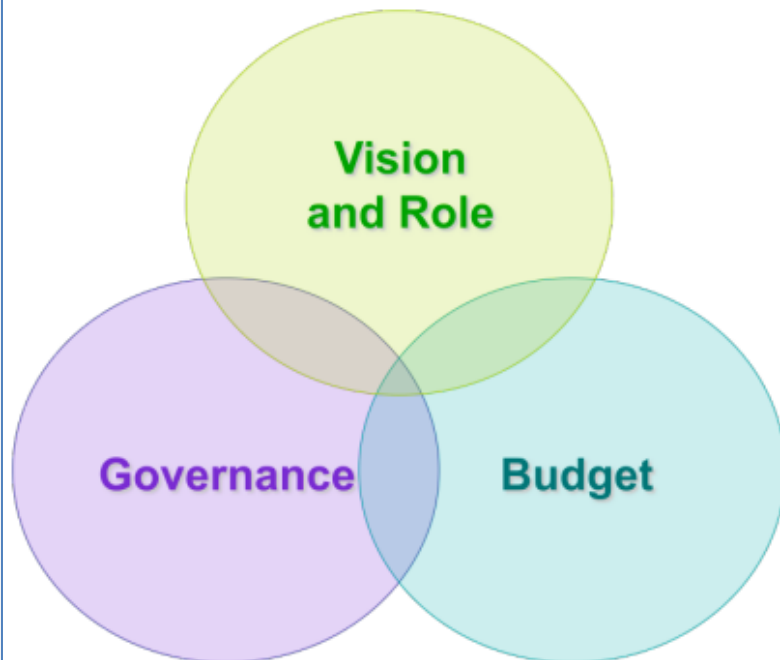




# Report on NIH Clinical Center



**Figure 1. The interrelated challenges facing the Clinical Center**

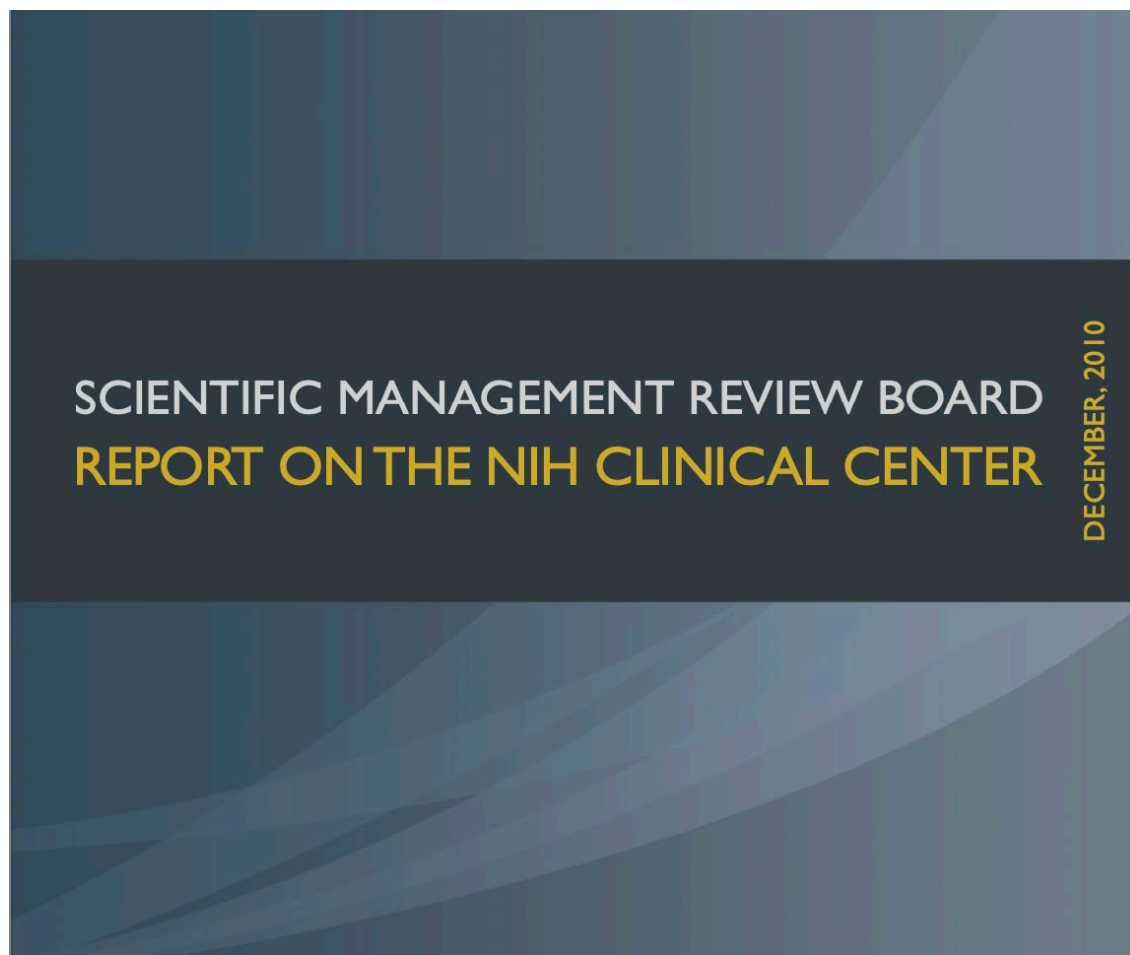


## ***Impetus***

Increasing fiscal constraints -- including inability to keep pace with inflation -- threatened the fiscal sustainability and utilization of the Clinical Center and its ability to attract a high-quality work force

- Need for a cohesive programmatic vision to enable both internal and external investigator use
- Need for a simplified governance structure capable of developing and overseeing a clear, coherent budgetary and programmatic plan for clinical research
- Need for a budget that is linked to a strong planning process and that remains stable in source and equitable in distribution

