

Welcome!

July 10, 2024 / 10:00 - 11:30 am EST



Opioid Settlement Technical Assistance Collaborative (TAC) Learning Series

Addressing Negative Health Outcomes from Opioid and Substance Use



INTRODUCTIONS

Kate Howe, MPH

Research Specialist, Prevention Research Collaborative

University of Michigan



HOUSEKEEPING ITEMS

- This Zoom event will be recorded
- Participants will be on mute when presenters are speaking
- To ask a question, please use the Chat or QA feature
- There will be a quick survey for attendees to provide feedback at the end
- Any follow-up questions or requests for the Technical Assistance Collaborative (TAC), please email: MDHHS-opioidsettlementhelp@michigan.gov
- Next learning series webinar will be in September 2024



ABOUT THE TAC

As announced in April of this year, Michigan's three largest public research universities will work together as part of a technical assistance collaborative to offer local governments assistance in developing abatement strategies to address the ongoing opioid epidemic, which resulted in more than 3,000 deaths statewide in 2021.

This monthly series of educational webinars is a main focus of the TAC's efforts, and will be offered to communities around the state in an effort to share information surrounding best practices for opioid related issues. The goal of this series is to assist county, city and township officials who have received settlement funding and are involved and/or interested in learning more about evidence-based practices and strategies to help remediate opioid overdoses in their communities.



PRESENTERS

Gina Dahlem, PhD, FNP-C, FAANP

Clinical Associate Professor, University of Michigan School of Nursing

Co-Director, Community Engagement, Opioid Research Institute

Steve Alsum, Executive Director

The Grand Rapids Red Project



Objectives

1

Harm Reduction
Philosophy/Tenets

2

Evidence
surrounding SSPs
and naloxone
distribution

3

Effective
Strategies to
Reduce Overdose
Risk

4

Challenges to SSP
and Harm
Reduction
Interventions

QUESTION 1

Where did the name “heroin” come from?

- A. It’s a historical term with roots in Greek mythology
- B. It’s a scientific term for this chemical substance, similar to other chemical names like hydrocodone bitartrate or methadone hydrochloride
- C. It’s street slang that emerged in the 1920s
- D. It’s a corporate trademark

ANSWER 1

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- C. It's street slang that emerged in the 1920s
- D. **It's a corporate trademark**



Bayer Heroin bottle by Mpv_51, 2005
https://en.wikipedia.org/wiki/Heroin#/media/File:Bayer_Heroin_bottle.jpg Public domain.

QUESTION 2

Who first pioneered naloxone distribution to people who use drugs?

- A. Medical researchers at the Center for AIDS Research at Brown University.
- B. Community outreach workers at Healthcare for the Homeless in Boston.
- C. Emergency department staff at a hospital in New Orleans.
- D. People who use drugs in Chicago.

ANSWER 2

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Photo Credit: Phil Velasquez/Chicago Tribune 2002)

Outtakes from Interview with Dan Bigg in September 2016 by Sawbuck Productions, Inc CC BY-NC-ND 3.0. <https://vimeo.com/287300875>

QUESTION 3

Each person who injects drugs infected with HCV is likely to infect about **XX** how many others?

- A. 10
- B. 15
- C. 20
- D. 25

ANSWER 3

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- B. 15
- C. **20**
- D. 25



By end_thewod -
https://www.flickr.com/photos/end_thewod/2984061867/, CC BY-SA 2.0,
<https://commons.wikimedia.org/w/index.php?curid=133213666>

Magiorkinis, G., et al., Integrating phylodynamics and epidemiology to estimate transmission diversity in viral epidemics. PLoS Comput Biol, 2013. 9(1): p. e1002876.

HARM REDUCTION

“Set of practical strategies and ideas aimed at reducing negative consequences associated with drug use. Harm reduction is a movement for social justice built on a belief in, and respect for, the rights of people who use drugs.”

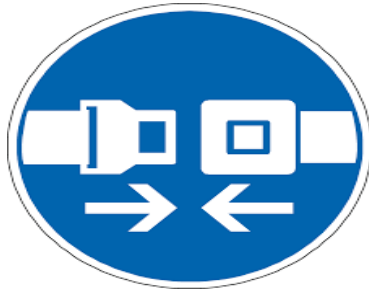
- Respect, dignity, and compassion
- Meeting people who use drugs “where they’re at”



EVERYDAY EXAMPLES OF HARM REDUCTION



Sunscreen



Seat Belts



Nicotine
Replacement



Hand
Sanitizer

Vector illustration of liquid sunblock, OpenClipart, 2019, <https://freessvg.org/sunscreen-vector-image>, Public domain.

Fasten Seat Belt Buckle Up Belt, needpix.com, 2019, <https://www.needpix.com/photo/72350/fasten-seat-belt-buckle-up-belt-on-buckle-on-seat-belt-sign-symbol-icon>, Public domain.

NicotinePatch, February 2022., Wikimedia Commons, <https://commons.wikimedia.org/wiki/File:NicotinePatch.jpg> Public domain.

Clean RX Hand Sanitizer, TaurusEdward., https://commons.wikimedia.org/wiki/File:Clean_RX_Hand_Sanitizer.jpg CC-BY-SA-4.

