Continued fentanyl crisis and drug-related deaths in the USA



Professor of Medicine, Boston University School of Medicine Medical Director, Bureau of Substance Addiction Services Massachusetts Department of Public Health

European Monitoring Centre for Drugs and Drug Addiction: Expert meeting on drug-related deaths
Thursday, November 3, 2022











Disclosures



My research and educational effort are funded by US National Institutes of Health, Centers for Diseases Control and Prevention, and Health Resources and Services Administration (HRSA). I have received honoraria for teaching about overdose prevention from the American Society of Addiction Medicine and producing a podcast focused on the care of people with opioid use disorder and HIV. I have no pharmaceutical or other commercial conflicts



https://ssc.jsi.com/resources/podcasts

https://podcasts.apple.com/us/podcast/connecting-care/id1550824211





Objectives



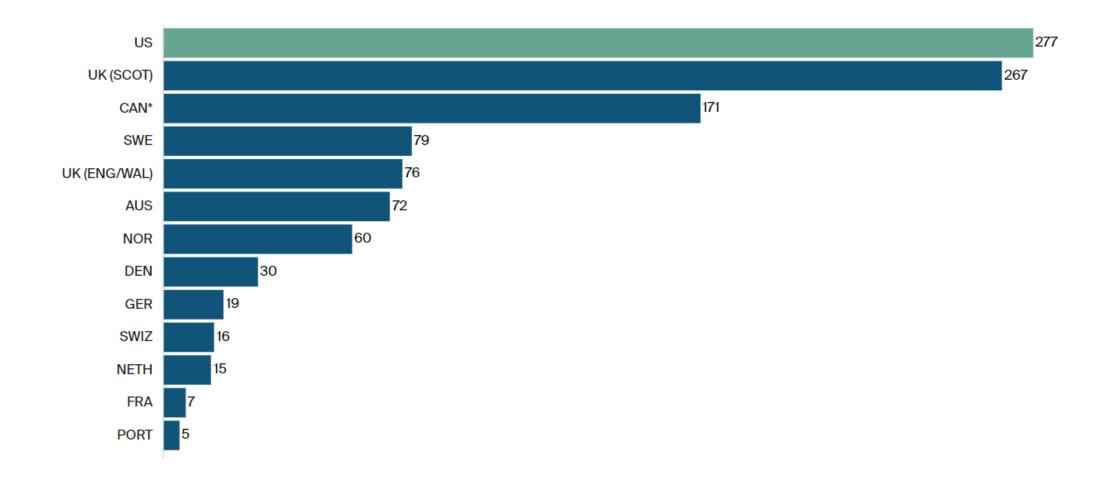
- The ?4? Waves of drug-related deaths in the United States
 - Variations by region and sub-population
- Clinical responses to drug-related deaths
 - harm reduction and treatment interventions
- Government responses to drug-related deaths





Drug-related death rate per 1 million population (unadjusted), 2020 or latest year available





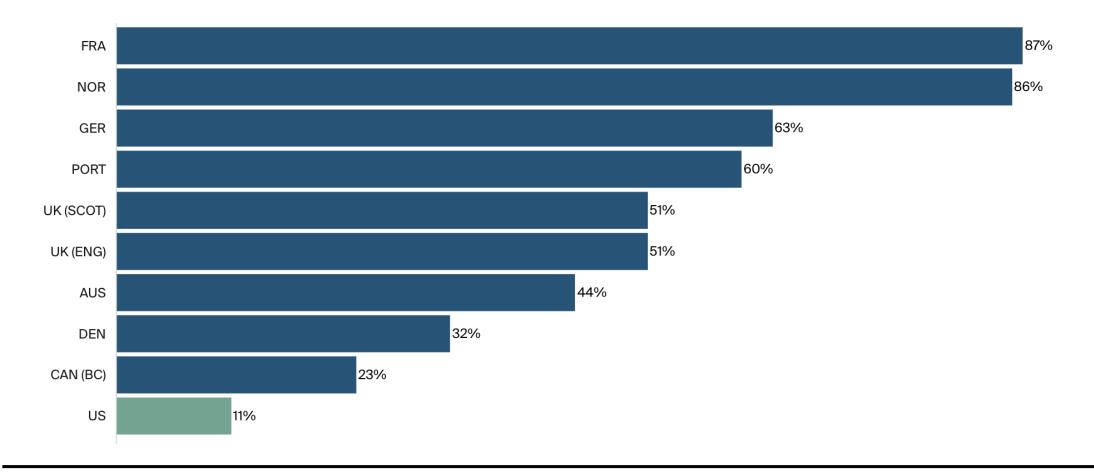




use disorder that receive medication for opioid use disorder



Percentage of people with high-risk opioid use or opioid use disorder (OUD) who received opioid-substitution treatment



