National Institutes of Health
Office of Behavioral and Social Sciences Research

OBSSR Update and Workshop Report on Contributions of Social and Behavioral Research in Addressing the Opioid Crisis

William T. Riley, Ph.D.
Associate Director for Behavioral and Social Sciences Research
Director, Office of Behavioral and Social Sciences Research
National Institutes of Health

Friday, September 7, 2018

A Brief Orientation to the Office of Behavioral and Social Sciences Research (OBSSR)

- Enacted by Congress and Created in 1995
- Mission:
  - Enhance the impact of health-related behavioral and social sciences research
  - Coordinate behavioral and social sciences research conducted and supported by the NIH and integrate these sciences within the larger NIH research enterprise
  - Communicate health-related behavioral and social sciences research findings to various stakeholders within and outside the federal government
- One of the coordination offices within the Division of Program Coordination, Planning, and Strategic Initiatives (DPCPSI)

BASIC + APPLIED RESEARCH SYNERGY

METHODS, MEASURES + DATA INFRASTRUCTURES

APPLICATION + ADOPTION OF BSSR RESEARCH

COMMUNICATION

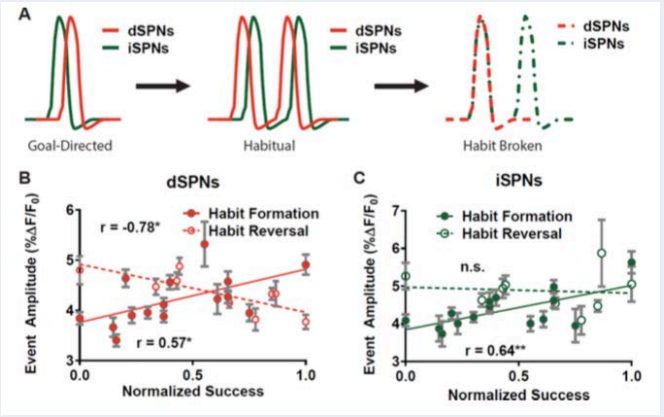
PROGRAM COORDINATION + INTEGRATION

TRAINING

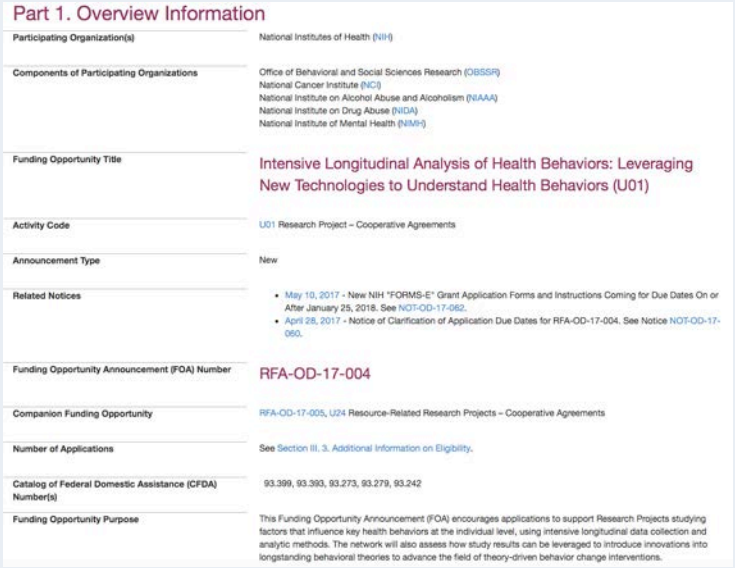
POLICY + EVALUATION

Recent OBSSR Activities

- **Continued Support and Coordination of OppNet**
- **Predoctoral Training in Advanced Data Analytics for Behavioral and Social Sciences Research (BSSR) [T32]**
- **Intensive Longitudinal Analysis of Health Behaviors FOA**
- **Contributions of Social and Behavioral Research in Addressing the Opioid Crisis**



O'Hare, et al., (2016). Pathway-specific striatal substrates for habitual behavior. *Neuron*, *89*, 472–479.



Part 1. Overview Information

Participating Organization(s)	National Institutes of Health (NIH)
Components of Participating Organizations	Office of Behavioral and Social Sciences Research (OBSSR) National Cancer Institute (NCI) National Institute on Alcohol Abuse and Alcoholism (NIAAA) National Institute on Drug Abuse (NIDA) National Institute of Mental Health (NIMH)
Funding Opportunity Title	Intensive Longitudinal Analysis of Health Behaviors: Leveraging New Technologies to Understand Health Behaviors (U01)
Activity Code	U01 Research Project – Cooperative Agreements
Announcement Type	New
Related Notices	• May 10, 2017 - New NIH "FORMS-E" Grant Application Forms and Instructions Coming for Due Dates On or After January 25, 2018. See NOT-OD-17-082. • April 28, 2017 - Notice of Clarification of Application Due Dates for RFA-OD-17-004. See Notice NOT-OD-17-060.
Funding Opportunity Announcement (FOA) Number	RFA-OD-17-004
Companion Funding Opportunity	RFA-OD-17-005, U24 Resource-Related Research Projects – Cooperative Agreements
Number of Applications	See Section III. 3. Additional Information on Eligibility.
Catalog of Federal Domestic Assistance (CFDA) Number(s)	93.399, 93.393, 93.273, 93.279, 93.242
Funding Opportunity Purpose	This Funding Opportunity Announcement (FOA) encourages applications to support Research Projects studying factors that influence key health behaviors at the individual level, using intensive longitudinal data collection and analytic methods. The network will also assess how study results can be leveraged to introduce innovations into longstanding behavioral theories to advance the field of theory-driven behavior change interventions.

HEAL (Helping to End Addiction Long-term) Initiative Launched by NIH in April, 2018

Doubling funding for research on opioid misuse/addiction and pain from approximately $600 million in fiscal year 2016 to $1.1 billion in fiscal year 2018

Preparations for HEAL Began in May, 2017 with NIH Cutting Edge Science Meeting Series

June 5, 2017
Medications Development for Opioid Use Disorders and for Overdose Prevention and Reversal

June 16, 2017
Development of Safe, Effective, Non-Addictive Pain Treatments

July 7, 2017
Understanding the Neurobiological Mechanisms of Pain

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NIH HEAL INITIATIVE

HEAL Initiative

- Prevent Addiction
- Improve Treatments
- Public-Private Partnership
- Events
- News and Announcements
- Resources

March 5, 2018

Meeting Agenda — Contributions of Social and Behavioral Research in Addressing the Opioid Crisis

Day 1 (March 5, 2018)

8:30 am

Welcome and Self -Introductions

William T. Riley, Ph.D., Director, Office of Behavioral and Social Science Research

Introductory Remarks: The NIH Initiative to Help End the Opioid Crisis

Francis S. Collins, M.D., Ph.D., Director, National Institutes of Health (NIH)

Opening Remarks: The Opioid Crisis – Research-based Solutions

Nora D. Volkow, M.D., Director, National Institute on Drug Abuse (NIH)

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NIH HEAL INITIATIVE

HEAL Initiative

- Addiction Treatments
- Pain Management
- Public-Private Partnership
- Funding
- Events
- News and Announcements
- Resources

March 6, 2018

Executive Summary - Contributions of Social and Behavioral Research in Addressing the Opioid Crisis

As part of a government-wide effort to address the opioid crisis, the NIH has initiated a public-private collaborative research initiative on (1) new and innovative medications and biologics to treat opioid addiction and to prevent or reverse overdose; (2) safe, effective, and non-addictive strategies to manage chronic pain; and (3) neurobiology of chronic pain.

oid problem, the NIH sought to
nnovative experts from academia,
ce meeting to identify and pursue
behavioral contributors to the opioid

ecify key actionable social and
immediately to address the opioid
ntial mid-term and longer-term)
e opioid crisis response.