HARM REDUCTION APPROACHES

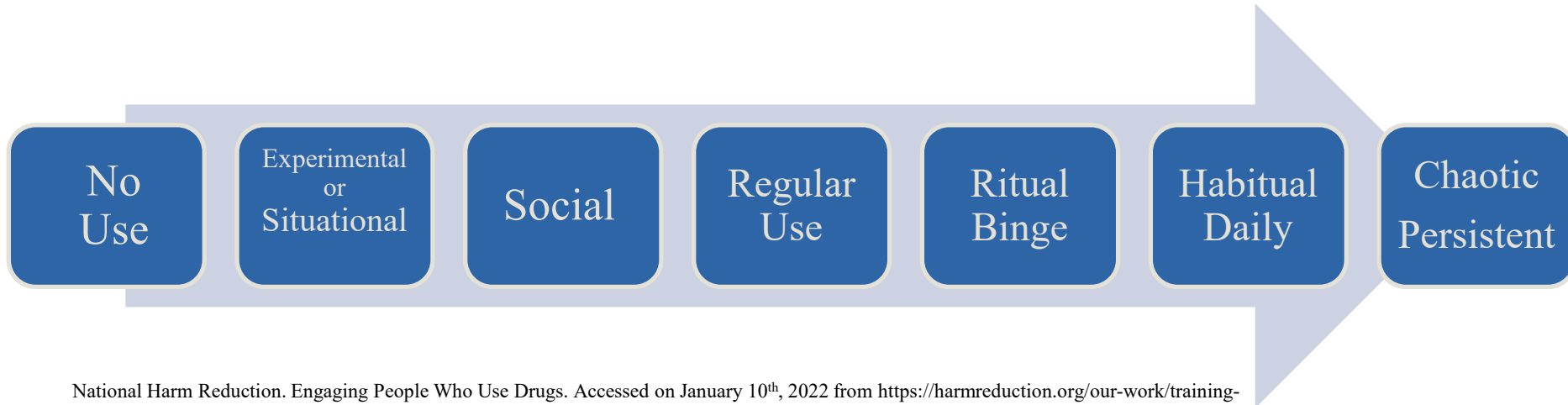
- Dignity + Respect = Engagement
 - Free of judgment
 - Biases:
 - PWUD are criminals, liars, lower class/less competent, etc
 - Establish partnerships, not power hierarchy
 - Meet the needs
 - ASK your patient rather than TELL
 - Listen more, talk less
 - Reduce the most immediate harm
 - Providing sterile syringes and equipment
 - Naloxone kits
 - Provision of food, medical care, housing, etc



Photo by rawpixel @rawpixel from [Unsplash](https://unsplash.com/photos/7K8q8q8q8q8)

CONTINUUM OF DRUG USE

- Try to understand the reasons behind the drug use
- Think of Continuum of Drug Use
 - Where is the person at on this spectrum?



HARM REDUCTION SUCCESSES FOR PEOPLE USING DRUGS MIGHT BE...

- Quitting drugs
- Using less or less often
- Using safer injection practices
- Accessing tools for safer use
- Assisting access to healthcare, housing
- Feeling comfortable about talking about their drug use
- Establishing new friendships and networks



Slide adapted with permission from Doe-Simkins, M., Davis, C., and Espinosa, I. (2010). Harm Reduction Conference 2019. Ann Arbor, MI.

A tribute to Dany Bigg of Chicago Recovery Alliance. September 2016 by Sawbuck Productions, Inc CC BY-NC-ND 3.0. <https://vimeo.com/287574344>

BASIC HARM REDUCTION MESSAGING

- Go slow, don't use alone, and carry naloxone
- Stagger use within group so others can respond if needed
- Do not mix drugs
- Be aware of tolerance changes
- Train friends to call for help
 - Never use Alone Hotline: 1 866 696 1966
 - Safe Spot Hot line: 1 800 972 0590



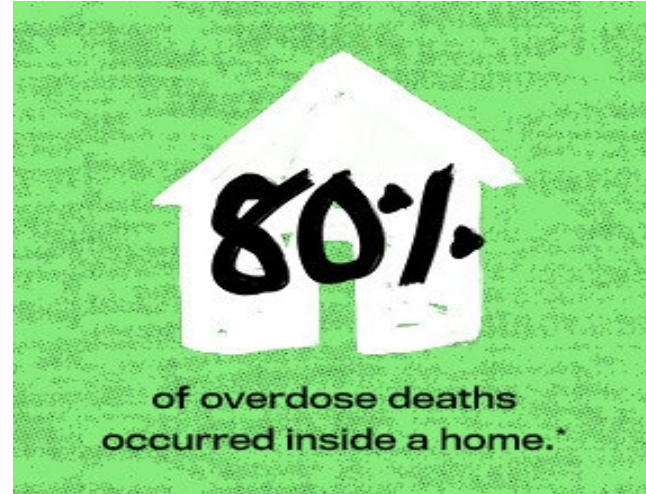
Evidence Behind Harm Reduction Interventions



Nearly 40% of opioid and stimulant overdose deaths occurred while a bystander was present



<https://pixabay.com/photos/friends-group-silhouettes-5493229/>



CDC 2020. Vital Signs:
<https://www.cdc.gov/drugoverdose/featured-topics/VS-overdose-deaths-illicit-drugs.html>

Evidence of Overdose Education and Naloxone Distribution

[Addiction](#). 2016 Jul; 111(7): 1177–1187.