# Report on NIH Clinical Center



## Recommendations

- NIH Clinical Center have an expanded vision and role to enable both internal and external investigator use
- Simplified governance structure
- NIH Clinical Center be funded by a line item in the OD appropriation
- Provide stable, adequate budget for fiscal viability and sustainability

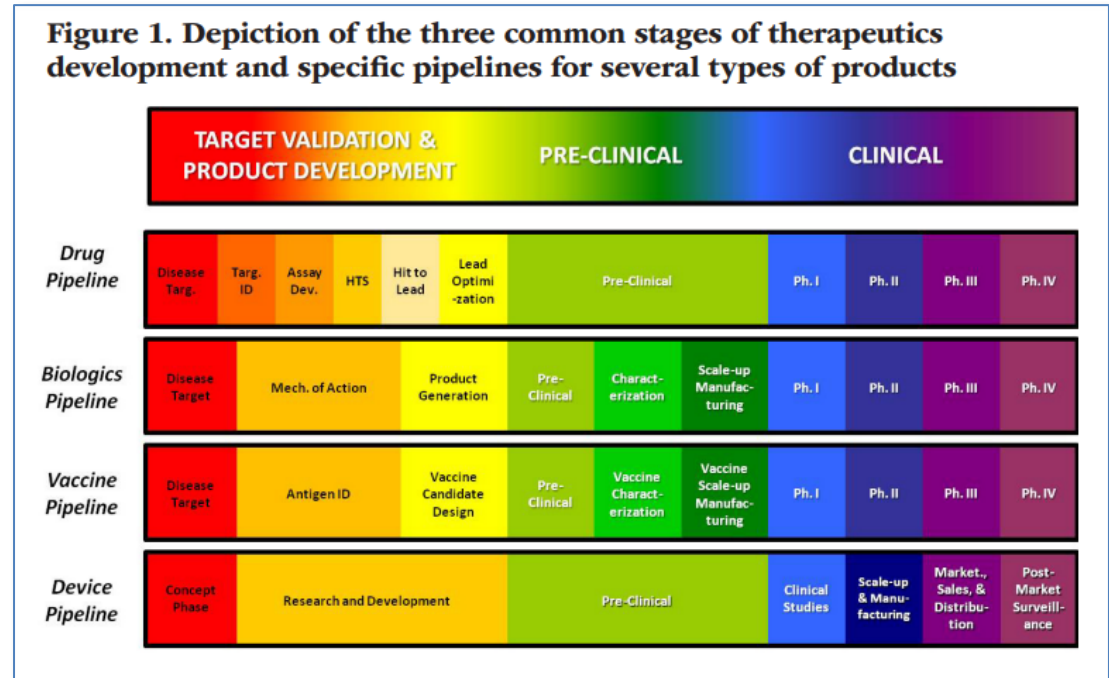


# Report on Translational Medicine and Therapeutics

## Impetus

In 2010, the **Patient Protection and Affordable Care Act (P.L. 111 148)** was enacted authorizing NIH to establish a **Cures Acceleration Network (CAN)** to advance development of “high need cures,” particularly by reducing barriers between research discovery and clinical trials in areas that the private sector is unlikely to pursue in an adequate or timely way