Email Updates

Sign up to receive email updates about the HEAL Initiative.

Sign up for updates

NIH HEAL INITIATIVE

HEAL Initiative

- Addiction Treatments
- Pain Management
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- Funding
- Events
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- Resources

March 6, 2018

Full Summary - Contributions of Social and Behavioral Research in Addressing the Opioid Crisis

The NIH Office of Behavioral and Social Sciences Research (OBSSR) convened this meeting in collaboration with National Institute on Drug Abuse (NIDA), the National Institute of Neurological Disorders and Stroke (NINDS), the National Center for Complementary and Integrative Health (NCCIH) and the National Institute on Minority Health and Health Disparities (NIMHD) as part of the NIH Cutting-Edge Science Meeting Series to End the Opioid Crisis. Participants included leaders and subject matter experts with diverse expertise in research and practice relevant to the opioid crisis.

The goals of the meeting were to: 1) specify key actionable social and behavioral science findings that can be brought to bear immediately to address the opioid crisis, and 2) identify critical short-term, as well as potential mid-term and longer-term research priorities that have the potential to improve the opioid crisis response.

These discussions were organized in five panels:

- Panel 1: Sociocultural and socioeconomic underpinnings of the crisis
- Panel 2: Behavioral and social factors preventing opioid initiation and mitigating the transition from acute to chronic opioid use
- Panel 3: Incorporating nonpharmacologic approaches in the treatment of opioid abuse and chronic pain management
- Panel 4: Challenges and barriers to implementing prevention and treatment strategies
- Panel 5: Effective models of integrated approaches

Email Updates

Sign up to receive email updates about the HEAL Initiative.

Sign up for updates

Contributions of Social and Behavioral Research in Addressing the Opioid Crisis

Goals

1) specify key actionable social and behavioral science findings that can be brought to bear immediately to address the opioid crisis

2) identify critical short-term (as well as potential mid-term and longer-term) research priorities that have the potential to improve the opioid crisis response

Panels

Panel 1: Sociocultural and socioeconomic underpinnings of the crisis

Panel 2: Behavioral and social factors preventing opioid initiation and mitigating the transition from acute to chronic opioid use

Panel 3: Incorporating nonpharmacologic approaches in the treatment of opioid abuse and chronic pain management

Panel 4: Challenges and barriers to implementing prevention and treatment strategies

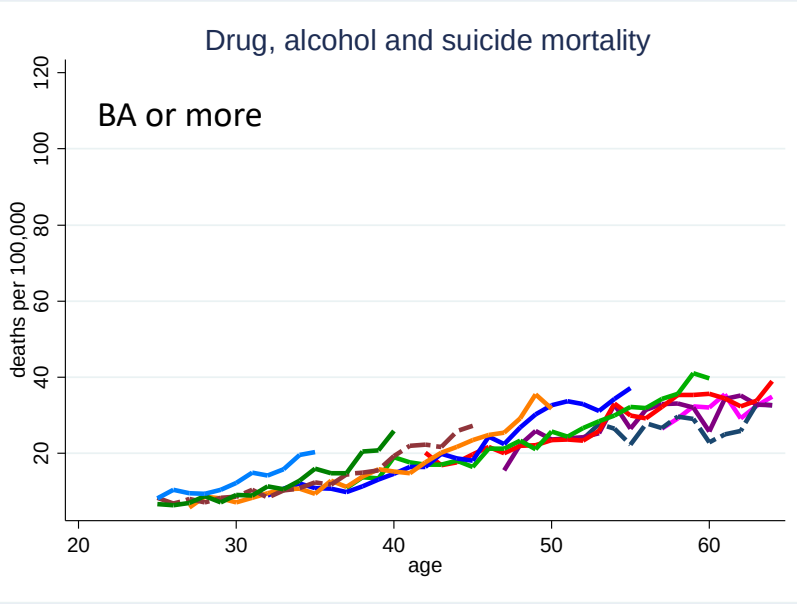
Panel 5: Effective models of integrated approaches