Published online 2016 Mar 30. doi: [10.1111/add.13326](#)

PMCID: PMC5071734

PMID: [27028542](#)

Are take-home naloxone programmes effective? Systematic review utilizing application of the Bradford Hill criteria

[Rebecca McDonald](#)¹ and [John Strang](#)¹



YES! Take-home naloxone programs reduce overdose mortality among program participants and in the community and have low rate of adverse events

[Review](#) > [Am J Public Health](#). 2021 Aug;111(8):e1–e12. doi: 10.2105/AJPH.2021.306306.

Epub 2021 Jul 2.

The Effect of Overdose Education and Naloxone Distribution: An Umbrella Review of Systematic Reviews

[Amir Razaghizad](#)¹, [Sarah B Windle](#)¹, [Kristian B Filion](#)¹, [Genevieve Gore](#)¹, [Irina Kudrina](#)¹, [Elena Paraskevopoulos](#)¹, [Jonathan Kimmelman](#)¹, [Marc O Martel](#)¹, [Mark J Eisenberg](#)¹



6 systematic reviews containing 87 unique studies showed that OEND programs:

- improve long-term knowledge about opioid overdose
- improve people's attitudes toward naloxone
- provide sufficient training for people to safely and effectively manage overdose
- effectively reduce opioid-related mortality

Are Community Naloxone Distribution Cost-Effective?

> [Pharmacoecon Open](#). 2021 Nov 11;1-14. doi: 10.1007/s41669-021-00309-z.
Online ahead of print.

Community Distribution of Naloxone: A Systematic Review of Economic Evaluations

Nelda Cherrier ¹, Joanne Kearon ², Robin Tetreault ¹, Sophiya Garasia ¹ ³,
Emmanuel Guindon ¹ ³



YES! All studies concluded that community distribution of naloxone was cost effective

Does Naloxone Provision Lead to Increased Substance Use?

Review > Int J Drug Policy. 2022 Feb;100:103513. doi: 10.1016/j.drugpo.2021.103513.

Epub 2021 Nov 16.

Does naloxone provision lead to increased substance use? A systematic review to assess if there is evidence of a 'moral hazard' associated with naloxone supply

Wai Chung Tse ¹, Filip Djordjevic ², Viandro Borja ³, Louisa Picco ⁴, Tina Lam ⁴, Anna Olsen ⁵, Sarah Larney ⁶, Paul Dietze ², Suzanne Nielsen ⁷



- **NO! No evidence that take-home naloxone provision associated with increased opioid use or overdose.**
- **Concerns that take-home naloxone supply may lead to increased substance use were not supported by data from reviewed studies**

• **Naloxone does not enable person's use – only enables the person to breathe**

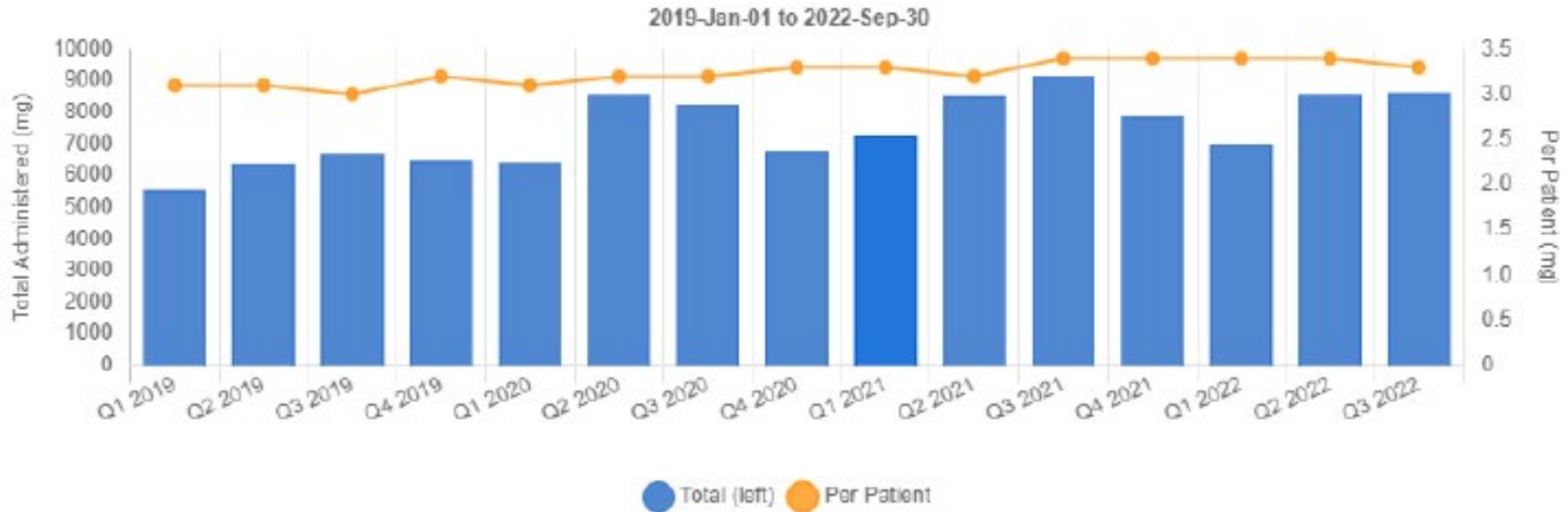
• **Dead people, DO NOT recover**

Are Higher Dosing Naloxone Needed?