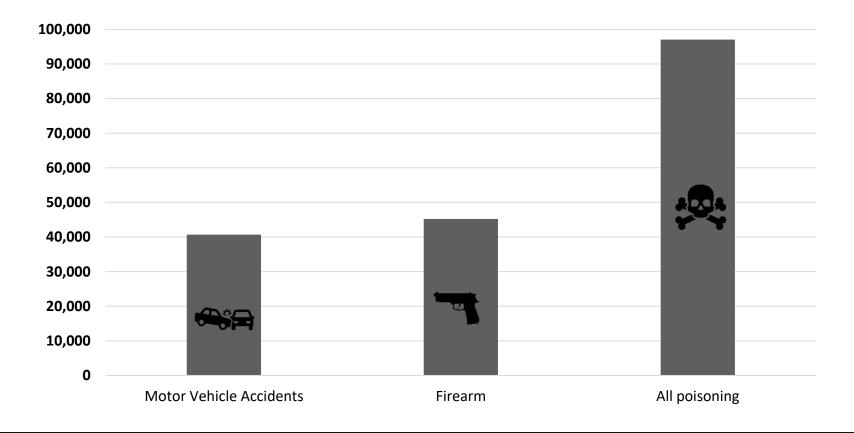




Overdose is the leading cause of accidental injury death ...by far



Deaths From Drug Overdose, Car Accidents and Gun Violence from 2020

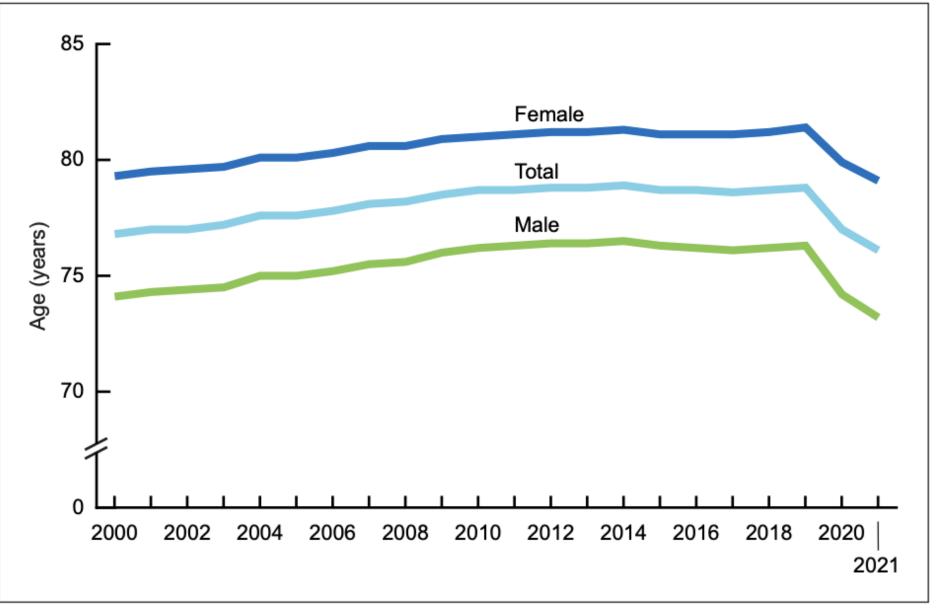






US life expectancy decreased 2014-17 2020-21

Figure 1. Life expectancy at birth, by sex: United States, 2000-2021



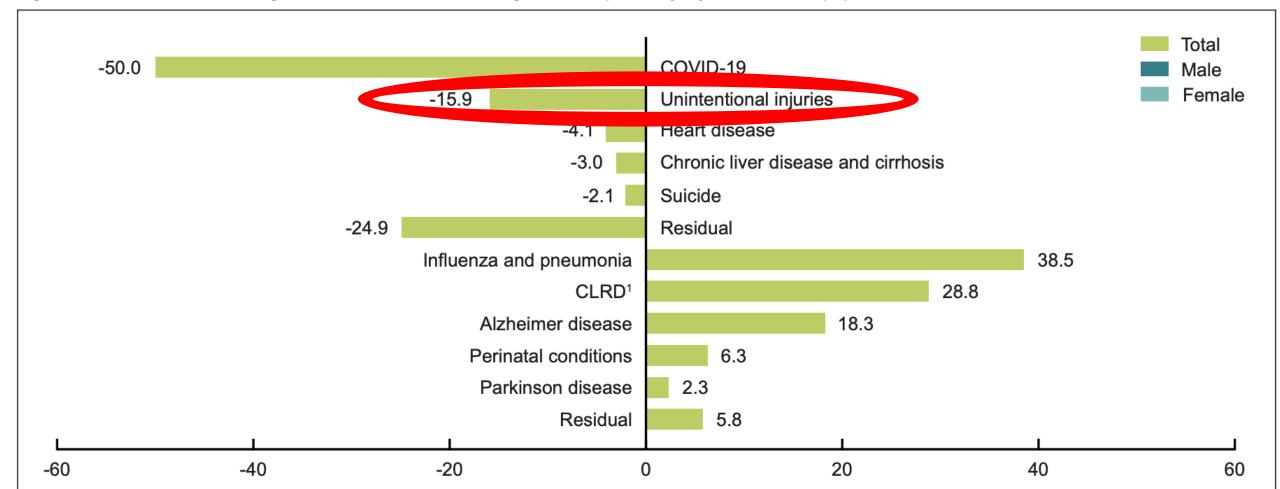
NOTES: Estimates are based on provisional data for 2021. Provisional data are subject to change as additional data are received. Estimates for 2000–2020 are based on final data.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Decreases in life expectancy driven by COVID and unintentional injuries



Figure 4. Contribution of leading causes of death to the change in life expectancy, by sex and total population: United States, 2020–2021

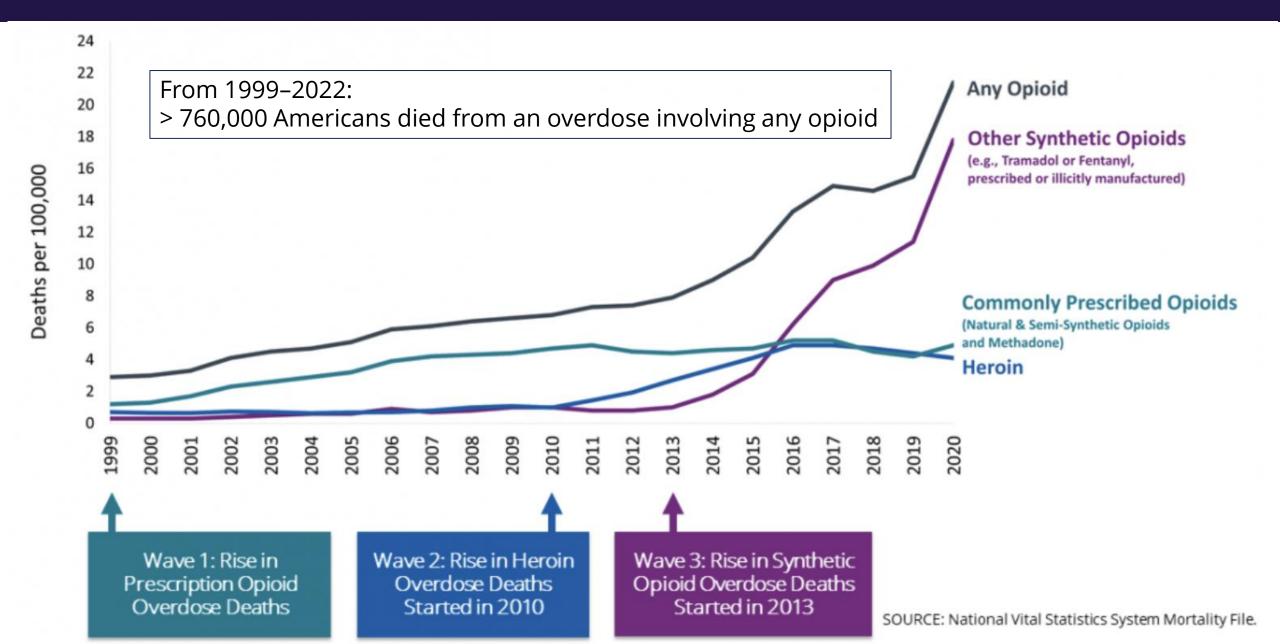






Overlapping Waves of Opioid Overdose Deaths





Fentanyl kills

Morbidity and Mortality Weekly Report



New Hampshire State Police Forensic Lab

Characteristics of Fentanyl Overdose — Massachusetts, 2014–2016

Nicholas J. Somerville, MD^{1,2}; Julie O'Donnell, PhD^{1,3}; R. Matthew Gladden, PhD⁴; Jon E. Zibbell, PhD⁴; Traci C. Green, PhD⁵; Morgan Younkin, MD⁶; Sarah Ruiz, MSW²; Hermik Babakhanlou-Chase, MPH²; Miranda Chan, MPH²; Barry P. Callis, MSW²; Janet Kuramoto-Crawford, PhD¹; Henry M. Nields, MD, PhD⁷; Alexander Y. Walley, MD^{2,5}

"So, now what they [people selling illicit drugs] are doing is they're cutting the heroin with the fentanyl to make it stronger. And the dope [heroin] is so strong with the fentanyl in it, that you get the whole dose of the fentanyl at once rather than being time-released [like the patch]. And that's why people are dying—plain and simple. You know, they [people using illicit drugs] are doing the whole bag [of heroin mixed with fentanyl] and they don't realize that they can't handle it; their body can't handle it." -- Overdose bystander

A comprehensive public health response to address overdoses related to IMF

- 1. Fentanyl should be included on standard toxicology screens
- Adapt existing harm reduction strategies, such as direct observation of anyone using illicit opioids, and ensuring bystanders are equipped with naloxone
- 3. Enhanced access and linkage to medication for opioid use disorders







Vital Statistics Rapid Release

Provisional Drug Overdose Death Counts

https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm

CDC's **Drug Overdose Surveillance and Epidemiology** (DOSE) system, which captures electronic health record information in <u>syndromic surveillance</u> systems. This dashboard represents the most up-to-date data that the CDC's DOSE system has available and is updated shortly after new data are made available each month. Currently, 47 states and the District of Columbia share data with DOSE. Reporting monthly data.

