Director’s Report to the National Advisory Council on Drug Abuse

September 5, 2019

Nora D. Volkow, M.D., Director

National Institute on Drug Abuse

@NIDAnews
<table>
<thead>
<tr>
<th></th>
<th>FY 2018 Actuals</th>
<th>FY 2019 Enacted</th>
<th>FY 2020 PB</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NonAIDS</strong></td>
<td>$854,609,000</td>
<td>$893,402,000</td>
<td>$796,379,000</td>
</tr>
<tr>
<td><strong>AIDS</strong></td>
<td>$269,765,000</td>
<td>$264,814,000</td>
<td>$250,000,000</td>
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<tr>
<td><strong>Total</strong></td>
<td>$1,124,374,000</td>
<td>$1,158,216,000</td>
<td>$796,379,000</td>
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<tr>
<td><strong>HEAL</strong></td>
<td>$250,000,000</td>
<td>$250,000,000</td>
<td>$250,000,000</td>
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National Institute on Drug Abuse Portfolio
Annual Appropriation
FY 2018 Actual

- Division of Neuroscience & Behavior -- 41%
- Division of Epidemiology, Services & Prevention Research -- 28%
- Division of Therapeutics and Medical Consequences -- 14%
- Center for the Clinical Trials Network -- 4%
- RMS -- 6%
- Intramural Research -- 8%
Illicit Drug Use

PAST YEAR, 2018 NSDUH, 12+

Marijuana
- 16.9M
- Significant decrease from 2017 (6.6%)

Psychotherapeutic Drugs
- 16.9M

Cocaine
- 2.0%
- 5.5M

Hallucinogens
- 2.0%
- 5.6M

Methamphetamines
- 0.7%
- 1.9M

Inhalants
- 0.7%
- 2.0M

Heroin
- 0.3%
- 808K

PAST YEAR, 2018 NSDUH, 12+
SAMHSA

Marijuana Use Increasing

PAST MONTH, 2015-2018 NSDUH, 12+

- 7.0%
- 6.5%
- 6.5%
- 6.7%
- 1.8M
- 1.6M
- 1.6M
- 1.7M
- 2015
- 2016
- 2017
- 2018

- 7.2M
- 22.1%
- 22.1%
- 20.8%+
- 19.8%+

- 7.6M
- 7.9%

- 7.6M
- 7.5M
- 7.2M
- 6.9M

- 13.6M
- 15.2M
- 16.8M
- 18.5M

- 6.5%+
- 7.9%+
- 8.8%+

- 7.9%
- 7.9%
- 8.6%
Serious Mental Illness in Adults
(18-25 yo and 26-49 yo)

PAST YEAR, 2008-2018 NSDUH, 18+

+ Difference between this estimate and the 2018 estimate is statistically significant at the .05 level.

Substance Use Is More Frequent among the Mentally Ill

PAST YEAR, 2018 NSDUH, 18+

+ Difference between this estimate and the estimate for adults without mental illness is statistically significant at the .05 level.
Suicidal Thoughts, Plans, and Attempts Increase for Young Adults (18-25 y.o)

PAST YEAR, 2008 and 2018 NSDUH, 18-25

- Difference between this estimate and the 2018 estimate is statistically significant at the .05 level.

Co-Occurring SUD is Associated with Suicidal Thoughts, Plans, and Attempts among Adults >18 y.o.

PAST YEAR, 2018 NSDUH, 18+

- Difference between this estimate and the estimate for adults with SUD is statistically significant at the .05 level.
Adolescent Brain Cognitive Development (ABCD) Study

Full Baseline Curated Data Released April 2019
ABCD Data Release 2.0.1 available now

Unique Users - 2019

- Clinical files
- Tabulated imaging files
- Minimally processed image files
- Fasttrack image files

January, February, March, April, May, June, July
Publications Using ABCD Data

- ABCD Investigators
- non-ABCD Investigators

Society for Neuroscience (SfN) Satellite: Diving DEAP into ABCD Study Data - October 19, 2019 @ 6:30-9:30pm

Register by emailing AdolescentBrain@nih.gov
THE CRISIS: NATIONAL OPIOID DEATH RATES

In 2017, there were 70,237 overdose deaths (9.6% higher than 2016).

