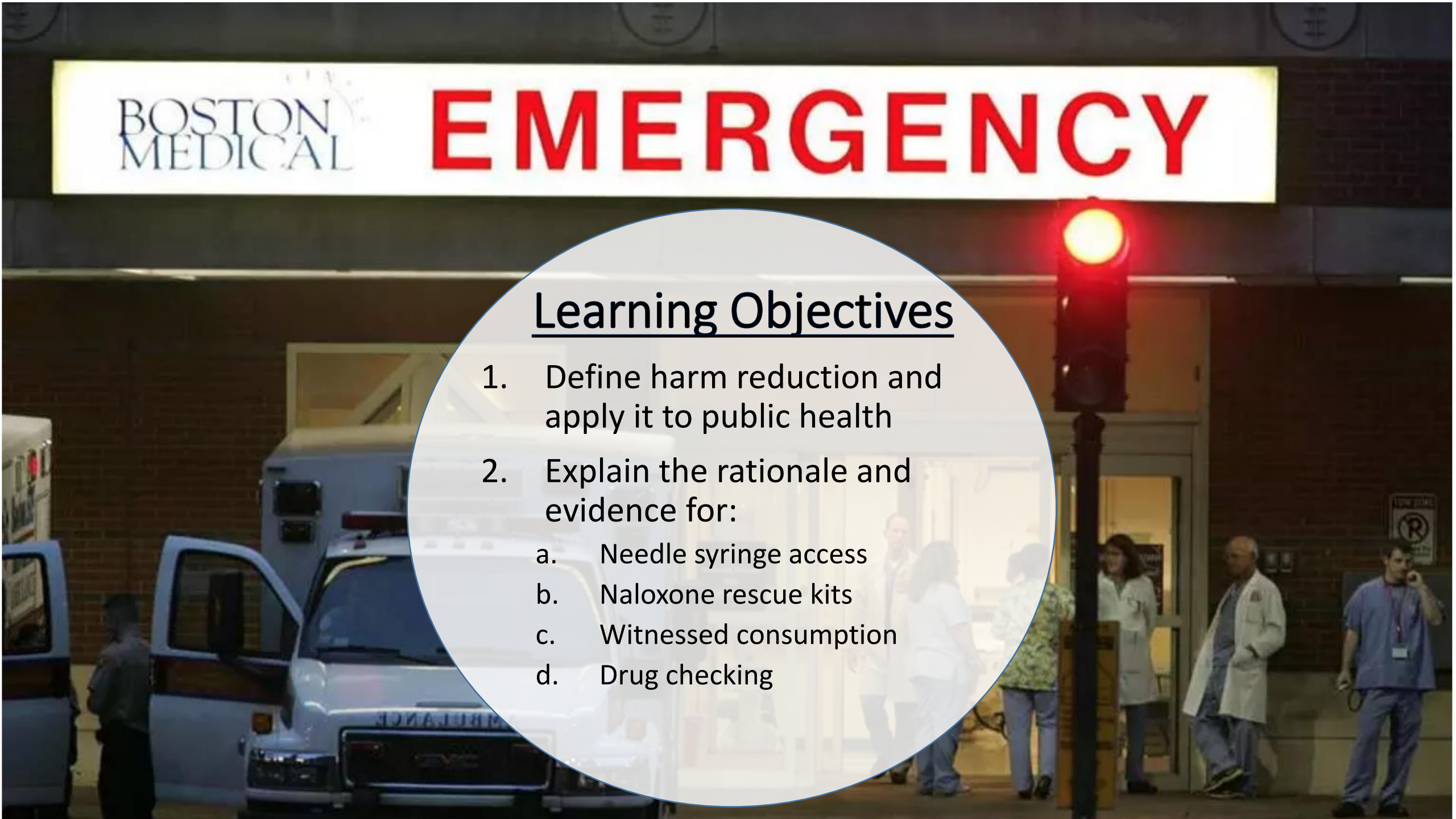
Optimizing Safety for People who Use Substances

Alex Walley, MD, MSc

CRIT/FIT/CFR – May 2026

BU Chobanian & Avedisian School of Medicine
Clinical Addiction Research & Education Unit

Grayken Center for Addiction
Boston Medical Center



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.

Trump-Vance 2025 Drug Policy Priorities

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

1. Reduce the Number of Overdose Fatalities, with a Focus on Fentanyl
   - "The Administration will expand access to overdose prevention education and life-saving opioid overdose reversal medications like naloxone…. We will encourage state and local efforts facilitating law-enforcement-assisted diversion to connect people who use drugs with supportive services that divert them from incarceration and reduce recidivism. We will encourage state and local jurisdictions to increase the availability of drug test strips and naloxone to mitigate the impact of deadly drugs on communities across the country. We will identify, locate, and bring to justice individuals responsible for overdose deaths and pursue the harshest available penalties for those who, at the expense of an unwitting drug-user's life, seek to enhance their illicit gains by relying on lethally potent opioids to expand their illicit drug sales."
2. Secure Global Supply Chain Against Drug Trafficking
3. Stop the Flow of Drugs Across our Borders and into Our Communities
4. Prevent Drug Use Before It Starts
5. Provide Treatment That Leads to Long-Term Recovery
   - "The Administration will ensure effective, timely, and evidence-based treatment is available to all Americans who need it. This will include expanding access to medications for opioid use disorder (MOUD) and improving integration of mental health treatment with clinical and recovery support services."
6. Innovate in Research and Data to Support Drug Control Strategies

SAMHSA Supported vs. Restricted Practices

under 2025 Federal Directives

✓ Life-Saving Overdose Prevention & Infectious Disease Control

- Opioid overdose reversal medications (OORMs) including naloxone
- ~~Substance test kits including fentanyl and xylazine test strips~~
- Nicotine cessation therapies and food (limited to $10/person)

April 2026
SAMHSA Dear Colleague Letter
Overdose prevention hotlines also listed as not supported

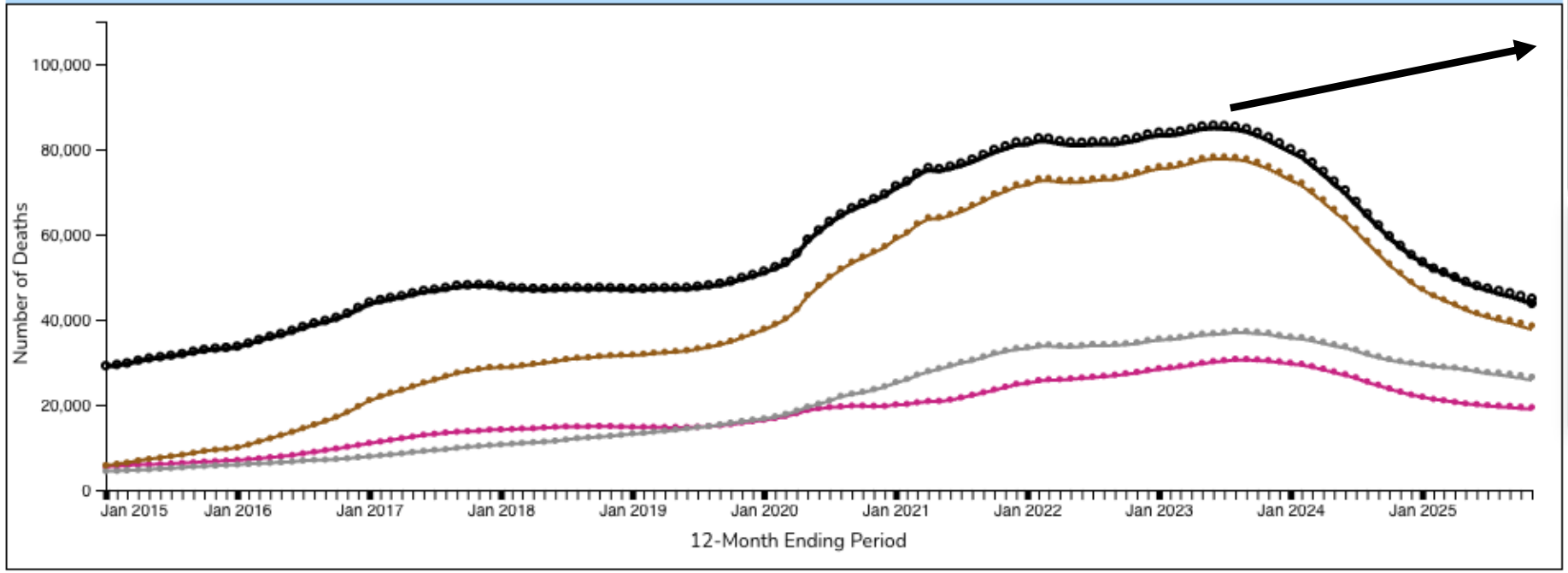
✗ Facilitation of Illicit Drug Use

- Syringes and needles used to inject illicit drugs
- Pipes or supplies for safer smoking kits
- Drug injection sites or "safe consumption sites"
- Sterile water, saline, or ascorbic acid used to facilitate drug use
- Any other drug paraphernalia

Source: July 29, 2025 SAMHSA Dear Colleague Letter & Executive Order 14321

Overdoses are dropping, but less for cocaine and methamphetamine

Figure 2. 12 Month-ending Provisional Number of Drug Overdose Deaths by Drug or Drug Class: United States



United States, Jun 2023, Opioids (T40.0-T40.4,T40.6)

Reported number of deaths:	84,972
Predicted number of deaths:	85,657
Percent pending investigation:	*0.16*
Percent with drugs specified:	*96.03*

**Numbers may differ from published reports using final data. See Technical Notes.

United States, Nov 2025, Opioids (T40.0-T40.4,T40.6)

Reported number of deaths:	43,810
Predicted number of deaths:	44,989
Percent pending investigation:	*0.30*
Percent with drugs specified:	*96.19*

*Underreported due to incomplete data.