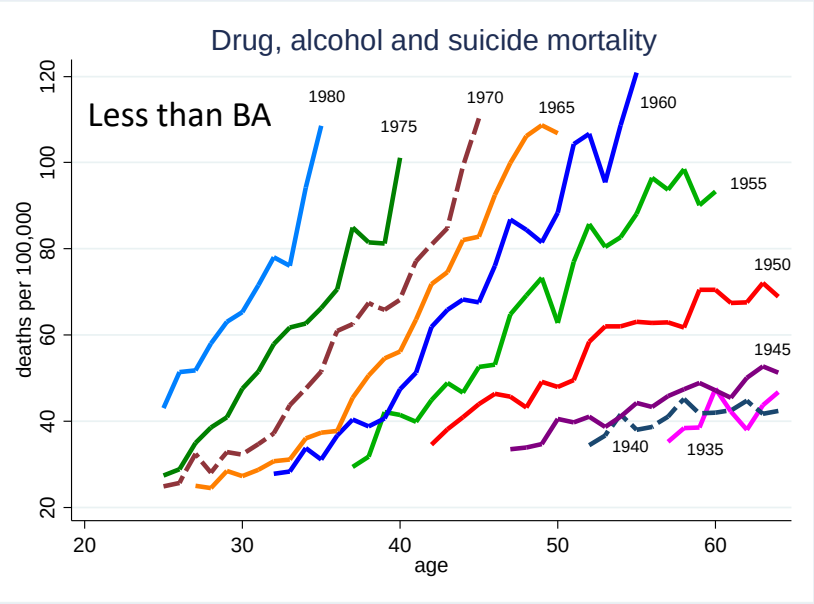
Panel 1 Highlights

DA Compounds on Cocaine Use in Monkeys

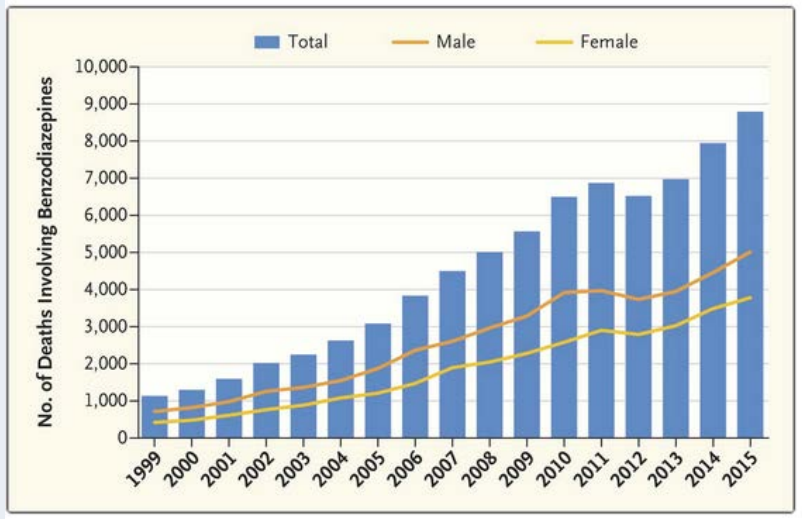
	Males		Females	
	DOM	SUB	DOM	SUB
Buspirone	↓	↑	↑	↑
Aripiprazole	↓	↑	↓	—
NPA	↑	↓	↓	↓

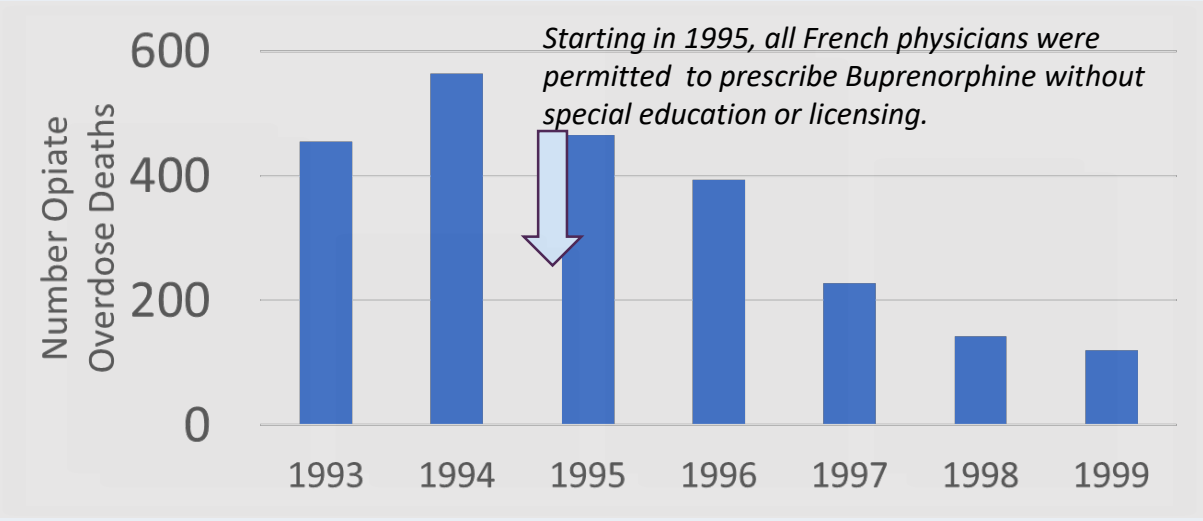
1. Each drug shows rank-related differences in males
2. Sex differences observed in dominant monkeys
3. No drug is effective in all groups





Panelists:
Anne Case
Angus Deaton
Leo Beletsky
Michael Von Korff
Michael Nader





Panel 1 Highlights

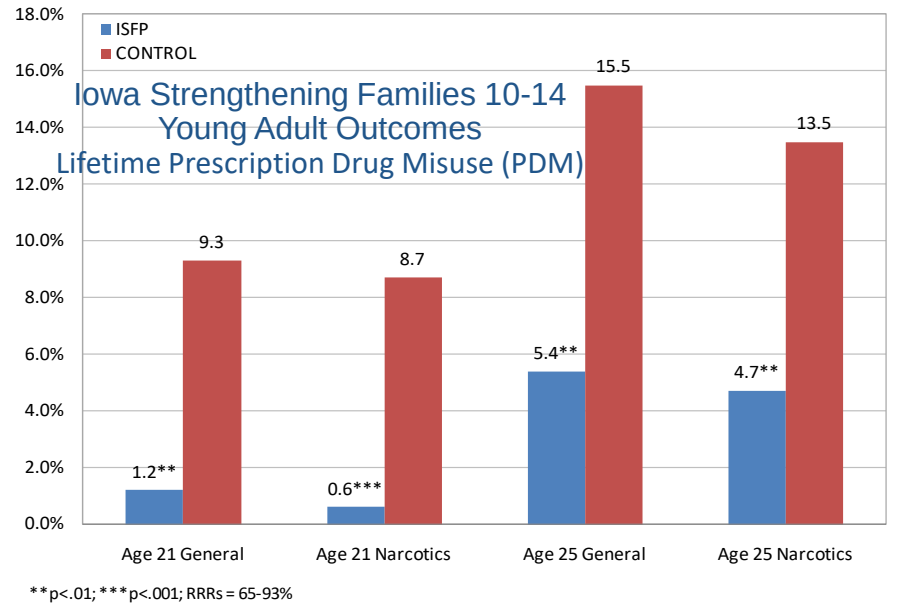
Key Things We Know

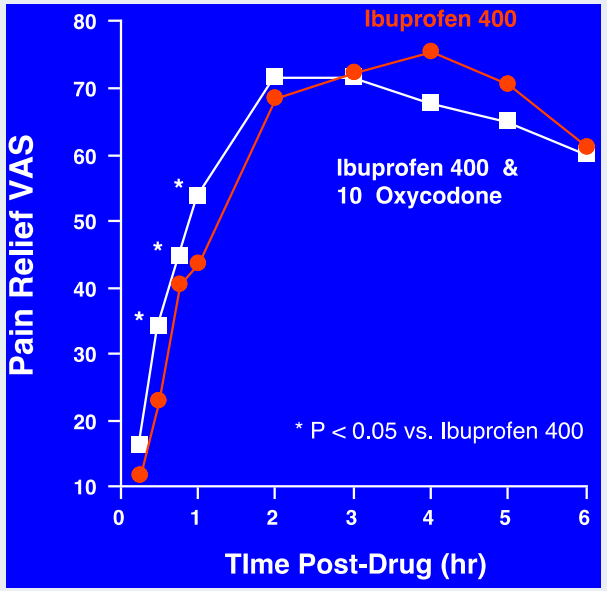
- Those without a college degree (i.e., working class families) are particularly vulnerable to opioid overdose deaths and other deaths of despair.
- Ensuring that providers who prescribe opioids are also able to prescribe opioid treatment would greatly reduce opioid overdose deaths and increase accessibility to MAT.
- Social factors increase not only psychological and social vulnerability to substance abuse, but also biological vulnerability to substance abuse.
- Monitoring progress in addressing the opioid crisis will require a comprehensive set of indicators including opioid prescribing, OUD incidence, overdose deaths, and polysubstance abuse.