CDC's State Unintentional Drug Overdose Reporting System (<u>SUDORS</u>) 47 states and the District of Columbia to provide comprehensive overdose death data. Reporting 2020 data.



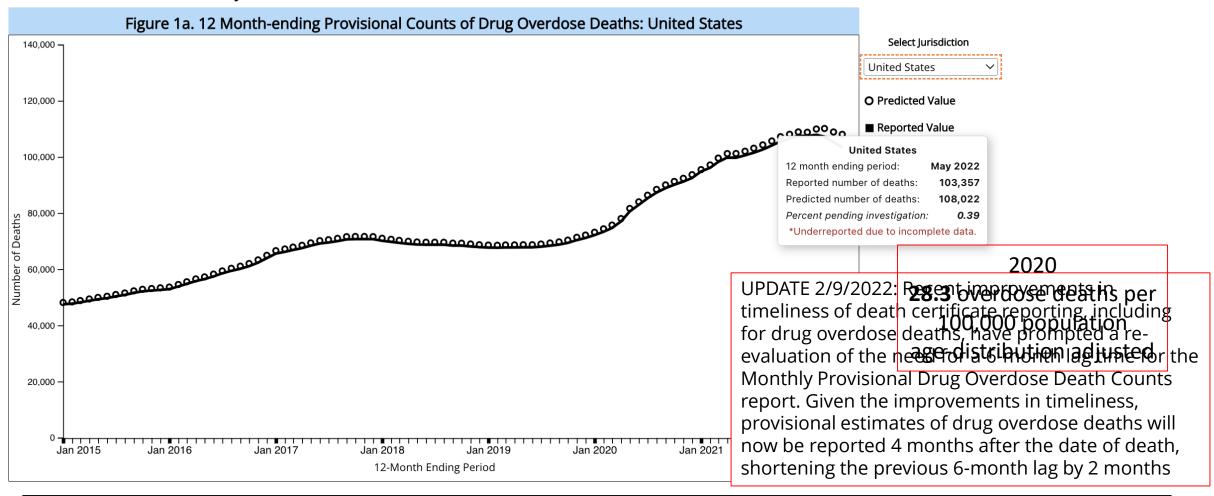
Tracks non-fatal opioid overdose in the pre-hospital setting using nationally submitted Emergency Medical Services (EMS) data. The ONDCP Non-Fatal Opioid Overdose Tracker dashboard is not available to the public at this time.







