Substance Use, Abuse, and Addiction Working Group
Report and Recommendations
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Working Group Charge

“... to recommend whether organizational change within NIH could further optimize research into substance use, abuse, and addiction and maximize human health and/or patient well being.”
Working Group Membership

Non-Federal

William Roper, MD, MPH
(Chair)
Deborah Powell, MD
Eugene Washington, MD, MSC
Huda Zoghbi, MD
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(ad hoc)

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Josephine Briggs, MD
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(ex officio)
Since April 2009, the working group has held 12 teleconferences and 3 in-person meetings and has heard from:

- Current and former NIAAA & NIDA Directors
- Prevention and treatment specialists
- Patient advocates
- Policy specialists
- Scientists with diverse areas of expertise
- Leaders of academia
- Industry representatives
- Judicial system representatives
- NIAAA and NIDA Advisory Councils
Summary of Findings: Opportunities in Science and Public Health

- Emerging scientific research indicates:
  - Similar reward pathways underlie compulsive behavior
  - Many substances that pose the potential for abuse may have similar effects on the brain
  - Common genetic sites associated with risk for disorders related to abuse
  - Addiction is a developmental disease, often beginning in adolescence with common early risk factors across substances

- Many substance abusers suffer from multiple drug dependencies and/or co-morbid conditions
Research/Public Health Needs Not Currently Addressed – NIAAA Perspectives

• A compendium of the pharmacokinetic and pharmacodynamic interactions between alcohol and the therapeutics used to treat general medical and psychiatric conditions (e.g., hypertension, diabetes, epilepsy, depression, etc.)

• Research on the generation of novel metabolites resulting from the in situ interaction of alcohol with opiates, stimulants, hallucinogens, or inhalants (e.g., the production of coco-ethylene) and their pharmacokinetic and pharmacodynamic properties and toxicity

• Mechanisms by which alcohol increases risk for certain cancers

• Encouraging the hesitant patient to seek treatment
Research/Public Health Needs Not Currently Addressed – NIDA Perspectives

- Lack of pharmaceutical industry interest in developing medications to treat addiction/alcoholism

- Insufficient involvement of the medical community in preventing and treating drug addiction and alcoholism

- Although treatments for substance abuse are available, they are not being widely used by those who need them

- There is a bottleneck in translating treatments for substance abuse from bench to bedside to the community
Summary of Findings: Stakeholder Perspectives

- Arguments in favor of structural reorganization
  - Scientific synergies
  - Underserved patient populations
  - Impediments to collaboration and integration

- Arguments in favor of non-structural reorganization
  - Potential loss of research
  - Establishment of a research dogma
  - Examples of current, successful collaborations
  - Licit vs. illicit substances
Deliberative Process: Framework
(DOCE Process for Considering Change)

• STEP 1:
  Assess the need for change

• STEP 2:
  Evaluate options for change

• STEP 3:
  Implement and navigate the change
Deliberative Process: Framework
(DoCE Process for Considering Change)

- Criteria for Assessing the Need for Change:
  - Immediate Crisis
  - Unaddressed Scientific Opportunities
  - Changes in Scientific Landscape
  - Evolving or Emergent Public Health Needs
  - Need for Improvements in Quality and/or Efficiency of Research
Deliberative Process: Spectrum of Potential Options
CONCLUSIONS & RECOMMENDATIONS
Working Group Conclusions

• **Status quo is not ideal** for fulfilling NIH mission and optimizing research into substance use, abuse and addiction

• **Reorganization is needed** for NIH to optimize science and best serve public health
Identified Needs for Change

• Unaddressed scientific opportunities, including:
  – Preventing adolescent use, abuse, and addiction
  – Promote an understanding of both alcohol and drug abuse as diseases
  – Understanding drug-drug interactions

• Changes in the scientific landscape, including:
  – Advances in systems-level understanding that warrant a joint approach for many aspects of SUAA research

• Emergent public health needs, including:
  – Populations suffering from co-morbid conditions associated with substance use, abuse, and addiction
  – Rises in other forms of addiction (e.g. gambling, food, sex, etc.)

• Needs for improvement in the quality and/or efficiency of research:
  – Development of an integrated discipline of addiction research
  – Cross-training tracks need to be developed across fields
Key Features of Reorganization

• Integration of addiction research portfolios across NIH
  – Scope of reorganization focused on addiction-related research
  – Broader than drug and alcohol research
  – Include other substances (e.g., tobacco) and behaviors (e.g., gambling)
  – Mission statement should promote
    • Unified vision for addiction research
    • Interdisciplinary approach
    • Flexibility for new areas of study
    • Multidisciplinary approach to training
Key Features of Reorganization (cont.)