Legend for Drug or Drug Class

- Cocaine (T40.5)
- Opioids (T40.0-T40.4,T40.6)
- Psychostimulants with abuse potential (T43.6)
- Synthetic opioids, excl. methadone (T40.4)

---- Reported Value

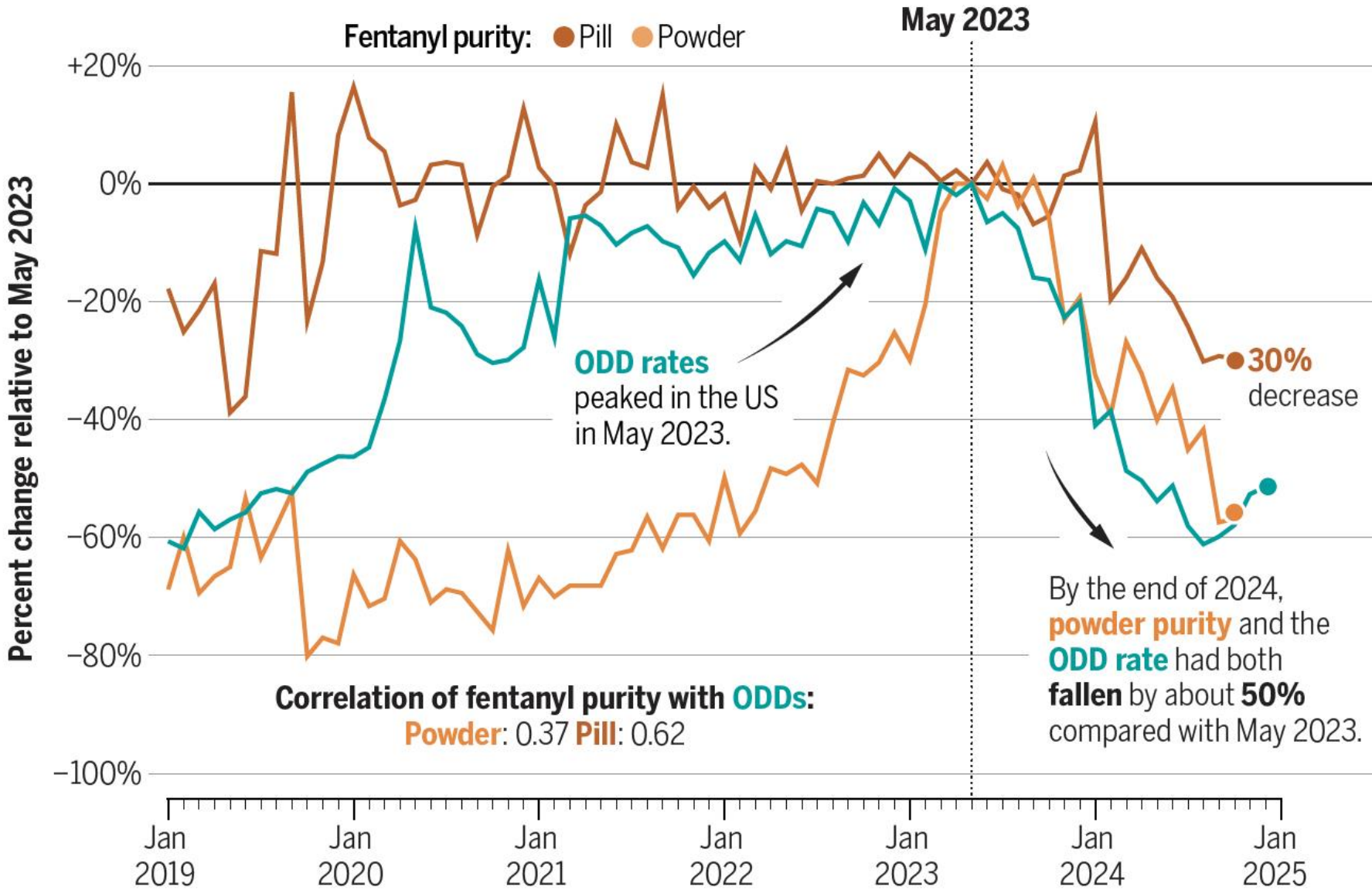
○ Predicted Value

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

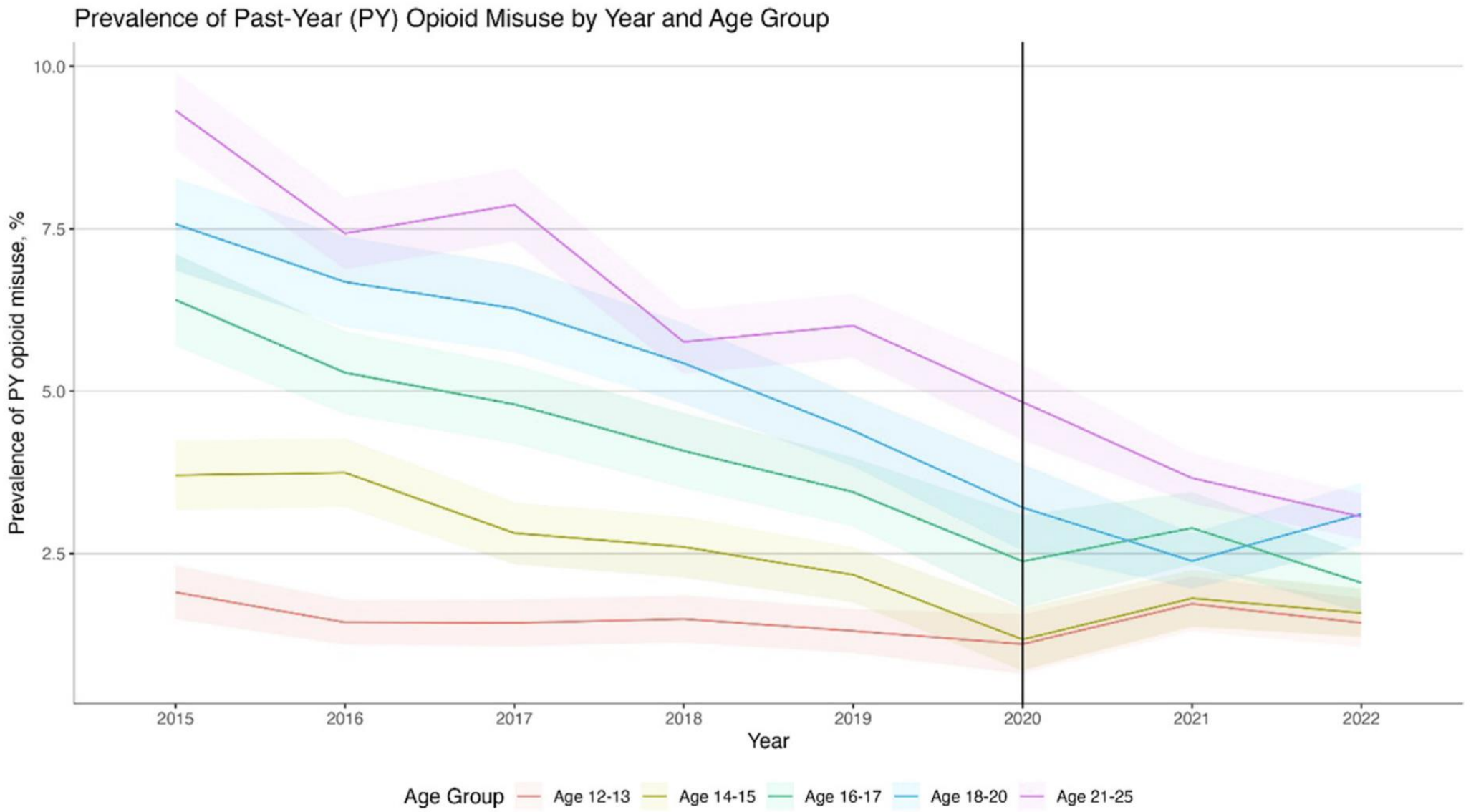
Fentanyl Supply Shock May 2023

US fentanyl purity and overdose mortality rates

Rates of overdose death (ODD) involving synthetic opioids and the purity of fentanyl powder and pills are indexed to May 2023, when ODDs peaked in the United States. Crude ODD rates are calculated using monthly population counts. See supplementary materials for details.



