

# Optimizing Safety for People who use Substances

Alex Walley, MD, MSc  
CRIT/FIT/CFR – May 2024



A photograph of the Boston Medical Center Emergency Department at night. The building is dark, but the entrance is brightly lit. A large sign above the entrance reads "BOSTON MEDICAL" in blue and "EMERGENCY" in large red letters. A red traffic light is visible on the right side of the entrance. Several people, including medical staff in white coats and blue scrubs, are standing near the entrance. A white ambulance is parked on the left side of the entrance.

BOSTON  
MEDICAL

EMERGENCY

## Learning Objectives

1. Define harm reduction and apply it to public health
2. Explain the rationale and evidence for:
  - a. Needle syringe access
  - b. Naloxone rescue kits
  - c. Witnessed consumption
  - d. Drug checking

# What is Harm Reduction?

- Practical strategies and ideas to reduce substance use consequences
  - Sunscreen, seat belts, designated driver
- Interventions guided by risk-benefit analysis
  - ♦ Abstinence is not a prerequisite to care
- A movement for social justice built on a belief in, and respect for, the rights of people who use substances
  - Harmreduction.org – National Harm Reduction Coalition



*Dan Bigg on Chicago Recovery Alliance van*



*Rhoda Creamer and George Arlos from Dutch newspaper.*



# Some Harm Reduction Mantras

- *Any positive change*
  - Dan Bigg
- *Nothing About Us Without Us*
- *Meeting people where they are at*
- *Harm reduction is loving people until they're ready to love themselves*
  - Mary Wheeler
- *I'm not hard to reach, you just do not know how to reach me*
  - Sarah Bagley's patient
- *Trauma is the gateway drug*
  - Jess Tilley
- *Instead of making the patient work for the treatment, let's make the treatment work for the patient*

## Harm Reduction Movement in Massachusetts: An Oral History Project

Listen to the interviews



Gary Langis

[Listen Now](#)



Sarah Mackin

[Listen Now](#)



Monique Tula

[Listen Now](#)



Joy Rucker

[Listen Now](#)



Jean McGuire

[Listen Now](#)



Jess Tilly

[Listen Now](#)

# Biden-Harris 2021 Drug Policy Priorities

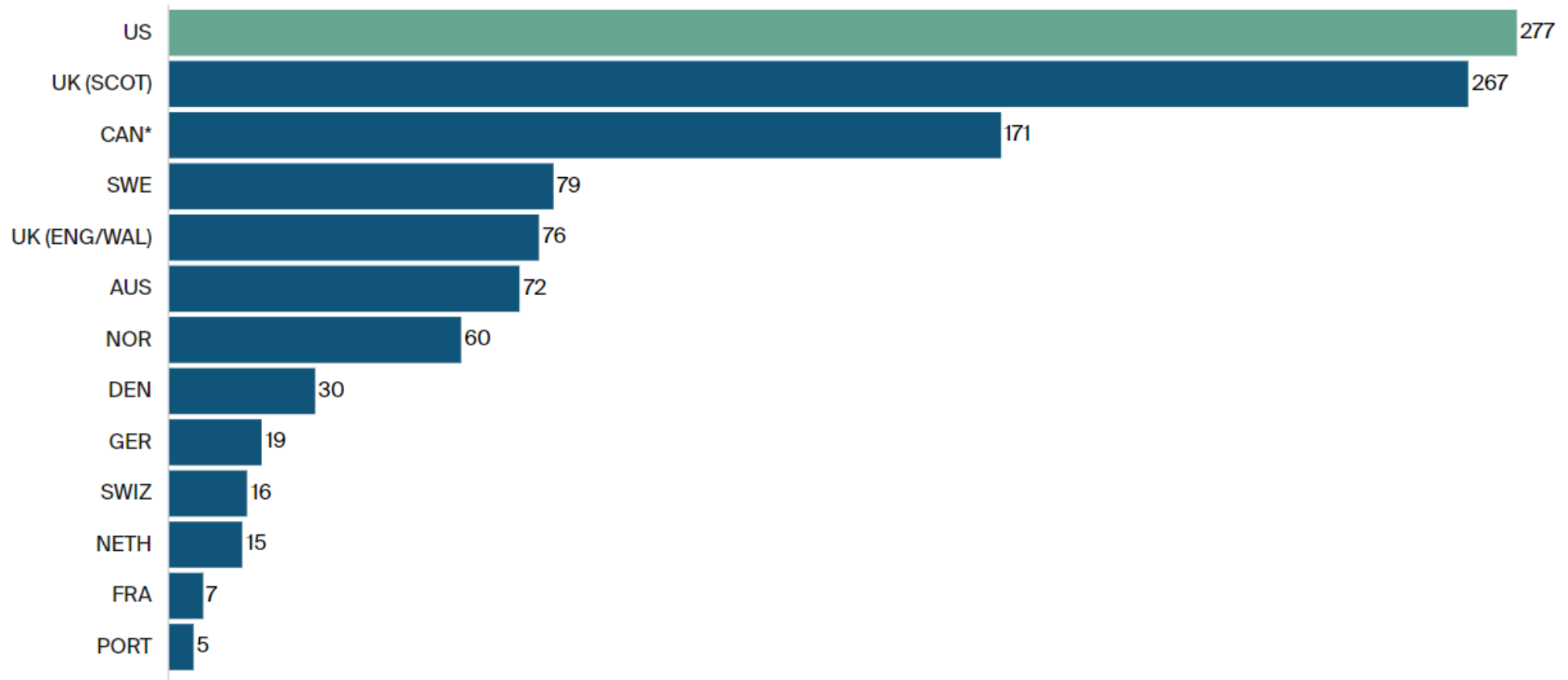
1. Expanding access to evidence-based treatment
2. Advancing **racial equity** issues in our approach to drug policy
3. Enhancing evidence-based **harm reduction** efforts
4. Supporting evidence-based prevention efforts to reduce youth substance use
5. Reducing the supply of illicit substances
6. Advancing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



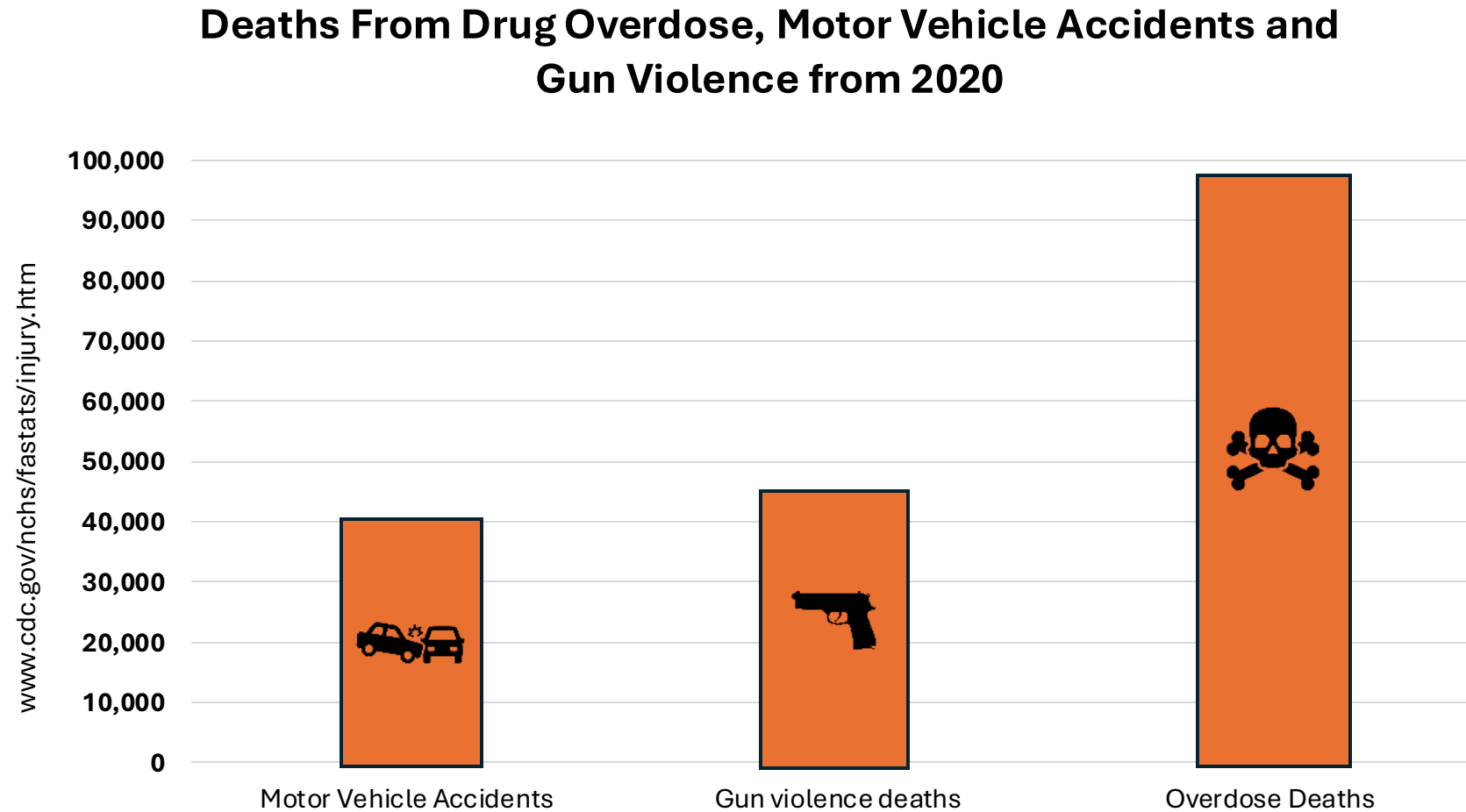
EXECUTIVE OFFICE OF THE  
PRESIDENT  
OFFICE OF NATIONAL  
DRUG CONTROL POLICY  
Washington, DC 20503