388 opioid overdose deaths in Oklahoma (10.2 per 100,000, vs 14.6 nationally).
HEAL Focus Areas
FY 19 Tentative Spending Plan

- Medicine Development 16%
- Pre-Clinical Pain Research 14%
- Clinical Pain Research 22%
- Prevention & Treatment 12%
- Implementation Science 28%
- Infants & Children 3%
- Other (SBIR/STTR, Program Evaluation, RMS) 5%

FY 2019 total: ~$930M
- HEAL launched in FY 2018 with funds for 2018-19
- OD invited all the ICs to propose plans for HEAL
- OD set overall research priorities
- RFAs released and reviewed in approved areas
- Presentations/discussion MDWG
- Final decisions by Executive Committee/Dr. Collins
CTN Node Expansion—June 2019

RFA-DA-19-008

- To enhance the CTN’s scientific and clinical research capacities
- To expand to regions highly impacted by the opioid epidemic

**Appalachian Node** – Univ. of Pittsburgh & WV Univ.
Jane Liebschutz, M.D., Ph.D.
Judith Feinberg, M.D.

**Great Lakes Node** – Rush University
Niranjan Karnik, M.D., Ph.D.
Mark Pollack, M.D.

**Greater Intermountain Node** – Univ. of Utah
Adam Joseph Gordon, M.D.
Gerald Cochran, M.S.W., Ph.D.

**Greater Southern California Node** – UCLA
Yih-Ing Hser, Ph.D.
Larissa Mooney, M.D.

**Southwest Node** – Univ. of New Mexico
Kimberly Page, Ph.D., M.P.H., M.S.
# CTN HEAL Proposed Studies (tentative)

## Large, Multi-Site OUD Studies
1. Optimizing Retention, Duration and Discontinuation for MOUD Subthreshold OUD Trial
2. Emergency Department-Initiated Buprenorphine (ED-INNOVATION)
3. Medication Treatment for OUD Expecting Mothers (MOMS)
4. Rural Expansion of Medications for OUD
5. Hospital Initiation of MOUD
6. Rapid Initiation of ER-Naltrexone

## Closing Treatment Gap
1. OUD Research Infrastructure Initiative (DC)
2. Culturally Centered MOUD in AI/AN
3. Development of a Pharmacy-based PDMP Risk Assessment Tool
4. Peer recovery Support: A Bridge to Treatment for Overdose Survivors
5. Survey of pharmacists and stakeholders for OUD interventions

## Expansion Existing Studies
1. Economic Study of ED-Initiated Buprenorphine

## Database Studies
1. Predictive Modeling of OUD Tx Responses (CTN Datasets)
2. Examine Patient Characteristics Associated with Buprenorphine Termination (VA Databases)
3. Compare Outcomes in Residential and Outpatient (Medicaid Databases)
4. Impact of Drug-focused Twelve Step Mutual Help Groups (VA Databases)
JCOIN

Individuals in the justice system (JS) with SUD should have access to evidence-based treatment

- Resource for researchers and practitioners
- Develop network of researchers and practitioners across JS to conduct research in JS
- Speed science-to-practice translation

9-12 Hubs
Each = Large Scale Project in 5+ Communities
Cascade of Care Focus
Must have a Justice & Treatment Partner
Diversity of Justice Setting, Geography, and Intervention

Novel Studies
STATE POLICY ROLLOUTS
LEVERAGING TECHNOLOGY
PEER NAVIGATION SUPPORT
INTER ORGANIZATIONAL LINKAGES
MOUD COMPARATIVE EFFECTIVENESS

Coordination and Translation Center:
George Mason University
Methodology and Advanced Analytics Resource Center:
University of Chicago
Preventing Opioid Use Disorder in Older Adolescents and Young Adults (ages 16-30)

Vulnerable Populations
- AI/AN – Urban
- AI/AN - Rural
- Homeless youth –
- Child welfare involved families –
- Construction workers

Healthcare Systems
- ED screen and brief intervention by remote health coach
- Video game intervention delivered through school based health centers
- Treatment for psychopathology and SUD on development of OUD
- Evaluate WV state opiate prescribing policy changes on prescribing practices

