

A decade of hints

*Quantifying the Health Information Revolution
through Data Innovation and Collaboration*

January 9-10, 2014 | Rockville, MD
NCI Shady Grove, 9609 Medical Center Drive



Integrative Data Analysis Workshop

Richard P. Moser, PhD
Behavioral Research Program
Science of Research and Technology Branch
National Cancer Institute

January 9, 2014



Presenters



- David Cantor, PhD (Westat)
- Rick for Sana Vieux, MPH (OD, National Cancer Institute)
- Benmei Liu, PhD (SRP, National Cancer Institute)
- Mandi Yu, PhD (SRP, National Cancer Institute)



Agenda

- 9:00-9:15 Workshop Overview (Rick)
- 9:15-9:50 Bridging Across Multiple Iterations of HINTS Data (David)
- 9:50-10:40 Merging Multiple Iterations of HINTS (Rick/Sana)

- 10:40-10:55 BREAK

- 10:55-11:35 Creating Model-Based State Level Estimates for Cancer-Related Knowledge Variables Using HINTS Data (Benmei)
- 11:35-12:15 Using Imputation to Augment Multiple Iterations of HINTS Data (Mandi)
- 12:15-12:30 Closing Remarks/Q & A (Rick/Everyone)



Integrative Data Analysis

- Statistical analysis of a single dataset that consists of two or more separate samples
- Different than meta-analysis
- Cost effective

“Without question, psychology as a field must in some way or another be motivated by a sincere idealistic quest to systematically build a **cumulative base of knowledge** upon which the science of psychology can progress.”

Patrick J. Curran
University of North Carolina





NIH Big Data to Knowledge (BD2K)

The screenshot shows the NIH Big Data to Knowledge (BD2K) website homepage. At the top, there are logos for NIH and the U.S. Department of Health and Human Services. The main header features the text "NIH Big Data to Knowledge (BD2K)" and the URL "http://bd2k.nih.gov". Below the header is a navigation menu with links for "FUNDING OPPORTUNITIES & NOTICES", "WORKSHOPS", "NEWS", "ABOUT BD2K", and "FAQs". The main content area is divided into several sections. On the left, there is a large graphic with binary code (0s and 1s) and a glowing light effect. To the right of this graphic is a blue box containing the text: "The NIH Big Data to Knowledge (BD2K) announces funding opportunity for CENTERS OF EXCELLENCE FOR BIG DATA COMPUTING IN THE BIOMEDICAL SCIENCES". Below this text is a yellow button labeled "LEARN MORE". To the right of the main content area, there are two sections: "WORKSHOPS" and "NEWS HIGHLIGHT". The "WORKSHOPS" section features a calendar icon and the text: "Frameworks for Community-Based Standards Efforts" with the dates "September 25 - 26, 2013" and a link "More Workshops >". The "NEWS HIGHLIGHT" section lists three news items: "NIH commits \$24 million annually for Big Data Centers of Excellence" (July 22, 2013), "NIH to recruit Associate Director for Data Science" (January 10, 2013), and "NIH proposes critical initiatives to sustain future of U.S. biomedical research" (December 7, 2012). At the bottom of the news section is a link "More News >".

The mission of the **NIH Big Data to Knowledge (BD2K)** initiative is to enable biomedical scientists to capitalize more fully on the Big Data being generated by those research communities. With advances in technologies, these investigators are increasingly generating and using large, complex, and diverse datasets. Consequently, the biomedical research enterprise is increasingly becoming data-intensive and data-driven. However, the ability of researchers to locate, analyze, and use Big Data (and more generally all biomedical and behavioral data) is often limited for reasons related to access to relevant software and tools, expertise, and other factors. BD2K aims to develop the new approaches, standards, methods, tools, software, and competencies that will enhance the use of biomedical Big Data by supporting research, implementation, and training in data science and other relevant fields that will lead to... Read more