Based on data available for analysis on: October 02, 2022

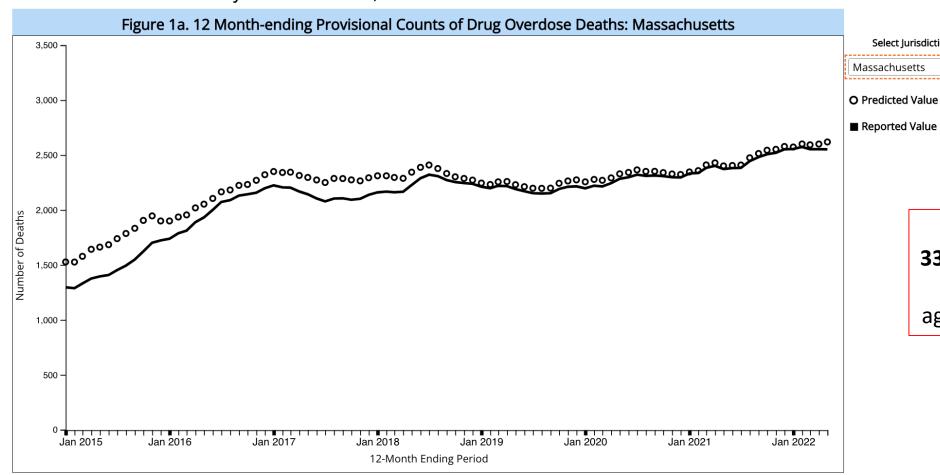








Based on data available for analysis on: October 02, 2022



2020 **33.9** overdose deaths per 100,000 population age-distribution adjusted

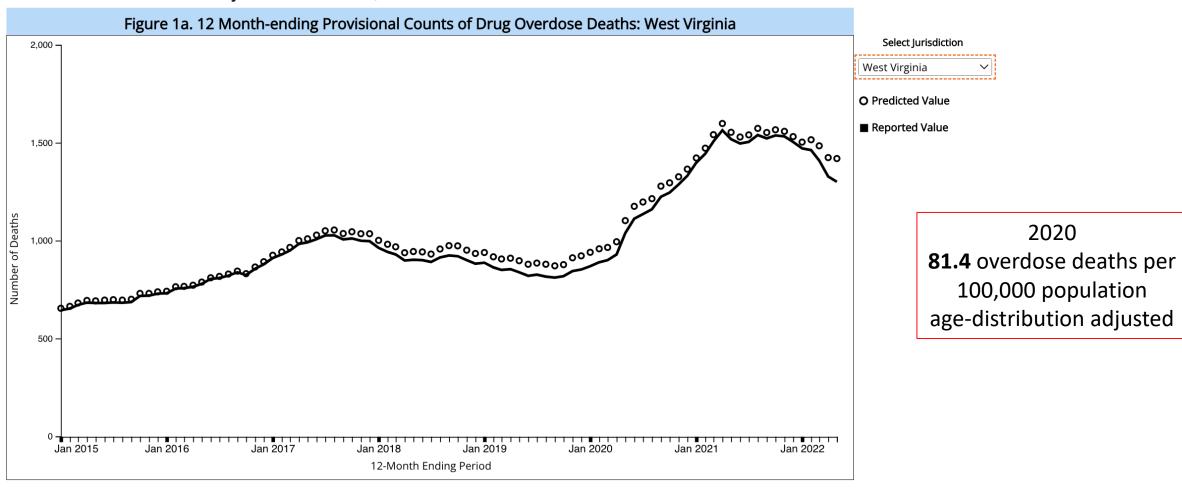
Select Jurisdiction







Based on data available for analysis on: October 02, 2022

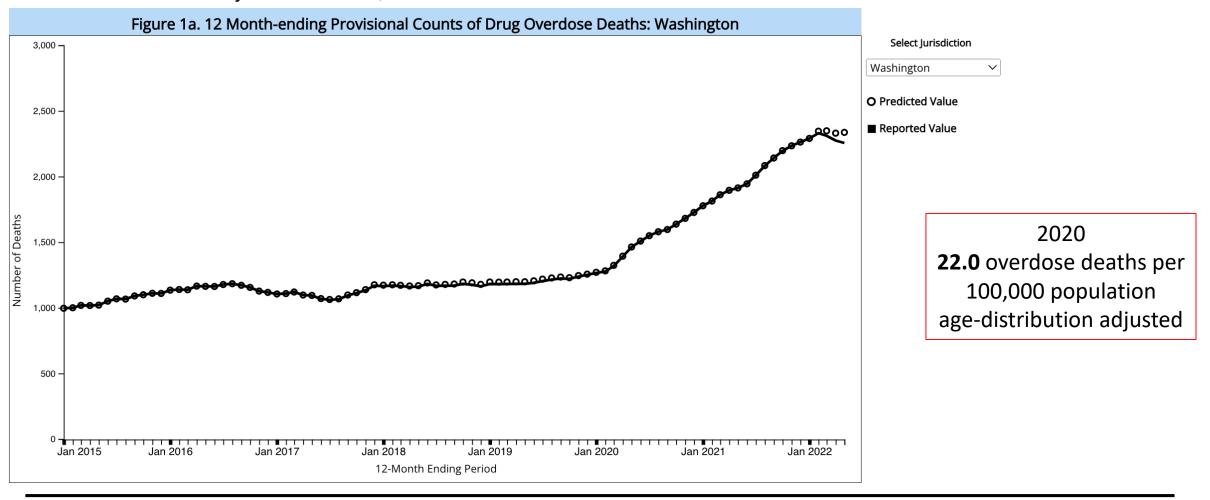








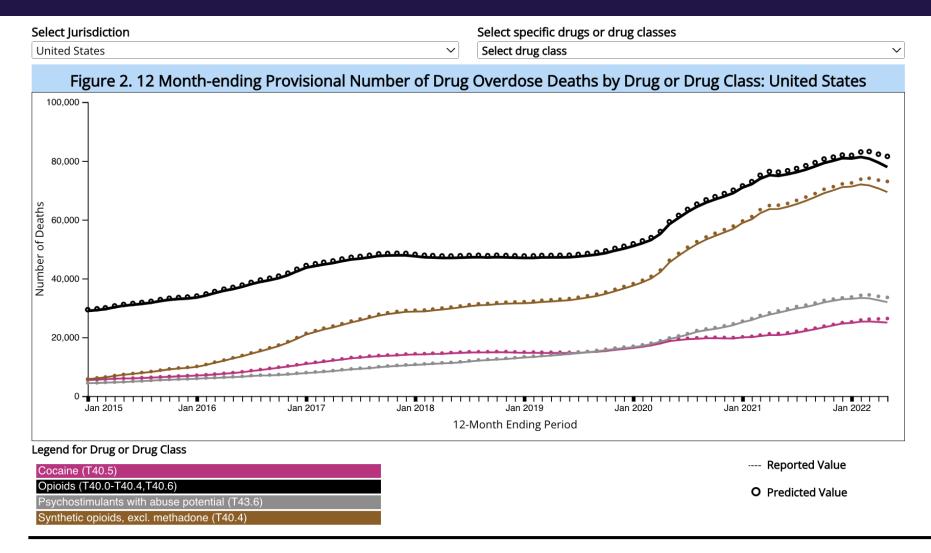
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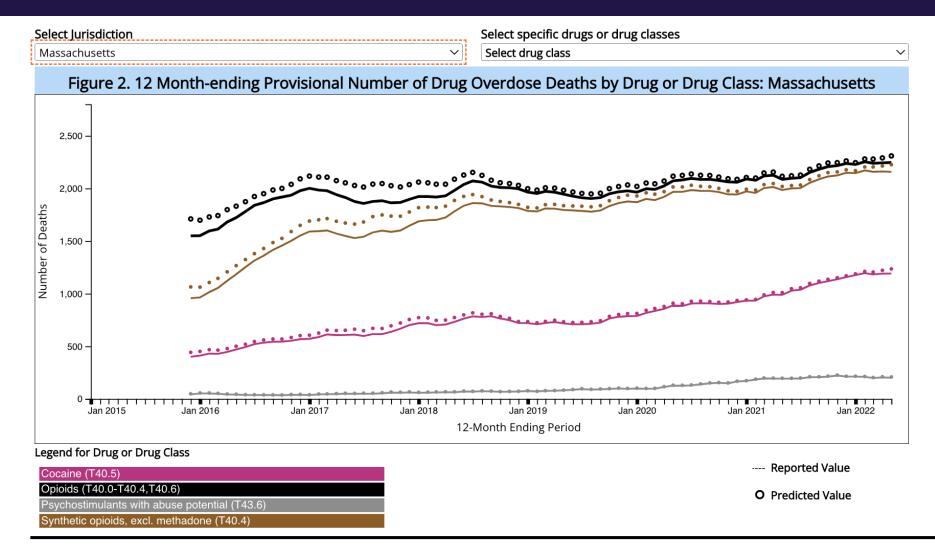








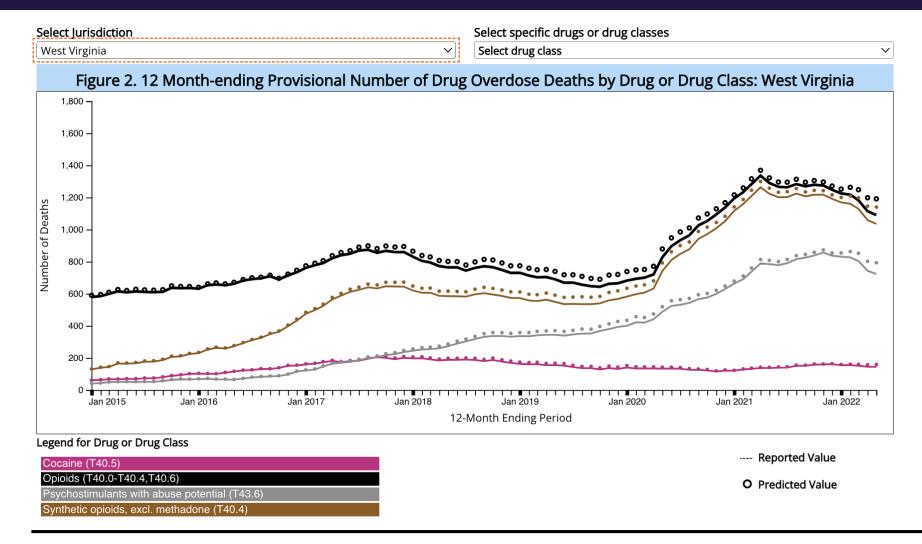








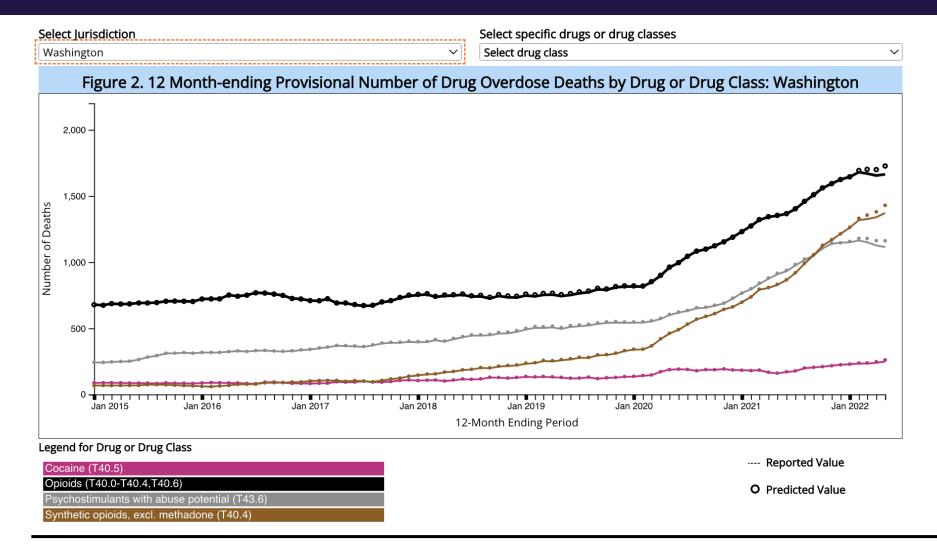
















Stimulant-involved overdose deaths surging with opioids



Figure 1. Age-adjusted rates of overdose deaths involving cocaine, by concurrent involvement of opioids: United States, 2009–2019