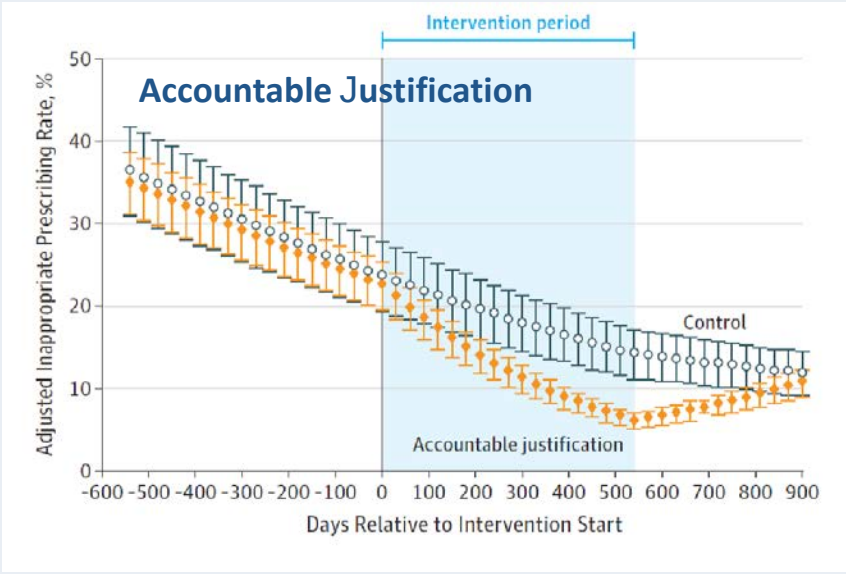
Key Things We Need to Know

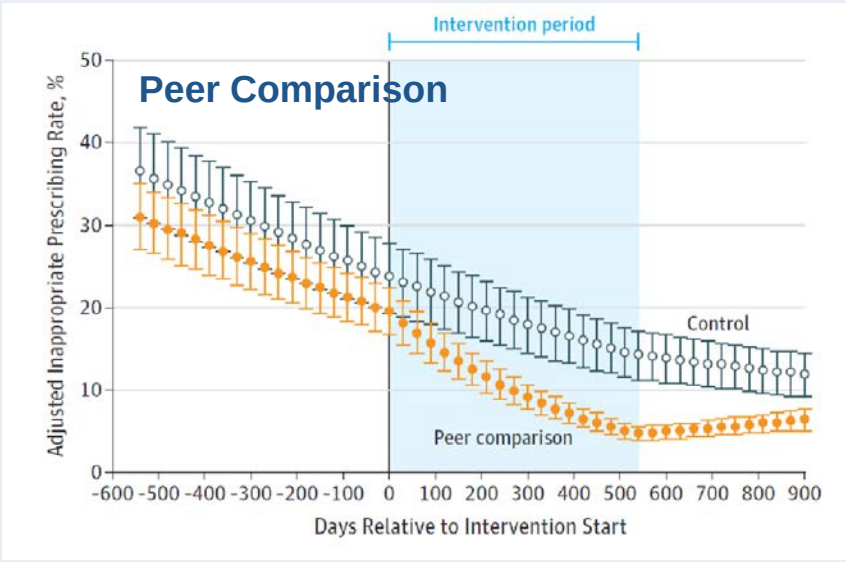
- What are the social and economic policy differences that result in higher rates of OUD and overdose deaths in the U.S. than in peer countries?
- What post-incarceration intervention approaches will reduce the high rates of overdose deaths among the formerly incarcerated?
- What changes in social and community systems lead to the greatest reductions in OUD and overdose deaths based on rapid program evaluation and dissemination of best practices?
- Are there additional biomarkers of vulnerability to substance abuse and how do various social factors contribute to these vulnerabilities?