- Commitment by all participants to success of reorganization
  - Strong leadership from NIH Director & IC Directors
  - Participation and contribution from NIH staff, community of affected researchers, and other stakeholders

- Functional integration
  - Shared goals
  - Enhanced communication and collaboration
  - Engagement and participation from all relevant parties
  - Identification, creation, and sustentation of synergies
  - Cultural shifts
  - Cannot be a change “in name only”
Two Recommended Approaches

• Reorganization **Option 1**:  
  – Create a New Addiction Institute

• Reorganization **Option 2**:  
  – Form a Trans-NIH Initiative on Addiction
Option 1: A New Addiction Institute

• Integrate all relevant addiction portfolios from NIAAA, NIDA, and other ICs. Include, for example:
  – Drug addiction research from NIDA
  – Alcohol addiction research from NIAAA
  – Tobacco addiction research from NCI
  – Gambling addiction research from NIDA and NIMH

• Transfer non-addiction research portfolios at NIAAA and NIDA to other ICs, as appropriate. For example:
  – Research on alcohol liver disease reassigned to NIDDK
  – Research on Fetal Alcohol Spectrum Disorders reassigned to NICHD
Option 1: A New Addiction Institute (cont)

- **Funding**
  - Addiction research funding relocated from existing ICs to the new institute
  - Funding for non-addiction and end-organ research programs relocated, as appropriate
  - No net change in level of funding for addiction research

- **Recruit new director**

- **Reassign current staff**

- **Develop a new strategic plan to advance addiction-related research**
**Option 1: A New Addiction Institute** (cont)

- Establish a transition committee
  - Implement reorganization
  - Outline process for development of new mission statement
  - Perform NIH-wide portfolio analysis to identify relevant programs for inclusion
  - Develop organizational structure
  - Establish timelines
Option 2: A New Trans-NIH Initiative on Addiction

- Modeled after the NIH Blueprint for Neuroscience Research or the Basic Behavioral and Social Science Opportunity Network (OppNet)

- Participation by NIAAA, NIDA, and all other ICs with relevant addiction portfolios. Include, for example:
  - NIDA (drug addiction)
  - NIAAA (alcohol addiction)
  - NCI (tobacco addiction)
  - NIMH (compulsive behaviors, gambling addiction)
  - NICHD (adolescent use)
Object 2: A New Trans-NIH Initiative on Addiction (cont)

• Stable, dedicated funding
  – May require a majority of each IC’s addiction funds
  – Contributions from Office of the Director
  – Larger investment than, for example, Neuroscience Blueprint

• Dedicated staff support provided by NIAAA and NIDA

• Evaluation to monitor initiative progress and success
Option 2: A New Trans-NIH Initiative on Addiction (cont)

• Organization
  – Steering committee to lead the initiative:
    • Include IC directors from respective Institutes
    • Co-chaired by 4-5 IC Directors, including NIDA and NIAAA
  – Working groups or coordinating committees carry out main work of initiative. For example:
    • Strategic planning activities
    • Identification of scientific and public health priority areas
    • Development of an evaluation plan
Arguments in Favor of a New Institute

- Changes in the scientific landscape, research opportunities, public health needs, and the potential for more efficient interdisciplinary research provide the rationale for change
  - These goals cannot be met through a trans-NIH initiative on addiction
- Divergence in scientific communities doing alcohol and drug research can only be remedied by establishing a new institute
- Provides a highly visible home for addiction research at NIH
- Enables effective promotion of research on polysubstance abuse, greater understanding of adolescent use, and development of a cohesive public health message that alcohol and illicit drugs can have similar effects on the brain and body
Arguments in Favor of a New Trans-NIH Initiative

- Changes in scientific landscape, research opportunities, public health needs, and the potential for more efficient research provide the rationale for change
  - These goals could be met through the trans-NIH initiative

- Functional strategies have worked in the past, in other scientific areas, with varying degrees of success

- Establishing a new Institute could create research gaps in understanding alcohol’s ubiquitous effects on the body and unique factors contributing to its abuse

- Establishing a new institute constitutes a significant undertaking that will demand considerable effort and cause considerable disruption in the research community

- Trans-NIH initiative would maintain an inherently interdisciplinary component
DISCUSSION