- NIH tasked SMRB with advising on the development of a CAN to help bridge the translational divide in innovative ways and at accelerated pace by:
  - (1) Identifying the attributes, activities, and functional capabilities of an effective translational medicine program for advancing therapeutics development
  - (2) Broadly assessing the NIH landscape for extant programs, networks, and centers for inclusion in this network and recommending their optimal organization



Reference: SMRB Report of Translational Medicine and Therapeutics (Dec 2010), page 21. [https://smrb.od.nih.gov/documents/reports/TMAT\\_122010.pdf](https://smrb.od.nih.gov/documents/reports/TMAT_122010.pdf)



# Report on Translational Medicine and Therapeutics



## Recommendations

- A new translational medicine and therapeutics center be created
- Endorsement of NIH commitment to undertake a more extensive analysis
- NIH report their findings to SMRB



# Report on Assessing the Value of Biomedical Research



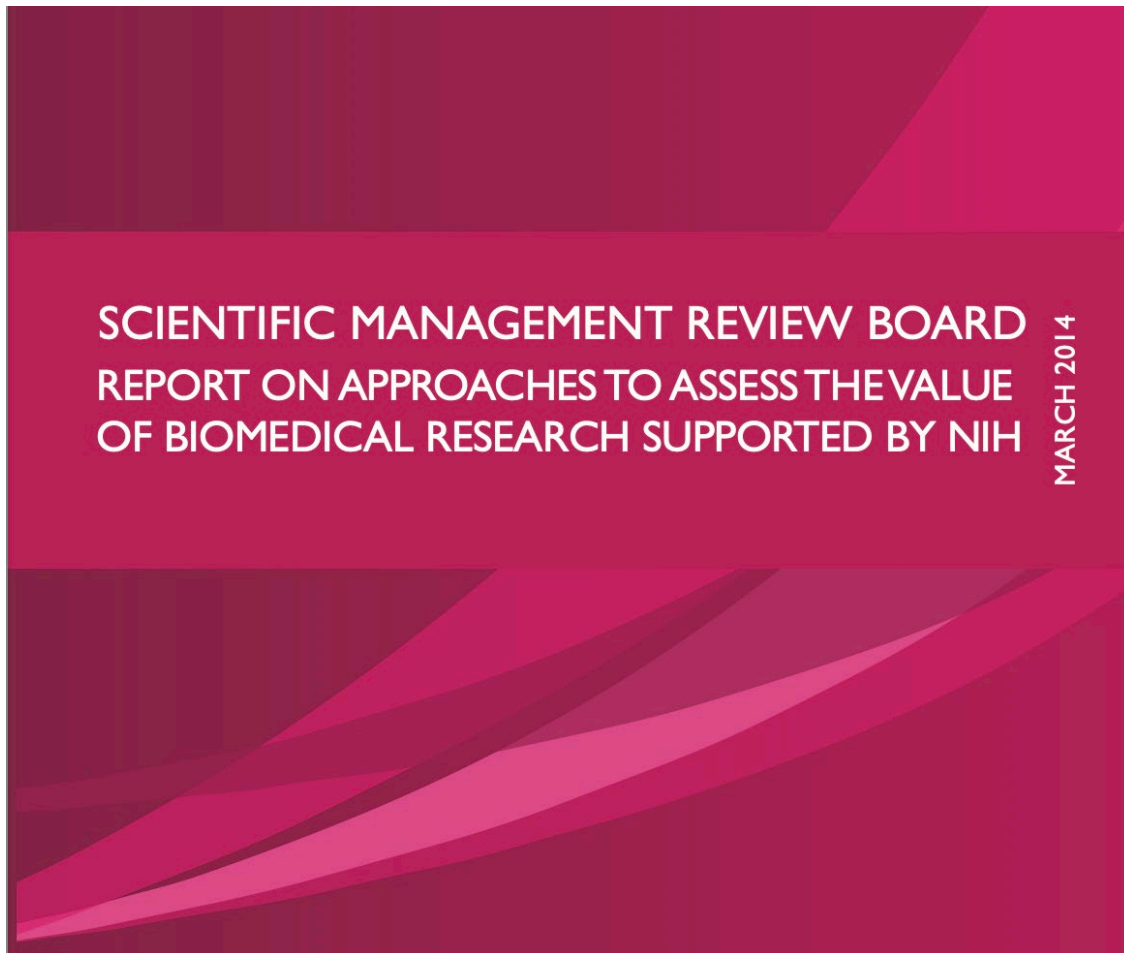
## *Impetus*

The American public entrusts NIH with the Nation's largest investment in biomedical research. Throughout its 120 year history, NIH has contributed to many of the scientific breakthroughs that have led to tangible improvements in the public health.

- A critical component of NIH's stewardship role is to systematically and comprehensively capture these improvements in ways that clearly link them to the public's investment in NIH.
  - However, accurate and clear assessments remain a significant challenge given the breadth, complexity, timeline, and multi-sector inputs into of biomedical research
- NIH tasked SMRB with identifying appropriate parameters and approaches for assessing and effectively communicating the value of biomedical research supported by NIH

Reference: SMRB Report on Assessing the Value of Biomedical Research (Mar 2014)  
[https://smrb.od.nih.gov/documents/reports/VOBR%20SMRB Report\\_2014.pdf](https://smrb.od.nih.gov/documents/reports/VOBR%20SMRB%20Report%202014.pdf)

# Report on Assessing the Value of Biomedical Research



## Recommendations

- NIH should intensify effort to assess the value of biomedical research
- NIH should examine connections between the generation and communication of basic and clinical knowledge and its impacts
- Assessments should attribute outcomes to all contributors and adopt a timeframe long enough for discoveries to be applied
- Assessments should be done in partnership with agency stakeholders