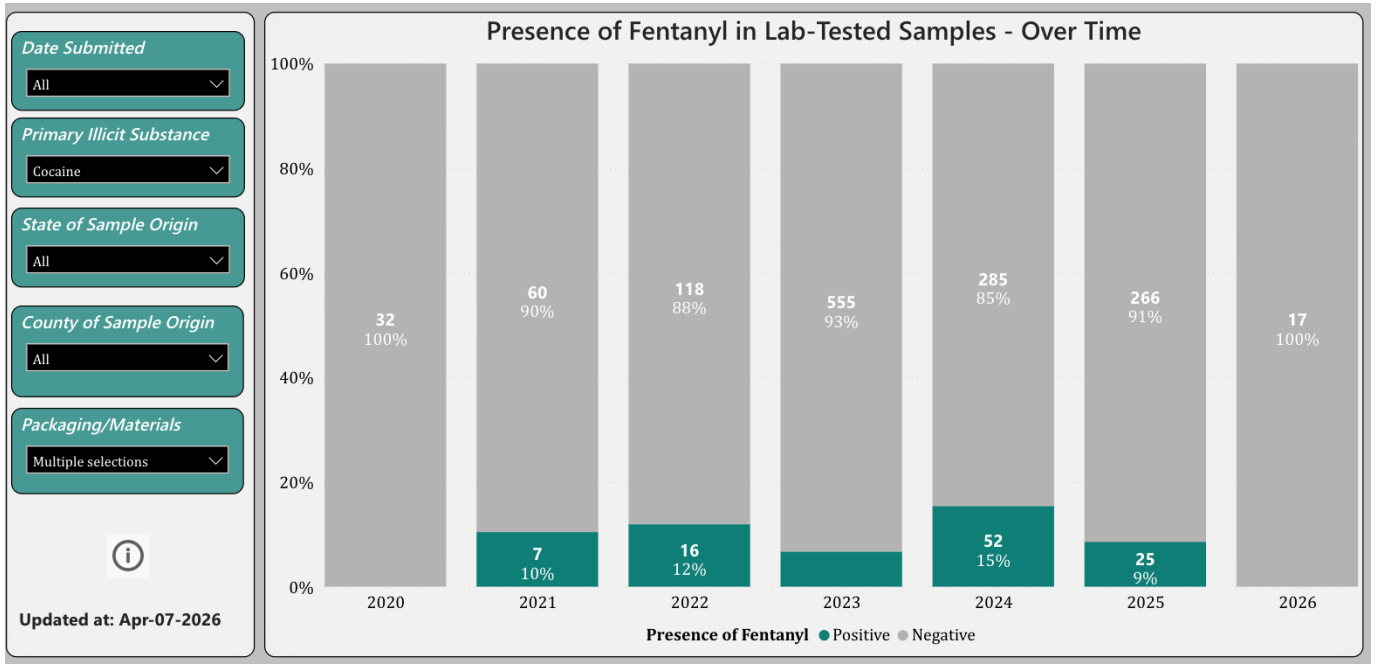
Fewer youth and young adults are using opioids



People who do not have opioid use disorder are overdosing due to fentanyl contamination of cocaine, methamphetamine, and counterfeit prescription pills

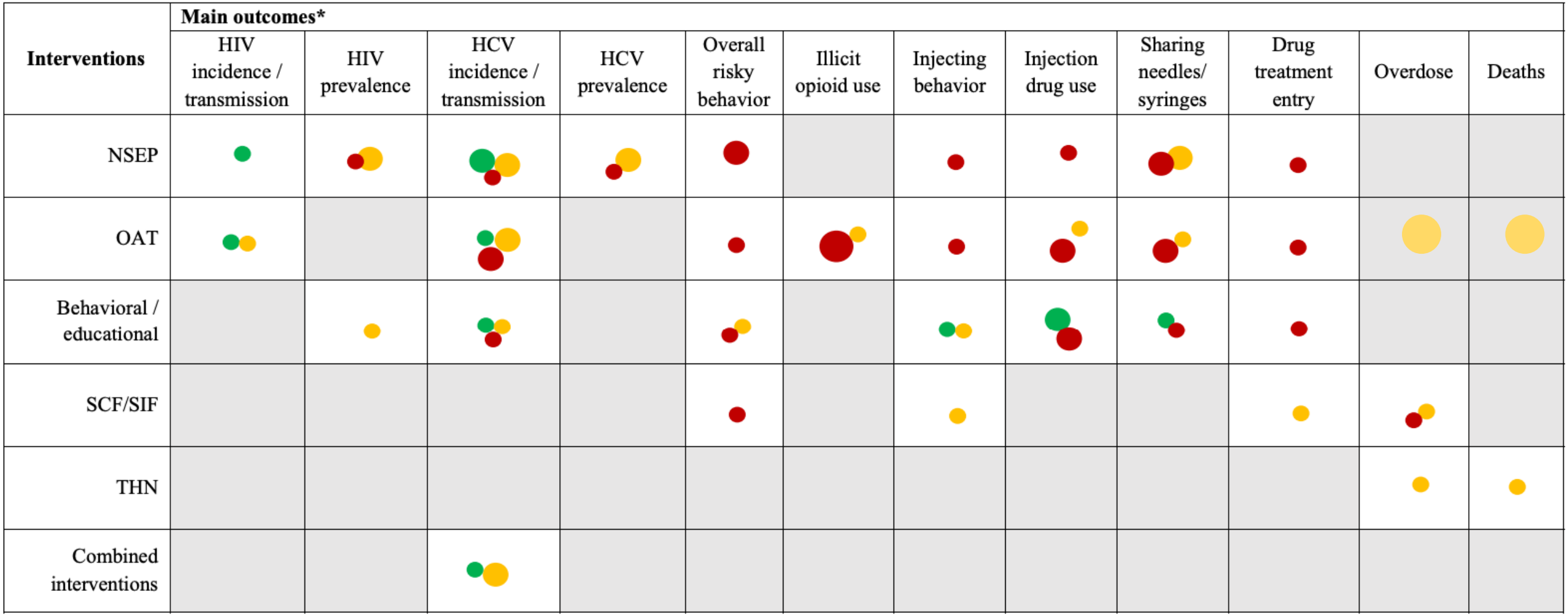
STREET CHECK COMMUNITY DRUG CHECKING

Streetcheck.org



- 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*

Harm Minimization Evidence Map – Tonin ASCP 2024



High Quality

Moderate Quality

Low Quality

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

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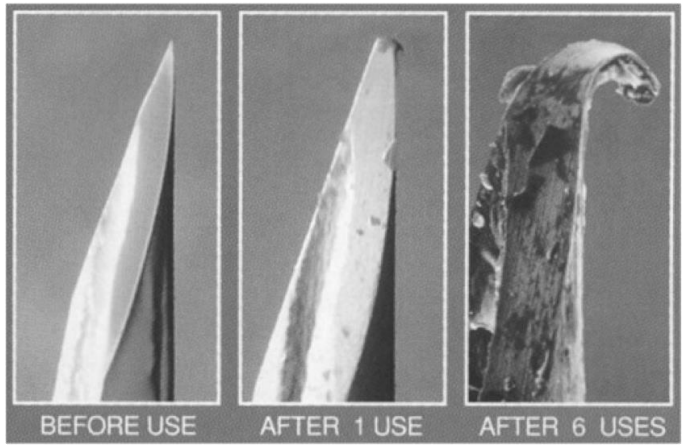


What do syringe service programs do?

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.