New York Health Department Study

- March 2022–August 2023
- Comparison of Administration of 8-Milligram and 4-Milligram Intranasal Naloxone by Law Enforcement
 - No differences in survival outcomes, number of doses used, combativeness, or refusal of hospital transport were found between the two products
- **HOWEVER, people given the 8mg dose were more than twice as likely to have symptoms of opioid withdrawal, like vomiting, compared to those who received the 4mg dose**
- Bottom Line: No clear benefit of using higher dose naloxone

Michigan EMS Data



EMS averaging 3-3.5mg dosing of naloxone during era of fentanyl scares (Pantaleo, A. Personal Communication, April 6th, 2023)

What about Nalmefene (Opvee)?

- Another opioid antagonist, but NOT naloxone
- Longer duration of action than naloxone = 7 hours

Position statement from American College of Medical Toxicology and American Academy of Clinical Toxicology

- Keep using naloxone until more reliable data on nalmefene's safety and benefit are available
- Need real world testing on the how it works and safety
- Compare naloxone to nalmefene in real world scenarios

Disease of Addiction

1. Pleasure Center Activation

- Dopamine released in the reward centers - makes you want to repeat the activity

2. Repeated Exposure → Tolerance develops

- Brain adapts, you need more of the drug to achieve the same effect as there is less dopamine released/less receptors bind

3. Compulsion and Obsession

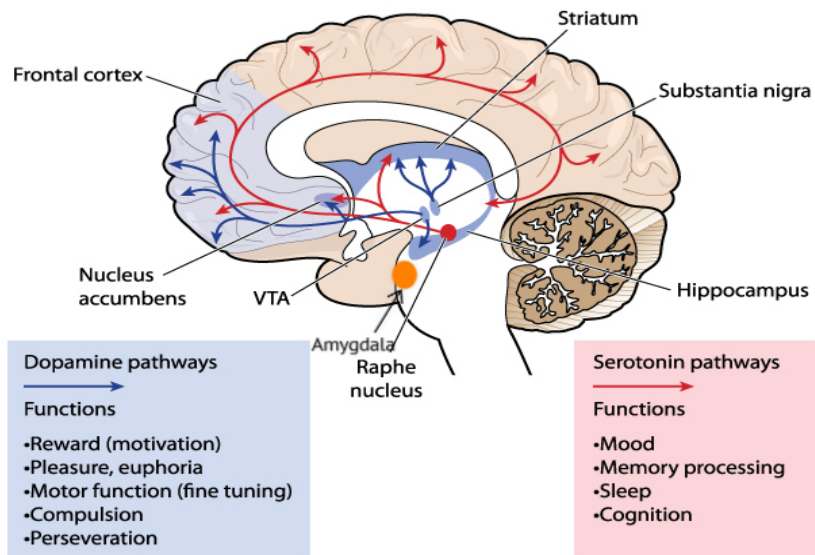
- Brain regions involved with judgment, decision making, and self-control become impaired—makes it harder to stop despite negative consequences

4. Withdrawal and Negative Affect

- experience when drug is not available

5. Learned behaviors

- affects memory centers where cues can trigger intense cravings for the drug



Methadone and Buprenorphine are Associated with Reduced Mortality after Nonfatal Opioid Overdoses

Retrospective Cohort Study MA Hospital Dataset from 2012-2014



HOW EFFECTIVE ARE DIFFERENT TREATMENT PATHWAYS FOR OUD?

Compared with those patients receiving no treatment:



Outpatient Counseling

No difference in overdose



Buprenorphine or Methadone

Reduced overdose
and death



Intensive Behavioral Health

No difference in overdose



Naltrexone

No difference in overdose

Inpatient Detoxification or
Residential Services

No difference in overdose

Bottom line: Methadone and buprenorphine
were associated with reduced overdose and
opioid-related morbidity compared to no treatment

Increasing Access to MOUD

Prescriptions for Buprenorphine in Michigan Following an Education Intervention

Liying Chen, MS¹; Sheba Sethi, MD²; Cara Poland, MD, MEd³; [et al](#)

» [Author Affiliations](#) | [Article Information](#)

JAMA Netw Open. 2023;6(12):e2349103. doi:10.1001/jamanetworkopen.2023.49103

“Among counties engaged with MOC, the density of buprenorphine prescribers and patients filling prescriptions for buprenorphine increased more than in non-MOC-engaged counties.”