Justice Settings
- Caring adult relational intervention for youth transitioning out of detention
- Adolescent Community Reinforcement Approach with Assertive Community Care for justice involved youth
Healthy Brain and Child Development (HBCD) Study

Large multi-site longitudinal study to examine brain, cognitive, **behavioral**, social and emotional development beginning prenatally and extending through childhood. Oversample for prenatal opioid exposure

Focus Areas for Reviewing Planning Grants (Phase I)

<table>
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<tr>
<th>Legal and Ethical Issues</th>
<th>Recruitment &amp; Retention</th>
<th>Imaging Technologies</th>
<th>Other Assessment Methodologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>• State laws</td>
<td>• Sampling strategies</td>
<td>• Movement corrections</td>
<td>• Social emotional assessments</td>
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<tr>
<td>• Mandatory reporting</td>
<td>• Assessment intervals</td>
<td>• Fetal imaging</td>
<td>• Environmental exposures</td>
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<tr>
<td>• Access to treatment/care</td>
<td>• Diverse population representation</td>
<td>• fNIRS/EEG</td>
<td>• Biospecimens</td>
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<tr>
<td>• Privacy</td>
<td>• Retention of high risk participants</td>
<td>• MRI</td>
<td>• Technology based, i.e., wearables</td>
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<tr>
<td>• Recruitment &amp; Retention</td>
<td></td>
<td>• Accessibility to imaging facility</td>
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US Opioid Epidemic has Increased Overdose Deaths and Prevalence of PWID

2017, 70,237 OD Deaths (9.6% higher > 2016)

Overdose Deaths

Prevalence of IDU in US has increased in past 15 years

Heroin IDU in US (12 or older, past-month use)

Han et al., SAMHSA (unpublished)
HIV Can Spread Rapidly Among People Who Inject Drugs

U.S. counties vulnerable to rapid spread of IDU-associated HIV

220 counties in 26 states

- Scott County, IN
  215 HIV cases from IDU in 2014-2015

- Cabell County WV
  76 HIV Cases from IDU in 2019

- Lowell and Lawrence, MA
  129 HIV cases in IDU from 2015-2018
(2012-2014, entire Mass had 123 IDU cases).

- Philadelphia, PA
  59 HIV Cases from IDU in 2018
(60% increase from 2016)

- King County, WA
  27 HIV cases from IDU in 2018
(286% from 2017)

- Multnomah County, OR
  42 HIV cases mostly IDU in 2018-2019
(200% increased from 2016-2017)

- Northern KY
  280% increase in HIV cases from IDU in 2017

Estimates of HIV increases in IDU are from local newspapers (search Volkow et al., 2019)
New NIDA HIV/AIDS Initiatives

Advancing Exceptional Research on HIV/AIDS and Substance Abuse (Clinical Trial Optional) RFA-DA-18-022 (R01) Application Due Date: 8/21/20

Leveraging Big Data Science to Elucidate the Mechanisms of HIV Activity and Interaction with SUD (Clinical Trials Not Allowed) \(\text{RFA-DA-20-008 (R01)/ RFA-DA-20-009 (R21)}\) Application Due Date: 11/14/19

Avenir Award Program for Research on SUD and HIV/AIDS RFA-DA-18-004 (DP2) Application Due Date: 11/13/19

PrEP for HIV Prevention among SUD Populations (Clinical Trial Optional) RFA-DA-20-013 (R01) Application Due Date: 11/8/19

Single Cell Opioid Responses in the Context of HIV (SCORCH) Program CNS Data Generation (Clinical Trial Not Allowed) RFA-DA-19-037 (UM1) Application Due Date: 10/8/19
2019 NIDA-DNB PECASE Awardees
Presidential Early Career Award
for Scientists and Engineers

Amy Janes, Ph.D.
Harvard Medical School

Donna Calu, Ph.D.
University of Maryland

Ian Maze, Ph.D.
Mt Sinai
Scientific sessions:
1) Sensing New Opportunities for Addiction Neuroscience
2) Novel Technologies & Approaches for Translational Research Targeting SUD
3) Rewriting Genes by CRISPR for SUD and Psychiatric Disorder Research