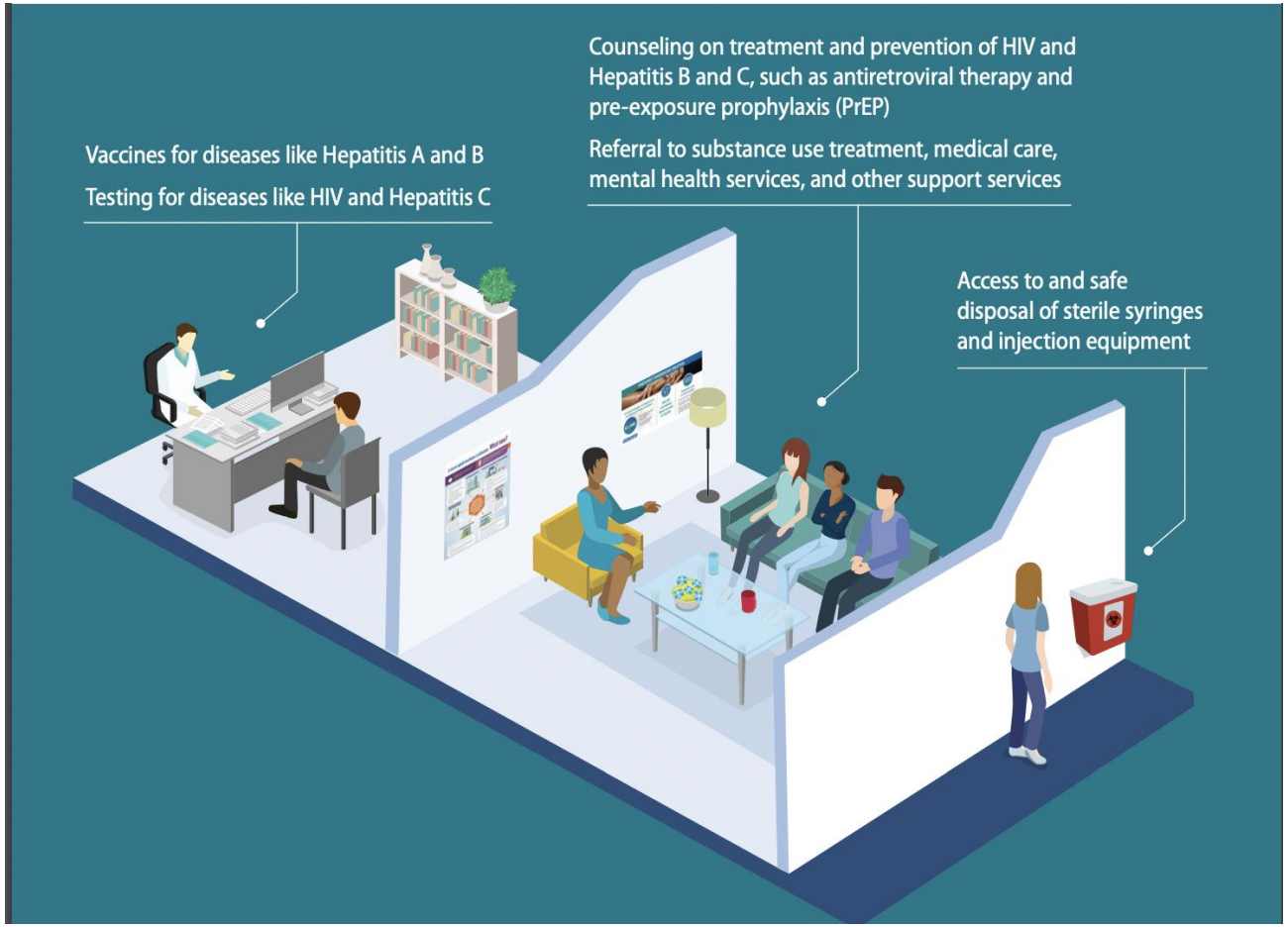
SSPs save lives by lowering the likelihood of deaths from overdoses.

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.



SYRINGE PRESCRIBING GUIDE

TYPES OF SYRINGES

Grayken Center for Addiction
Boston Medical Center

	Barrel	Length
31 GAUGE	1CC	5/16"

Also known as:
-Ultra ultra fine
-Bee stingers
-Short tip 5/16th inch

30 GAUGE	1CC	1/2"

Also known as:
-Ultra fine
-30 longs

28 GAUGE	.5CC &1CC	1/2"

Also known as:
-Biggie smalls -1cc barrel
-Smalls -0.5cc barrel

27 GAUGE	1CC	5/8"

Also known as:
-Bigs
-Big bigs
-5/8 inch

22 GAUGE	3CC	1 ½"

-Steroid/ Hormone

FIND A SAFE VEIN AND A BACK-UP VEIN

- Pick a safer injection site

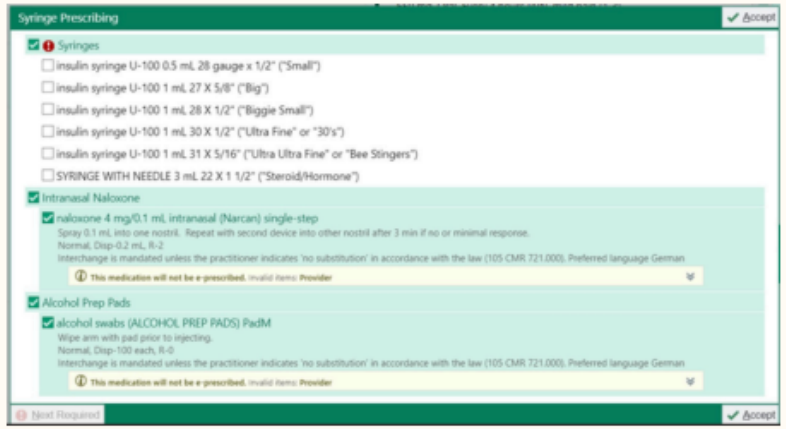
BEST	• Arms • Back of hand
OK	• Legs • Feet
AVOID	• Groin • Neck • Wrist

- **CLEAN AREA WITH ALCOHOL SWAB PRIOR TO INJECTING**
- **USE A NEW NEEDLE EVERY TIME YOU INJECT**

FOR THE PRESCRIBER

Questions or comments?
Please contact Christina Joy: Christina.joy@bmc.org or Michael Yang: Michael.yang@bmc.org

USE EPIC ORDER SET "SYRINGE PRESCRIBING"



PRESCRIPTION DETAILS

- When deciding quantity: ask patient preference, how many times a day they inject, housing situation for storage etc.
  - 1 Box of syringes = 100 syringes
  - 1 Box of Alcohol swabs = 100 swabs
- Rx Instructions for syringe: Clean area with alcohol swab then inject with new syringe 4 x a day PRN.
- Standard rx order is 100 syringes with 11 refills, modify as needed.

ADDITIONAL SUPPLIES

- Band aids
- Cotton balls
- Tourniquets
- Sharps container
- Sterile water vials (2.5ml)
- Cooker (vessel to dissolve powder/ solid drugs prior to injection)

*These items may not be covered by insurance. May be available for purchase, also available at harm reduction programs.

WRITING A PRESCRIPTION OUTSIDE OF ORDER SET

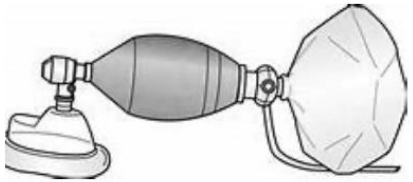
- Diagnosis Codes (not always required):
  - Z20.6: contact with and (suspected) exposure to HIV
  - Z20.2: contact with and (suspected) exposure to infection with a predominantly sexual mode of transmission
  - Z77.21: contact with and (suspected) exposure to potentially hazardous body fluids
- If not auto populated when prescribing: please include barrel size, gauge and syringe size.
- Include directions of use: number of times a day patient injects Ex: Clean area with alcohol swab and then inject with a new syringe 3-4x a day PRN
- Include quantity (syringes come in 10 packs and one box has 100 syringes), dispensed and refills.

How Do You Keep Yourself Safe From Overdose?

- What is your safety plan?
  - Plan A?
  - Plan B?
  - Plan C?
- What has worked for you?
- What has not worked for you?

How Do You Keep Others Safe From Overdose?

- What is your plan if you witness an overdose in the future?
- Have you received training to prevent, recognize, or respond to an overdose?



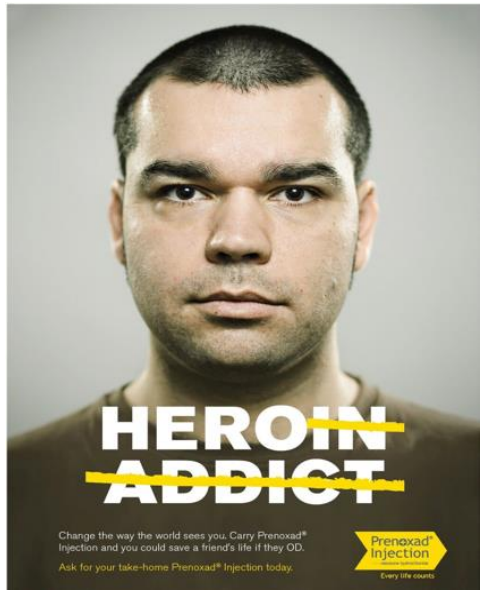
SOURCE: zerooverdose.org

Known Overdose Risk Factors	Overdose Safety Planning

Using alone	• Monitored drug use
	  • Use with others
	  • Take turns
	  • Overdose prevention centers
	  • Virtual spotting
	  • Overdose detection technologies
	• Unmonitored drug use
	  • Use where others are passing by
	  • Do not use behind a locked door

Polysubstance use	• Start low and go slow
Period of abstinence	• MOUD • Start low and go slow • Monitored drug use
Unregulated drug supply	• Start low and go slow • Drug checking