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

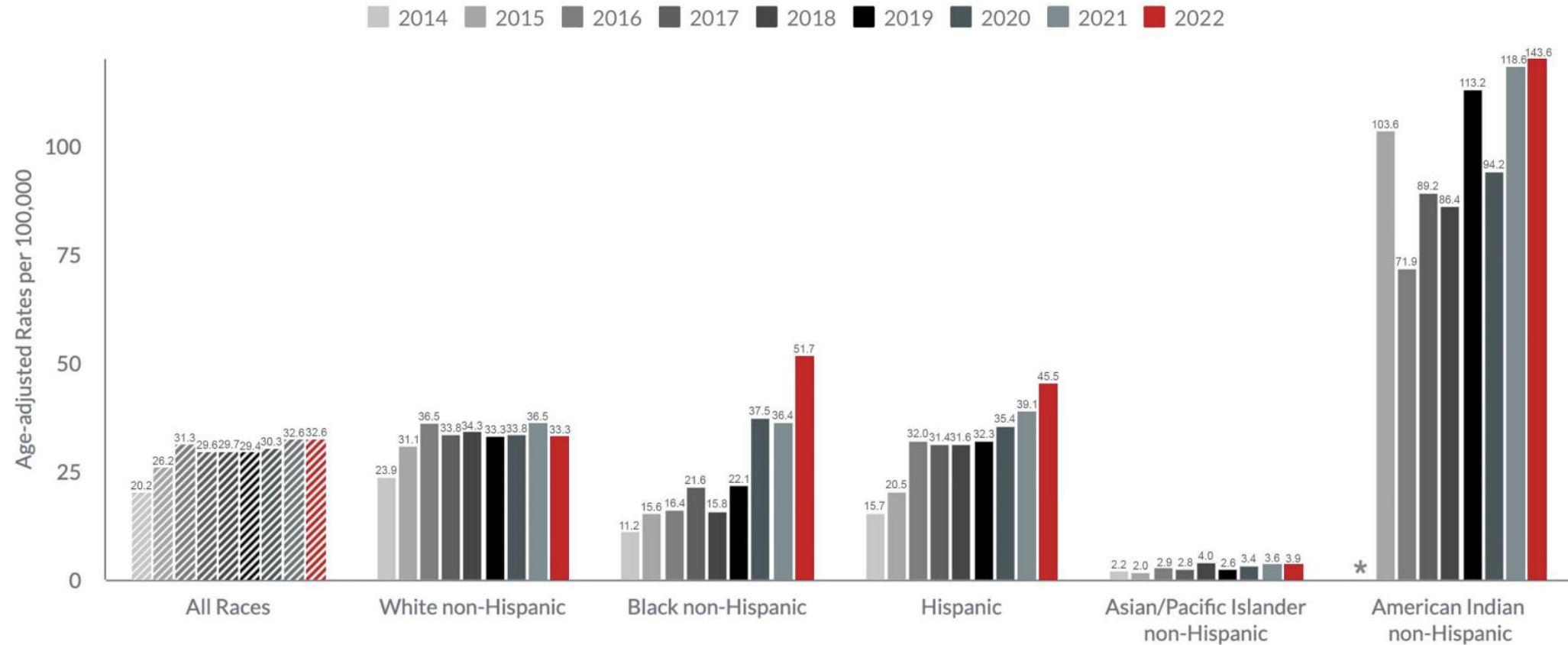


# Overdose is the leading cause of accidental injury death..... By far!



# Increases in overdose deaths since 2019, especially among Black, Hispanic, and American Indian people

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





- People without opioid tolerance unwittingly exposed to fentanyl via non-opioids
  - *Innovate to focus on engaging people who use stimulants and counterfeit non-opioid prescription pills*

- People without opioid tolerance unwittingly exposed to fentanyl & non-opioids
  - *Innovate to focus on engaging people who use stimulants and counterfeit non-opioid prescription pills*



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 unwittingly exposed to fentanyl via non-opioids
  - *Innovate to focus on engaging people who use stimulants and counterfeit non-opioid prescription pills*


































## Overdose from Unintentional Fentanyl Use when Intending to Use a Non-opioid Substance: An Analysis of Medically Attended Opioid Overdose Events




Alexander R. Bazazi · Patrick Low · Bryson O. Gomez · Hannah Snyder ·  
Jeffrey K. Hom · Christine S. Soran · Barry Zevin · Michael Mason ·  
Joseph Graterol · Phillip O. Coffin

Among 448 opioid overdose survivors in SF  
6/2022-9/2022

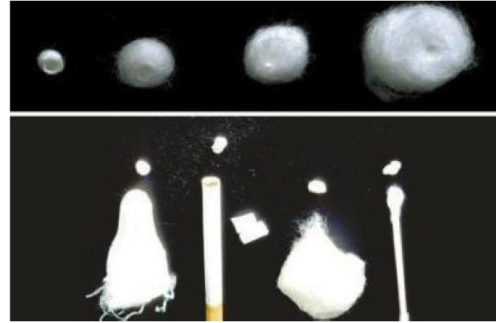
- 57% intended to use opioids
- 43% intended to use MA or cocaine
  - 58% of Black and 52% of Latinx survivors
  - 29% of White Survivors

# Harm Reduction Evidence Map

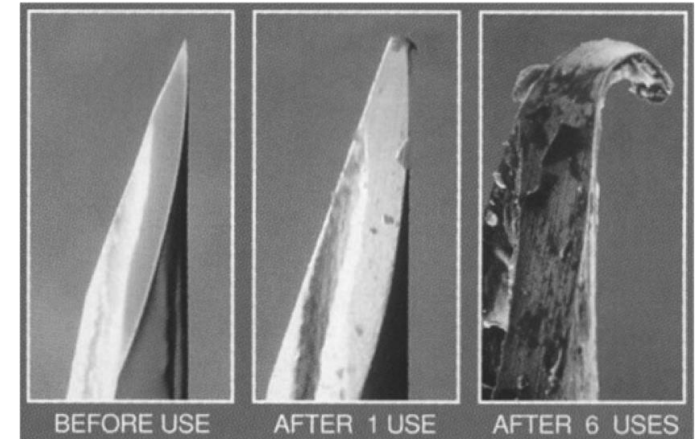
Interventions	Main outcomes*											
	HIV incidence / transmission	HIV prevalence	HCV incidence / transmission	HCV prevalence	Overall risky behavior	Illicit opioid use	Injecting behavior	Injection drug use	Sharing needles/ syringes	Drug treatment entry	Overdose	Deaths
NSEP												
OAT												
Behavioral / educational												
SCF/SIF												
THN												
Combined interventions												

-  High Quality
-  Moderate Quality
-  Low Quality

Size proportional to # of reviews  
(larger=3 or more; medium=2; small=1)



What do syringe service programs do?





# What do syringe service programs do?

Scientists, including those at the Centers for Disease Control and Prevention (CDC), have studied SSPs for more than 30 years and found that comprehensive SSPs benefit communities.



SSPs save lives by lowering the likelihood of deaths from overdoses.



Providing testing, counseling, and sterile injection supplies helps prevent outbreaks of other diseases. For example, SSPs are associated with a **50% decline** in the risk of HIV transmission.



Users of SSPs were **three times more likely** to stop injecting drugs.



Law enforcement benefits from reduced risk of needlesticks, **no increase in crime**, and the ability to save lives by preventing overdoses.



When two similar cities were compared, the one with an SSP had **86% fewer syringes** in places like parks and sidewalks.





# Rationale for overdose education and naloxone distribution



[Patient education videos and materials  
at prescribetoprevent.org](https://prescribetoprevent.org)

- Most people who use opioids do not use alone
- Known risk factors:
  - Mixing substances, abstinence, using alone, unknown source
- Opportunity window:
  - Opioid overdoses take minutes to hours and is reversible with naloxone
  - For fentanyl, the window is seconds to minutes
- Bystanders are trainable to recognize and respond to overdoses
- Fear of public safety



**U.S. FOOD & DRUG**  
ADMINISTRATION

FDA NEWS RELEASE

# FDA Approves First Over-the-Counter Naloxone Nasal Spray

*Agency Continues to Take Critical Steps to Reduce Drug Overdose Deaths Being Driven Primarily by Illicit Opioids*

[f Share](#)

[t Tweet](#)

[in LinkedIn](#)

[✉ Email](#)

[🖨 Print](#)

**For Immediate Release:** March 29, 2023

Results

Price and other details may vary based on product size and color.