Panel 2 Highlights

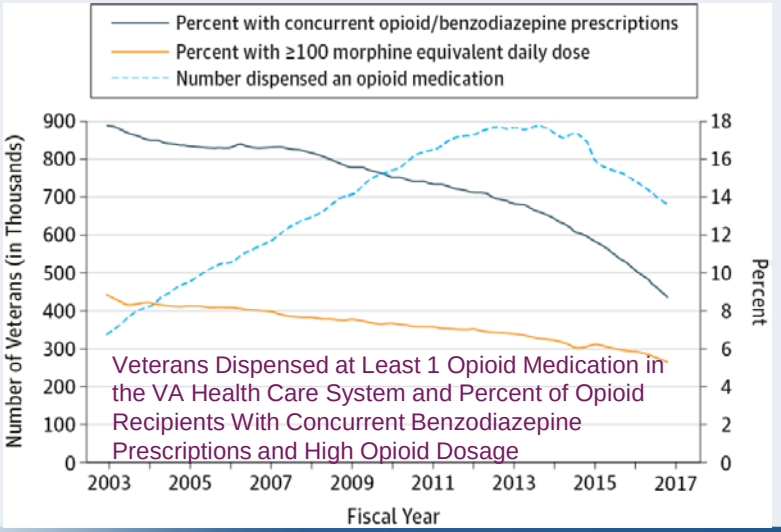


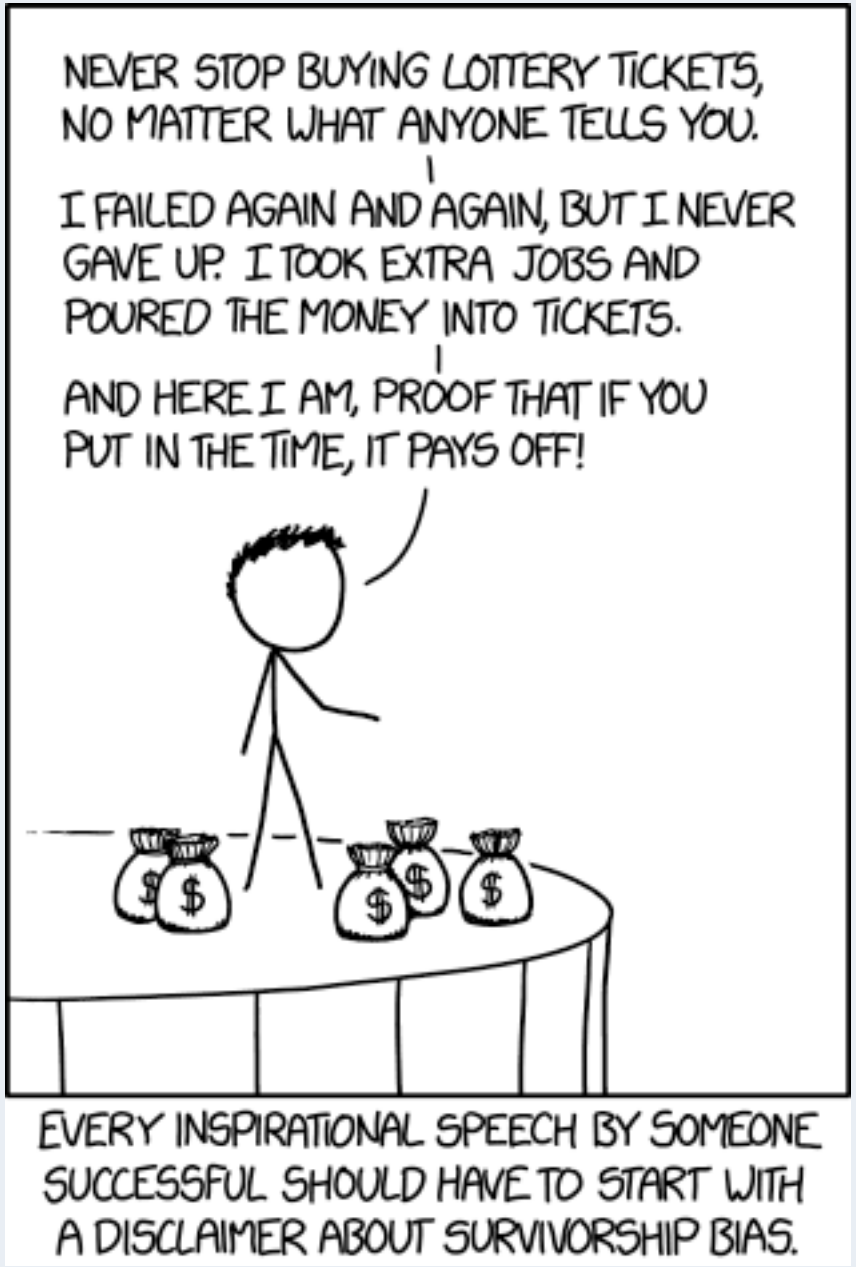






Panelists:
Richard Catalano
Jane Liebschutz
Jason Doctor
Raymond Dionne
Theodore Katsivas





NEUROSCIENCE

Opioid prescribing decreases after learning of a patient's fatal overdose

Jason N. Doctor[1]*, Andy Nguyen[1], Roneet Lev[2], Jonathan Lucas[3], Tara Knight[1], Henu Zhao[1], Michael Menchine[4]

Most opioid prescription deaths occur among people with common conditions for which prescribing risks outweigh benefits. General psychological insights offer an explanation: People may judge risk to be low without available personal experiences, may be less careful than expected when not observed, and may falter without an injunction from authority. To test these hypotheses, we conducted a randomized trial of 861 clinicians prescribing to 170 persons who subsequently suffered fatal overdoses. Clinicians in the intervention group received notification of their patients' deaths and a safe prescribing injunction from their county's medical examiner, whereas physicians in the control group did not. Milligram morphine equivalents in prescriptions filled by patients of letter recipients versus controls decreased by 9.7% (95% confidence interval: 6.2 to 13.2%; $P < 0.001$) over 3 months after intervention. We also observed both fewer opioid initiates and fewer high-dose opioid prescriptions by letter recipients.

Science 10 Aug 2018:
Vol. 361, Issue 6402, pp. 588-590
DOI: 10.1126/science.aat4595

Panel 2 Highlights

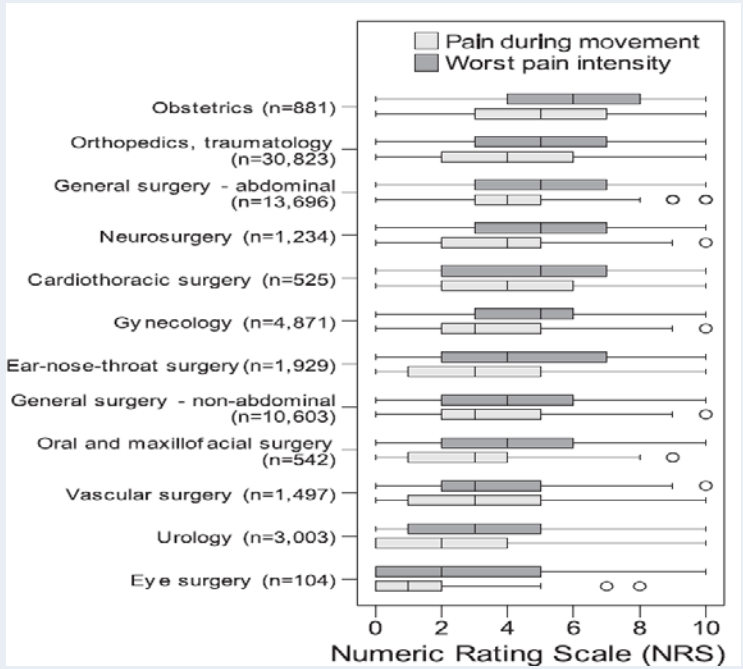
Key Things We Know

- A variety of effective substance abuse programs are available for communities to implement.
- Injection drug use is facilitated by social networks, and strategic targeting of individuals in these networks may have broader impacts than on the individuals targeted.
- Simple interventions (e.g., peer comparison) have been shown to change prescribing behavior.
- Systems level interventions such as those by the VA have been shown to reduce opioid prescribing behaviors.

Key Things We Need to Know

- What implementation science strategies will facilitate the adoption of effective substance abuse prevention programs by communities?
- What interventions targeting patients, providers, and healthcare systems will optimize acute opioid administration to minimize opioid use while adequately controlling pain?
- How can we change the cultural expectations of our society regarding pain relief (relieve vs. manage or control (including self-management and self-control) and the misperception that NSAIDS and self-management approaches are inferior for pain treatment?
- Can technologies for the automated monitoring of medication adherence be used to identify early warning patterns of acute opioid use likely to develop into persistent use?