Buprenorphine Prescription Units** Dispensed per 1,000 Residents by County

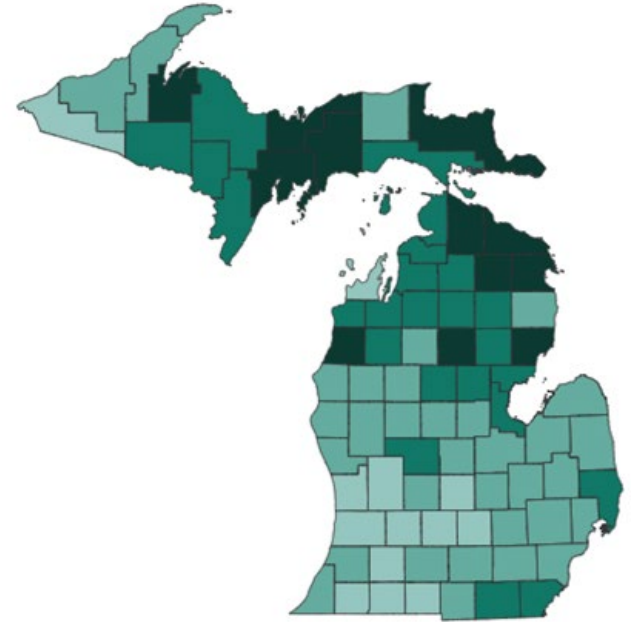
Select Quarter

2023 Q4

605.3

Buprenorphine Dispensing Rate

Category ● 0-399 ● 400-799 ● 800-1,199 ● 1,200+



**The term "units" refers to a dosage unit which could be pills (tablets, capsules, etc.), or milliliters, grams, etc.

Syringe Service Programs



Human Rights

“Impeding [the IDU] population from obtaining or using sterile syringes amounts to prescribing death as a punishment for illicit drug use.”

- Human Rights Watch, “Lessons Not Learned: Human Rights Abuses and HIV/AIDS in the Russian Federation,” April 2004, Vol. 16, No. 5, p.3

Syringe Service Programs (SSPs)

Initially started in the United States in mid-1980s
coinciding with the HIV/AIDS

- Activist, David Purchase - handing out sterile syringes to replace old syringes in Tacoma, WA
- SSPs provide people who use drugs with access to ESSENTIAL health and social services

<https://www.nytimes.com/2013/01/28/us/dave-purchase-who-led-needle-exchange-movement-dies-at-73.html>



Dave Purchase handing out syringes on his own in Tacoma, Wash., in the late 1980s. Doug Wilson

HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014–2015

Authors: Philip J. Peters, M.D., Pamela Pontones, M.A., Karen W. Hoover, M.D., M.P.H., Monita R. Patel, Ph.D., M.P.H., Romeo R. Galang, M.D., M.P.H., Jessica Shields, B.S., Sara J. Blosser, Ph.D., [+18](#), for the Indiana HIV Outbreak Investigation Team* [Author Info & Affiliations](#)

Published July 21, 2016 | N Engl J Med 2016;375:229-239 | DOI: 10.1056/NEJMoa1515195 | VOL. 375 NO. 3

Scott County, IN: Case Study HIV Outbreak

- Small, rural, southeastern county
- From 2004-2013, only **5 people** diagnosed with HIV
- Nov 18, 2014 to Nov 1, 2015, **181 cases of HIV** with majority from a single strain of HIV (n=157)
- Nearly all had experience injecting extended release oxymorphone
- 167 (92%) co-infected with Hepatitis C.



Led to public health emergency allowing for SSP to establish in 2015

Evidence Behind SSPs

- Early epidemiological studies since 1996 show that participating in SSP programs reduces HIV infection¹

SSPs consistently^{2,3}

- Lowers risk of infectious diseases
- Improves access to substance use treatment
- Access to harm reduction supplies including naloxone
- Studies in Baltimore and Harlem show living near SSP is not associated with increased crime rates⁷⁻⁹



EVIDENCE FOR SSPs

- Cost Effective⁴
- They save taxpayer dollars:
 - *Cost of...*
 - HIV Treatment = \$300-600K
 - Hepatitis C Treatment = \$100-500K
 - Sterile Syringe = 10¢



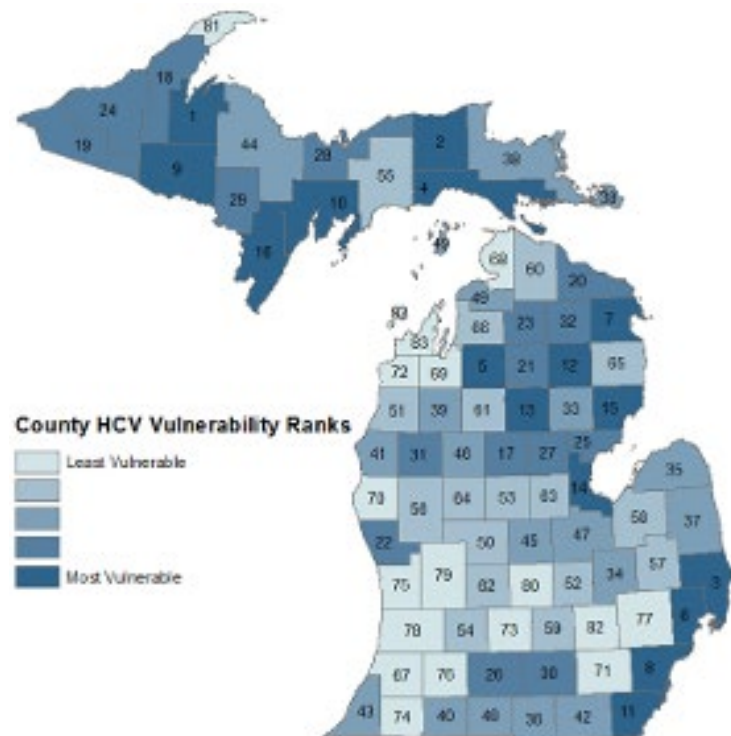
EVIDENCE FOR SSPs

- **Programs reduce the spread of HIV by up to 80% and Hepatitis C by up to 50%**
 - SSP services combined with MOUD, shown to reduce more than 2/3 transmission of HIV/Hep⁶
- **People are more likely to enter treatment and stop drug use**
 - Users of syringe exchange programs (SSPs) are 5x more likely to enter drug treatment and 3x more likely to stop using drugs than those who don't use SSPs⁵
- **They protect the community:**
 - decreasing accidental needle stick by 66% and taking used syringes off the street