Sponsored ⓘ  
**Naloxone HCl Nasal Spray 4mg, Emergency Treatment of Opioid Overdose, 2 Single-Dose Nasal Spray**  
0.01 Fl Oz (Pack of 2)  
★★★★☆ ~ 14  
**\$39<sup>99</sup>** (\$6,665.00/Fl Oz) List: \$43.47  
FREE delivery **Fri, May 3**  
Or fastest delivery **Wed, May 1**



Sponsored ⓘ  
**NARCAN Nasal Spray 4 mg, Emergency Treatment of Opioid Overdose, 2 Single-Dose Devices**  
★★★★★ ~ 268  
5K+ bought in past month  
**\$44<sup>97</sup>** (\$22.49/Count)  
✓prime  
FREE delivery **Fri, May 3**  
Or fastest delivery **Mon, Apr 29**



Sponsored ⓘ  
**Naloxone Cardboard Tabletop Distribution Stand | Alternative to a Naloxone Vending Machine**  
**\$49<sup>95</sup>**  
✓prime  
FREE delivery **Fri, May 3**  
Or fastest delivery **Thu, May 2**  
Only 17 left in stock - order soon.  
Small Business ~



**NARCAN Nasal Spray 4 mg, Emergency Treatment of Opioid Overdose, 2 Single-Dose Devices**  
★★★★★ ~ 268  
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**Overall Pick ⓘ**  
**Naloxone Case for Opioid Overdose Kits | Custom Designed Hardshell Case Holds All Formulations of...**  
1 Count (Pack of 1)  
★★★★★ ~ 377  
**\$15<sup>99</sup>** (\$15.99/Count)



**Naloxone Overdose Emergency Kit Cabinet - Includes Alarm and Optional Locking System - Designe...**  
★★★★★ ~ 5  
**\$139<sup>00</sup>** (\$139.00/Count)  
Save more with Subscribe & Save  
✓prime



**Best Seller**  
**Demo Training Devices, Pack of 4, for use in Instruction of Nasal naloxone.**  
★★★★★ ~ 18  
100+ bought in past month  
**\$27<sup>99</sup>** (\$27.99/Count)  
✓prime  
FREE delivery **Fri, May 3** on \$35 of items



**Opioid Overdose Prevention Test Kit - Includes 5 Fentanyl Test Strips for Pills, Powders & Liquids + Naloxone...**  
★★★★★ ~ 3  
**\$19<sup>95</sup>** (\$19.95/Count)  
Small Business ~



**WNL Products 5000NMT Nasal Med Trainer, Naloxone Training Device, for use in Educational Narcan Training Only - 5 Pack**  
50+ bought in past month  
**\$26<sup>95</sup>** (\$5.39/Count)

amazon

Delivering to Newton 02458  
Update location

All ▾ naloxone

≡ All

Medical Care ▾

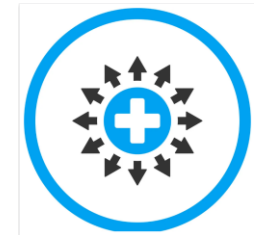
Groceries ▾

Best Sellers

Amazon Basics

# Broaden naloxone distribution

- Partner with Harm Reduction Providers to get naloxone to those at highest risk for overdose
  - Community Program Standing Order
- Facilitate Pharmacy distribution
  - Over-the-Counter Placement and Cost offset
  - Statewide Standing Order
  - Insurance Coverage
- Engage addiction treatment providers, federally qualified health centers, emergency departments
- First responders – administration and leave behind





# Making a risk reduction plan with your patients

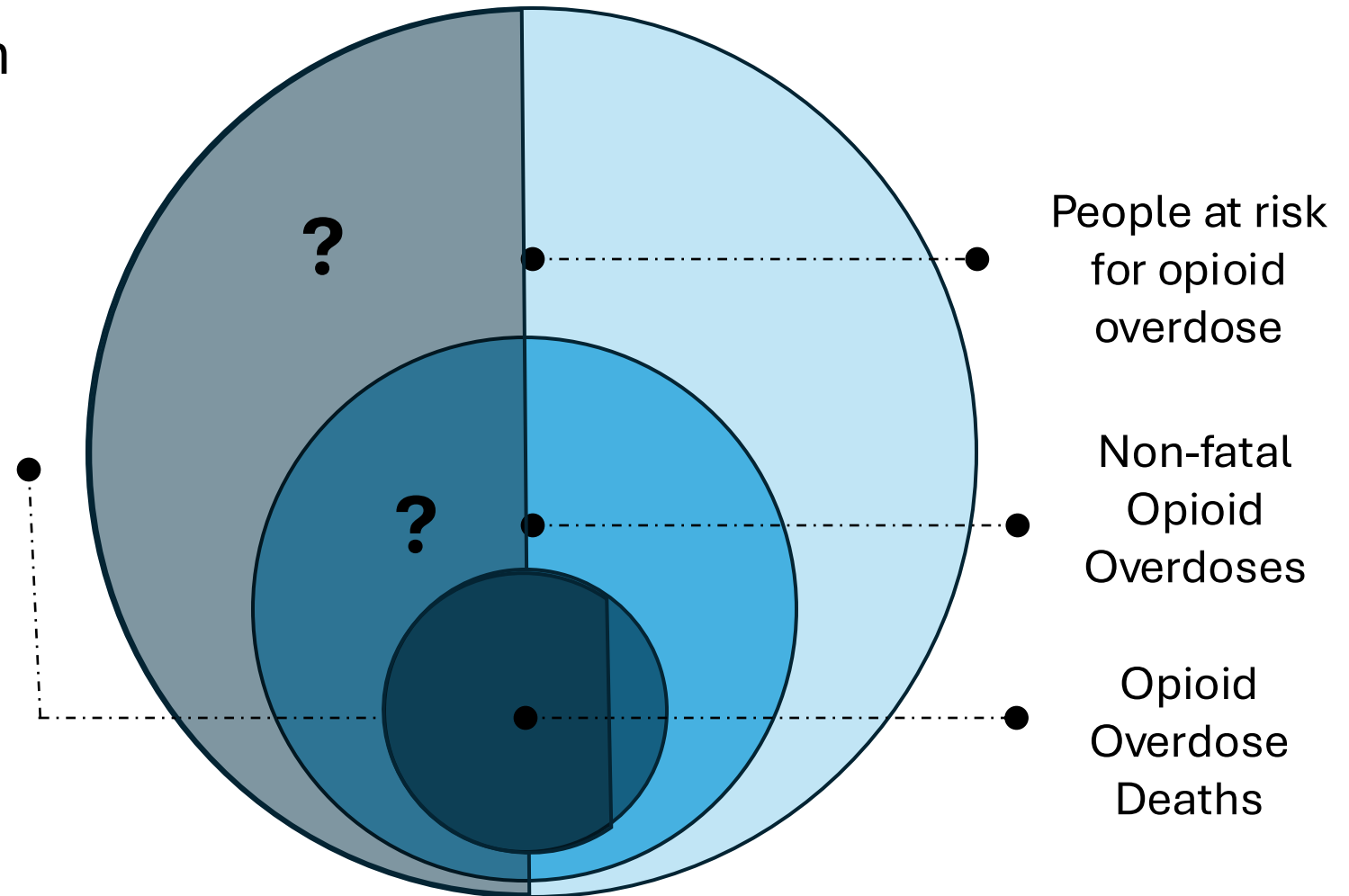
- ***Ask your patients:***
  - How do you protect yourself against overdose?
    - Plan A? Plan B? Plan C?
  - How do you keep your medications safe at home?
- ***And their loved ones:***
  - What is your plan if you witness an overdose in the future?
  - Have you received training to prevent, recognize, or respond to an overdose?





# Challenge: What is the rate of unwitnessed drug use? What can we do about it?

- Unwitnessed drug is common
- >90% of deaths occur during unwitnessed drug use
- Naloxone only works if there is a witness
- Naloxone limited by ceiling effects
  1. Community saturation
  2. Individual - precipitated withdrawal



# Challenge: What is the rate of unwitnessed drug use? What can we do about it?

## Opportunities: Compassionate Overdose Response

1. Titratable naloxone + communicative rescuers
  - Not higher doses, longer acting antagonists -> unintended consequences, unproven benefit

*8mg vs. 4mg naloxone:  
No benefit, more withdrawal*

Morbidity and Mortality Weekly Report

## Comparison of Administration of 8-Milligram and 4-Milligram Intranasal Naloxone by Law Enforcement During Response to Suspected Opioid Overdose — New York, March 2022–August 2023

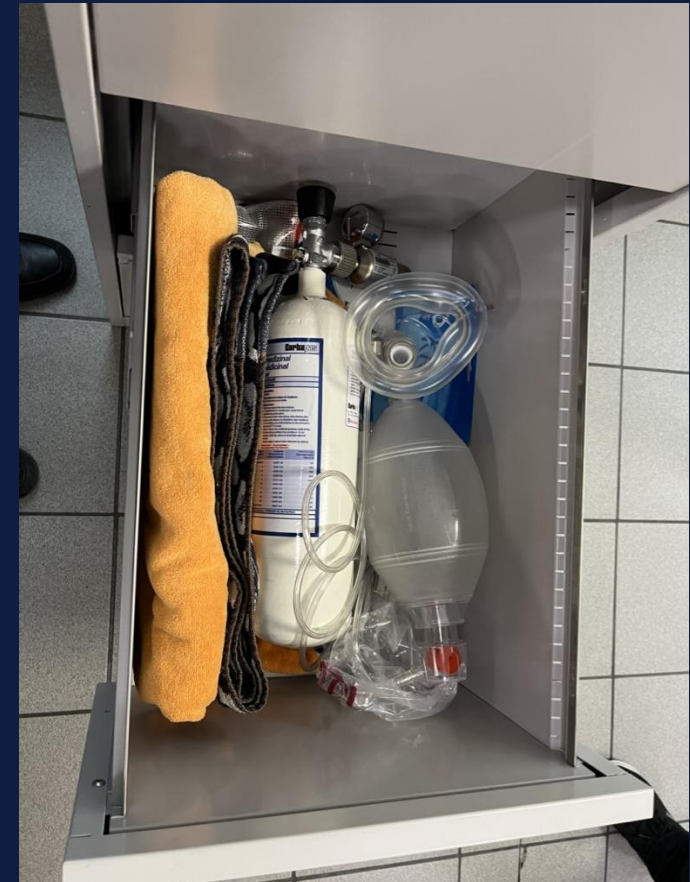
Emily R. Payne, MSPH<sup>1</sup>; Sharon Stancliff, MD<sup>1</sup>; Kirsten Rowe, MS<sup>1</sup>; Jason A. Christie<sup>2</sup>; Michael W. Dailey, MD<sup>3</sup>

# Challenge: What is the rate of unwitnessed drug use? What can we do about it?

## Opportunities: Compassionate Overdose Response

1. Titratable naloxone + communicative rescuers
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  - Experienced rescuers spare naloxone
2. In-person and virtual witnessing
  - Overdose Prevention Centers

## City of Zurich Drug Consumption Facility



Oxygen and ambu bag, but no naloxone!

