

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

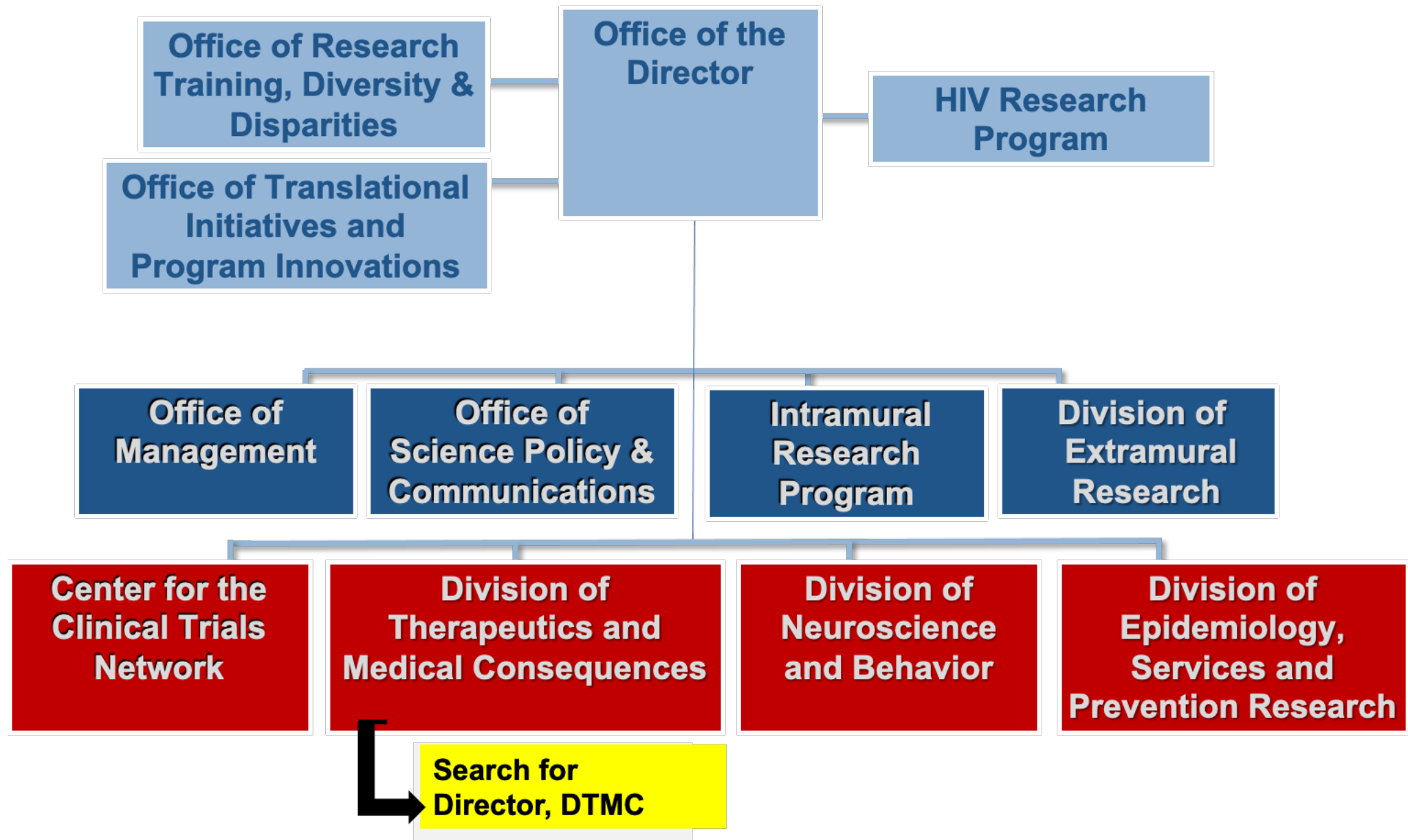
Nora D. Volkow, M.D.

Director

National Institute on Drug Abuse

May 10, 2022

NIDA



NIDA BUDGET

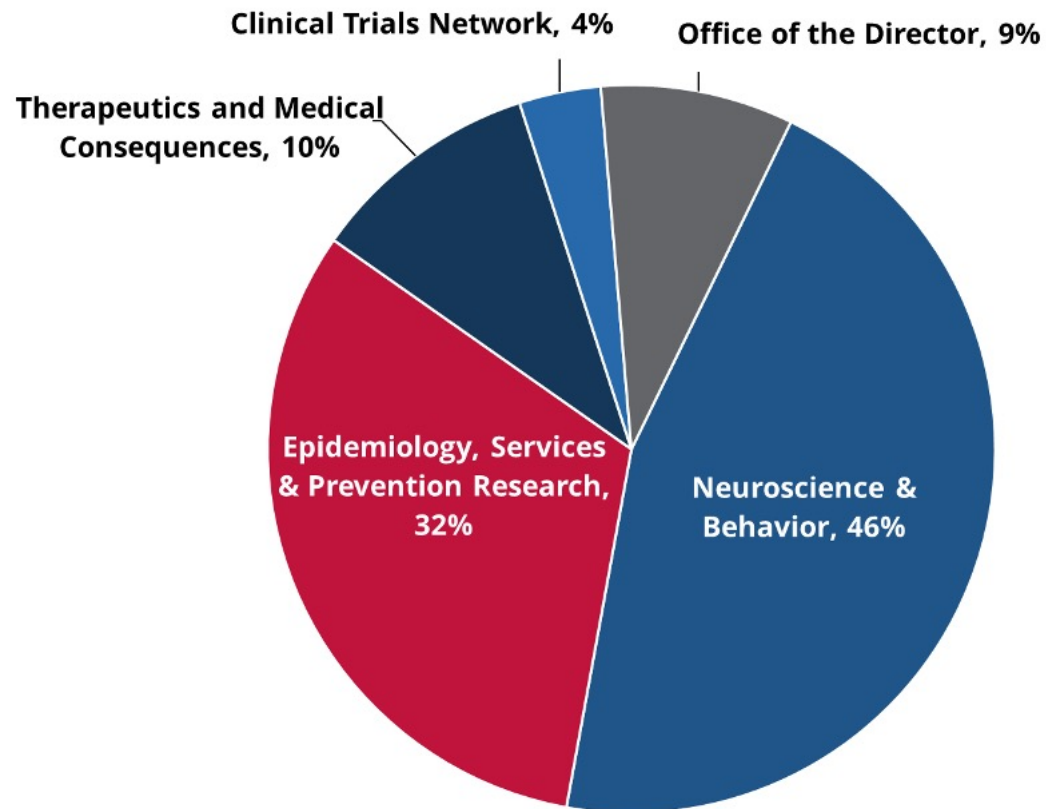
(all dollars are in \$k)

	FY 2021 Final	FY 2022 Enacted	FY 2023 PB*
Base	\$1,206,321	\$1,250,828	\$1,437,883
HEAL	\$269,484	\$345,295	\$405,443
Total	\$1,475,805	\$1,596,123	\$1,843,326