BD2K: Four Programmatic Areas

I. Facilitating Broad Use of Biomedical Big Data

II. Developing and Disseminating Analysis Methods and Software for Biomedical Big Data

III. Enhancing Training for Biomedical Big Data

IV. Establishing Centers of Excellence for Biomedical Big Data



Common Data Elements (CDE) Portal

The screenshot shows the NIH Common Data Element (CDE) Resource Portal. At the top left is the NLM logo and the text "U.S. National Library of Medicine National Institutes of Health". To the right is the URL "http://cde.nih.gov" and a search bar. Below the header is a navigation menu with links: "Databases", "Find, Read, Learn", "Explore NLM", "Research at NLM", "NLM for You", and "The World's Largest Medical Library". The main content area has a "Home" link and a "Common Data Element (CDE) Resource Portal" title. The page is divided into two columns: "NIH CDE Initiatives" and "NIH CDE Tools and Resources". Each column has a "Summary Table" and "Subject Areas" button. The "NIH CDE Initiatives" section describes collections of CDEs identified for use in research projects. The "NIH CDE Tools and Resources" section describes databases and repositories that assist in identifying and selecting data elements. The page also includes a "Home" link, a "Glossary" link, and a "Contact us" link. The footer contains copyright information, a USA.gov logo, and metadata including "Last reviewed: 03 January 2013", "Last updated: 03 January 2013", "First published: 18 June 2012", and "Metadata | Permanence level: Permanent: Dynamic Content".

U.S. National Library of Medicine
National Institutes of Health

<http://cde.nih.gov>

Contact NLM

Search

Databases Find, Read, Learn Explore NLM Research at NLM NLM for You The World's Largest Medical Library

NIH Common Data Element (CDE) Resource Portal Home | Resource Summaries | Glossary

Home

Home

NIH encourages the use of common data elements (CDEs) in clinical research, patient registries, and other human subject research in order to improve data quality and opportunities for comparison and combination of data from multiple studies and with electronic health records. This portal provides access to NIH-supported CDE initiatives and other tools and resources that can assist investigators developing protocols for data collection. [What is a CDE?](#)

NIH CDE Initiatives

Collections of CDEs that have been identified for use in particular NIH-supported research projects or registries after a formal evaluation and selection processes.

[Summary Table](#) [Subject Areas](#)

NIH CDE Tools and Resources

Databases and repositories of data elements and case report forms that may assist investigators in identifying and selecting data elements for use in their projects.

[Summary Table](#) [Subject Areas](#)

The CDE Resource Portal also includes [Other CDE Resources](#) and [Relevant Standards](#). Descriptions of all four groups can be found in the [Glossary](#).

The CDE Working Group of the [Trans-NIH BioMedical Informatics Coordinating Committee](#) (BMIC) developed this Portal to improve the coordination of CDEs. BMIC encourages researchers to use CDEs from the Resources in this Portal where applicable, and to consider existing CDE initiatives before starting additional initiatives.

Are we missing a CDE Resource? [Contact us](#).

Copyright, Privacy, Accessibility, Site Map, Viewers and Players
U.S. National Library of Medicine, 8600 Rockville Pike, Bethesda, MD 20894
National Institutes of Health, Health & Human Services
Freedom of Information Act, Contact Us

USA.gov

Last reviewed: 03 January 2013
Last updated: 03 January 2013
First published: 18 June 2012
Metadata | Permanence level: Permanent: Dynamic Content



The Federal Perspective: Funding Mechanisms





Before you Submit For a Grant....

- NIH Guide listserv:
 - <http://grants1.nih.gov/grants/guide/listserv.htm>
 - Search for current FOAs; grants process overview...
- RePORTER (Research Portfolio Online Reporting Tools; successor to CRISP):
 - <http://projectreporter.nih.gov/reporter.cfm>
 - Reports, data, and analyses of NIH research
- **Talk with program staff**



General Information:

Statfund (List of stats-related NCI funding announcements):

<http://www.statfund.cancer.gov/funding/opportunities.html>

Training/career kiosks (info about NIH career development awards):

<http://grants.nih.gov/training/careerdevelopmentawards.htm>

http://grants.nih.gov/training/f_files_nrsa.htm



Specific Grant Mechanisms

NIH parent announcements for R03, R21:

<http://grants.nih.gov/grants/guide/pa-files/PA-13-304.html>

<http://grants.nih.gov/grants/guide/pa-files/PA-13-303.html>

NCI omnibus announcements for R03, R21:

<http://grants.nih.gov/grants/guide/pa-files/PAR-14-007.html>

<http://grants.nih.gov/grants/guide/pa-files/PAR-13-146.html>

Methodology, Measurement, and Statistics (NSF)

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5421&org=SES



Important Websites

- Electronic Submission of Grant Applications-FAQs
http://grants.nih.gov/grants/electronicreceipt/faq_full.htm
- Funding Opportunities and Notices
<http://grants.nih.gov/grants/guide/index.html>
- Parent Announcements (For Unsolicited or Investigator-Initiated Applications)
http://grants.nih.gov/grants/guide/parent_announcements.htm
- Standard Due Dates for Competing Applications
<http://grants.nih.gov/grants/funding/submissionschedule.htm>