“Drug Paraphernalia” in Michigan

- MCL 333.7451 criminalizes the sale of drug paraphernalia, with sterile syringes defined as paraphernalia
- MCL 333.7457(g)
- Sections 7451 to 7455 do not apply to any of the following:
 - *(g) An object sold, offered for sale, or given away by a state or local governmental agency or by a person specifically authorized by a state or local governmental agency to prevent the transmission of infectious agents.*
 - ***Local ordinances further criminalize the possession of sterile syringes. In addition individuals can be charged with possession of a controlled substance for trace amounts in used supplies.***

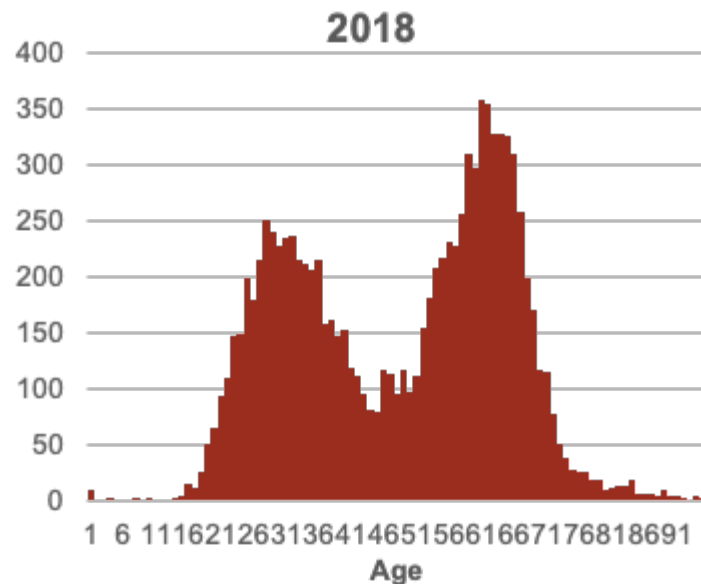
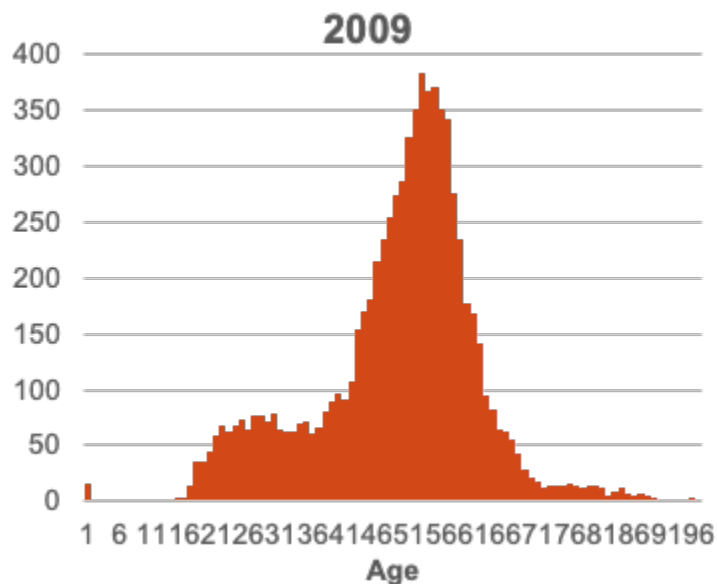
CDC vs. Michigan HIV/HCV County-Level Vulnerability Ranking



County-level Vulnerability to Rapid Dissemination of HIV/HCV Infection Among Persons Who Inject Drugs



Distribution of New HCV Diagnoses by Year of Birth in Michigan



Syringe Service Programs in Michigan (as of 2021)

ACCESS (Macomb)

Beaumont Taylor Teen

Benzie-Leelanau District Health Department

Calhoun County Health Department

**Central Michigan District Health
Department**

**Community Health Awareness Group
(Detroit)**

Chippewa County Health Department

COPE Network (Kalamazoo)

Detroit Recovery Project

Dickinson-Iron District Health Department

District Health Department #2

District Health Department #4

District Health Department #10

Grand Traverse County Health Department

Harm Reduction Michigan

Health Department Northwest

Ionia County Health Department

JXN Harm Reduction

LMAS District Health Department

Marquette County Health Department

Oakland County Health Division

Public Health Delta Menominee

Punks with Lunch

Salvation Army Harbor Light - Monroe

Shiawassee County Health Department

SOOAR

St. Clair County Health Department

The Grand Rapids Red Project

Unified

Wellness

Western Up District Health Department



Naloxone Distribution



Access to Naloxone

Naloxone has existed since 1971, but it wasn't until 2017 (in Michigan) that it was available without a prescription for the people who need it most

This is a question of:

- Who has access, and;
- The social context of substance use



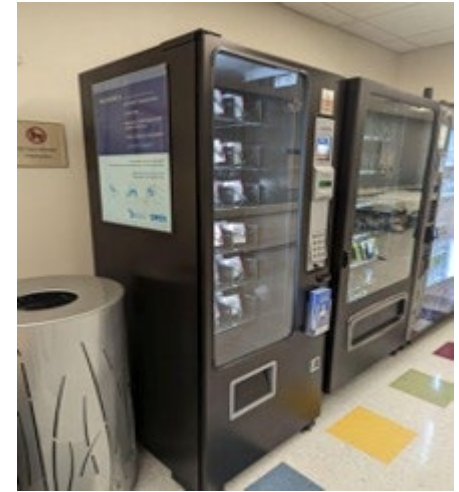
NATIONAL
HARM REDUCTION
COALITION



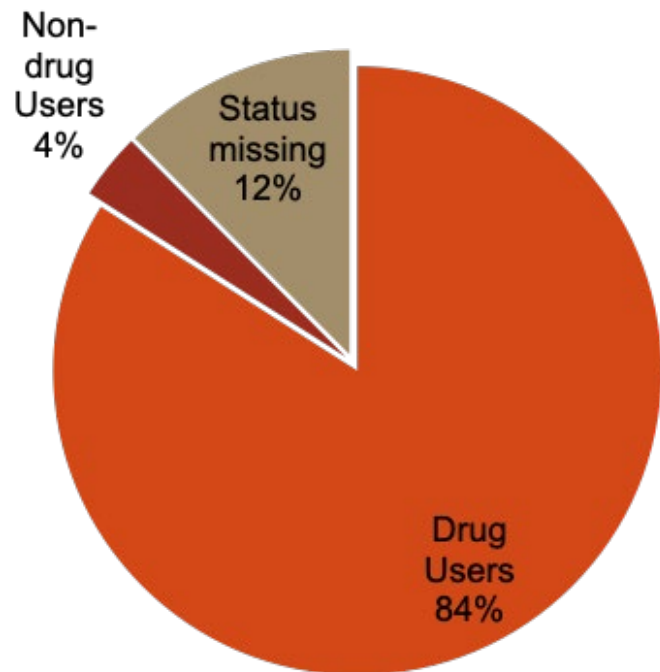
Access to Naloxone, Con't.

Although naloxone distribution has hit the mainstream, it wouldn't have without small groups of dedicated harm reduction activists working directly with people who use drugs to ensure access to this life saving medication.

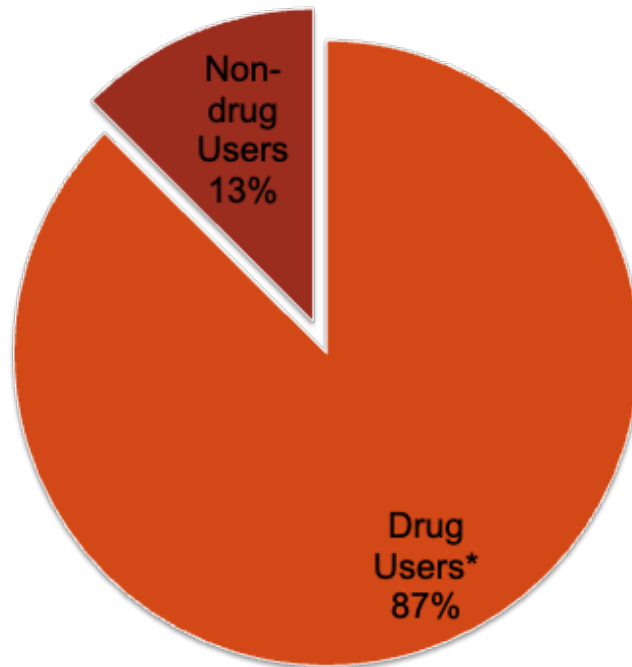
Naloxone Distribution Best Practice



People Who Use Drugs Are Key



Overdose responders from Rowe,
2015



Overdose rescues from Walley, 2013



The more
the better

- Dose response effect- Walley, 2013

Finite resources, must prioritize?



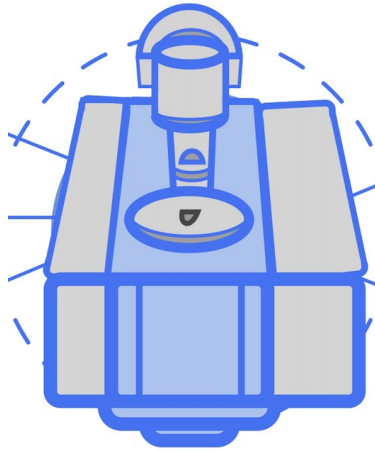
People who use drugs

Other incidental
bystanders

Summoned
responders

- Experiencing **incarceration**
(Binswanger, 2013)
- Entering & exiting **treatment for OUD**
(Strang, 2003)
- Experiencing **homelessness**
(Baggett, 2012)
- Living with **HIV/AIDS** (Green, 2012)

Drug Checking Services



Shukait, A, Photo used with permission, 2023.