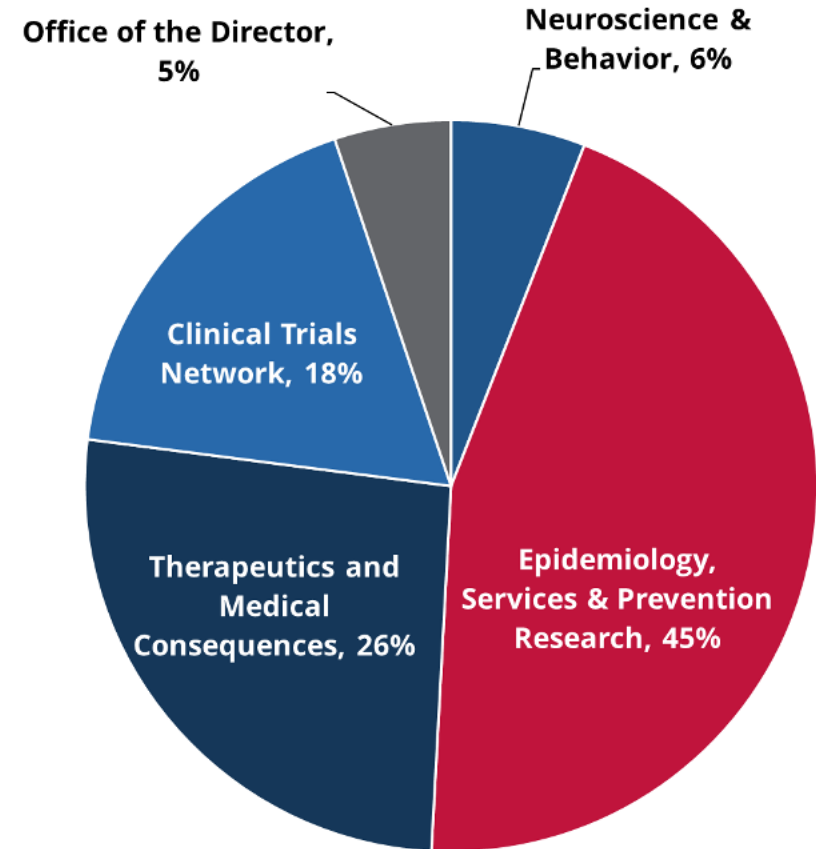
* The FY 23 President's Budget proposal was released prior to the receipt of a full year FY 22 appropriation. The proposed budget included a \$364m increase over the FY 22 Continuing Resolution level and contained a request for \$196.3m in support of non-HEAL opioid and pain research.

FY 21 Funding Overview

Non-HEAL Research



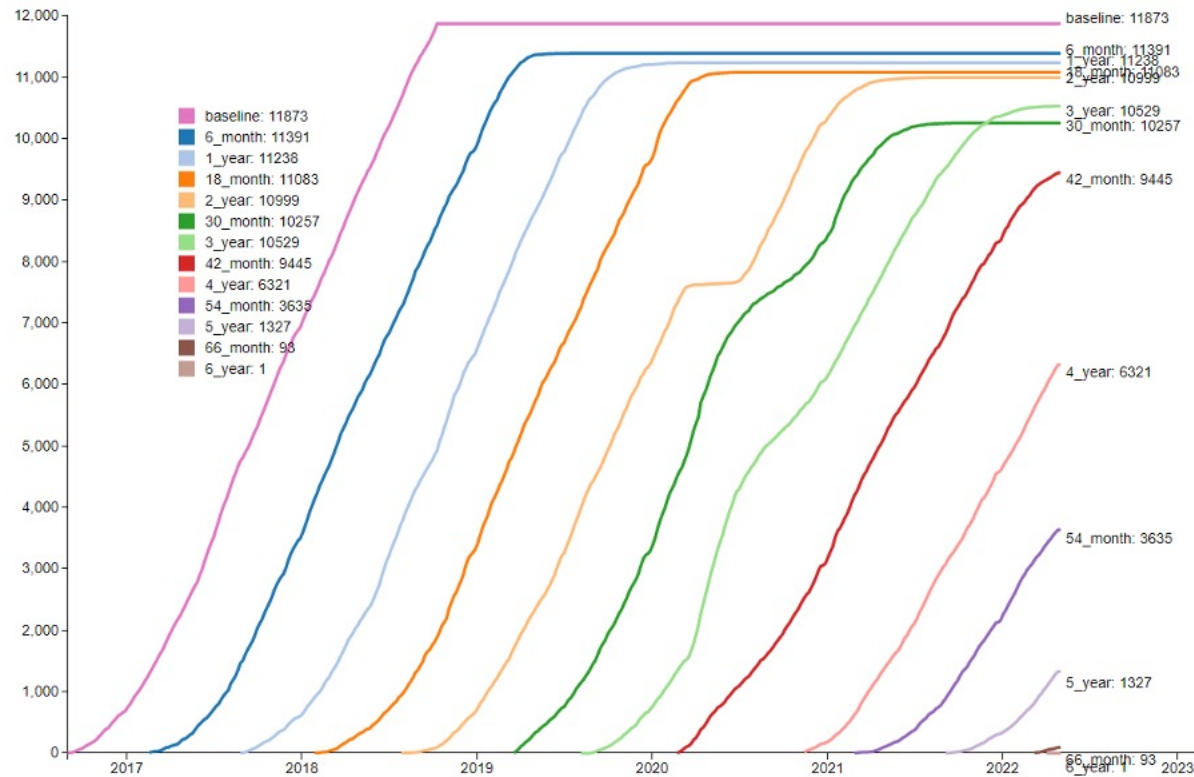
HEAL Research*



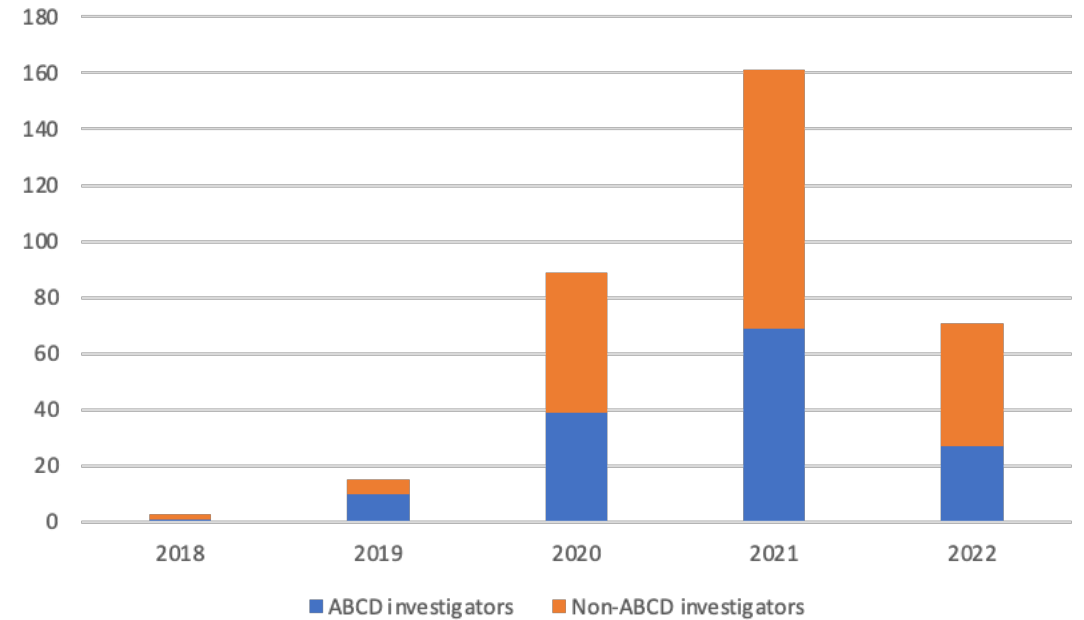
*Includes all NIDA HEAL projects regardless of funding source