Panel 3 Highlights



Effective Psychosocial Chronic Pain Treatments Available Since the 1980s but Underutilized

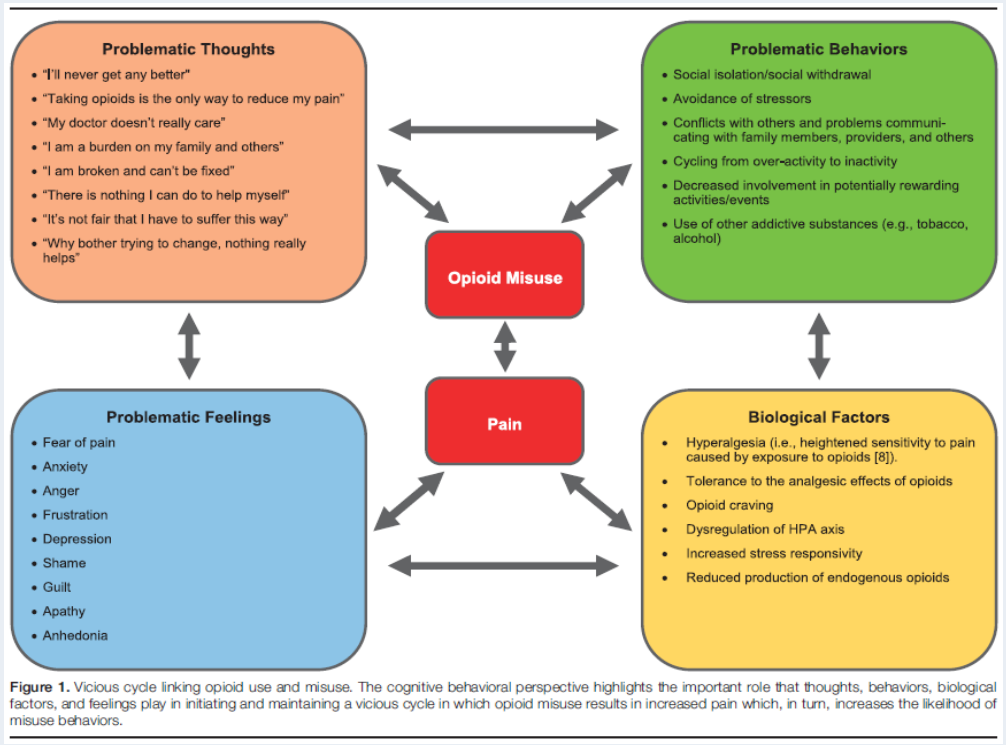
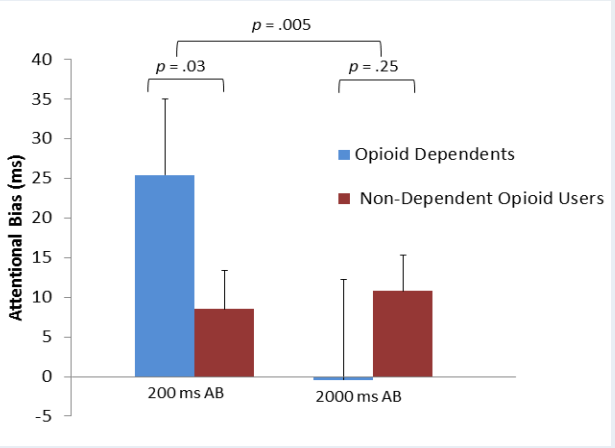
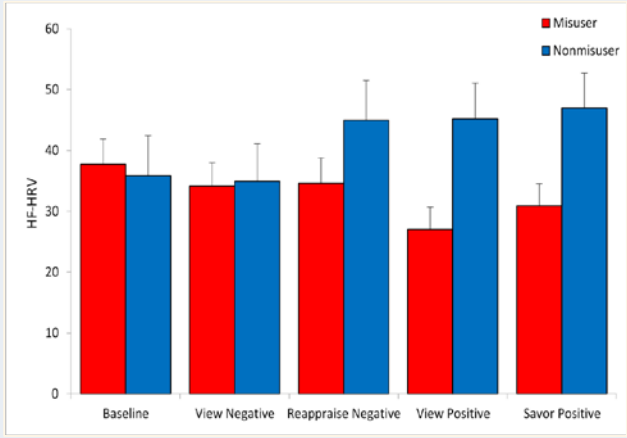


Figure 1. Vicious cycle linking opioid use and misuse. The cognitive behavioral perspective highlights the important role that thoughts, behaviors, biological factors, and feelings play in initiating and maintaining a vicious cycle in which opioid misuse results in increased pain which, in turn, increases the likelihood of misuse behaviors.

Misusers Exhibit Sensitization to Opioid-Related Cues



Misusers Exhibit Insensitivity to Natural Reward



Panelists:
Francis Keefe
Dennis Turk
Eric Garland
Ryan Mutter
Steven Passik
Daniel Cherkin