# Report on Assessing the Value of Biomedical Research

## Biomedical Research Outputs and Outcomes with Measurement and Assessment Tools (3) Broader Societal Impacts

OUTPUTS	
Proximal	• <b>Government, science, and technology jobs</b> (Assessment tools: NIH Budget Office, RPPRs, contract invoicing, STAR METRICS)
	• <b>Demand for R&amp;D supplies</b> (Assessment tools: Purchase requests, RPPRs, STAR METRICS)
	• <b>International collaboration</b> (Assessment tools: NIH funding and cooperative agreements for international activities, RPPRs, Fogarty database)
	• <b>Support for academia</b> (Assessment tools: NIH funding, RePORTER, STAR METRICS, RPPRs)
	• <b>Reduced risk in pre-competitive space</b> (Assessment tools: R&D investment by pharma and biotech industries; comprehensive tools lacking)
Intermediate	• <b>Cross-sector collaboration</b> (Assessment tools: Material Transfer Agreements; other tools needed)
	• <b>Private sector activity</b> (e.g., Biotech, Pharma) (Assessment tools: FDA approvals, patents, industry reports [PhRMA], Bureau of Labor Statistics)
	• <b>Enhanced STEM education</b> (Assessment tools: NSF Report on Science and Engineering Indicators, NAS, Department of Education)
	• <b>Communication and interpretation of findings across sectors and to the public</b> (Assessment tools: IC-provided data, HHS Assistant Secretary for Planning and Evaluation and NIH evaluations, CDC [NCHS])
	• <b>International science and technology capacity building</b> (Assessment tools: Tools lacking)
Distal	• <b>Spurring the local economy</b> (Assessment tools: Tools lacking)
	• <b>Uptake and spread of technological innovations</b> (Assessment tools: Tools lacking)
	• <b>Workforce output</b> (e.g., longevity, health) (Assessment tools: CDC [NCHS], WHO)
	• <b>Workforce development</b> (Assessment tools: NSF Report on Science and Engineering Indicators)
	• <b>Internationally competitive science and technology sectors</b> (Assessment tools: NSF Report on Science and Engineering Indicators, Organisation for Economic Co-operation and Development [OECD])
	• <b>GDP</b> (Assessment tools: Data from Bureau of Labor Statistics, Department of Commerce)
OUTCOMES/GOALS	• <b>Emergence of new sectors and industries</b> (Assessment tools: Data from Bureau of Labor Statistics, Department of Commerce)
	• <b>Health care costs</b> (Assessment tools: Federal data sources, commercial data sources)
	<b>Scientifically literate public • Health care–related cost savings • Higher Productivity</b> <b>• Greater capacity for innovation • Greater global R&amp;D competitiveness • Diplomacy and stability through science</b>