Rationale for Overdose Education and Naloxone Distribution



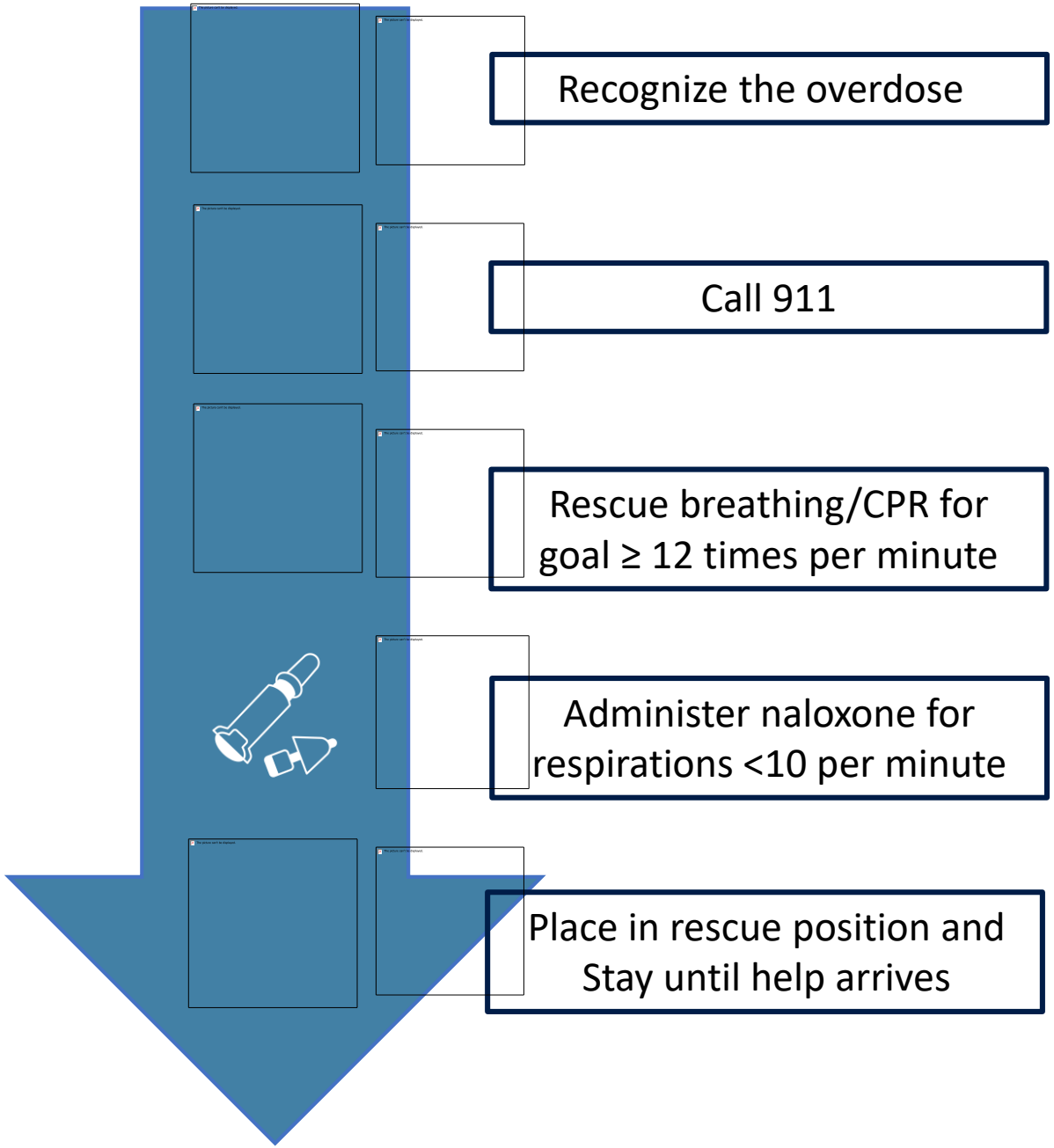
PRESCRIBE TO PREVENT

Patient education videos and materials at prescribetoprevent.org

- Most people who use opioids do not use alone
- 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

How to Respond to an Overdose

- Steps to teach patients, family, friends, caregivers



Roll over image to zoom in

In 50+ people's carts

NARCAN Nasal Spray

NARCAN Opioid Overdose Treatment Nasal Spray, 4 mg, 2 Single-Dose Devices

★★★★★ (5.0) 1 review

$44.97

Price when purchased online

Add to cart

Free pickup, **today** at Quincy Store

Aisle E7

Delivery from store Check eligibility

Free shipping, **arrives by today** to Dorchester Center, 02124

Sold and shipped by Walmart.com

Free 90-day returns Details

This item is gift eligible Learn more

Broaden Naloxone Distribution

- Partnering with harm reduction providers to get naloxone to those at highest risk for overdose
  - Community Program Standing Order

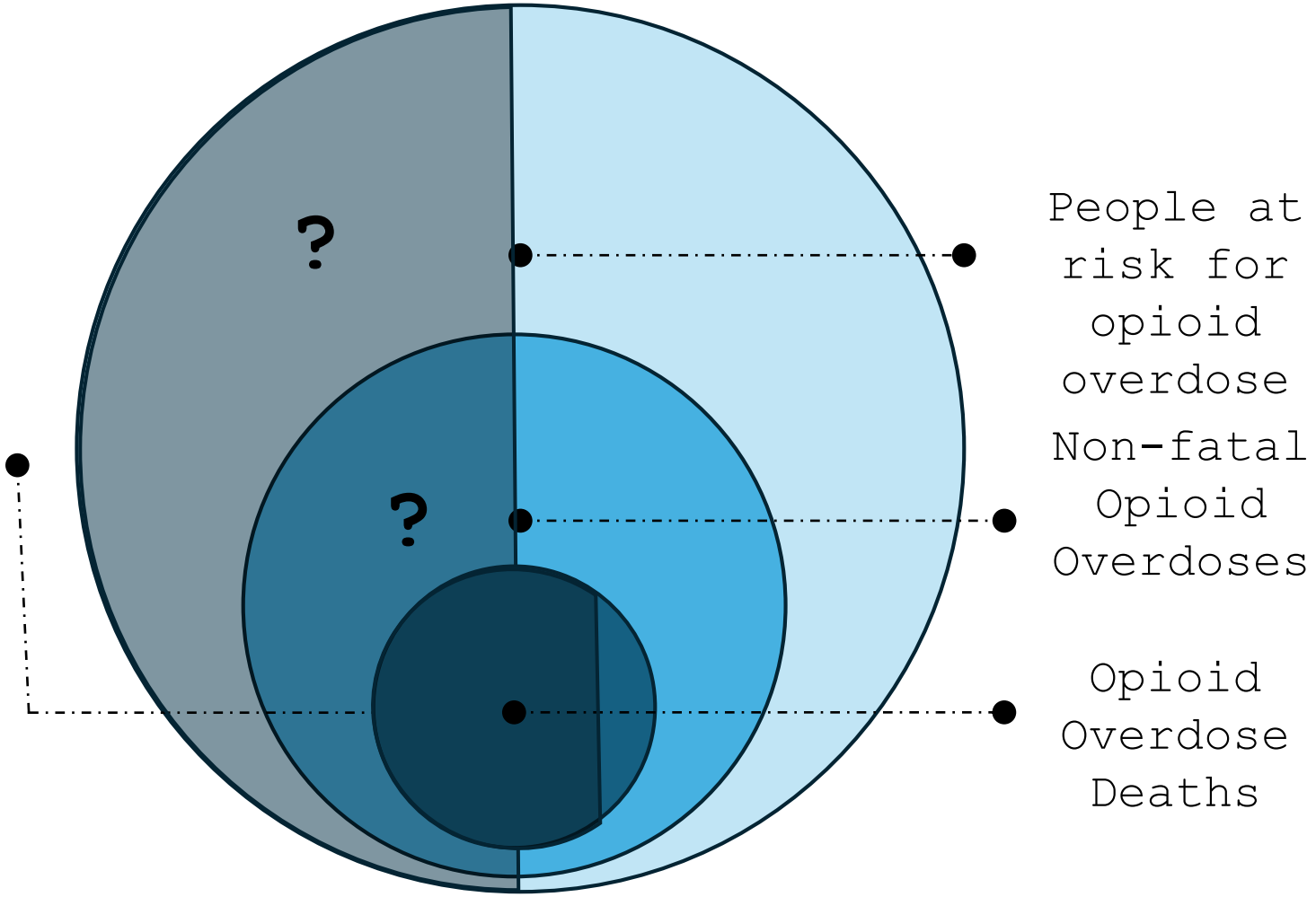
- Facilitating pharmacy distribution
  - Statewide standing order
  - Over the counter!
  - Insurance coverage

- Engaging addiction treatment providers, federally qualified health centers, and emergency departments