Panel 3 Highlights

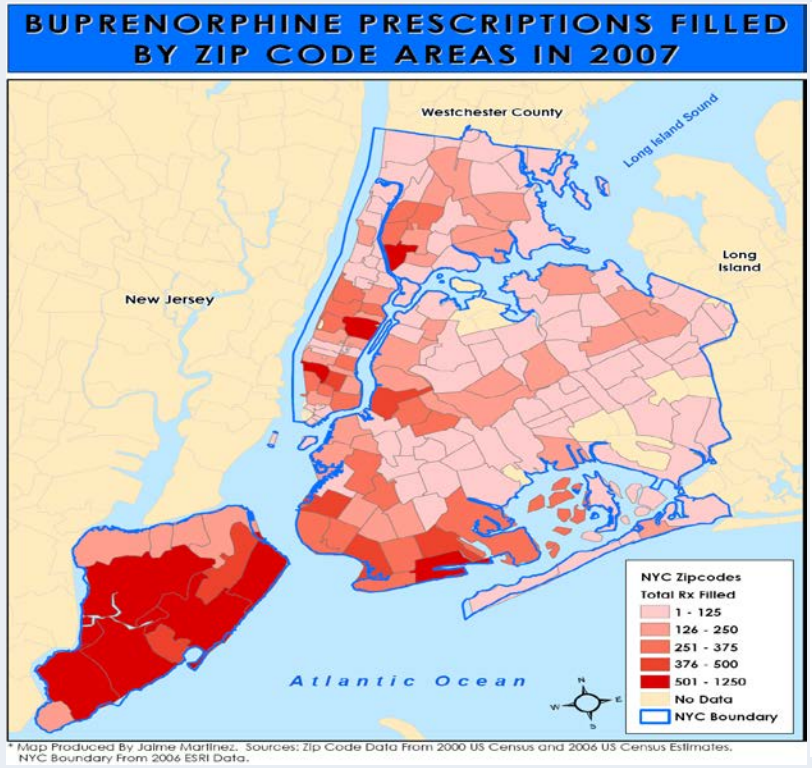
Key Things We Know

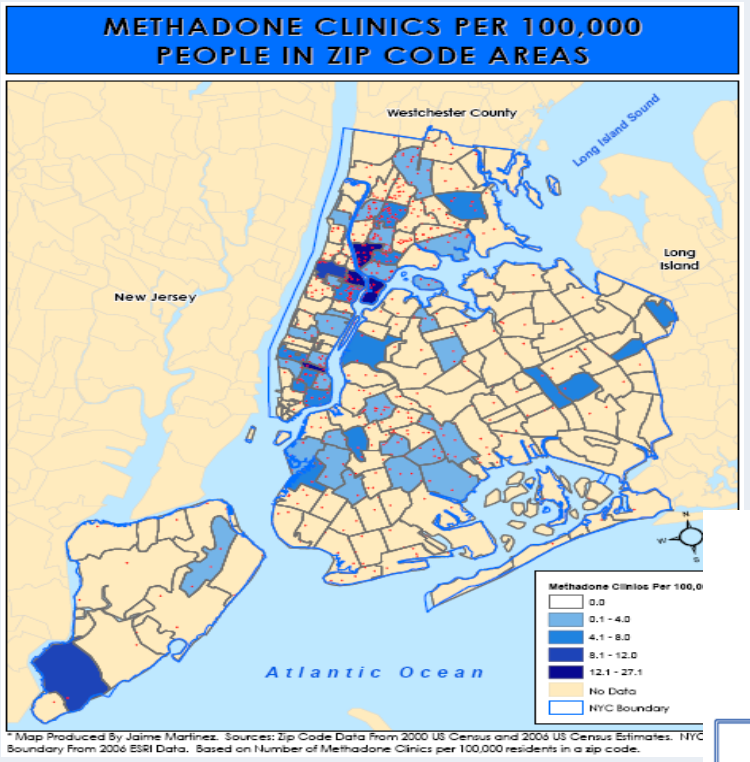
- Effective nonpharmacological treatment strategies and programs for chronic pain have been available for decades; however, despite being as or more effective than opioids for treating chronic pain with no abuse liability, there is limited access to these programs in the U.S. healthcare system.
- There is limited access to MAT and considerable barriers to implementation of MAT in outpatient care settings.
- Individuals with OUD and chronic pain benefit from comprehensive approaches that address medical and social needs, but the link between such treatment, social services, and general medical care is frequently weak.

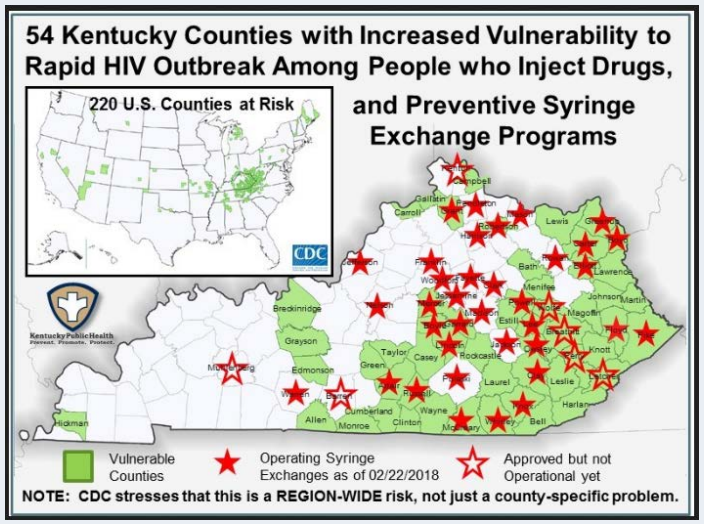
Key Things We Need to Know

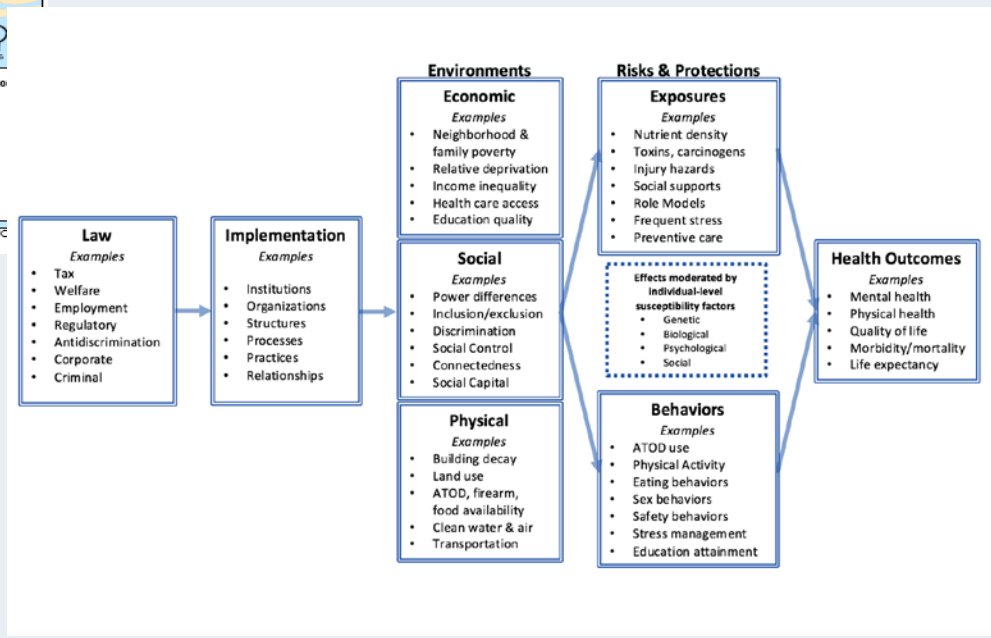
- Given the variability in OUD and chronic pain treatment response, what treatment strategies work for whom?
- What combination and sequences of existing treatment strategies, and what additional strategies optimize treatment outcomes from OUD and for chronic pain?
- Which treatment strategies in which dosages and durations facilitate maintenance of initial treatment effects?
- How can barriers to the implementation of current nonpharmacologic treatments for chronic pain and of MAT for OUD be addressed to increase access and availability of these treatments?
- How can individuals be encouraged and motivated to take a more active role in the management of chronic pain and OUD?

Panel 4 Highlights









Panelists:
John Gale
Kelli Komro
Hannah Cooper
Steven Leifman
Helena Hansen.