Adolescent Brain Cognitive Development Study

98.1 Percent Retained



Publications Using ABCD Data
N=339

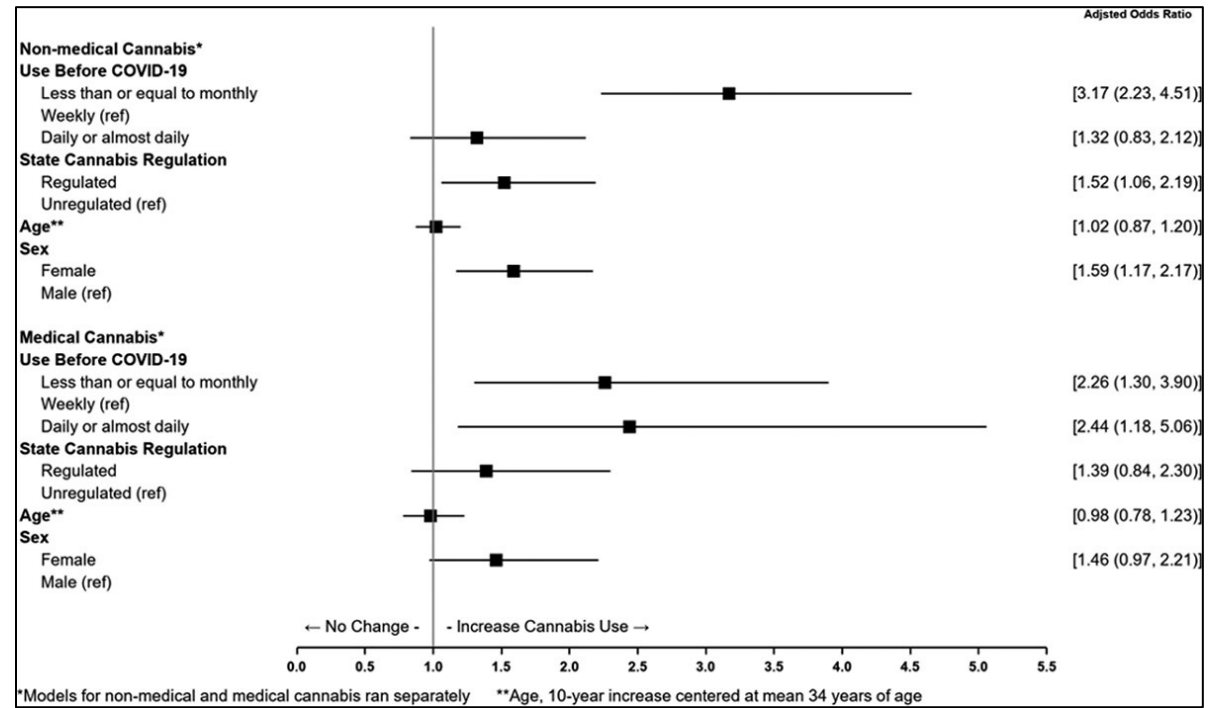




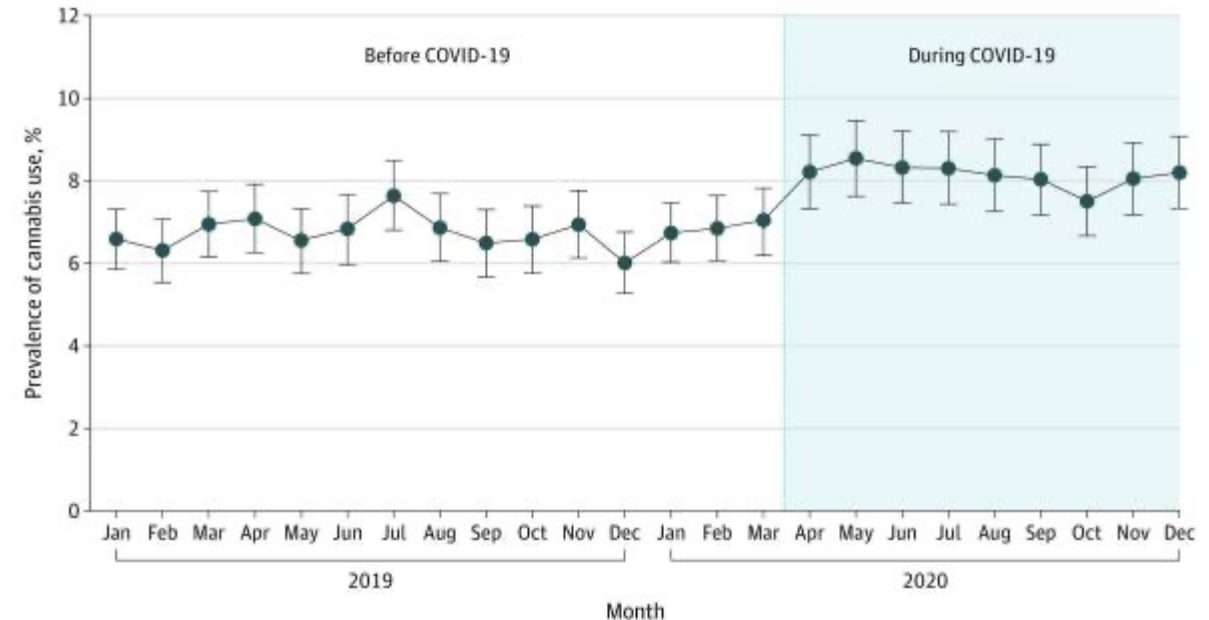
Intersection Between COVID-19 and Substance Use Disorders