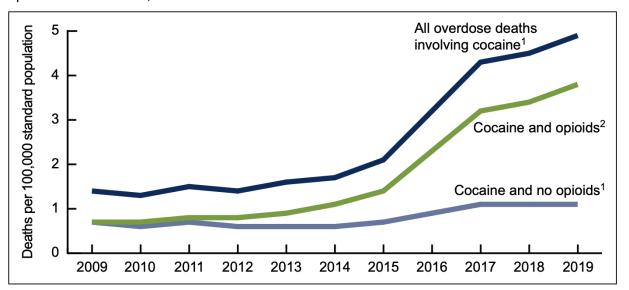
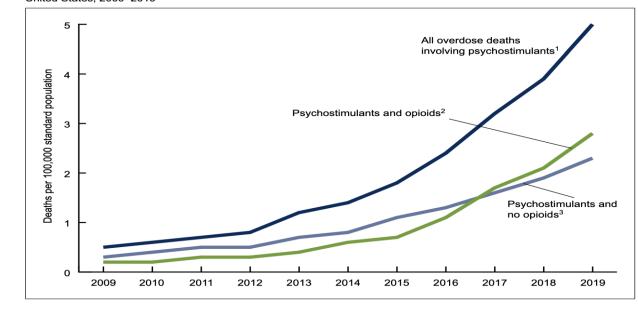


Figure 3. Age-adjusted rates of overdose deaths involving psychostimulants, by concurrent involvement of opioids: United States, 2009–2019







An increasing, but unknown, number of people who do not have opioid use disorder are overdosing due to fentanyl contamination of cocaine, methamphetamine, and counterfeit prescription pills



- People without opioid tolerance are unwittingly being exposed to fentanyl via non-opioids and overdosing
- Fentanyl related overdose is on the rise in people who use methamphetamine and cocaine
 - Implication: Overdose prevention efforts need to expand and innovate to focus on engaging people who use stimulants and counterfeit non-opioid prescription pills
 - Klar SA, Brodkin E, Gibson E, Padhi S, Predy C, Green C, Lee V. Notes from the Field: Furanyl-Fentanyl Overdose Events Caused by **Smoking Contaminated Crack Cocaine** British Columbia, Canada, July 15-18, 2016. MMWR Morb Mortal Wkly Rep. 2016 Sep 23;65(37):1015-1016.
 - Tomassoni AJ, Hawk KF, Jubanyik K, Nogee DP, Durant T, Lynch KL, Patel R, Dinh D, Ulrich A, D'Onofrio G. Multiple Fentanyl Overdoses New Haven, Connecticut, June 23, 2016. MMWR Morb Mortal Wkly Rep. 2017 Feb 3;66(4):107-111.
 - DiSalvo P, Cooper G, Tsao J, Romeo M, Laskowski LK, Chesney G, Su MK. **Fentanyl-contaminated cocaine outbreak** with laboratory confirmation in New York City in 2019. Am J Emerg Med. 2021 Feb;40:103-105.
 - Canning P, Doyon S, Ali S, Logan SB, Alter A, Hart K, Coler R, Kamin R, Wolf SC, Soto K, Whiteman L, Jenkins M. Using Surveillance With Near-Real-Time Alerts During a Cluster of Overdoses From **Fentanyl-Contaminated Crack Cocaine**, Connecticut, June 2019. Public Health Rep. 2021 Nov-Dec;136(1 suppl):18S-23S.
 - Armenian P, Whitman JD, Badea A, Johnson W, Drake C, Dhillon SS, Rivera M, Brandehoff N, Lynch KL. Notes from the Field: Unintentional Fentanyl **Overdoses Among Persons Who Thought They Were Snorting Cocaine** Fresno, California, January 7, 2019. MMWR Morb Mortal Wkly Rep. 2019 Aug 9;68(31):687-688.
 - Palamar JJ, Ciccarone D, Rutherford C, Keyes KM, Carr TH, Cottler LB. Trends in seizures of powders and pills containing illicit fentanyl in the United States, 2018 through 2021. Drug Alcohol Depend. 2022 May 1;234:109398.





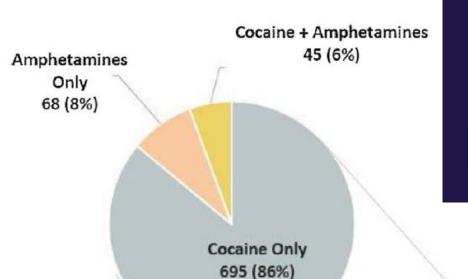
Fourth weave of overdose death?



- Surging number of deaths involving stimulants including cocaine, and especially methamphetamine since 2012
 - Surging cocaine and methamphetamine deaths commonly involve fentanyl
- Fentanyl contamination of other drugs heroin, cocaine, methamphetamine, counterfeit prescription opioids and benzodiazepines
- Legacy of abrupt discontinuation
- Surging racial and ethnic inequities
- COVID 19 pandemic inequities in isolation, access, and care





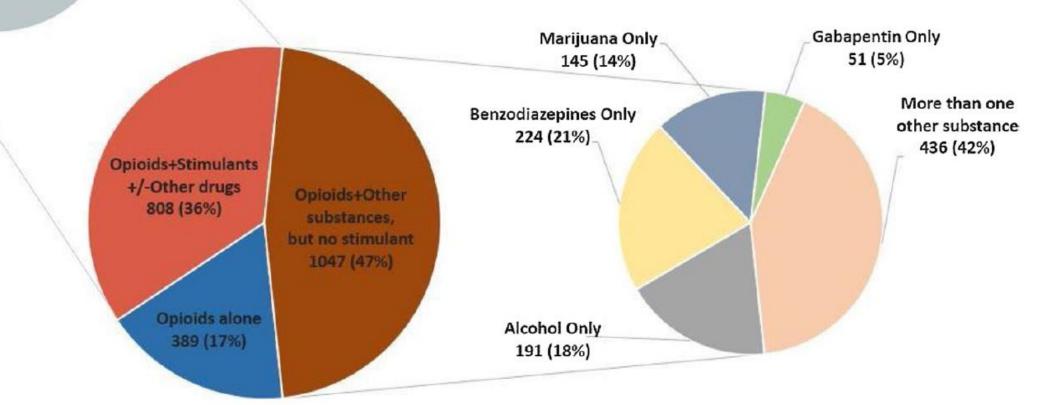


The Rule = multiple substances The Exception = only opioids

Massachusetts opioid-related overdose death toxicology 2014-15 (n=2244)

Barocas JA et al. DAD. 2019 Jul 1;200:59-63.