Panel 4 Highlights

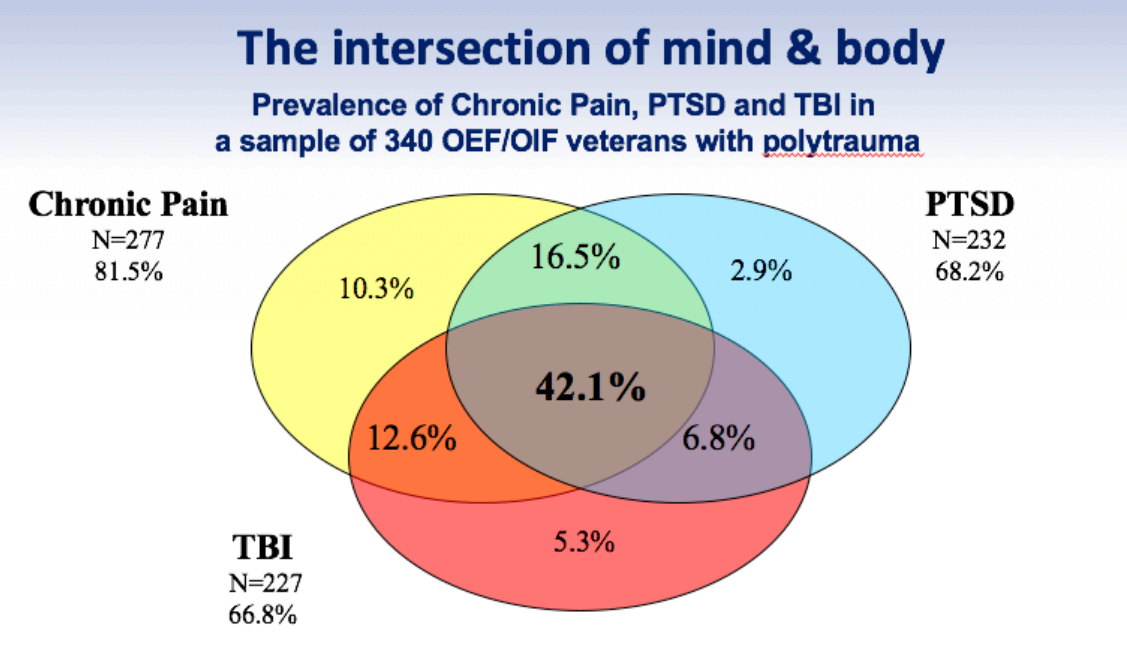
Key Things We Know

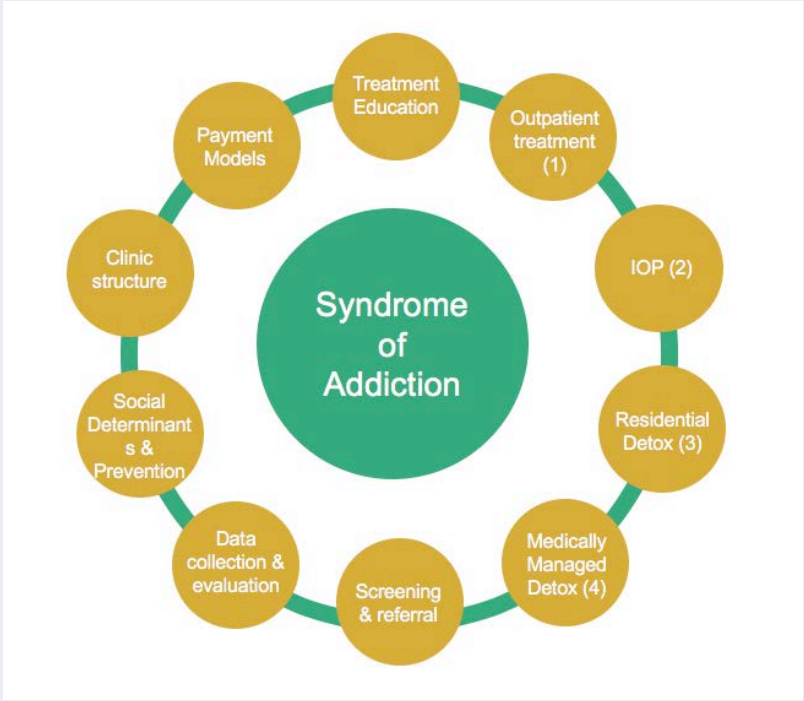
- OUD and overdose deaths are disproportionately occurring in rural areas and among AI/AN populations.
- Access to treatment for Blacks and Hispanics is much more limited and of poorer quality than for Whites.
- Substance abuse prevention programs adapted to the unique needs of these communities have been effective at reducing substance use and abuse, including prescription medication misuse.
- Stigma is a critical barrier to obtaining care, and stigmatization extends beyond communities and includes providers as well.
- The criminal justice system is overwhelmed by the number of untreated mental health and substance abuse problems, including OUD, and does not have the guidance, tools, or resources necessary to address these needs.

Key Things We Need to Know

- What can be learned from addressing stigma in the alcohol and HIV/AIDS fields that can be applied to reducing stigma from OUD and encouraging treatment seeking of those with OUD?
- What are best practices for involving communities and adapting OUD prevention and treatment programs for various communities?
- What combination of programs and resources will give criminal justice systems the tools they need to address the large number of OUD and other substance abuse and mental health disordered individuals in the system?
- What programs and policies effectively divert OUD individuals from the criminal justice system to the public health system and minimize the social and economic repercussions of a felony conviction that can contribute to relapse?

Panel 5 Highlights





Vancouver Model

The integration of evidence-based interventions (e.g., naloxone training and distribution, supervised consumption services) into health and community settings represents an effective approach to the scale-up of overdose responses, and peer workers have been instrumental to these efforts.

Panelists:
Katherine Watkins
Corey Waller
Eric Schoomaker
Ryan McNeil

Panel 5 Highlights

Key Things We Know

- Collaborative care and related models for integrating behavioral health and addiction treatment within the primary healthcare setting increases treatment accessibility and improves outcomes, but there continue to be significant barriers to implementing these integrative healthcare models.
- Structural factors challenging the implementation of integrated care include lower reimbursement levels for appropriate OUD treatments, electronic medical record systems not optimized for integrative care, and organizational reticence.
- Integrated care within the U.S. military provides one model for integrating mental health and substance abuse services within the primary healthcare system.
- Canadian models for integrated care extend beyond healthcare and integrate social and public health services with the healthcare system.

Key Things We Need to Know

- How do the types of outcomes monitored by healthcare systems (e.g., more than retention in treatment or pain intensity ratings) data impact care and can a more complete perspective on patient and system outcomes impact the type of care provided?
- How have integrated care models that adequately address OUD and overdose deaths been implemented and what are the effective components to that implementation?
- What are the financial considerations of health care payers to integrated care models, and how can these considerations be addressed to provide adequate compensation for integrated services?
- Which models of integration are most appropriate for which types of healthcare and public health systems and settings?

Next Steps

Collaborate and coordinate with other entities charged with practice implementation to disseminate proven strategies and interventions, and address key implementation barriers based on current implementation science research findings.

Convene NIH Institutes, Centers, and Office meeting participants to prioritize research questions and consider how best to stimulate research in these prioritized areas.

Trans-NIH Planning Group in Collaboration with the HEAL Initiative

- **28 Members representing NIH ICOs**
- **Inform dissemination of March meeting**
  - **Prioritize research recommendations**
  - **Integrate within HEAL FOAs when appropriate**
  - **Identify recommendations not integrated into HEAL**
- **Disseminate the science we know**
  Conferences, communication directors, outreach to societies, clinicians, etc.
- **Coordinate across ICOs**

Connect with OBSSR

Questions? Bill Riley:
william.riley@nih.gov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