Cannabis Use During the COVID-19 Pandemic

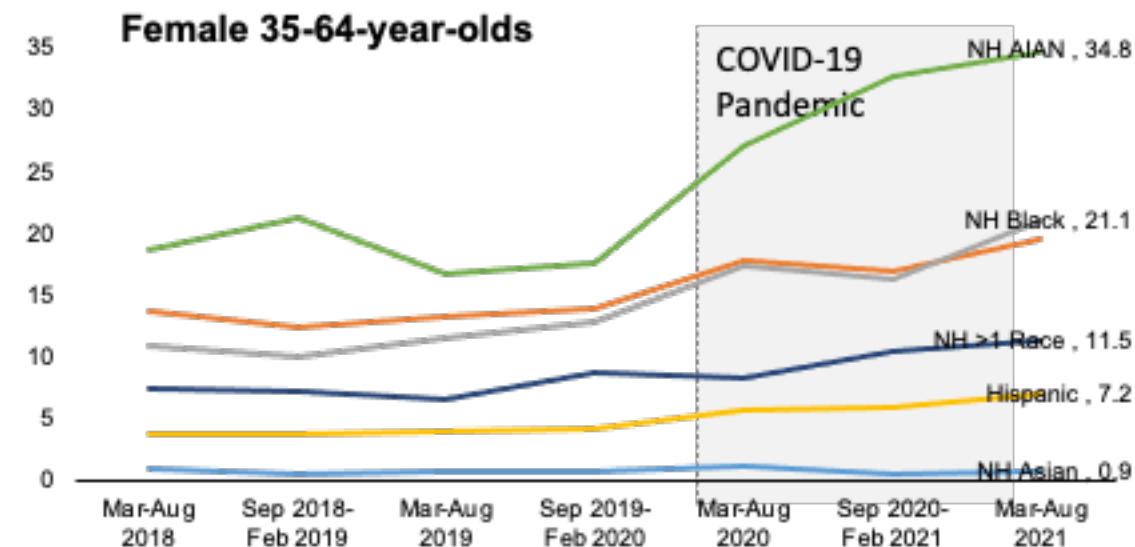
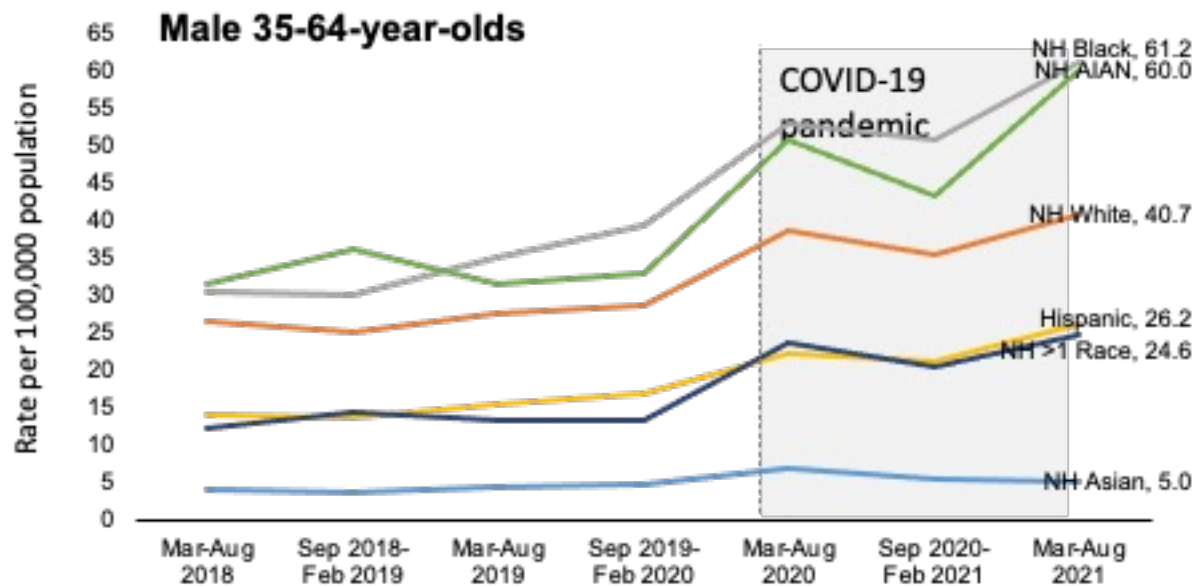
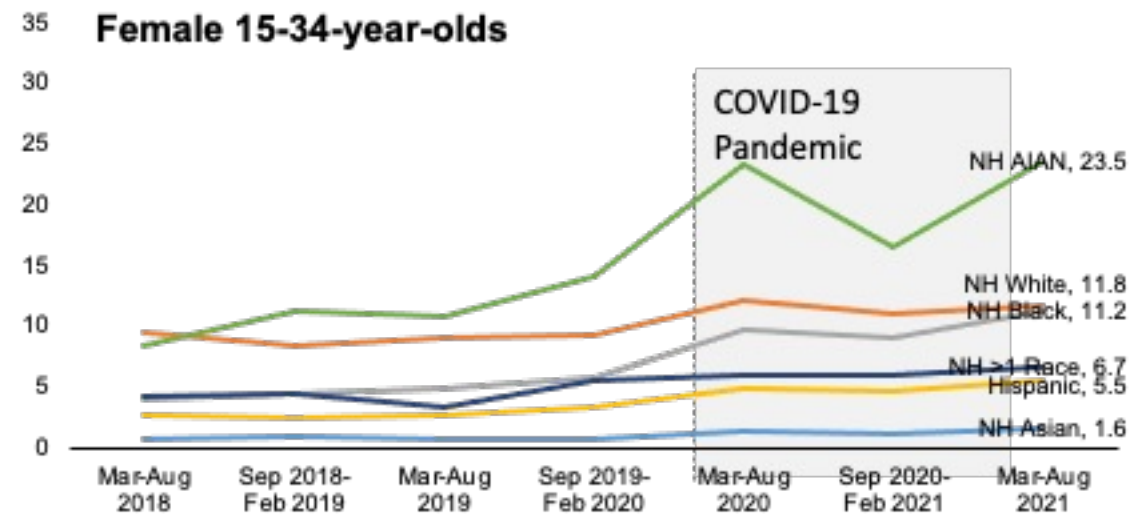
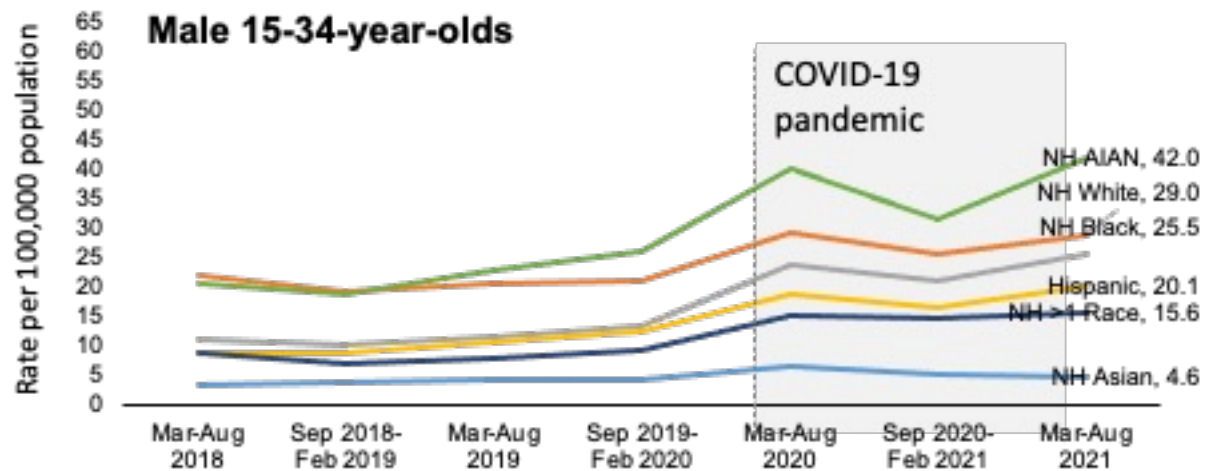
- **Adults:** Online survey of adults who used cannabis showed greater odds of increased non-medical use during the pandemic among those who reported monthly or less than weekly use prior to the pandemic ([Assaf et al., 2022](#)).