## Recommendations (cont.)

- NIH should establish a trans-NIH Committee on Assessments
- Assessments should begin with the identification of the purpose and audiences

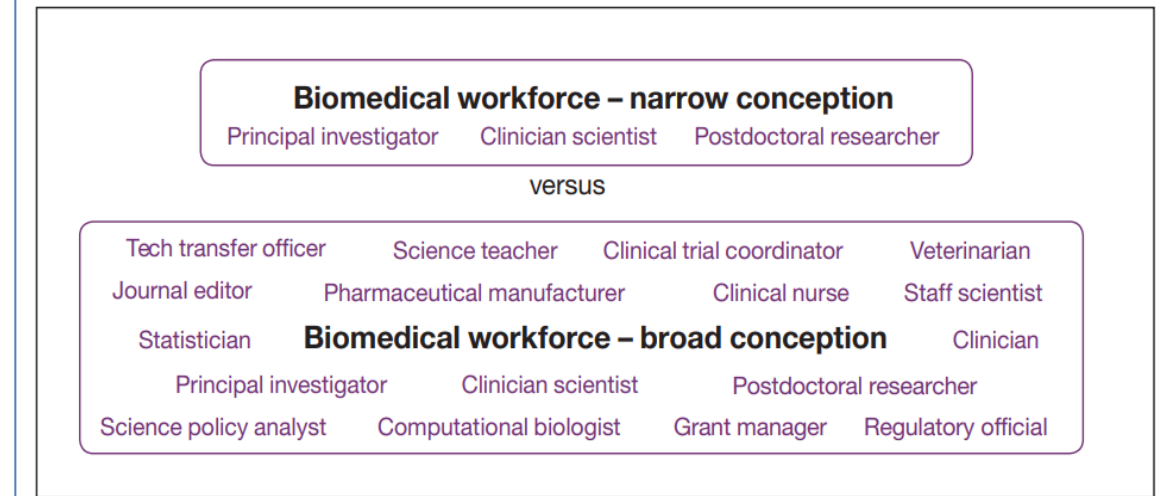


# Report on Pre-College Engagement

## *Impetus*

- Trends in the profile of the current and rising biomedical workforce raised significant **concerns about both the preparedness and diversity of the United States' future biomedical workforce and its ability to address the increasingly complex nature of biomedical research:**
  - Major and widening achievement gaps in U.S. pre-college science, technology, engineering, and mathematics (STEM) education compared with other countries
  - Diversity of students seeking degrees and careers in relevant fields does not reflect the nation's rapidly changing demographic profile
- NIH tasked SMRB with advising on how NIH could maximize its influence to increase pre-college biomedical science engagement.

**Figure 2: Conceptualizations of workforce categories in the biomedical science enterprise**



Reference: SMRB Report of Pre-college Engagement in Biomedical Science (Jan 2015), page 27  
[https://smrb.od.nih.gov/documents/announcements/SMRB\\_Report\\_2015\\_FINAL\\_revised\\_508.pdf](https://smrb.od.nih.gov/documents/announcements/SMRB_Report_2015_FINAL_revised_508.pdf)





