 Agenda

• Workgroup Co-Chair and Member Introductions
• Workgroup Logistics
• Committee Charge/Goals
• Background and Context
• Big Data Issues, Challenges and Opportunities
• Other Action Items (e.g., Workgroup Homework)
• 5 Minute Public Comment Period
• Adjourn
# Big Data WG Members

<table>
<thead>
<tr>
<th>NAME</th>
<th>AFFILIATION</th>
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<tr>
<td><strong>WORKGROUP CHAIRS</strong></td>
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<tr>
<td>Roger Little, PhD</td>
<td>NIDA</td>
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<td>Massoud Vahabzadeh, PhD</td>
<td>NIDA</td>
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<td><strong>EXTRAMURAL WORKGROUP MEMBERS</strong></td>
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<tr>
<td>Christopher Chute, MD, DrPH</td>
<td>Johns Hopkins University</td>
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<td>Michael Neale, PhD</td>
<td>Virginia Commonwealth University</td>
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<td>Eric Nestler, MD, PhD</td>
<td>The Mount Sinai Hospital</td>
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<td>Michael Milham , MD, PhD</td>
<td>Child Mind Institute</td>
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<td>Arthur Toga, PhD</td>
<td>University of Southern California</td>
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<td>Maryanne Martone, PhD</td>
<td>University of California at San Diego</td>
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<td><strong>NIH STAFF</strong></td>
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<td>Philip Bourne, PhD</td>
<td>NIH Associate Director for Data Science</td>
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<td>Maureen Boyle, PhD</td>
<td>NIDA</td>
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<td>Ericka Boone, PhD</td>
<td>NIDA</td>
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<td>Udi Ghitza, PhD</td>
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<td>Steve Gust, PhD</td>
<td>NIDA</td>
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<td>Vani Pariyadath, PhD</td>
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<td>Tom Radman, PhD</td>
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<td>Joni Rutter, PhD</td>
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<td>Tisha Wiley, PhD</td>
<td>NIDA</td>
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Logistics

• Workgroup members:
  – Please dial in through the phone instead of using your computer speakers to improve the quality of the audio.
  – We will mute participants as necessary to control noise. Please unmute to speak.
Logistics

- Non-workgroup members should remain muted until the public comment period
  - If you have a comment or question before then please feel free to enter it into the chat box
- The webinar will be recorded
- There is a note taker on the call and summaries will be posted on the website: http://www.drugabuse.gov/about-nida стратегический план
NIDA Strategic Planning

• RFI released in December to solicit feedback from the field on NIDA’s draft strategic priorities:
  – **Basic Neuroscience**: Improve our understanding of the basic science of drug use, addiction, vulnerability to addiction, and recovery
  – **Clinical and Translational Science**: Support the development of new and better interventions and treatments that incorporate the diverse needs of individuals with Substance Use Disorders (SUDs)
  – **Public Health**: Increase the public health impact of NIDA research and programs
  – **Science Infrastructure**: Enhance the national research infrastructure to support advancements in science

• **Comment period closed January 30th**
Updating the NIDA Strategic Plan

• Next steps:
  – Bold Goals Challenge: Will award up to $10k in prizes for top ideas
  – Priority Area Workgroups will be formed to gather input from internal and external experts on cross divisional topics to develop strategic priorities for:
    • Big Data
    • Gene x Environment x Development interactions
    • Complex patients (multiple comorbidities)
  – Division strategic plans currently being developed
NIDA Strategic Planning Timeline

• RFI – Closed Jan 30, 2015
  – Review comments, by Mar 6, 2015

• Priority Area Workgroups
  – February through July

• Bold Goals Challenge
  – Winner selection, by August

• Draft Strategic Plan out for public comment
  – Summer 2015

• Final Strategic Plan
  – Fall 2015
Workgroup Charge

• To develop recommendations on the best approach for NIDA to utilize Big Data to advance strategic priorities including data sharing/access, analysis, visualization, reproducibility, negative data resource

• **Deliverable:** 3-5 page summary of recommendations on leveraging ‘Big Data’ in the next 5 years

• Completion date: **by Friday June 26th**
Workgroup Charge

• The workgroup should also address these cross cutting themes as appropriate
  – Training needs (training of clinicians common theme in RFI comments)
  – Addressing sex and gender issues
  – How to leverage technology advances
  – Leveraging innovations from other fields
Background and Context

- NIH Big Data to Knowledge (BD2K) need to anticipate/exploit it for NIDA research community and other stakeholders

- The NIH plan for increasing data sharing

- Opportunities for discovery, validation, increased analytical power

- Transparency and negative data repository

- Electronic medical records, efforts to create common data elements (in multiple domains)

- NIDA Big Data-related Projects and FOAs
Big Data Issues

• Capture, data dictionaries, ontologies, common data elements

• Storage: Cloud, centralized, decentralized, discoverability

• File Formats: unstructured data, preprocessing, metadata

• Data Curation (who does this; commercial service?)

• Transfer, sharing, security, privacy

• Visualization, analysis tools, machine learning
Big Data Challenges and Opportunities

• What are the challenges and opportunities? Prioritize.

• What are potential new areas of research? Prioritize.

• What is/are the impact areas unique to NIDA research? Addictome.org

• What are the training needs?

• To take advantage of the new opportunities and areas that will be created by big data research, what should NIDA do?
NIDA/DBNBR Awards by BD2K Topic Area

(# of Grants*)

(Total Funding*)

*NOTE: All projects and dollar values are for internal analysis purposes only. Numbers are not final and are not subject to FOIA regulations
# NIH BD2K FOAs

## Analysis Methods and Software

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<tr>
<th>Title</th>
<th>Number</th>
<th>Opening Date</th>
<th>Closing Date</th>
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<tbody>
<tr>
<td>Big Data to Knowledge (BD2K) Advancing Biomedical Science Using Crowdsourcing and Interactive Digital Media (UH2)</td>
<td>RFA-CA-15-006</td>
<td>05/03/2015</td>
<td>06/30/2015</td>
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<td>Early Stage Development of Technologies in Biomedical Computing, Informatics, and Big Data Science (R01)</td>
<td>PA-14-155</td>
<td>05/02/2014</td>
<td>05/08/2017</td>
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<tr>
<td>Extended Development, Hardening and Dissemination of Technologies in Biomedical Computing, Informatics and Big Data Science (R01)</td>
<td>PA-14-156</td>
<td>05/05/2014</td>
<td>05/08/2017</td>
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<tr>
<td>Early Stage Development of Technologies in Biomedical Computing, Informatics, and Big Data Science (R43/R44)</td>
<td>PA-14-154</td>
<td>07/05/2014</td>
<td>05/08/2017</td>
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<tr>
<td>Early Stage Development of Technologies in Biomedical Computing, Informatics, and Big Data Science (R41/R42)</td>
<td>PA-14-157</td>
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Wrap Up

• Other Action Items
  – Workgroup Homework
  – Other Items/Questions

• 5 Minute Public Comment Period

• Adjourn

*Next Meeting – 2:00-3:00pm, Wednesday, April 22, 2015*