# Supervised Injection Facility=Drug Consumption Spaces= Overdose Prevention Centers

- Legal facilities where people can inject pre-obtained drugs under supervision
- Objectives: Public Health + Public Safety
  - Reduce overdose
  - Reduce injection-related infections
  - Improve access to substance use disorder treatment
  - Reduce public drug use
  - Improve neighborhood security
- Existing Facilities
  - Facilities throughout Europe and Canada
  - Sydney, Australia
  - New York City 2021



# *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

By **Jeffery C. Mays** and **Andy Newman**

Nov. 30, 2021

[NBC Nightly News – Youtube link](#)

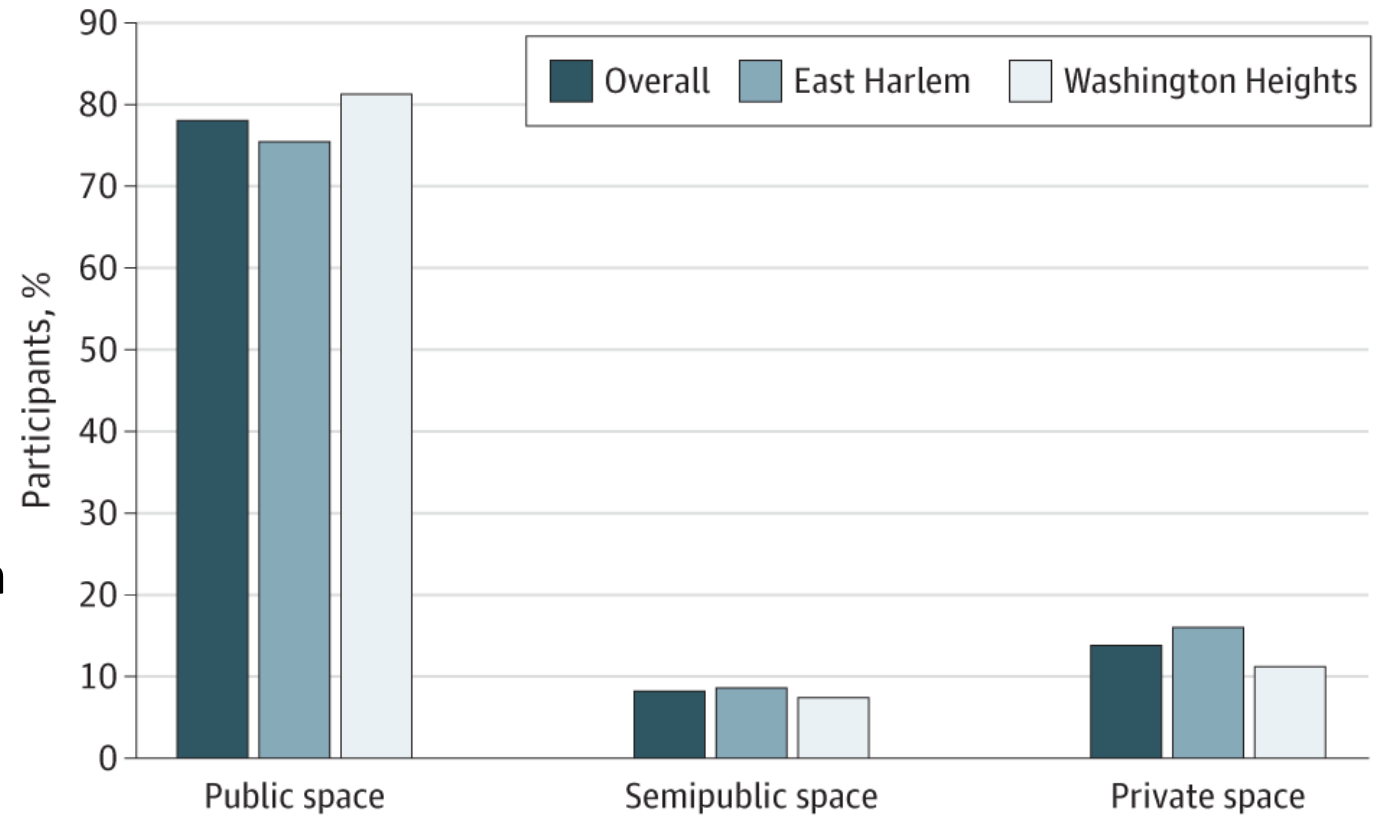


## *Nation's First Supervised Drug-Injection Sites Open in New York*

First 2 months – 11/21-01/22

- 613 individuals used 5975 times
- 125 overdose responses
  - 19 naloxone administrations
  - 35 oxygen uses
- 45 overamping episodes
  - hydration, cooling, de-escalation
- 5 EMS calls
  - 3 transports
- No fatal overdoses

Figure. Reported Drug Use Location If Overdose Prevention Center Was Not an Option



Harocopos A et al. First 2 Months of Operation at First Publicly Recognized Overdose Prevention Centers in US. JAMA Netw Open. 2022 Jul 1;5(7):e2222149.

**The New York Times**

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August 22, 2022

# ***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.

---



# Challenge: What is the rate of unwitnessed drug use? What can we do about it?

## Opportunities: Compassionate Overdose Response

1. Titratable naloxone + communicative rescuers
  - Not higher doses, longer acting antagonists -> unintended consequences, unproven benefit
  - Experienced rescuers use spare naloxone
2. In-person and virtual witnessing
  - Overdose Prevention Centers
  - Overdose prevention helplines, apps and devices
3. Support practices of safety – “Back to Basics”
  - EVERYONE needs an overdose safety and self-care plan and a network they can count on



12

2023/2024 Overdose Detections/911  
Activations

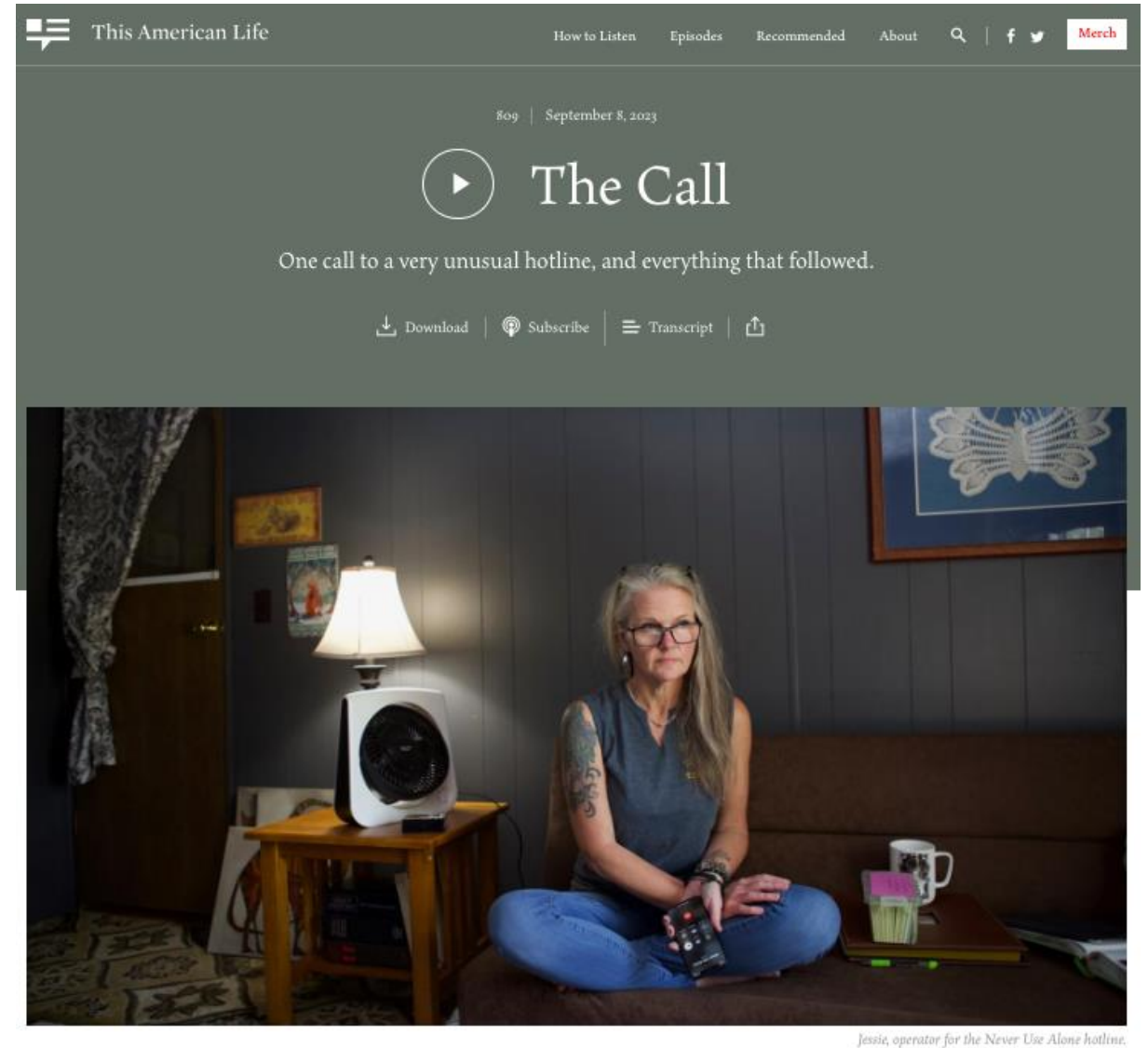
2,205+

2023/2024 use events supervised

# Challenge: What is the rate of unwitnessed drug use? What can we do about it?



**Scan me!**



<https://www.thisamericanlife.org/809/the-call>

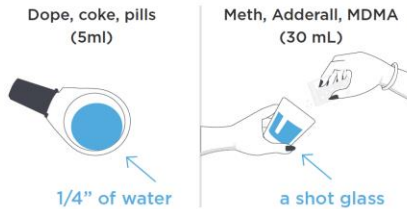
# USE FENTANYL TEST STRIPS

## TAKE THESE STEPS:

- 1 Prepare the test
- 2 Dip the strip
- 3 Wait 5 minutes
- 4 Read results
- 5 Make a plan