- **Pregnant Women:** Analysis of Kaiser Permanente Northern California data suggest elevated cannabis use by pregnant women after the onset of the pandemic ([Young-Wolff et al., 2021](#)).



Age-adjusted Drug Overdose Death^a Rates By Age, Sex and Race/Ethnicity Before and During the COVID-19 Pandemic In US

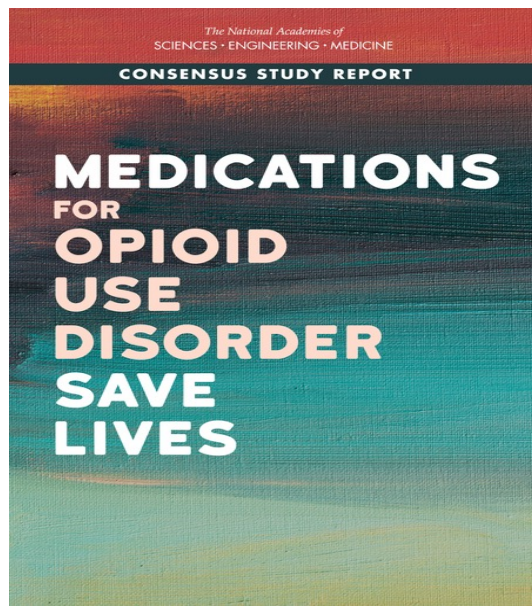


^a ICD-10 codes: X40-44 (unintentional) and Y10-14 (undetermined intent). NH=non-Hispanic. ALIAN=American Indian or Alaska Native.

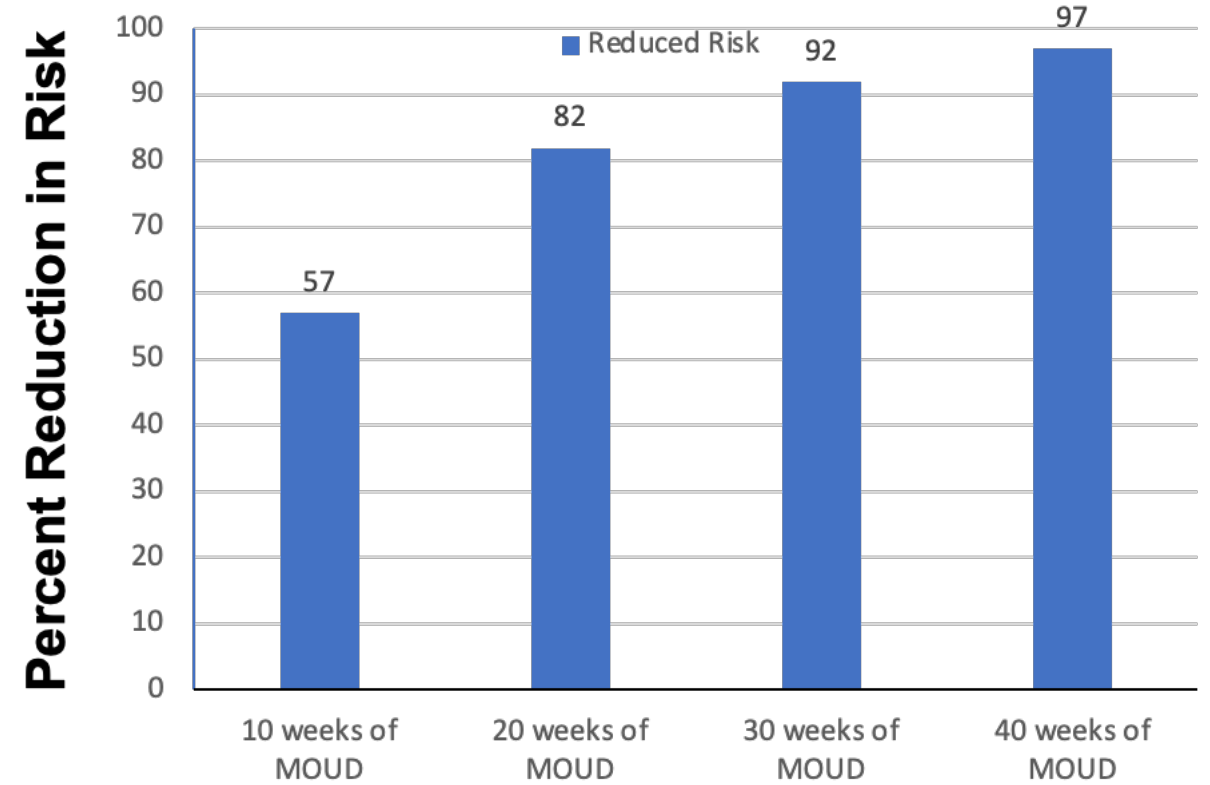
Drug Overdose Deaths* Continued to Increase in 2021

	ALL DRUGS	HEROIN	NAT & SEMI SYNTHETIC	METHADONE	SYNTHETIC OPIOIDS (mainly illicit fentanyl)	COCAINE	OTHER PSYCHO-STIMULANTS (mainly meth)
11/2020*	92,366	13,698	13,667	3,593	56,595	19,953	23,894
5/2021	101,075	11,633	13,909	3,802	64,871	21,235	28,890
11/2021*	106,854	9,504	13,643	3,619	70,420	23,908	32,476
Percent Change 11/20-11/21	15.7%	-30.6%	-0.2%	0.7%	24.4%	19.8%	36.0%

* NCHS Provisional drug-involved overdose death counts are PREDICTED VALUES, 12 months ending in select months. <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm>



Reduced Risk Overdose in Pregnant Women Given Medications for OUD



FDA-Approved Medications

Methadone



In use since the 1960s, the slow-acting synthetic opioid agonist effectively treats moderate to severe heroin addiction. It is only available in heavily regulated clinics.