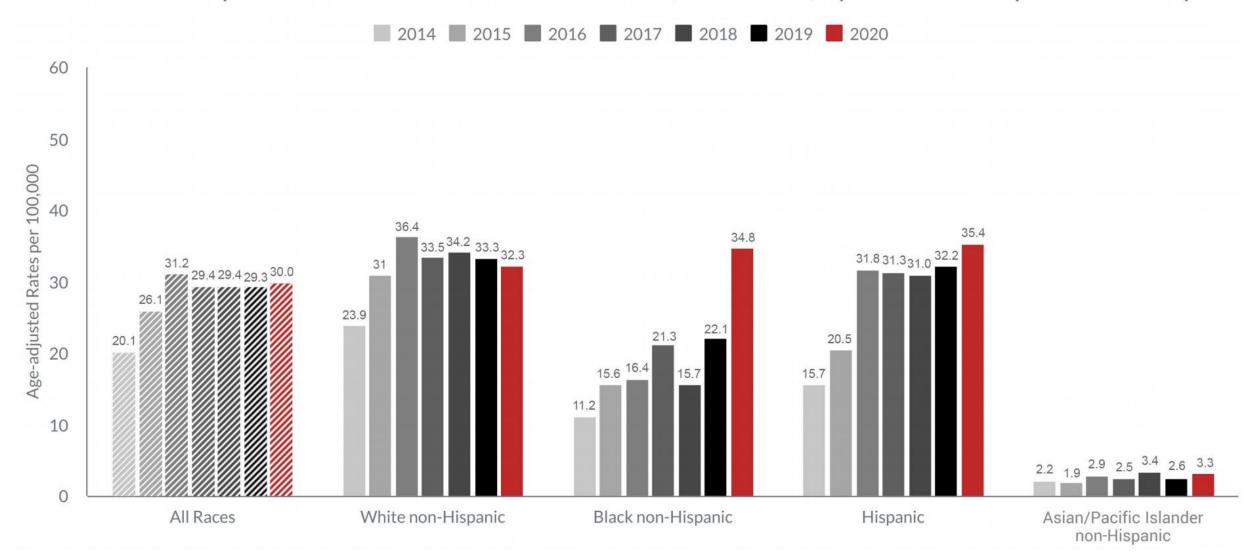
Non-Hispanic
Black residents
increased risk for
opioid and
stimulant death
than non-Hispanic
White residents
OR: 2.18,
95% CI: 1.01–4.70



As opioid deaths among White people decreased, Deaths among Black and Hispanic people increased



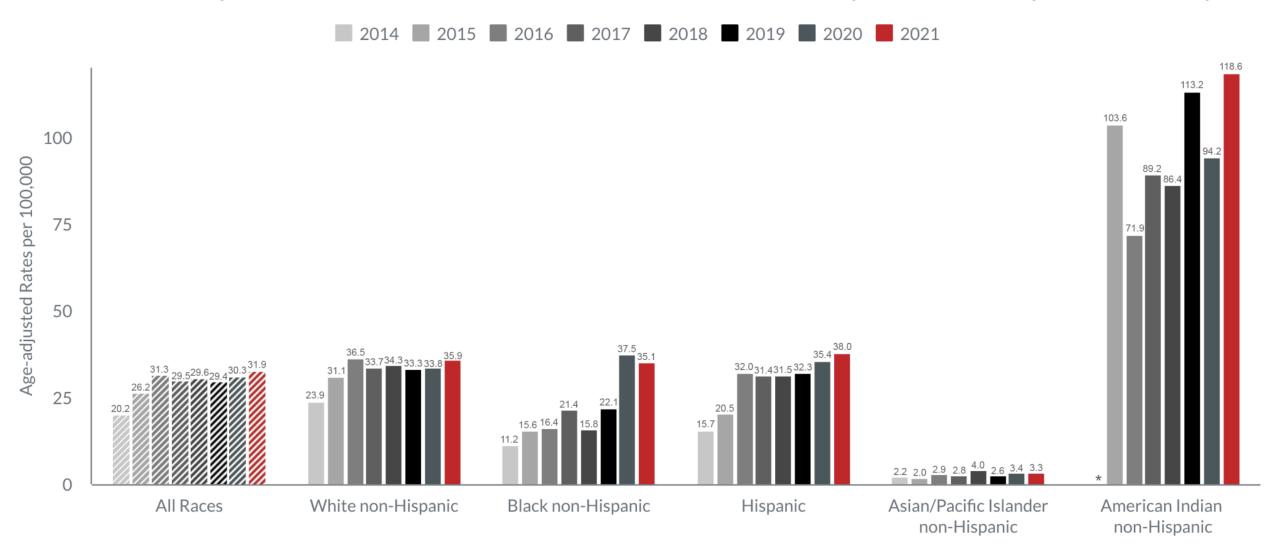
Confirmed Opioid-Related Overdose Death Rates, All Intents, by Race and Hispanic Ethnicity



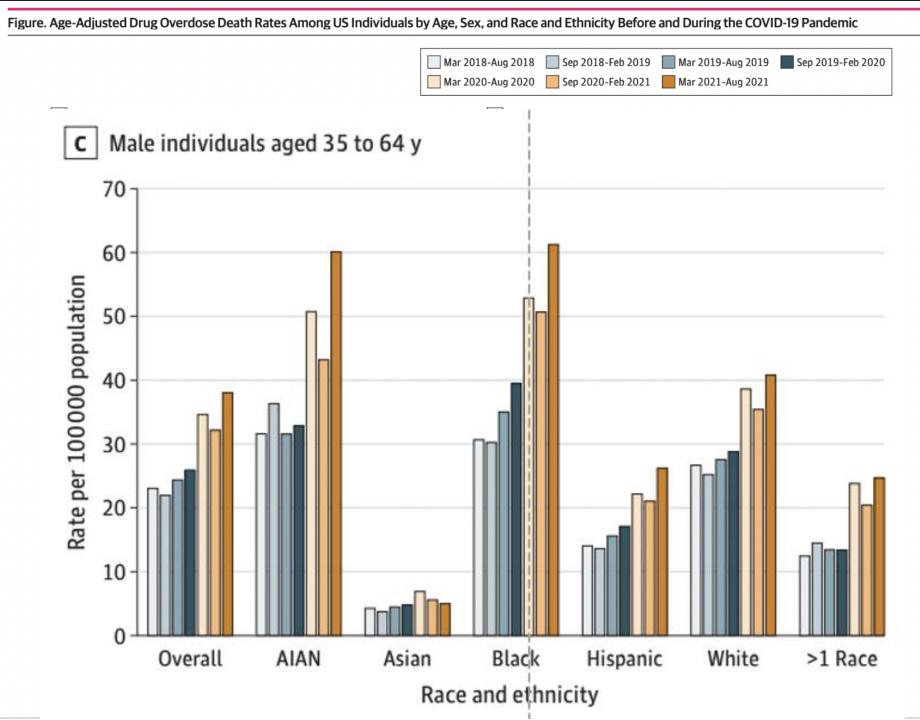
American Indian Massachusetts people face opioid overdose death rates up to 3-fold greater than other people



Confirmed Opioid-Related Overdose Death Rates, All Intents, by Race and Hispanic Ethnicity



Racial and Ethnic Disparities During COVID-19



What is the US prevalence of opioid use disorder?