### 1 PREPARE THE TEST

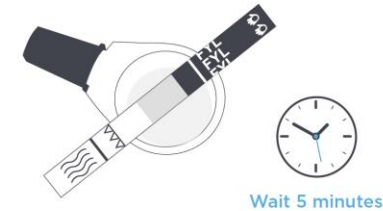
- Take a small amount of product and put it in a container (cooker, cup, shot glass).
  - + For dope, coke, or pills add 5 mL (a cooker or 1/4 inch) water.
  - + For meth, Adderall, MDMA, add 30 mL (shot glass) of water.
- To test pills, scrape from middle or crush.



### 3 WAIT 5 MINUTES

- Set the strip on a horizontal surface.
- Wait 5 minutes.
- While waiting for results, think about what you will do if the results are positive.

*Remember: There is always a risk for false results. Always take care when using.*



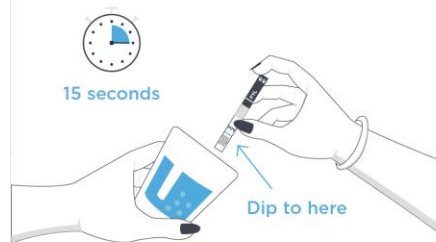
### 5 MAKE A PLAN

- If not using, flush drugs down toilet. Don't put in trash.
- Do a test dose or use less.
- If you use, include a spotter (someone ready and able to respond). Use with others and take turns.
- Carry Naloxone.



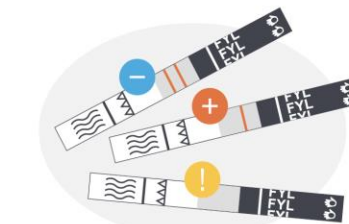
### 2 DIP THE STRIP

- Dip the bottom of the strip into the water just up to the solid blue line — NOT past it!
- Hold the strip in the water for 15 seconds.



### 4 READ RESULTS

- **Two lines:** negative, likely *does not* contain fentanyl.
- **One line:** positive, likely contains fentanyl.
- **No lines:** invalid, use another strip to try again. Make sure you are not putting the strip in past the solid blue line.



**HelplineMA.org**  
800-327-5050

Other drugs than fentanyl can cause  
an overdose or a bad reaction.

Check drugs before use at a  
MADDs testing site (where possible):  
[www.streetcheck.org](http://www.streetcheck.org)



RESEARCH

Open Access

# The Bronze Age of drug checking: barriers and facilitators to implementing advanced drug checking amidst police violence and COVID-19



Jennifer J. Carroll<sup>1,2\*</sup>, Sarah Mackin<sup>3</sup>, Clare Schmidt<sup>3</sup>, Michelle McKenzie<sup>2,4</sup> and Traci C. Green<sup>2,5</sup>

## Barriers to drug checking:

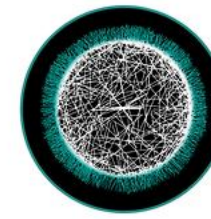
- technological complexity of the advanced spectroscopy devices
- spectroscopy devices are powerful but not always well-suited for street-based drug checking efforts
- legal ambiguity of drug checking
- disruptive and oppositional police



*“The reality is the technology has not caught up...For [mobile outreach], ideally, we would have something that was cheaper. Like a Toughbook. That’s maybe that size or less. And that’s super accurate and can tell you percentages. And what the cut is. And it doesn’t require a lot of kinda like finagling to get a good read on it...We are in, like, the Bronze Age of drug checking.”*

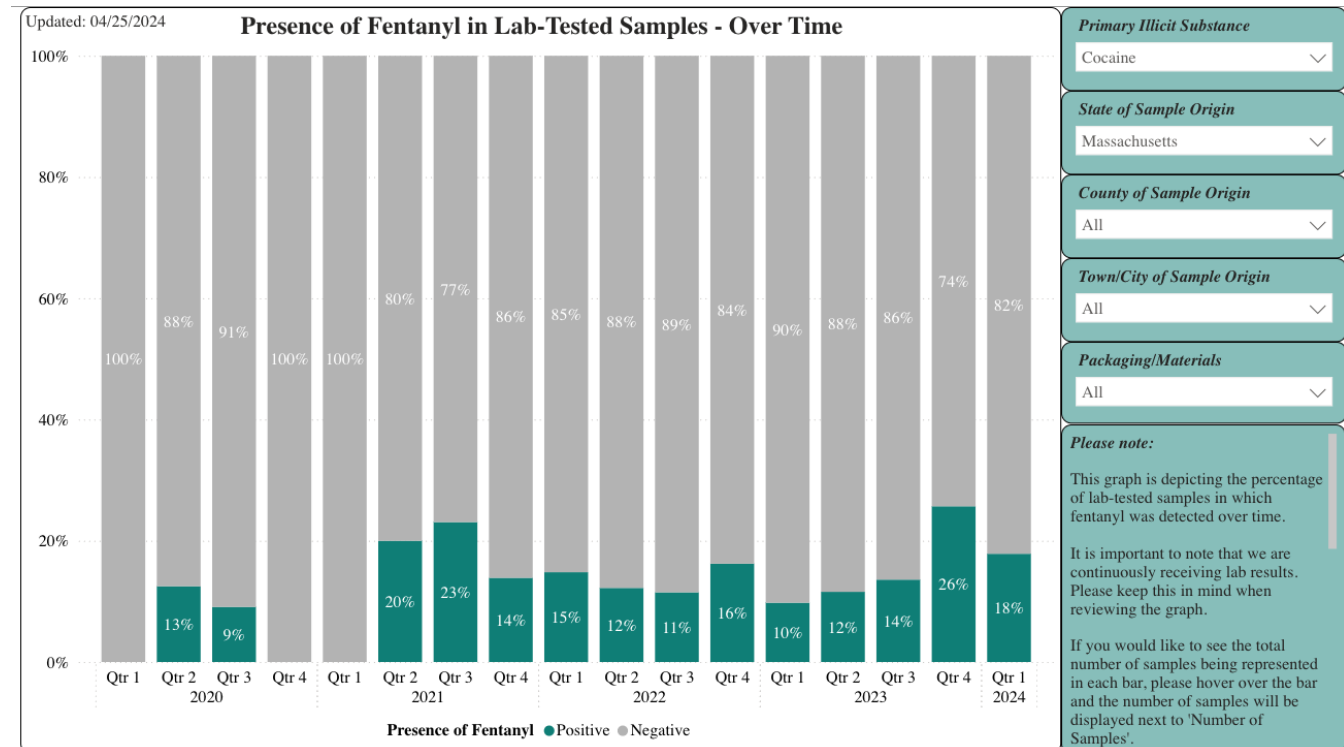
An increasing, but unknown, number of people who do not have opioid use disorder are overdosing due to fentanyl contamination of cocaine, methamphetamine, and counterfeit prescription pills

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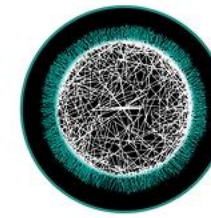
**STREET CHECK  
COMMUNITY  
DRUG CHECKING**