# Report on Pre-College Engagement

SCIENTIFIC MANAGEMENT REVIEW BOARD  
REPORT ON PRE-COLLEGE ENGAGEMENT  
IN BIOMEDICAL SCIENCE

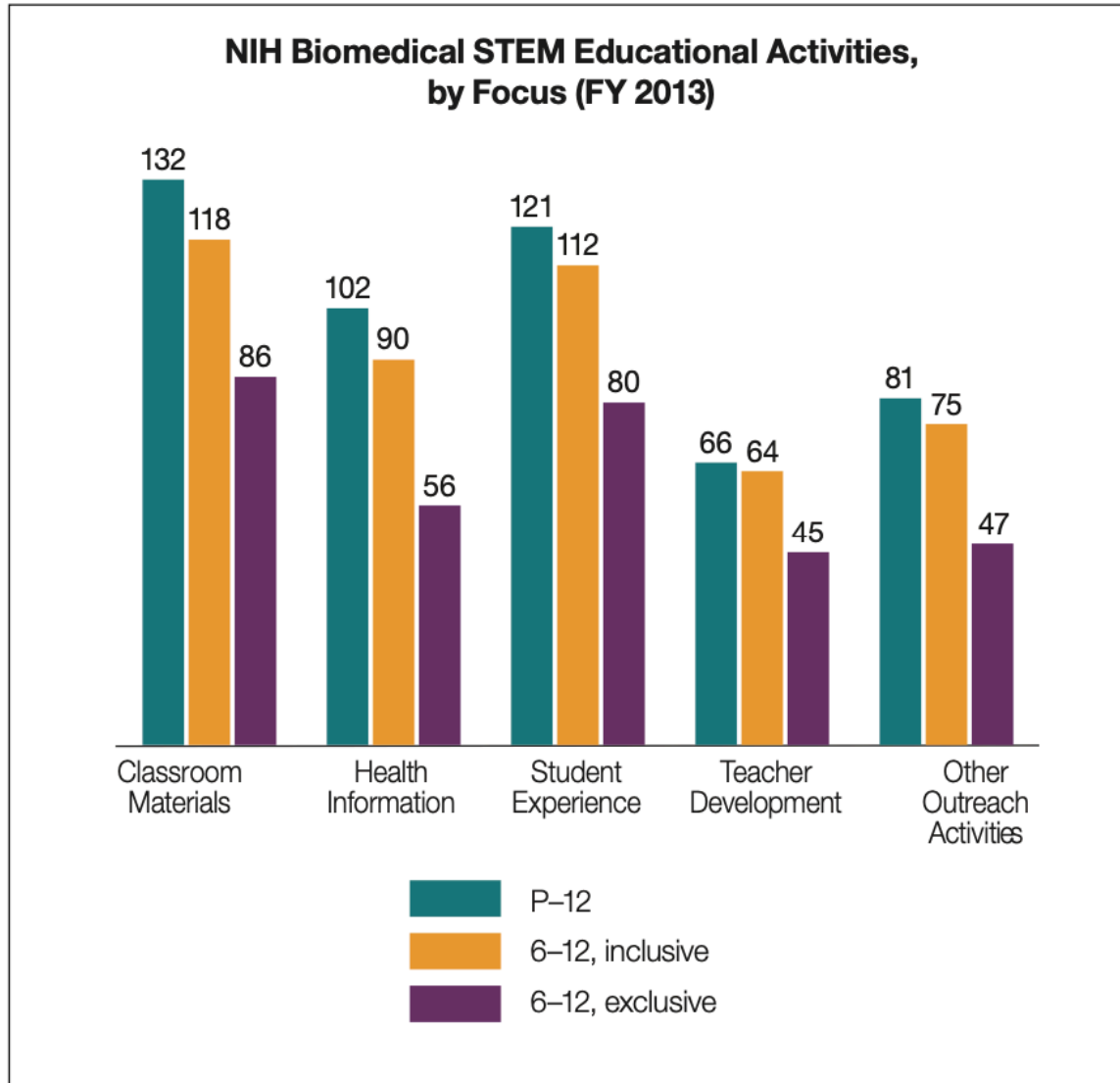
JANUARY 2015

## Recommendations

- Focus pre-college efforts on the most pressing workforce needs
- Broaden workforce categories to convey the full range of career options to pre-college youth
- Streamline and increase coordination of existing NIH pre-college STEM activities
- Develop standard metrics of success for existing NIH pre-college STEM activities
- Leverage strengths of public and private sectors



# Report on Pre-College Engagement



## Recommendations (cont.)

- Develop standard metrics of success for existing NIH pre-college STEM activities
- Leverage strengths of public and private sectors



# QUESTIONS?

Please visit the archived SMRB  
website for more info