- First responders – administration and leave behind

Naloxone only works if there is someone to respond

- Unmonitored drug is common
- >90% of deaths occur during unmonitored drug use
- Naloxone only works if there is someone to respond
- Naloxone impact limited by
  1. Community saturation
  2. Individual -



More potent naloxone is not the answer – Focus on breathing

Opportunities: Compassionate Overdose Response

1. Titratable naloxone + communicative rescuers
   - Not higher doses, longer acting ant
   cor

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

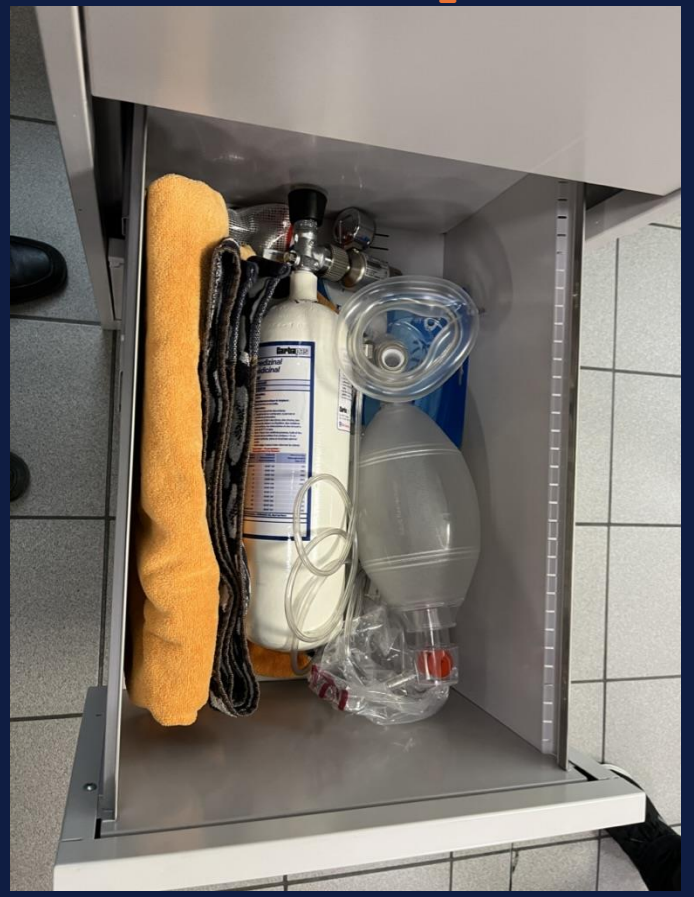
Emily R. Payne, MSPH[1]; Sharon Stancliff, MD[1]; Kirsten Rowe, MS[1]; Jason A. Christie[2]; Michael W. Dailey, MD[3]

Compassionate Overdose Response – Focus on breathing!

Opportunities: Compassionate Overdose Response

1. Titratable naloxone + communicative rescuers
   - Not higher doses, longer acting antagonists -> unintended consequences, unproven benefit
   - Experienced rescuers spare naloxone
2. In-person and virtual witnessing
   - Overdose Prevention Centers

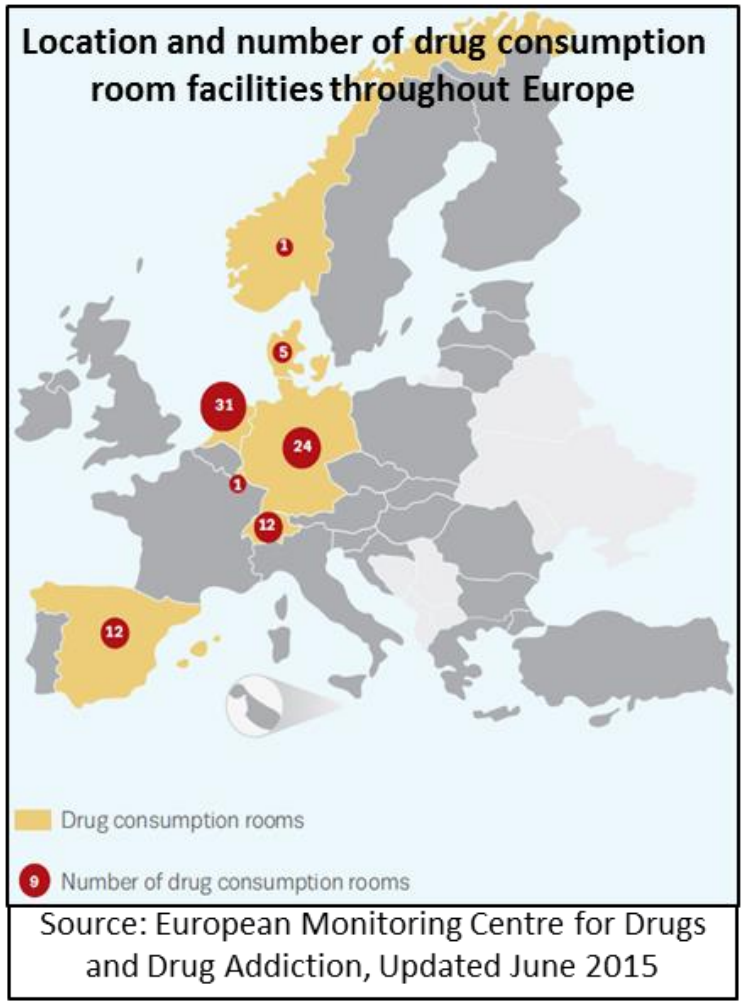
City of Zurich Drug Consumption Facility



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, Providence 2025



Source: European Monitoring Centre for Drugs and Drug Addiction, Updated June 2015

OPCs: Reduced Overdose Mortality

Methods: Population-based overdose mortality rates were examined in the 500m surrounding the DCS before and after its opening and compared with before and after rates in the rest of the city of Vancouver.

Results: In the area around the DCS overdose mortality **decreased 35%**, compared with a 9.3% reduction in the rest of the city.

	ODs occurring in blocks within 500 m of the SIF*		ODs occurring in blocks farther than 500 m of the SIF*	
	Pre-SIF	Post-SIF	Pre-SIF	Post-SIF
Number of overdoses	56	33	113	88
Person-years at risk	22 066	19 991	1 479 792	1 271 246
Overdose rate (95% CI)*	253·8 (187·3–320·3)	165·1 (108·8–221·4)	7·6 (6·2–9·0)	6·9 (5·5–8·4)
Rate difference (95% CI)*	88·7 (1·6–175·8); p=0·048	..	0·7 (-1·3–2·7); p=0·490	..
Percentage reduction (95% CI)	35·0% (0·0%–57·7%)	..	9·3% (-19·8% to 31·4%)	..

SIF=supervised injection facility. Pre-SIF period=Jan 1, 2001, to Sept 20, 2003. Post-SIF period=Sept 21, 2003, to Dec 31, 2005. *Expressed in units of per 100 000 person-years.

Table 2: **Overdose mortality rate in Vancouver between Jan 1, 2001, and Dec 31, 2005 (n=290), stratified by proximity to the SIF**

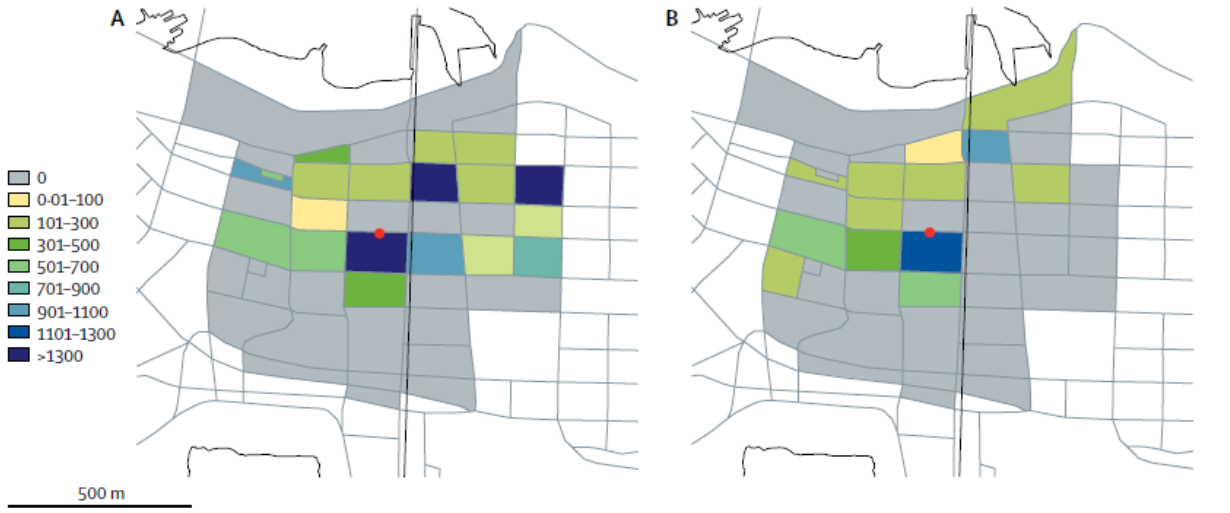


Figure 2: **Fatal overdose rates before (A) and after (B) the opening of Vancouver's SIF (shown in red) in city blocks located within 500 m of the facility**
Rates are given in units of 100 000 person-years and were calculated by aggregating the locations of death to the dissemination block level as shown.