Streetcheck.org



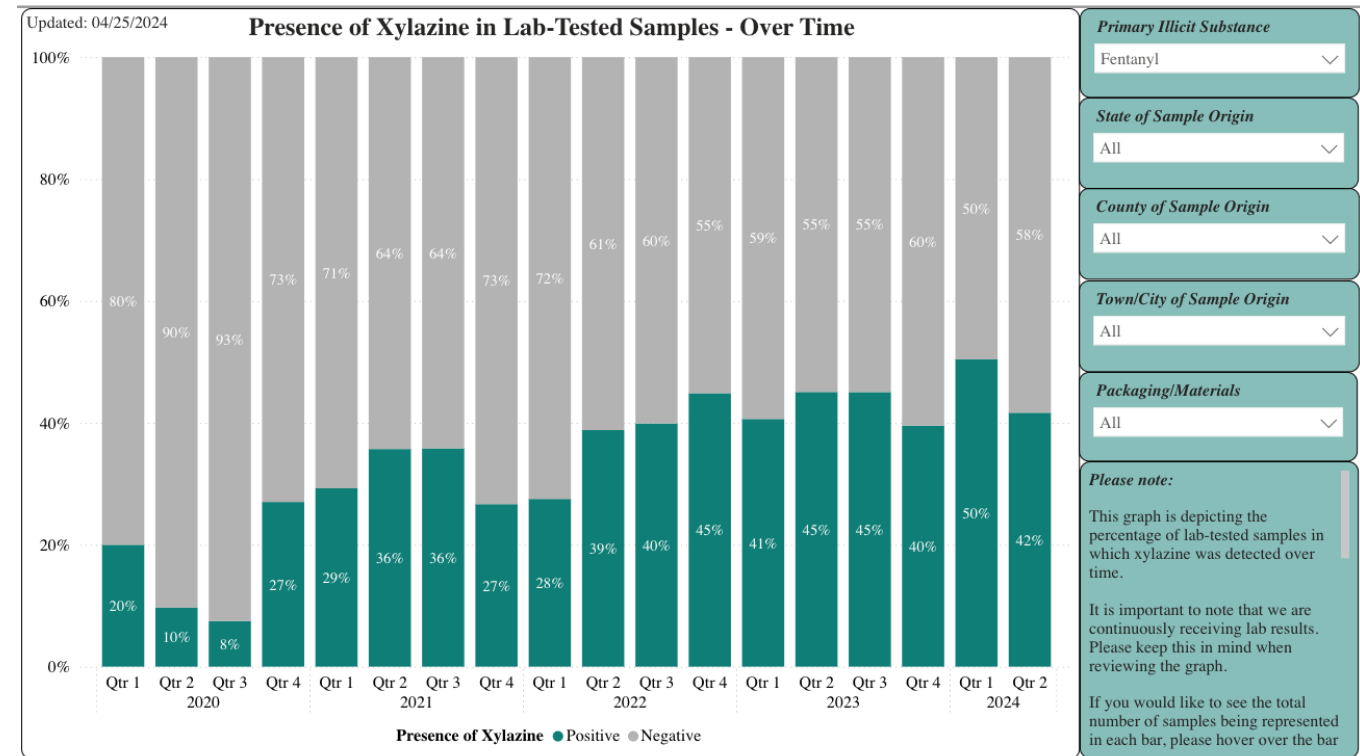
## Tracking xylazine emerging...

- Adrenergic alpha(2) agonist that is a longer acting sedative and anesthetic
  - Synergizes with fentanyl for overdose
  - Complicates MOUD initiation
  - Wounds at injection sites and elsewhere




**STREET CHECK  
COMMUNITY  
DRUG CHECKING**

Streetcheck.org



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PPMC Wound Care Guidelines:  
**Xylazine-Induced Wounds**

January 2024

**WHAT ARE XYLAZINE-INDUCED WOUNDS?**

Xylazine (tranq) is a veterinary sedative that is increasingly being found in the opioid supply sold on the street. A hallmark of chronic xylazine use is the **associated skin ulcerations** characterized by non-viable tissue.

Wounds can develop at the site of injection, or away from the injection site (e.g. arms or legs that we never injected), or in a patient who does not inject but consumes this drug through other routes (e.g. smoking).

**Pre-medicate! And give time for meds to work!**





Soak the dressing with NS to decrease pain when removing

Ask the patient if they would rather remove the dressing themselves

**When do you need to place a consult?**

Wound care consults:  
If there is concern for infection, or if non-viable tissue is present in the wound bed, place a wound care consult.

Consults for surgery:  
Optimal treatment for these wounds is debridement. Discuss with the provider if there is need for involvement of additional services.  
• Ex: general surgery, plastics, ortho

<b>Step 1:</b> <b>Cleanse the Wound</b>		<b>NS or Sea-clens</b> <small>for odor and/or purulent drainage:</small> <b>Dakin's 0.125%</b>	<small>Purpose of wound cleansing is to remove surface bacteria and debris from the wound bed. After removing a wound dressing, the wound and surrounding skin should be gently cleansed and dried. Be sure to remove dressing and cleanse wound <b>before</b> assessing the wound for any odor.</small>		
<b>Step 2: Apply dressing</b>		<p><b>Is there a clean wound bed?</b></p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"> <b>Xeroform</b>  <small>Cut the dressing to the wound size to prevent maceration</small> </div> <div style="font-size: 2em; margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"> <b>Island dressing (scant/small drainage)</b>  <b>ABD and kerlix (moderate/large drainage)</b>  <b>Mepilex (hard to dress areas)</b> </div> <div style="font-size: 2em; margin: 0 5px;">➔</div> <div style="text-align: center;"> <small>Δ daily and prn</small> </div> </div>			
		<p><b>Is there non-viable tissue in the wound bed? Slough or eschar present (but no s/s infx)</b></p> <p><b>Consult wound care. Discuss with provider if general surgery should be consulted to further evaluate.</b></p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"> <b>Medihoney*</b>  <small>Apply to wound bed</small> </div> <div style="font-size: 2em; margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"> <b>Xeroform</b>  <small>Cut the dressing to the wound size to prevent maceration</small> </div> <div style="font-size: 2em; margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"> <b>Island dressing (scant/small drainage)</b>  <b>ABD and kerlix (moderate/large drainage)</b>  <b>Mepilex (hard to dress areas)</b> </div> <div style="font-size: 2em; margin: 0 5px;">➔</div> <div style="text-align: center;"> <small>Δ daily and prn</small> </div> </div> <p><small>*Do not use medihoney if patient has allergy to <b>bees or honey</b>. Skip medihoney, and apply xeroform + secondary dressing.</small></p>			
		<p><b>Is there concern for infection? S/S to look for: Purulent drainage, odor, surrounding warmth, erythema, or induration</b></p> <p><b>Consult wound care. Discuss with provider if general surgery should be consulted to further evaluate.</b></p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"> <b>Dakin's 0.125% - moistened gauze</b>  <small>Must be ordered from pharmacy</small> </div> <div style="font-size: 2em; margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"> <b>Island dressing (scant/small drainage)</b>  <b>ABD and kerlix (moderate/large drainage)</b>  <b>Mepilex (hard to dress areas)</b> </div> <div style="font-size: 2em; margin: 0 5px;">➔</div> <div style="text-align: center;"> <small>Scant/small drainage: Δ daily and prn Mod/large drainage: Δ q12 and prn</small> </div> </div>			
		<p><b>Are there multiple small wounds?</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <b>Intact scabs:</b>  <b>Superficial wounds, partial scabs:</b>  <b>Small wounds with drainage:</b>  <b>Small wounds with slough:</b> </td> <td style="width: 50%; border: none;">                     Leave ota                      Apply A&amp;D, leave ota                      Xeroform + foam dressing, change daily                      Medihoney + foam dressing, change daily                 </td> </tr> </table>	<b>Intact scabs:</b> <b>Superficial wounds, partial scabs:</b> <b>Small wounds with drainage:</b> <b>Small wounds with slough:</b>	Leave ota Apply A&D, leave ota Xeroform + foam dressing, change daily Medihoney + foam dressing, change daily	
<b>Intact scabs:</b> <b>Superficial wounds, partial scabs:</b> <b>Small wounds with drainage:</b> <b>Small wounds with slough:</b>	Leave ota Apply A&D, leave ota Xeroform + foam dressing, change daily Medihoney + foam dressing, change daily				

Have a "go bag" ready for the patient with **1 week's worth** of dressing supplies. Keep in the room in case the patient is discharged or decides to leave.

Collaborate with the provider to obtain wound care orders per these guidelines





## CHECK YOUR RESTROOMS YOUR ACTIONS COULD HELP SAVE A LIFE

### KNOW WHAT TO LOOK FOR

- Unresponsive
- Slow breathing
- Lack of breathing
- Blue lips/fingertips

### KNOW WHAT TO DO

- Call 911 immediately
- Perform rescue breathing
- Administer Narcan



# Additional Innovations to Optimize Safety

- Culturally responsive substance use care
- Making medication for opioid use disorder work better
  - Liberalized methadone access
  - Buprenorphine induction innovations
  - Long-acting morphine, injectable opioid agonists
- Decriminalization
- Safer Supply
- Safe spaces for oversedation
- Bathroom safety
- Mobile and Post-overdose outreach
- Managed alcohol programs
- Bad date sheets
- Pre and Post Exposure Prophylaxis

## I am living proof that methadone treatment works.

I had a horrible addiction to heroin. I didn't really care if I lived or died. My family wanted me to change, but I didn't know how. I started methadone treatment. It's medicine. It helped me stop craving and taking drugs. Today I have my family. Every Sunday I cook at home. My kids and grandkids come to visit. Thanks to methadone treatment, I'm living life.

— Camille

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 or visit [nyc.gov/health/addictiontreatment](http://nyc.gov/health/addictiontreatment) for more information.

Thrive  
NYC

NYC  
Health

NYC  
Health

## 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 or visit [nyc.gov/health/addictiontreatment](http://nyc.gov/health/addictiontreatment) for more information.

Thrive  
NYC

NYC  
Health

NYC  
Health



A photograph of the Boston Medical Center Emergency Department at night. The building is dark, but the entrance is brightly lit. A large sign above the entrance reads "BOSTON MEDICAL" in blue and "EMERGENCY" in large red letters. A red traffic light is visible on the right side of the entrance. Several people, including medical staff in white coats and blue scrubs, are standing near the entrance. A white ambulance is parked on the left side of the entrance.