Direct estimation through 2019 National Survey on Drug Use and Health: **0.62% or 1.7 million** Multiplier methods

- capture-recapture to adjust 2019 NSDUH direct estimation: 2.77% or 7.6 million
- mortality meta-analysis of OUD and poisoning deaths + fentanyl correction: 2.04% or 6.7 million

Capture-recapture study of 7-linked statewide datasets, MA Public Health Data Warehouse

- 4.6% (275,070) of Massachusetts adults with opioid use disorder in 2015
 - 44% (120K) known → **56% are unknown!!!!**
 - via medical claims, addiction treatment or medication, fatal and non-fatal overdose
 - 15% (40K) treated with buprenorphine or methadone in 2015
- **6.9%** of 26-44 year olds

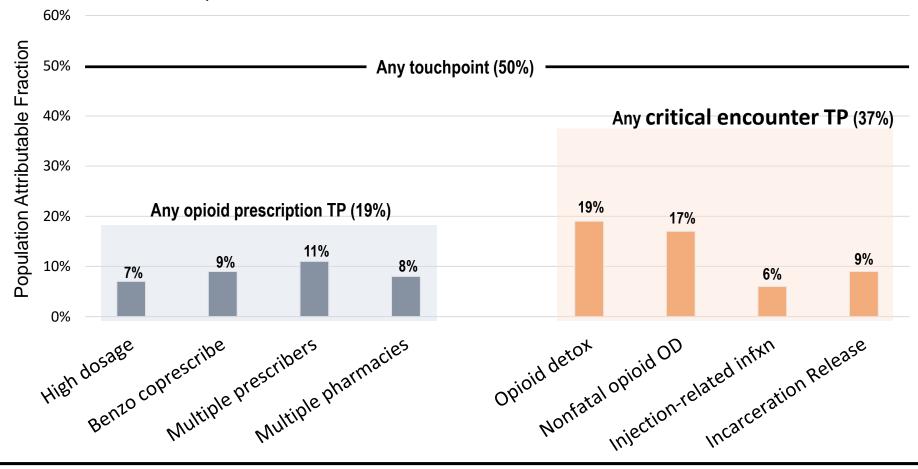




Looking back....Half of OD decedents touch our systems < 12 months Population attributable fractions for pre-OD touchpoints



Massachusetts, 2014, n=1,315 opioid-related deaths







Looking forward.... Overdose death within 1 year of high-risk touchpoints Standardized Mortality Ratios



Massachusetts, 2014, n=1,315 opioid-related deaths

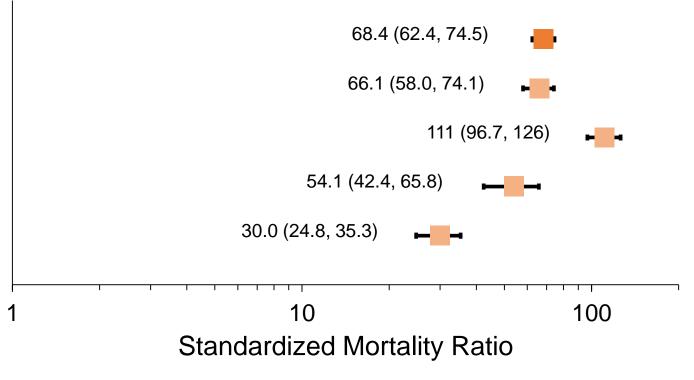
Any critical encounter TP

Opioid detoxification

Nonfatal opioid overdose

Injection-related infection

Release from incarceration







Increase in Fatal Drug Overdoses Across the United States Driven by Synthetic Opioids Before and During the COVID-19 Pandemic - CDC Health Alert Network 12/17/2020



Recommendations:

- 1. Expand the provision and use of naloxone and overdose prevention education
- 2. Expand access to and provision of treatment for substance use disorders
- 3. Intervene early with individuals at the highest risk for overdose
- 4. Improve detection of overdose outbreaks due to fentanyl, novel psychoactive substances (eg, fentanyl analogs), or other drugs to facilitate an effective response

What Else?

- Better supply-side solutions
- Racial and ethnic equity
- Treatment and harm reduction where people are, on their terms
- Address the low barrier treatment-retention paradox
 - Choice!

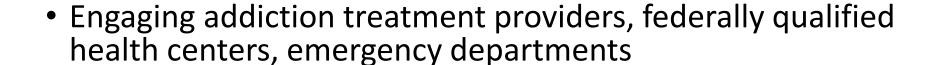




Naloxone distribution streams



- Partnering with Harm Reduction Providers to get naloxone to those at highest risk for overdose
 - Community Program Standing Order
- Facilitating Pharmacy distribution
 - Statewide Standing Order
 - Insurance Coverage



First responders – administration and leave behind













Harm reduction for people using fentanyl...



- Start low and go slow
 - Use a small amount and give slowly to gauge potency
- Before COVID pandemic:
 - Use with other people present
 - Take turns to prevent simultaneous overdose
 - Have naloxone ready and an immediate way to call for help
- <u>During COVID pandemic</u> > Virtual Spotting
 - When using alone, connect with someone by phone or video to monitor while and immediately after using
 - Neverusealone.com
 - MA Line 1 (800)972-0590
 - Canary Prevent Overdose App
 - Brave.coop











The New York Times

Nation's First Supervised Drug-Injection Sites Open in New York

During the first official day in operation at the two Manhattan facilities, trained staff reversed two overdoses, officials said.

















 People can use drugs in what is called a narcotic consumption booth inside the injection sites. David Dee Delgado for The New York Times

The New York Times

Governor Newsom Vetoes Bill for Drug-Injection Sites in California

The governor said that he supported the idea of supervised facilities to reduce overdoses and deaths, but that the state was not yet prepared to put it into practice. August 22, 2022



Supply –side challenges and solutions



Challenges

- Interdiction is insufficient and law enforcement efforts stigmatize which undermine evidence-based prevention and treatment
 - "We can't arrest our way out of the problem."
- Prescription opioid supply has been replaced by deadlier illicit opioids

Solutions

- Decriminalization
- Drug consumption spaces
- Drug checking
- Prescription injectable opioid agonists for opioid use disorder (diacetylmorphine, hydromorphone)
 - Multiple RCTs show benefit among people for whom methadone has not been sufficient.

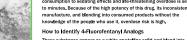


Massachusetts Drug Supply Data Stream (MADDS) STREET NARCOTICS ALERI



From November 2020 to January 2021, multiple drug samples sold a

fentanyl and heroin have been confirmed to contain these analogs an fentanyl. The samples were recovered in Lynn, Quincy, Pittsfield. Springfield, and Boston, Of 11 samples, 4 (36%) were associated wit







Naloxone is effective at reversing overdoses caused by fentanyl analogs Administer naloxone (Narcan) as you would for any overdose and immediately summon medical attention

Police Encounters with Fentanyl

Fentanyl and its analogs are NOT readily absorbed through skin or clothing. Toxicity through inhalation may only result from very prolonged exposure in enclosed areas





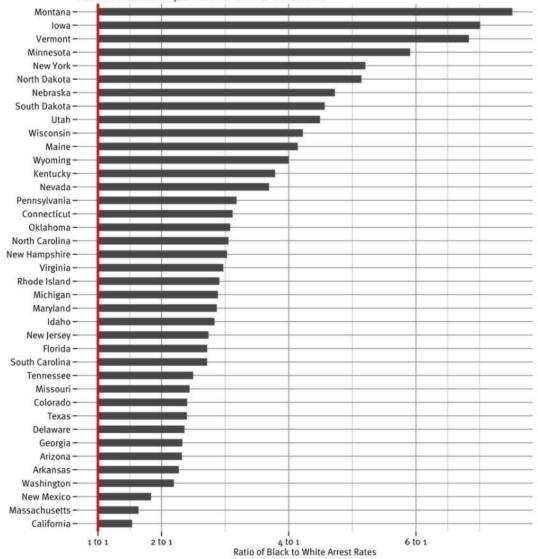




Substance use rates are similar across racial and ethnic groups, yet people of color are much more likely to be arrested for drug possession



