NLM: Meeting Challenges & Seizing Opportunities in & with Big Data

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NLM Coordinator of Data & Open Science Initiatives & Associate Director for Program Development, NLM, NIH

BD2K All Hands Meeting – November 30, 2016
What has NLM done in & with Big Data?
Biomedical Science
Biomedical Science

Information Science
What will NLM do in the future?
Lots happening on that right now
Lots happening on that right now

NIH Vision for NLM
- Data Science
- Open Science
Lots happening on that right now

Patricia Brennan, RN, PhD
Director, NLM

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NLM Strategic Planning
NIH ACD Working Group on NLM
NIH ACD Working Group on NLM

Charged to Form a Strategic Vision for NLM
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- June 2015 – WG report to ACD
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- Six recommendations including:
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  - **Open Science** - NLM should lead efforts to support and catalyze open science, data sharing, and research reproducibility, striving to promote the concept that biomedical information and its transparent analysis are public goods.
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- Recommendations accepted by Director, NIH
NLM Strategic Planning Process
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Translating the Vision to a Plan
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- September 2016 – December 2017
NLM Strategic Planning Process

Translating the Vision to a Plan

- September 2016 – December 2017

- NLM Strategic Planning Group
  - Jill Taylor, PhD, co-chair, NY State Dept of Health
  - Daniel Masys, MD, co-chair, University of Washington
  - Robert Greenes, MD, PhD, Arizona State University
  - Eric Horvitz, MD, PhD, Microsoft Research
  - Sandra Martin, MSLS, Wayne State University
  - James Olds, PhD, National Science Foundation
  - Barbara Rapp, PhD, NLM
  - Mike Huerta, PhD, NLM
NLM Strategic Planning Process

Translating the Vision to a Plan

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  - Mike Huerta, PhD, NLM

- **Stakeholder engagement**
- **Expert panel meetings**
- **Physical & functional audits**
NLM Strategic Planning Process
Organized & Conducted Around 4 Themes
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- What is the future role of the NLM in:
NLM Strategic Planning Process

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- Supporting the public’s health: clinical systems, public health systems and services, & personal health
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- Cross-cutting topics include
  - Research needs & funding
  - Infrastructure, standards, & workforce development
  - Partnerships & user communities
  - Health disparities & educational outreach
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Request For Info: NOT-LM-17-002

NLM Future in Data & Open Science

Communication & Collaboration
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  - Value assessment (e.g., infrastructure, acquisition)
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NLM Future in Data & Open Science

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- Data science beyond “Big Data”
  - Innovation in data analytics, machine learning, visualization, storage & access