Slide courtesy of Jessie Gaeta

Marshall, B. et al. (2011). Reduction in overdose mortality after the opening of North America's first medically supervised safer injecting facility: a retrospective population-based study. *Lancet*, *377*(9775):1429-37.

Safer Drug Use

- Encourage people to use with others and take turns
- Encourage the use of an overdose prevention center, if available
- Call a friend or an overdose prevention hotline

SafeSpot

- 24/7 phone service
  - Confidential and free
  - Trained, peer operators who make a safety plan with people using drugs alone
  - “Spot” them while they use drugs
  - Send help when needed: EMS or friend
- Call 1-800-972-0590

Scan to add SafeSpot to your phone contacts

Safer Drug Use

- Encourage people to use with others and take turns
- Encourage the use of an overdose prevention center, if available
- Call a friend or an overdose prevention hotline
- Use somewhere someone will check on you and can find you
- Use in a place with an overdose detection technology

What if I do not have a phone?

- Consider areas with overdose detection technologies, such as reverse motion detectors

When a reverse motion detector sounds, this MD becomes a lifesaver

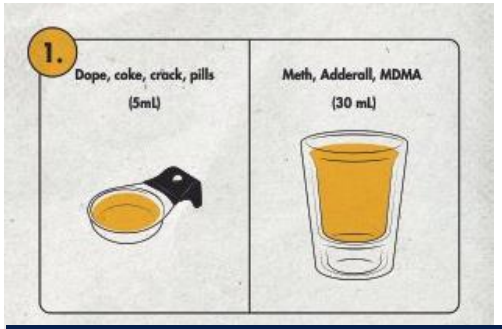
By Felice J. Freyer Globe Staff, January 15, 2019, 8:10 p.m.

Test Strips

Take These Steps:

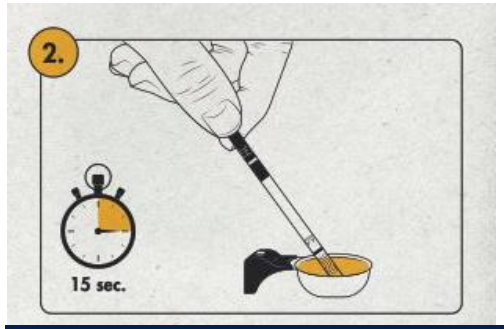
- [ ] Prepare to test.
- [ ] Dip the fentanyl test strip.
- [ ] Wait 5 minutes.
- [ ] Read results.
- [ ] Make a plan.

FTS and Wallet Card Available for MA providers at:
https://massclearinghouse.ehs.state.ma.us/PROG-BSAS-YTH/SA5844.html



Prepare to test

- Take a small amount of drug and put it in a container (cooker, cup, shot glass).
- For dope, coke, crack, or pills, add 5mL (a cooker or ¼ inch) water.
- For meth, Adderall, MDMA, add 30 mL (shot glass) of water.
- To test pills, scrape from middle or crush.



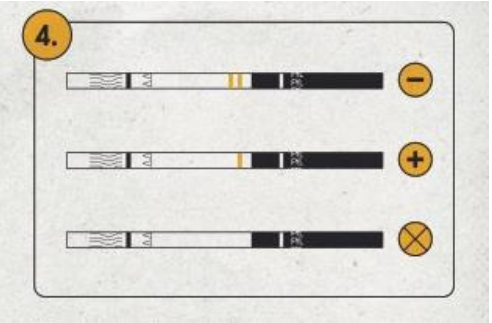
Dip the fentanyl test strip

- 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.

Wait 5 minutes

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

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



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.

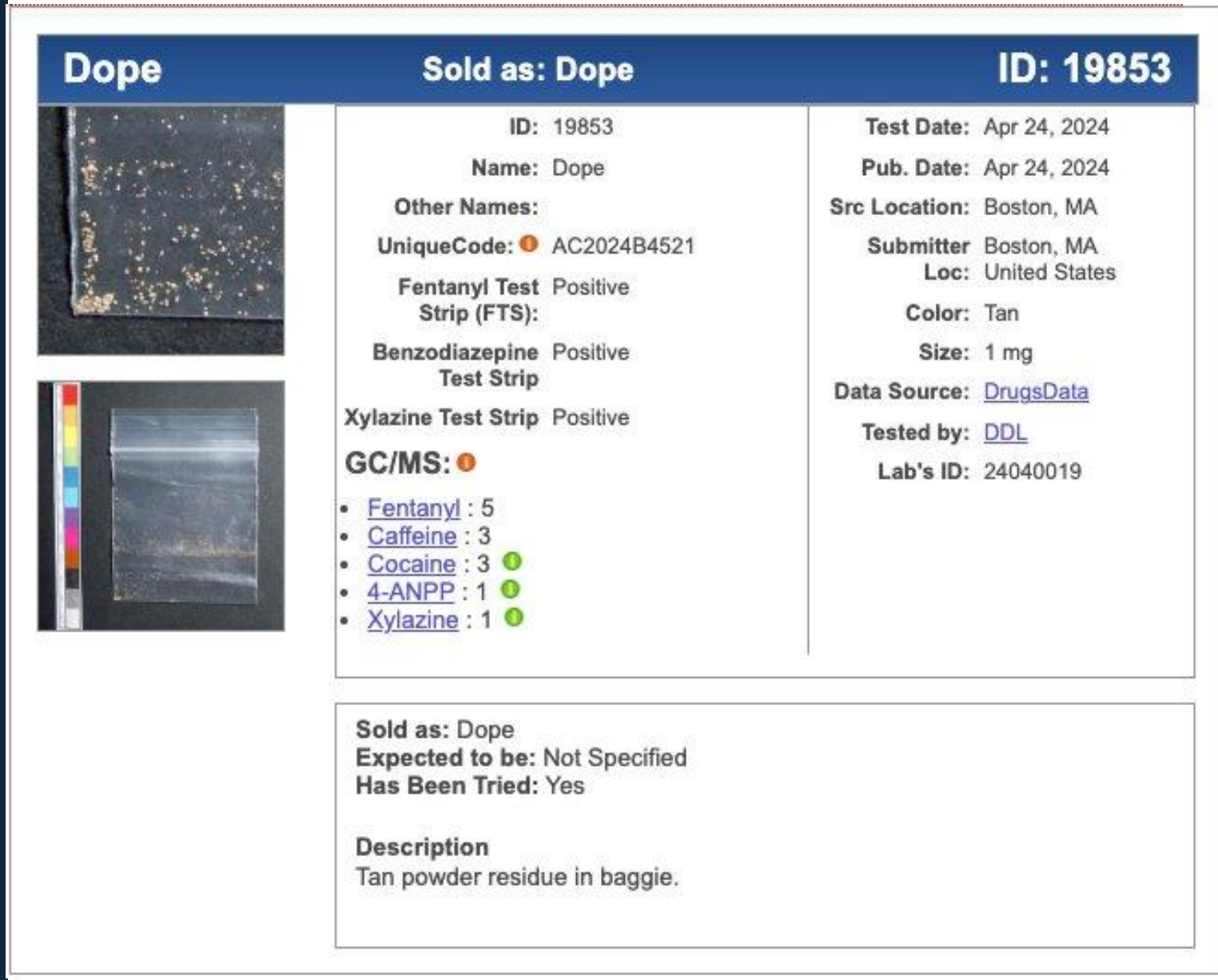
Make a plan

- If not using, flush drugs down toilet. Don't put in trash.
- Do a test dose or go low and slow.
- Never use alone. Call the OPH at 800-972-0590 and we'll make sure you stay safe.
- Carry Narcan®.
- Call 911 to stop an overdose.

Checking Drugs

Community drug checking is emerging in more US communities:

- Utility and challenges of drug checking shifting



Dope | **Sold as: Dope** | **ID: 19853**

ID:	19853
Name:	Dope
Other Names:	
UniqueCode:	AC2024B4521
Fentanyl Test Strip (FTS):	Positive
Benzodiazepine Test Strip	Positive
Xylazine Test Strip	Positive

GC/MS:

- Fentanyl : 5
- Caffeine : 3
- Cocaine : 3
- 4-ANPP : 1
- Xylazine : 1

Test Date:	Apr 24, 2024
Pub. Date:	Apr 24, 2024
Src Location:	Boston, MA
Submitter Loc:	Boston, MA United States
Color:	Tan
Size:	1 mg
Data Source:	DrugsData
Tested by:	DDL
Lab's ID:	24040019

Sold as: Dope
Expected to be: Not Specified
Has Been Tried: Yes

Description
Tan powder residue in baggie.