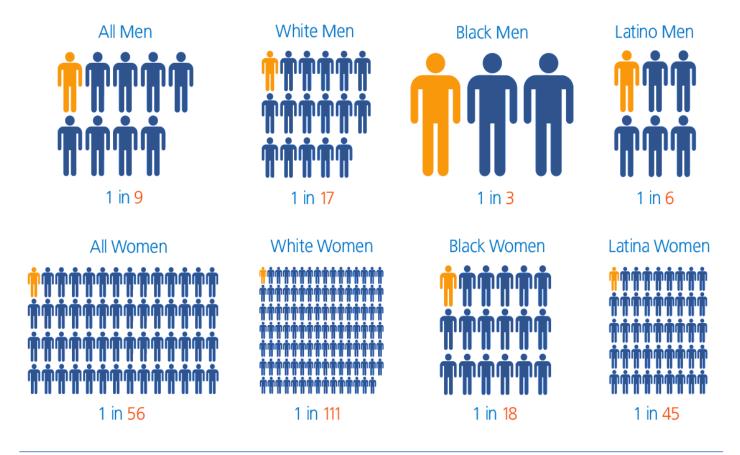
Figure 7: Race disparities in US drug possession arrests Ratios of arrest rates per 100,000 adults, disaggregated by race (2014) Red line indicates equal Black and white arrest rates



Note: Excludes states where less than 75 percent of the population was covered by reporting agencies. This is reported data only and does not estimate arrests from non-reporting agencies.

Source: Human Rights Watch analysis of United States Department of Justice, Federal Bureau of Investigation, Uniform Crime Reporting (UCR) Program Data: Arrests by Age, Sex, Race, Summarized Yearly, 2014; Florida Office of the State Courts Administrator Offender Based Transaction System data; New York Division of Criminal Justice Services data; and US Census Bureau 2014 ACS 5-year estimate.

Lifetime Likelihood of Imprisonment



Source: Bonczar, T. (2003). *Prevalence of Imprisonment in the U.S. Population, 1974-2001*. Washington, D.C.: Bureau of Justice Statistics.

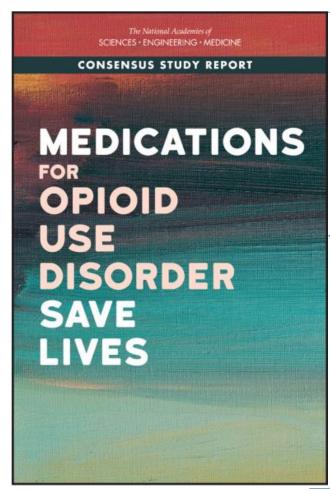






National Academy of Sciences, Engineering, and Medicine 2019





OVERVIEW OF CONCLUSIONS

To read the full text of the committee's conclusions, visit national academies.org/OUD treatment.

- 1. Opioid use disorder is a treatable chronic brain disease.
- 2. FDA-approved medications to treat opioid use disorder are effective and save lives.
- 3. Long-term retention on medications to treat opioid use disorder is associated with improved outcomes.
- 4. A lack of availability of behavioral interventions is not a sufficient justification to withhold medications to treat opioid use disorder.
 - 5. Most people who could benefit from medication-based treatment for opioid use disorder do not receive it, and access is inequitable across subgroups of the population.
- 6. Medication-based treatment is effective across all treatment settings studied to date.

 Withholding or failing to have available all classes of FDA-approved medication for the
- treatment of opioid use disorder in any care or criminal justice setting is denying appropriate medical treatment.
- 7. Confronting the major barriers to the use of medications to treat opioid use disorder is critical to addressing the opioid crisis.





Make the MOUD work for the patient, rather than the patient work for the MOUD



I am living proof that methadone treatment works.



- Opt out, instead of opt in MOUD
 - Convert "detox" into induction sites
 - Hospital/ED patients, especially post-OD
 - Jails/prisons
 - Pharmacies
 - Syringe-service programs
 - Mobile units
- More evidence-based MOUD choices
 - 24-hour oral morphine
 - Injectable opioid agonist treatment heroin and hydromorphone

I am living proof that methadone treatment works.

I started using heroin when I was 20. I went from once in awhile to every day. When you wake up sick from withdrawal, all other needs and responsibilities are subordinate. It's only through methadone treatment that I was able to stop. Today, life is centered on my kids, my family, and my music. Methadone made it possible.

- Erik

Opioid addiction treatment with methadone and buprenorphine is available in New York City.

If you or someone you know needs help, call 888-NYC-WELL











Biden-Harris 2021 Drug Policy Priorities







- 2. Advancing racial equity issues in our approach to drug policy
- 3. Enhancing evidence-based harm reduction efforts
- 4. Supporting evidence-based prevention efforts to reduce youth substance use
- 5. Reducing the supply of illicit substances
- 6. Advancing recovery-ready workplaces and expanding the addiction workforce
- 7. Expanding access to recovery support services





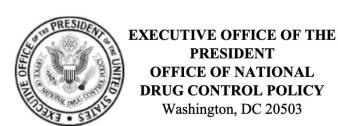
Biden-Harris 2021 Harm Reduction Strategies



- 1. **SSP** - Integrate and build linkages between funding streams to support SSPs
- 2. **SSP** - Explore opportunities to lift barriers to federal funding for SSPs
- 3. **SSP/naloxone** - Identify state laws that limit access to SSPs, naloxone, and other services
- **Linkage** -Develop and evaluate the impact of educational materials featuring evidence-based harm reduction 4. approaches that link PWUD with harm reduction, treatment, recovery support, health and social services
- 5. **Naloxone** - Examine naloxone availability in counties with high rates of overdose and identify opportunities to expand access in targeted areas among pharmacies, clinicians, peer support workers, family and community members, and **PWUD**
- 6. FTS/Linkage - Amplify best practices for FTS services, standards for FTS kits, and use of FTS as a means of engagement in health care systems; and
- 7. **Research** - Support research on the clinical effectiveness of emerging harm reduction practices in real world settings and test strategies to best implement these evidence-based practices



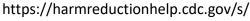




PRESIDENT



Harm reduction programs are an effective component of community-based programs preventing infectious disease, overdose, and other negative outcomes related to using drugs. The National Harm Reduction Technical Assistance Center is designed to strengthen the capacity and improve the performance of syringe services programs (SSPs) and other harm reduction efforts throughout the United States by supporting enhanced technical assistance to ensure the provision of high-quality, comprehensive harm reduction services









Can what works for HIV also work for overdose?

| | | Successful strategies for HIV/AIDS | | Parallel opportunities for overdose reduction |
|-------------|---|--|---|--|
| ention | • | HIV testing and risk reduction counseling | • | Overdose risk assessment and reduction counseling |
| | • | Needle-syringe distribution | • | Naloxone rescue kit distribution |
| | • | Targeted outreach /peer-driven interventions | • | Targeted outreach /peer-driven interventions |
| rev | • | Supervised injection facilities | • | Supervised injection facilities / Safe Supply |
| ^ <u>-</u> | • | Anti-retroviral therapy and opioid agonist treatment | • | Medication for opioid use disorders |
| Treatment < | • | Comprehensive, collaborative, longitudinal care for individuals with HIV infection | • | Comprehensive, collaborative, longitudinal care for individuals with addictions |
| | • | Coordinated prevention and treatment strategy across public health and the healthcare system | • | Coordinated prevention and treatment strategy across criminal justice, law enforcement, public health and healthcare systems |
| | • | Major funding across public health and the healthcare system of evidence-based interventions | • | Major funding across criminal justice, law enforcement, public health and healthcare systems of evidence-based interventions |



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Thank you!

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