BOSTON  
MEDICAL

EMERGENCY

## Learning Objectives

1. Define harm reduction and apply it to public health
2. Explain the rationale and evidence for:
  - a. Needle syringe access
  - b. Naloxone rescue kits
  - c. Witnessed consumption
  - d. Drug checking

# ANY POSITIVE CHANGE

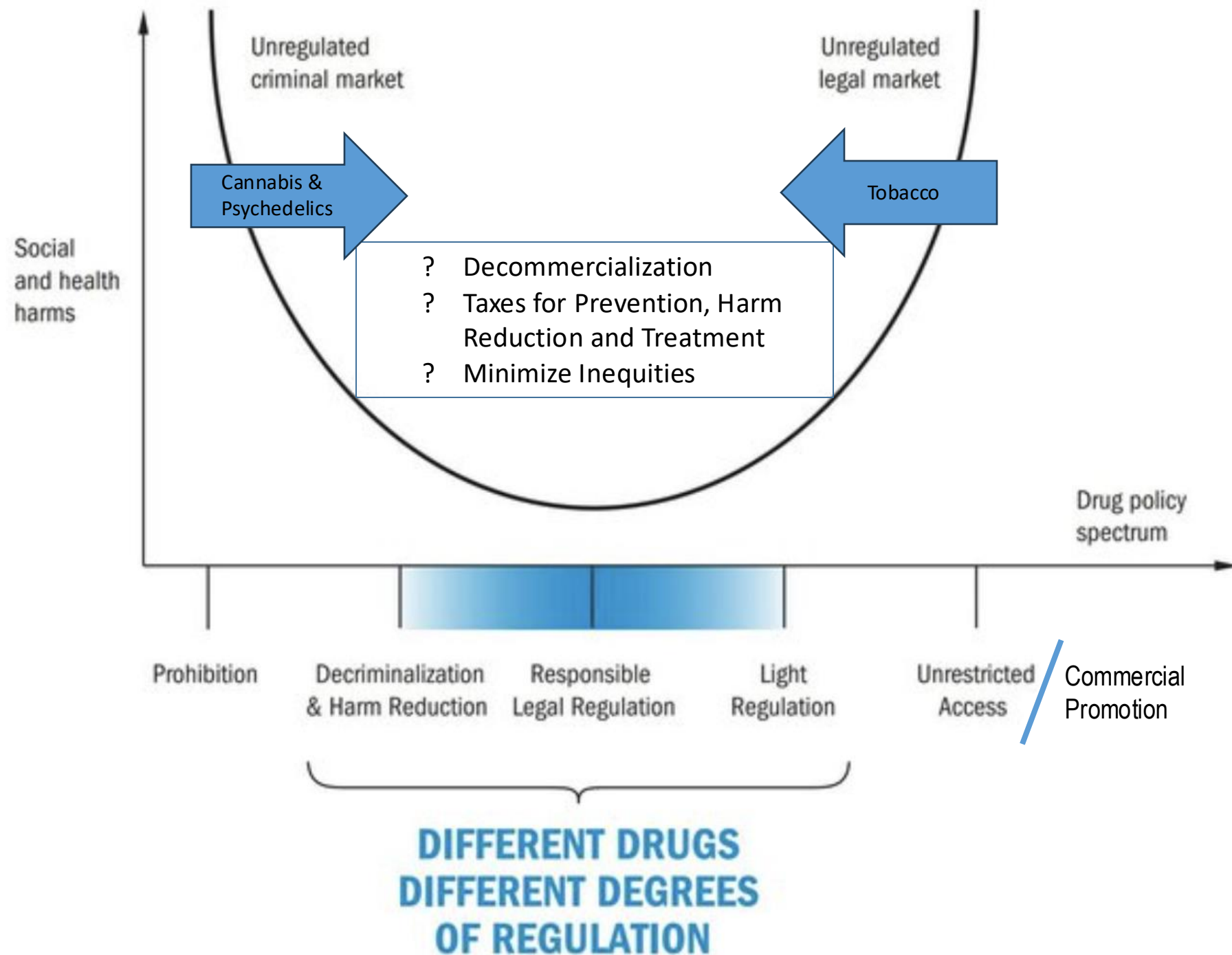


[awalley@bu.edu](mailto:awalley@bu.edu)



Safer Supply

## Paradox of Prohibition and Commercialization





# CDC Recommends PrEP in People who Inject Drugs

**Table 1: Summary of Guidance for PrEP Use**

	Men Who Have Sex with Men	Heterosexual Women and Men	Injection Drug Users
Detecting substantial risk of acquiring HIV infection	HIV-positive sexual partner Recent bacterial STI High number of sex partners History of inconsistent or no condom use Commercial sex work	HIV-positive sexual partner Recent bacterial STI High number of sex partners History of inconsistent or no condom use Commercial sex work  In high-prevalence area or network	HIV-positive injecting partner Sharing injection equipment Recent drug treatment (but currently injecting)
Clinically eligible	Documented negative HIV test result before prescribing PrEP No signs/symptoms of acute HIV infection Normal renal function; no contraindicated medications Documented hepatitis B virus infection and vaccination status		
Prescription	Daily, continuing, oral doses of TDF/FTC (Truvada), ≤90-day supply		
Other services	Follow-up visits at least every 3 months to provide the following: HIV test, medication adherence counseling, behavioral risk reduction support, side effect assessment, STI symptom assessment At 3 months and every 6 months thereafter, assess renal function Every 6 months, test for bacterial STIs		
	Do oral/rectal STI testing	Assess pregnancy intent Pregnancy test every 3 months	Access to clean needles/syringes and drug treatment services

STI: sexually transmitted infection

Chopanya et al Lancet 2013; Bernard et al Annals Int Med 2016





# Risk Compensation and Moral Hazard

->> *Narcan Party Urban Legend = Fake News*



Naloxone distribution does *not* increase drug use

- Maxwell et al., Journal of Addictive Diseases, 2006;
- Seal et al., Journal of Urban Health, 2005;
- Wagner et al., 2010 International Journal of Drug Policy;
- Doe-Simkins et al, BMC Public Health, 2014
- Jones et al. Addictive Behaviors 2017;71:104-6



# Successful strategies for HIV/AIDS and parallel opportunities for overdose reduction

Treatment <-----> Prevention

## Successful strategies for HIV/AIDS

- HIV testing and risk reduction counseling
- Needle-syringe distribution
- Targeted outreach /peer-driven interventions
- Supervised injection facilities
- Anti-retroviral therapy and opioid agonist treatment
- Comprehensive, collaborative, longitudinal care for individuals with HIV infection
- Coordinated prevention and treatment strategy across public health and the healthcare system
- Major funding across public health and the healthcare system of evidence-based interventions

## Parallel opportunities for overdose reduction

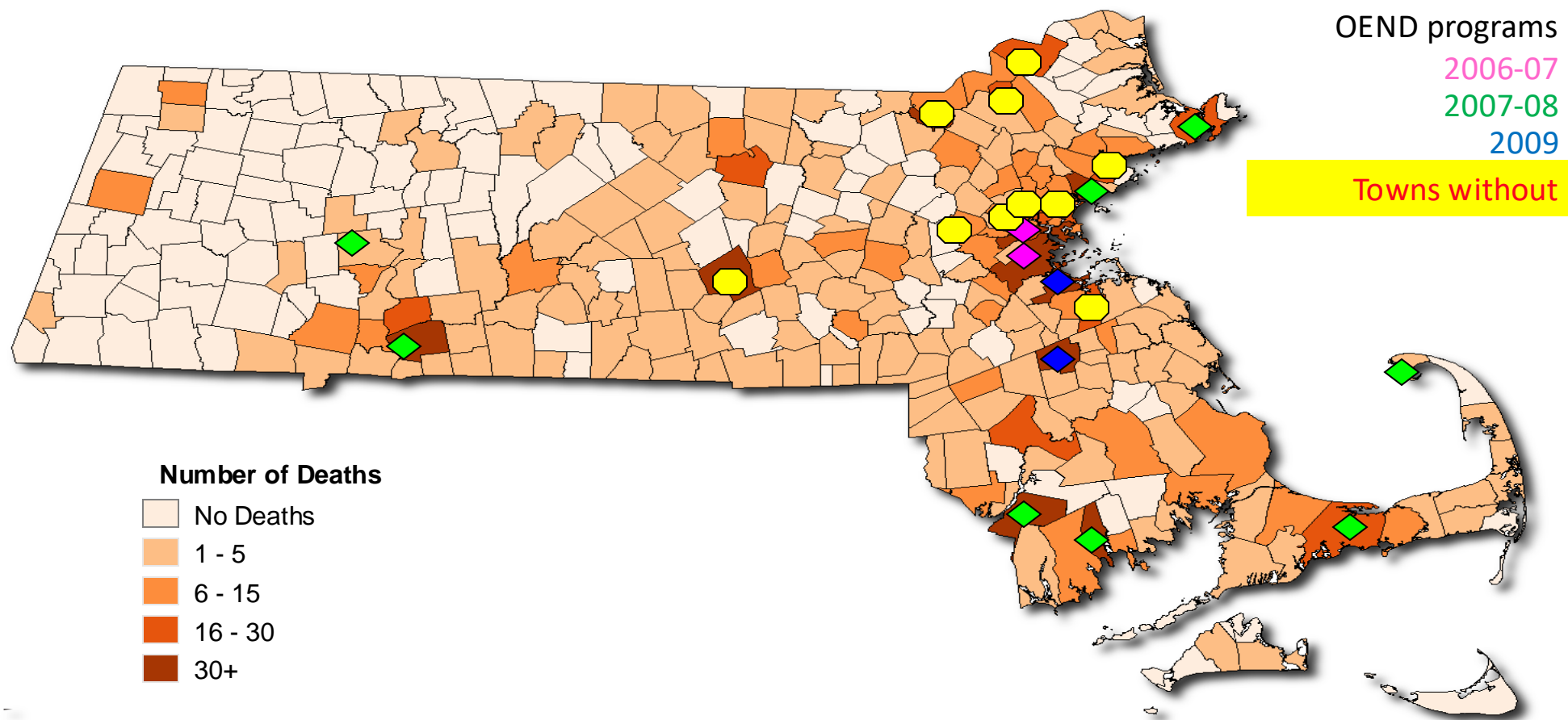
- Overdose risk assessment and reduction counseling
- Naloxone rescue kit distribution
- Targeted outreach /peer-driven interventions
- Supervised injection facilities
- Medication for opioid use disorders
- Comprehensive, collaborative, longitudinal care for individuals with addictions
- Coordinated prevention and treatment strategy across criminal justice, law enforcement, public health and healthcare systems
- Major funding across criminal justice, law enforcement, public health and healthcare systems of evidence-based interventions