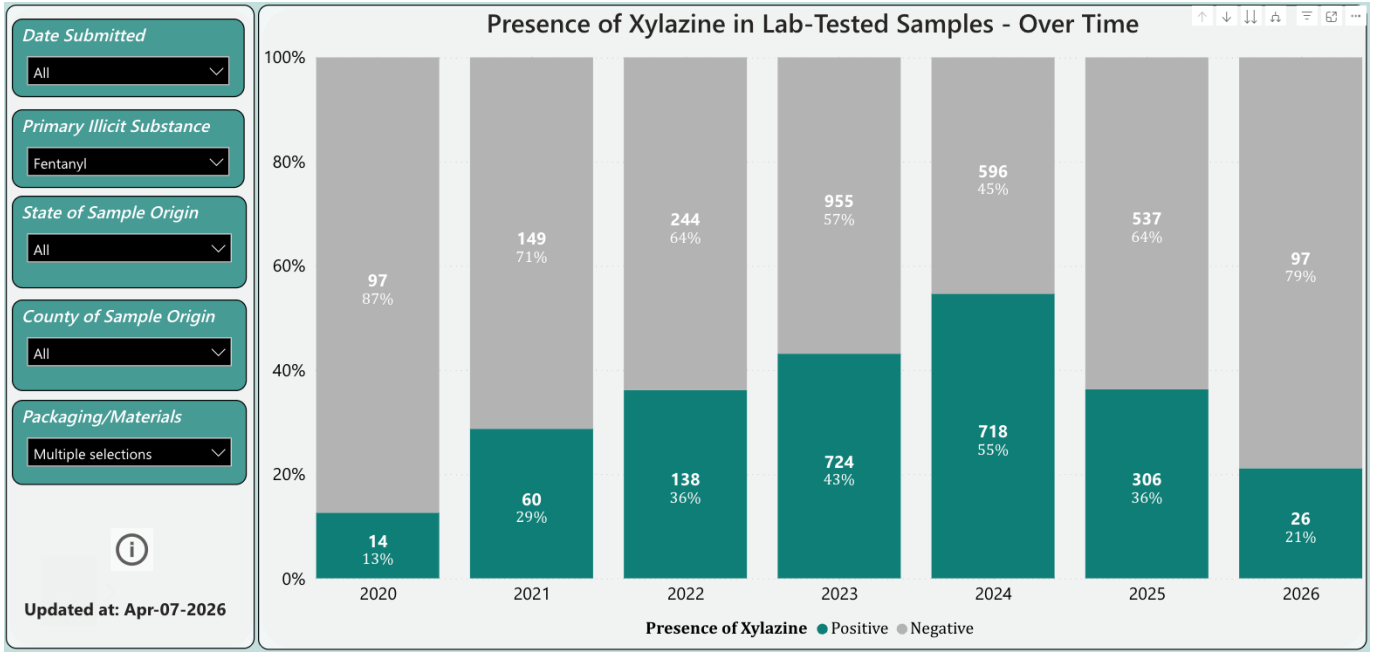
SOURCE: DOI: 10.1186/s12954-022-00590-z

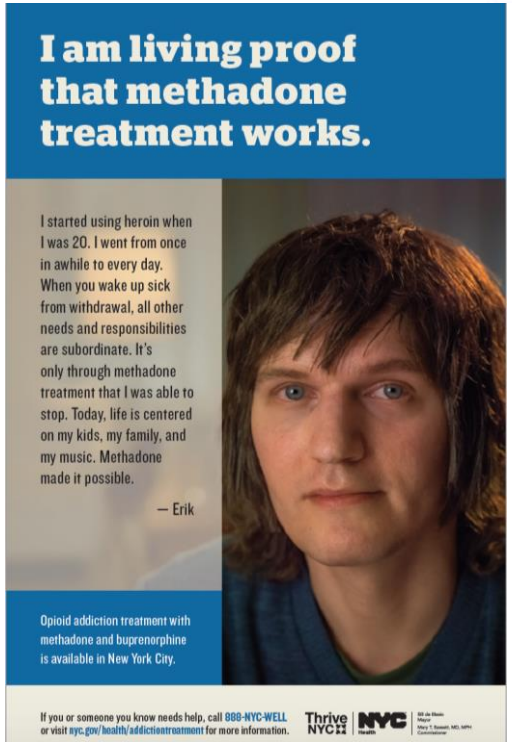
Tracking xylazine and medetomidine emerging…

- Adrenergic alpha(2) agonists that are a longer acting sedative and anesthetic
  - Synergizes with fentanyl for overdose
  - Complicates MOUD initiation
  - **Xylazine -** Wounds at injection sites and elsewhere
  - Medetomidine - Difficult to manage withdrawal with nausea, vomiting, BP and heartrate surges requiring dexmedetomidine in the ICU

STREET CHECK COMMUNITY DRUG CHECKING

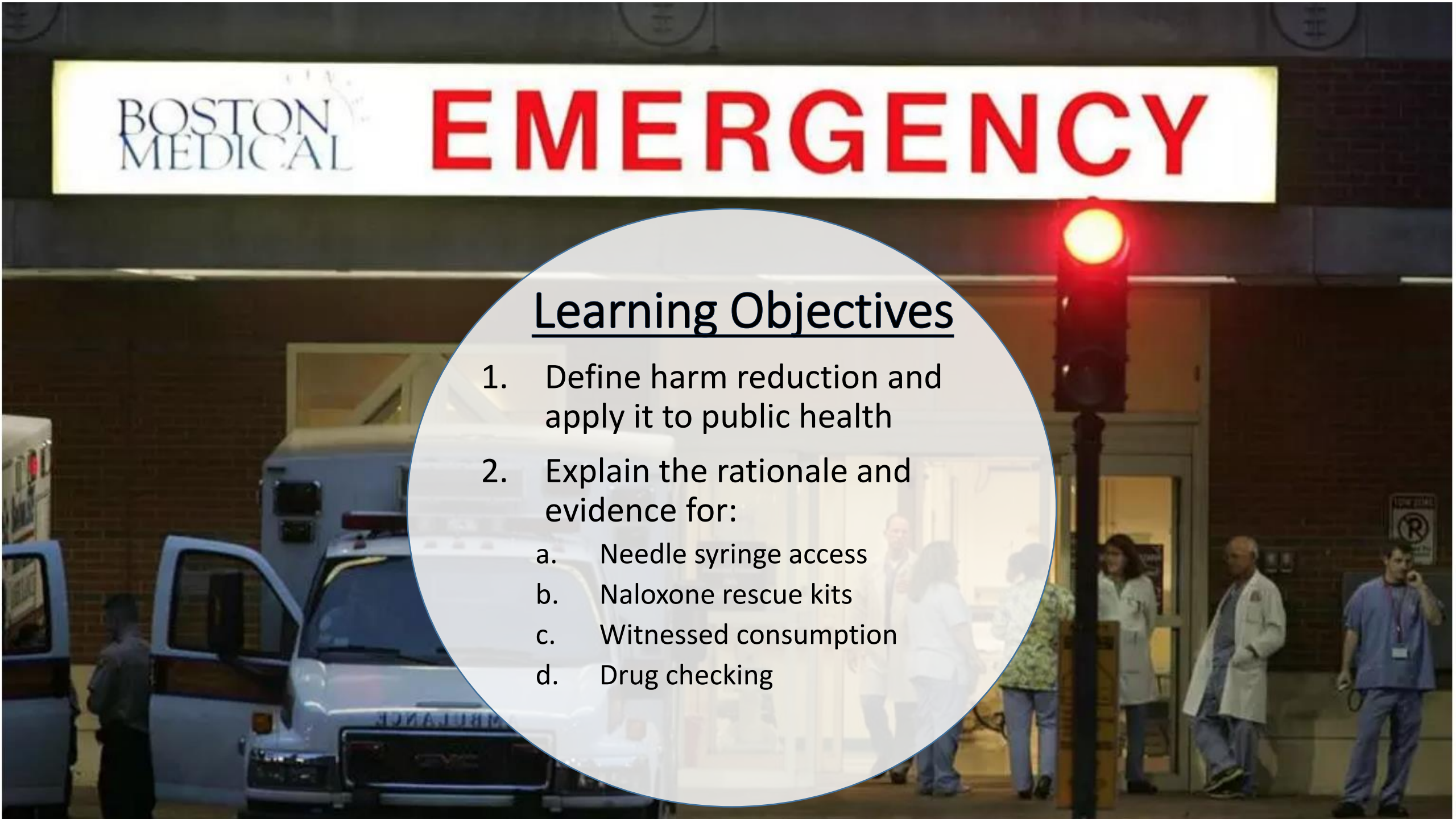
Streetcheck.org





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



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

awalley@bu.edu