Buprenorphine/Suboxone



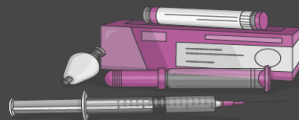
Approved in 2002, the long-acting opioid agonist relieves drug cravings with fewer side effects than other opioids and is available by prescription from certain doctors. Suboxone is designed to deter illicit use.

Naltrexone/Vivitrol



Approved in pill form in 1984, it has been available since 2010 as a 30-day time-release injectable medication called Vivitrol. Patients must be completely off all opioids for seven to 10 days. Both block the effect of opioids, do not activate the opioid receptor system, and do not cause physical dependence.

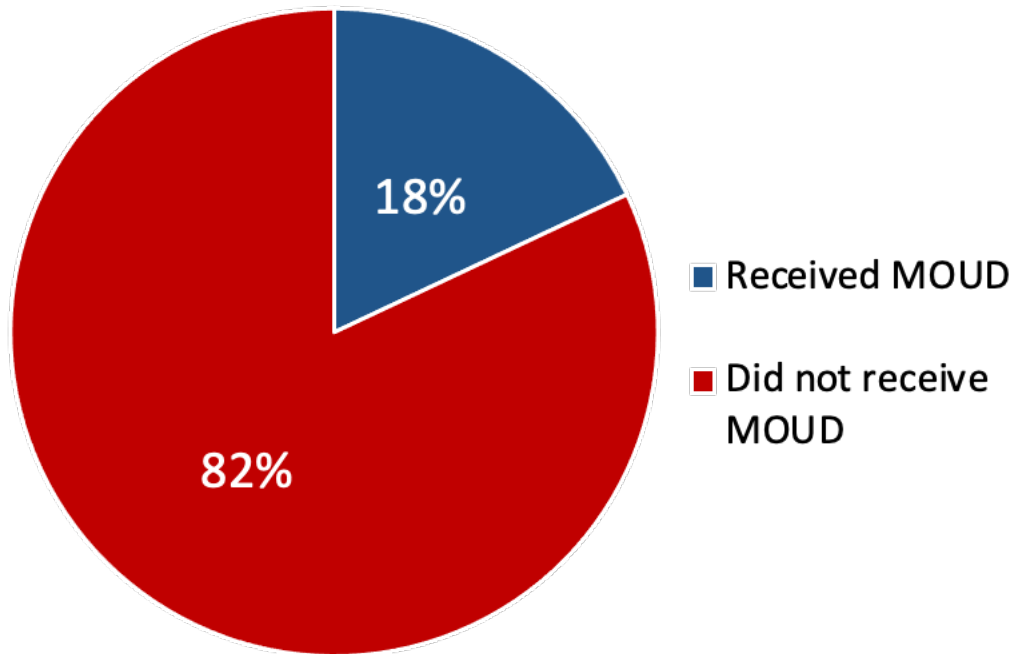
Naloxone



Approved in 1971, the short-acting medication, also known as Narcan and Evzio, reverses opioid overdoses but does not treat opioid addiction.

Receipt Of and Retention In MOUD Among People With OUD

- Among the 1.6 million people aged 12+ with past year OUD, **18% received MOUD**



([NSDUH, 2019](#))

- Retention rates for MOUD vary widely across treatment settings, medications, and behavioral therapy factors ([Timko et al., 2016](#))
- Overall MOUD retention (for trial duration) based on meta-analysis of 79 RCT ([Lim et al., 2022](#)):
 - 64% for methadone (2 weeks-3 years)
 - 54% for buprenorphine (2 weeks-1 year)
 - 41% for naltrexone (2 months-9 months)
 - 30% for control (2 weeks-3 years)

Methadone superior to buprenorphine (RR = 1.22; 95% CrI = 1.06-1.40)

Buprenorphine superior to naltrexone (RR = 1.39; 95% CrI = 1.10-1.80)

All Medication superior to control

Implementation Science: CTN, JCOIN, HCS, Prevention



Enhancing the National Drug Abuse Treatment Clinical Trials Network to Address Opioids Expand research conducted by NIDA CTN to address emergent needs presented by the opioid crisis.



Justice Community Opioid Innovation Network Study quality care for OUD in justice populations. Help create partnerships between local and state justice systems and community-based treatment providers.



HEALing Communities Study is investigate coordinated approaches for deploying evidence-based strategies to prevent and treat OUD in 67 communities in 4 states.



CTN Progress: 9/2021 - Now

Pending,
Development
& Review (18)

Data
Collection (25)

Data Analysis
(21)

Publication &
Dissemination
(111)

Studies addressing:

- Treatment Research among minority population
7 active, 1 pending award
- Screening/prevention strategies in primary care
2 active, 2 pending award
- Expand methadone for OUD in primary care
2 active
- Optimize effective treatments in ED
2 active, 3 trials and 3 ancillary studies completed
- Expand MOUD in community pharmacies
1 pilot completed, 1 starting summer 2022
- Stimulants
2 active, 2 pending study medications

Over 23,500 participants recruited

27% African American
15% Hispanic
6% Multi-race
3% Asian American
1% American Indian/AN
39% Women

CTN publications

606 – Total publications
66 – Last 12 months
69 – Pending journal review

MEDICATIONS AT RE-ENTRY

Providing all FDA-approved MOUDs during incarceration could reduce overdose deaths & recidivism by ~30%



Jails in communities offer all 3 MOUDs



State prisons offer all 3 MOUDs

Sources: Evans et al., 2022; Scott et al., 2021, Macmadu et al., 2021

Barriers

Stigma
Funding
Training
Logistics

PILOT STUDY: EXTENDED-RELEASE BUPRENORPHINE

Extended-release buprenorphine prior to re-entry from jails increased adherence (69 vs. 35%) relative to sublingual buprenorphine

Sources: Lee et al. 2021

MEDICAID & INCARCERATION

Medicaid pre-enrollment prior to release increased Medicaid access 7-fold & decreased racial disparities.