# Evidence SIFs DON'T....

Encourage people to initiate injection drug use	<p>Kerr 2007 examined length of injecting career and circumstances surrounding initiation into injection drug use among 1065 SIF users and found that the median years of injection drug use was 15.9 years, and that only 1 individual reported performing a first injection at the SIF. These findings indicate that the SIF's benefits have not been offset by a rise in initiation into injection drug use.</p> <p>Am J Public Health. 2007 Jul;97(7):1228-30.</p>
Attract drug dealers to the area	<p>Wood 2006 used Vancouver Police Department data to examine the effect of a SIF on crime rates before and after opening and no increases were seen with respect to drug trafficking (124 vs. 116) or assaults/robbery(174 vs. 180), although a decline in vehicle break-ins/vehicle theft was observed (302 vs. 227). The SIF was not associated with increased drug trafficking or crimes commonly linked to drug use.</p> <p>Subst Abuse Treat Prev Policy. 2006 May 8;1:13.</p>
Increase relapse rates or decrease rate of stopping injection drug use	<p>Kerr 2006 performed an analysis of periods before and after the facility's opening that showed no substantial increase in the rate of relapse into injected drug use (17% v 20%) and no substantial decrease in the rate of stopping injected drug use (17% v 15%).</p> <p>BMJ. 2006 Jan 28;332(7535):220-2.</p>
Increase the likelihood of overdose	<p>Milloy 2009 surveyed injection drug users and found at baseline, 638 (58.53%) reported a history of non-fatal overdose and 97 (8.90%) reported at least one non-fatal overdose in the last six months. In the analysis, factors associated with recent non-fatal overdose included: sex-trade involvement and public drug use. Using the SIF for <math>\geq 75\%</math> of injections was not associated with recent non-fatal overdose in univariate or multivariate analyses.</p> <p>J Public Health (Oxf). 2010 Sep;32(3):342-9.</p>

# OEND implementation by town

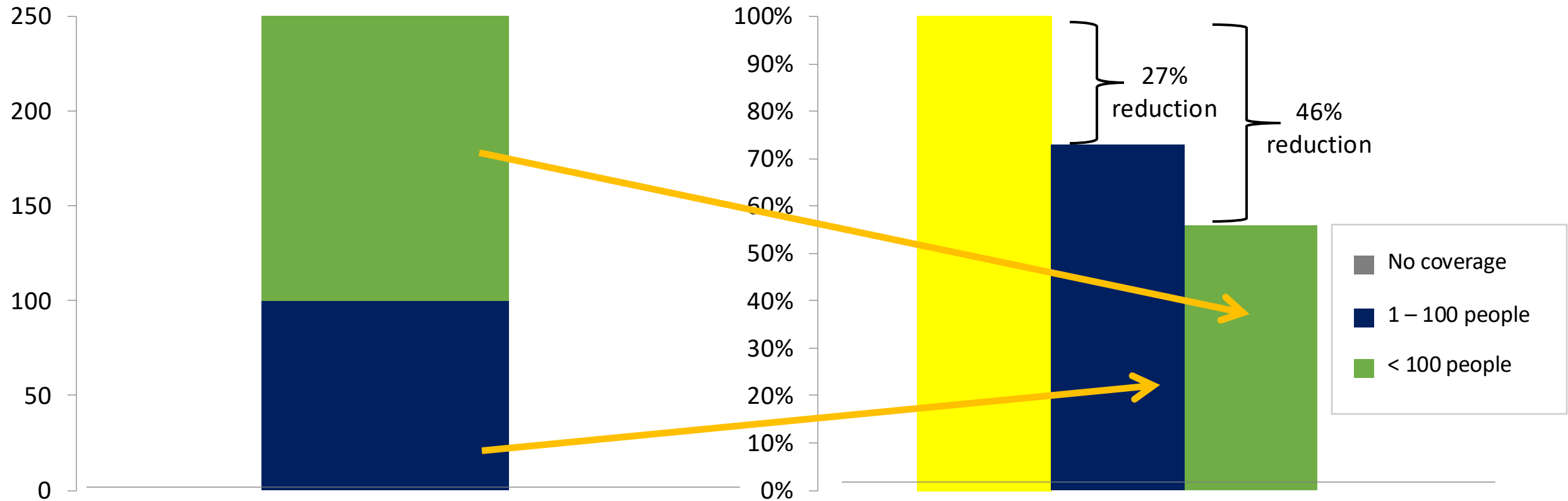
## Opioid Overdose Related Deaths: Massachusetts 2004 - 2006



# Fatal opioid OD rates by OEND implementation

Naloxone coverage per 100K

Opioid overdose death rate







# Drug checking in Massachusetts



**Crack**

**Sold as: Crack**

**ID: 13924**



**ID:** 13924

**Name:** Crack

**Other Names:**

**UniqueCode:** AC2022B0738

**Marquis:** Unknown

**Mecke:** Unknown

**Mandelin:** Unknown

**GC/MS:**

- [Cocaine](#) : 90
- [Methylecgonidine](#) : 10
- [Fentanyl](#) : 4
- [Tropacocaine](#) : 1

**Test Date:** Sep 01, 2022

**Pub. Date:** Sep 01, 2022

**Src Location:** Lawrence, MA

**Submitter** Lawrence, MA

**Loc:** United States

**Color:** Tan

**Size:** 1 mg

**Data Source:** [DrugsData](#)

**Tested by:** [DDL](#)

**Lab's ID:** 22080078


**Sold as:** Crack

**Expected to be:** Crack

**Has Been Tried:** Yes

**Description**

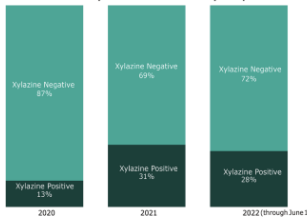
Tan residue in glass pipe.

**Massachusetts Drug Supply Stream (MADDS)**  
Community Drug Supply Alert: Xylazine Present in Opioids July 2022

**Xylazine is on the rise in fentanyl & heroin**

- Since initial reporting by MADDS in March 2021, the veterinary sedative xylazine continues to be detected in a substantial number of samples sold as fentanyl and heroin throughout Massachusetts.\* In 2021, 31% of 398 opioid samples tested statewide contained xylazine. As of June 15, xylazine was detected in 28% of 263 opioid samples tested in 2022 (see graph).

**Presence of Xylazine in Heroin & Fentanyl Samples**




Year	Xylazine Negative	Xylazine Positive
2020	87%	13%
2021	69%	31%
2022 (through June 15th)	72%	28%


**Xylazine is commonly present in opioids.**  
Xylazine can contribute to oversedation alongside opioids. Naloxone WILL NOT reverse the effects of xylazine, but ALWAYS administer naloxone in a suspected overdose. Naloxone will reverse the effects of any opioids present. The person may remain unresponsive if xylazine is involved. Call for help and give rescue breaths to support their breathing.

**Xylazine is a health hazard**

- Xylazine is a **long-acting, sedating medication, but it is not an opioid**. Use experiences noted "made me sleep weird"; "put me out for 6 hours"; "very strong"; "made me pass out and I woke with vomit on me", "skin on fire, teeth felt like they were going to fall out", and "causing holes (ulcers) where injected".
- Xylazine can cause unresponsiveness or decreased consciousness, low blood sugar, low blood pressure, slowed heart rate, and **reduced breathing**. Because xylazine is often found in combination with other sedating drugs like opioids, there is an increased risk for overdose or death.
- Using xylazine may increase risk of **skin ulcers** at the injection site and around other cuts. Skin ulcers from xylazine may quickly lead to infection or necrosis.
- People may sustain **serious injuries** if oversedated and unresponsive for long periods. Falls; hypothermia or heat-related emergencies if using outside; and damage to muscles, nerves, and kidneys can result if blood flow is restricted to a part of the body for a long time.



Xylazine has been found in powder residue and counterfeit pain pills.



[Click or scan for more info.](#)

**Harm reduction and risk of overdose**

- The drug supply is unpredictable. It is safer to use when other people are present or can check on you frequently. People using together should take turns to prevent simultaneous overdose.
- In case of overdose, administer naloxone, give rescue breaths, and monitor until breathing resumes, even if the person remains unresponsive. You can get naloxone at harm reduction programs and retail pharmacies without a prescription. If someone is oversedated, put them in the recovery position, make sure their airway is clear, and monitor their breathing.
- Use a sterile syringe and clean the site with an alcohol swab before every injection to prevent infection. Monitor injection sites and other cuts or scratches, and seek medical attention in case of abscesses or skin ulcers. Rotate injection sites to prevent vein damage and reduce the risk of infection.
- Consider not injecting or switching to sniffing or smoking instead.
- Contact a local harm reduction program for help with abscess or wound care, more advice on safer use, safer use supplies, fentanyl test strips, and drug checking with MADDS.

\* All samples were provided by harm reduction programs or donated by police departments for MADDS testing. MADDS is a state-funded collaboration between Brandeis University researchers, the Massachusetts Department of Public Health, various town police departments, and local harm reduction agencies. Contact us at [maddsboston@gmail.com](mailto:maddsboston@gmail.com)

<https://heller.brandeis.edu/opioid-policy/community-resources/madds/index.html>

# 2020 Updated Opioid-Associated Life Threatening Emergency (ADULT) Algorithm

American Heart  
Association

## Opioid-Associated Emergency for Healthcare Providers Algorithm.