Receiving MOUDs while incarcerated doesn't change Medicaid costs, but decreased costs from emergency care

Sources: Burns et al., 2020, Howell et al. 2021, Hochstatter, 2021

HCS Intervention Accomplishments



Images of People in the Community

- Implemented EBPs for OEND, MOUD, and safer prescribing in Wave 1 communities
- Communication campaigns completed on:
 - Overdose education and naloxone
 - MOUD
 - Accessing and staying in treatment
- Developing sustainability plans to maintain HCS activities

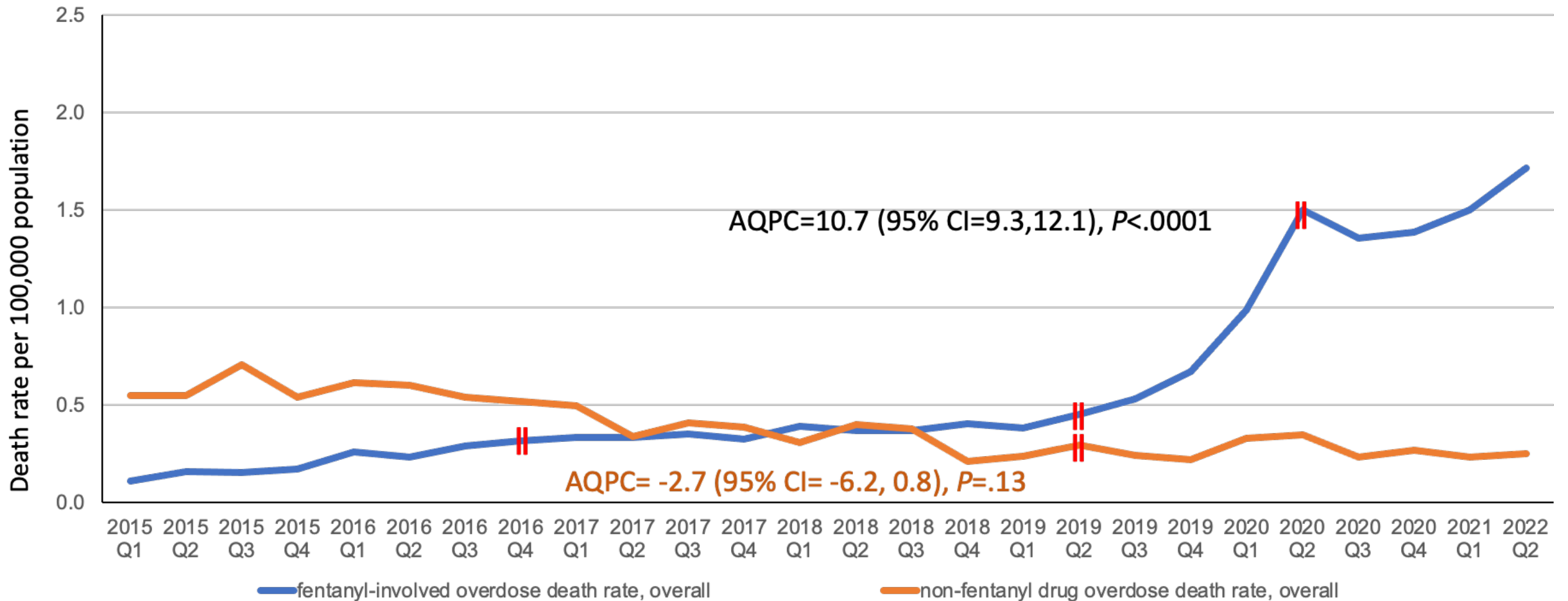
Wave 1 communities are implementing the Communities That Heal intervention through June 2022. Wave 2 communities will start implementation on July 1, 2022.

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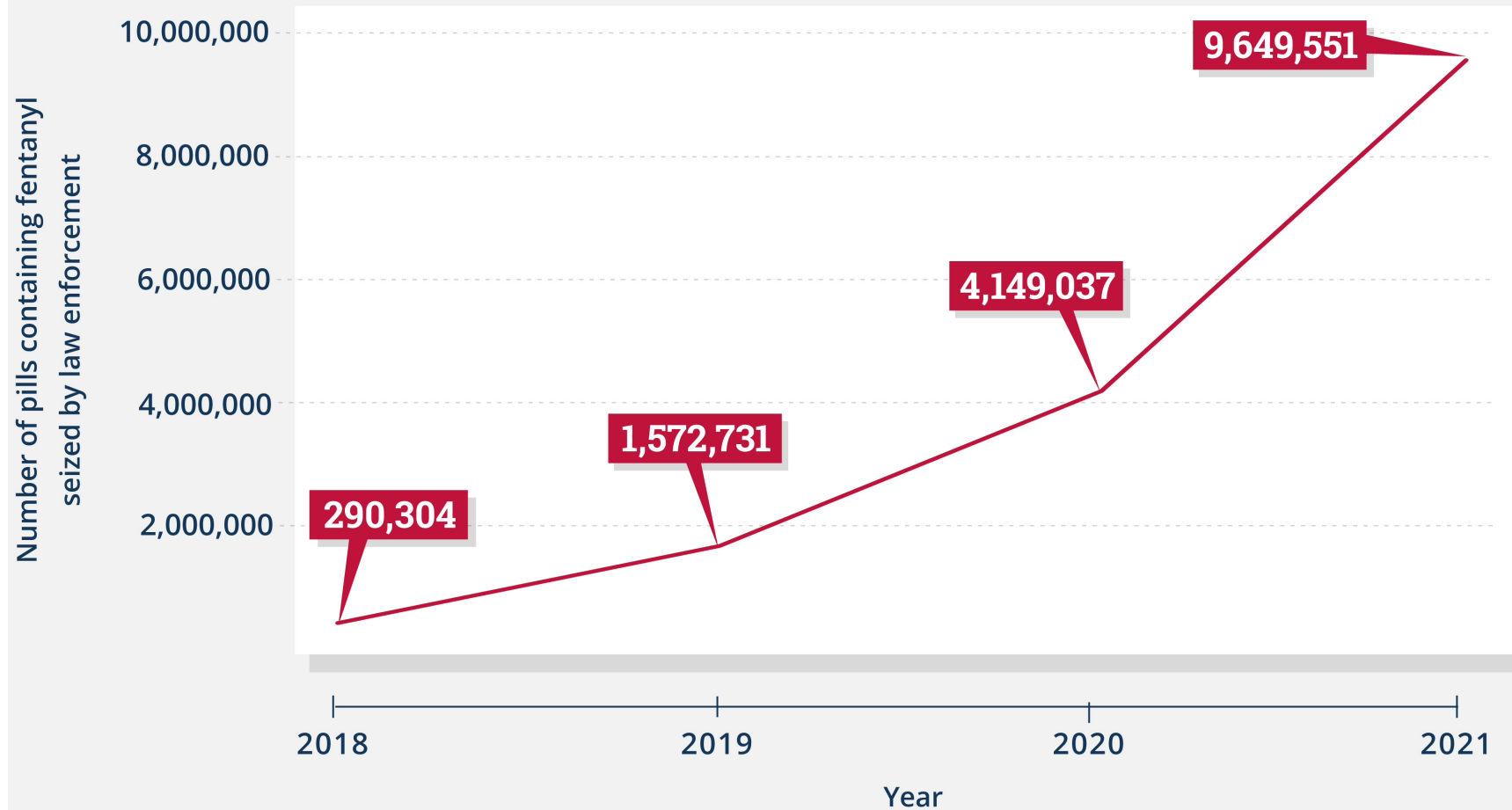
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Fentanyl-involved and Non-Fentanyl Overdose Death Rates In US Youth Aged 15-19 Prior To and During The Covid Pandemic



National Vital Statistics System multiple-cause-of-death 2015-2020 final and 2021 provisional data U.S. census monthly data. ||: Joinpoints indicate significant changes in nonlinear trends using Bayesian Information Criterion. AQPC=average` quarter percentage change during 2015 Q1-2022 Q2. ICD-10 cause of death code: synthetic opioids other than methadone (T40.4, primarily fentanyl and analogs).

Number of Pills Containing Fentanyl Seized by Law Enforcement in the United States, 2018 – 2021



Estimates based on data reported by the Office of National Drug Control Policy's High Intensity Drug Trafficking Areas program

Reference: JJ Palamar, et al. *Drug and Alcohol Dependence*. DOI: 10.1016/j.drugalcdep.2022.109398 (2022)

Addressing Overdose Deaths in 2022

- **Pain** treatments crucial but not sufficient.
- Treatment **Opioid Use Disorders** crucial but not sufficient.
 - Retention
 - Recovery
- Treatment of **other Substance Use Disorders**
- Overdose treatment: drug combinations, **stimulant overdoses**
- **Prevention** drug use including but not limited to opioids
 - Screening and appropriate treatment intervention for SUD (mild-severe)
- **DATA:** Timely reporting of fatal and non-fatal overdoses
 - Emerging new drugs and drug mixtures (xylazine)
- Social Determinants of Health

PREVENTION: Pre-Addiction (SBI Renamed)

Measures to define and detect Pre-Addiction

- This is a research need
- Meanwhile, DSM 5 diagnoses are reliable and easy to implement. Criteria for “Mild to Moderate” SUD are reasonable starting points for defining “pre-addiction”

Effective interventions for Pre-Addiction

- Treatments designed for severe SUD are usually inappropriate for mild cases.
- Payers support screening and 1-4 motivational counseling sessions, which are effective in reducing alcohol misuse. However, less data exists for other SUD. Also, more intensive interventions are likely needed for more severe symptoms.
- Need to develop pre-addiction interventions and test their effectiveness.

NIDA's Office of Translational Initiatives and Program Innovation

 U.S. Department of Health & Human Services

Overdose Prevention Strategy



Primary Prevention

focuses on root causes and key predictors of substance use and substance use disorder, and how to safely and effectively manage pain.



Harm Reduction

focuses on reducing risks associated with substance use, including overdose and infectious disease transmission.



Evidence-Based Treatment

focuses on providing the most effective, evidence-based treatments without delay, stigma, or other barriers.



Recovery Support

focuses on funding, reimbursing, training workforces for, and developing protocols around peer, employment, and housing supports.

invistics

S:3 Research

BIO
BOT

Biobot Analytics

appliedVR

 SOUND
life sciences

 Workit Health

 Sober Grid

 Woebot

village

 emocha
MOBILE HEALTH INC.

 prapela

we the
Village

 Marigold
HEALTH



<https://www.nytimes.com/2022/04/26/magazine/virtual-reality-chronic-pain.html>

PEAR Therapeutics



2022 NIDA Virtual Genetic and Epigenetic Cross-Cutting Research Team Meeting



Amy Lossie
NIDA



Earl Ettienne
Howard

April 27th, May 4th & May 11th, 2022



Anil Shankur
Meharry

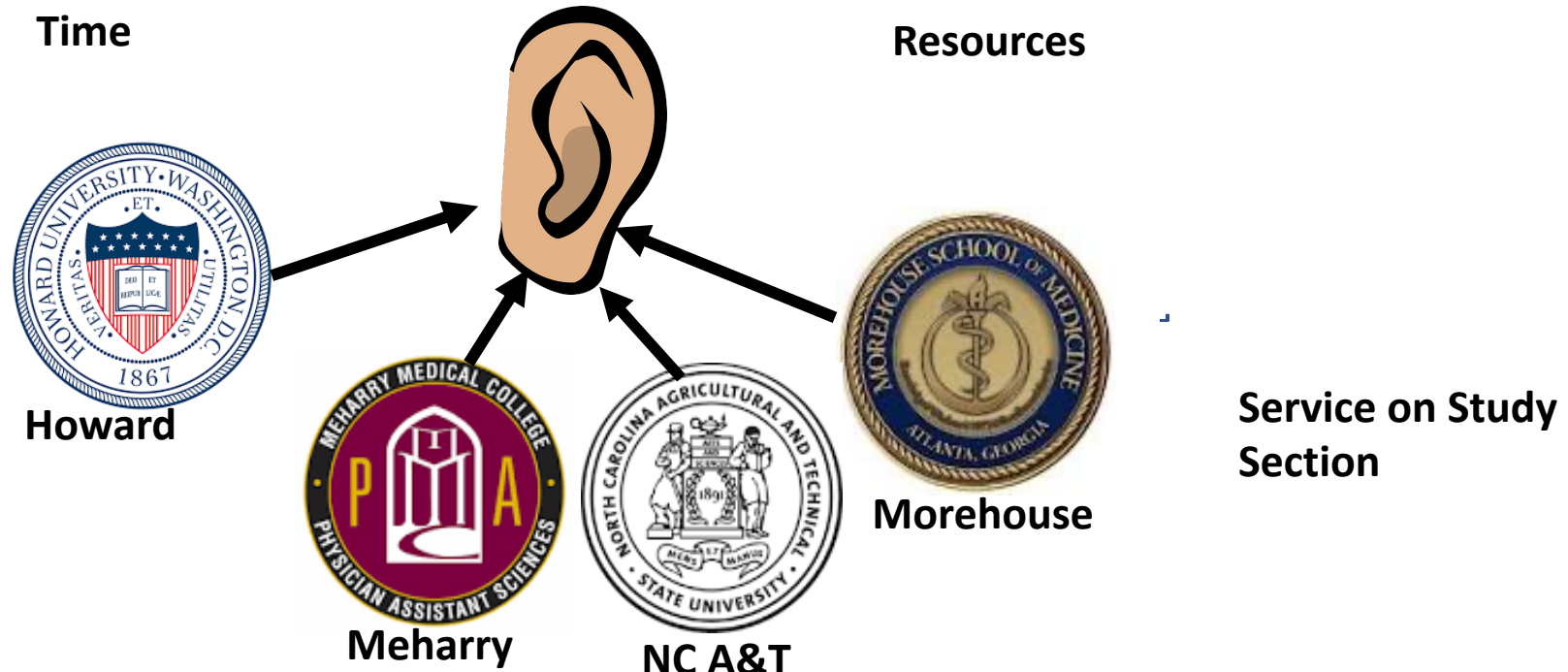


Evar Nwulia
Howard



Jonathan Pollock
NIDA

LISTENING SESSIONS



NIDA Name Change Proposal



“...pervasive stigma against people with substance use disorders (SUDs) remains a major barrier to treatment.

Language is a powerful driver of negative bias; even the word “abuse,” may perpetuate stigma against people who use drugs and deter people with SUD from seeking treatment.

As a step toward reducing that stigma, **NIDA is proposing that the Institute be renamed the ‘National Institute on Drugs and Addiction.’”**