Contextualizing Drug Checking

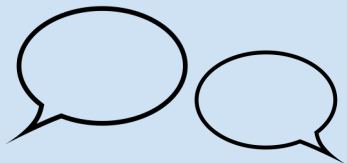
- People have a basic human right to know what they are putting in their bodies
 - Think FDA labels
 - As a result of criminalization this info is not available for most PWUD
- Without this information it is very difficult to reduce risk
- With it most people will take steps to protect their health



Drug Checking Services

Goal 1

Provide actionable info
to end users of
substances

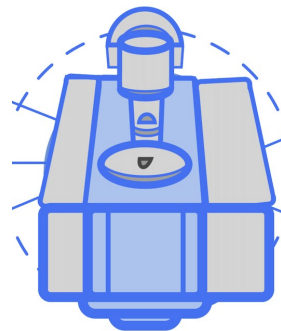


Goal 2

Contribute to
community
understanding of drug
supply and ability to
respond

Different Types Drug Checking Services

- Reagent testing
- FTS, XTS, BTS
- Onsite FTIR
- Laboratory GC/MS

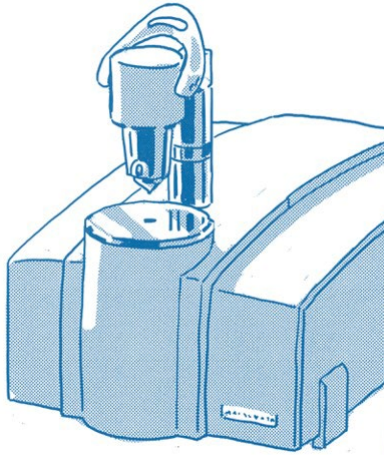


Study Outcomes from DCS

Increase in Knowledge



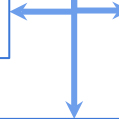
Informed decision making



Changes in Behaviors particularly for Unexpected Substances

Dispose of the drug

Sharing information to social networks

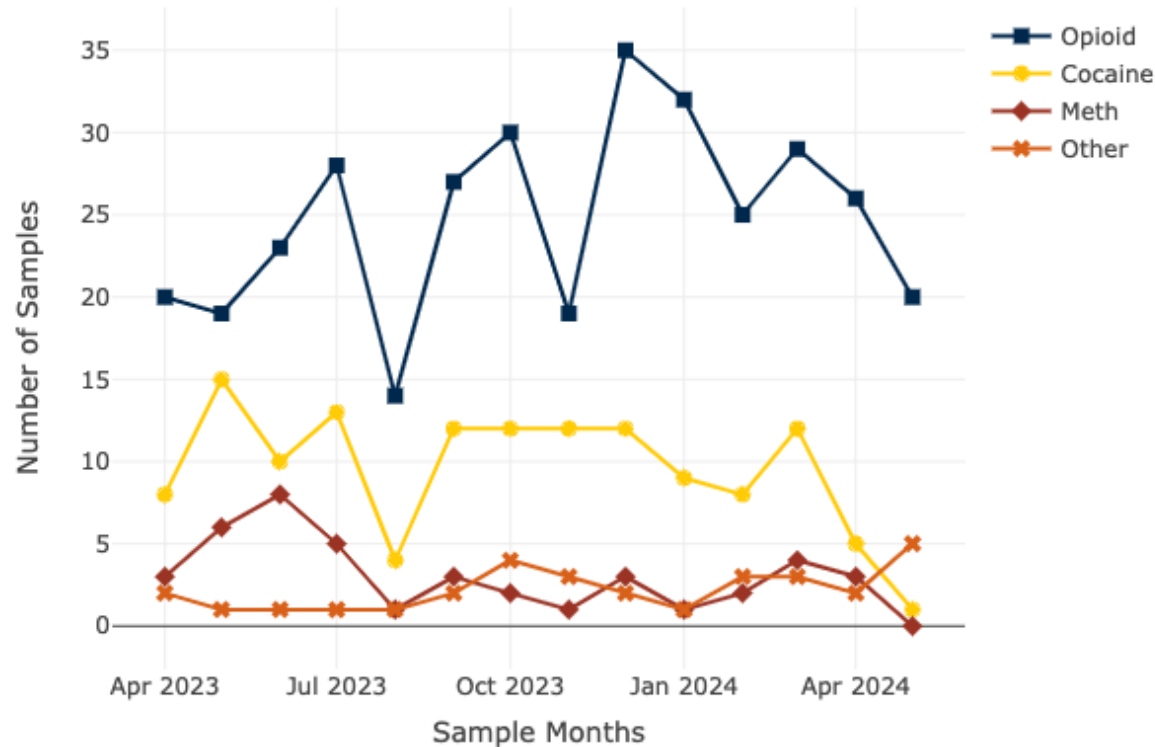


Safer Use Practices

- Use less - a tester shot
- Using more slowly
- Naloxone available

Sage, C. and Michelow, W. Drug Checking at Music Festivals: A How-to-Guide. ANKORS; 2016. <http://michelow.ca/drug-checking-guide>; Measham FC. Drug safety testing, disposals and dealing in an English field: Exploring the operational and behavioural outcomes of the UK's first onsite "drug checking" service. Int J Drug Policy. 2019;67:102-107. doi:10.1016/j.drugpo.2018.11.001; Rouhani S, Park JN, Morales KB, Green TC, Sherman SG. Harm reduction measures employed by people using opioids with suspected fentanyl exposure in Boston, Baltimore, and Providence. Harm Reduct J. 2019;16. doi:10.1186/s12954-019-0311-9; Krieger MS, Goedel WC, Buxton JA, et al. Use of Rapid Fentanyl Test Strips Among Young Adults Who Use Drugs. Int J Drug Policy. 2018;61:52-58. doi:10.1016/j.drugpo.2018.09.009; Valente H, Martins D, Carvalho H, et al. Evaluation of a drug checking service at a large scale electronic music festival in Portugal. Int J Drug Policy. 2019;73:88-95. doi:10.1016/j.drugpo.2019.07.007

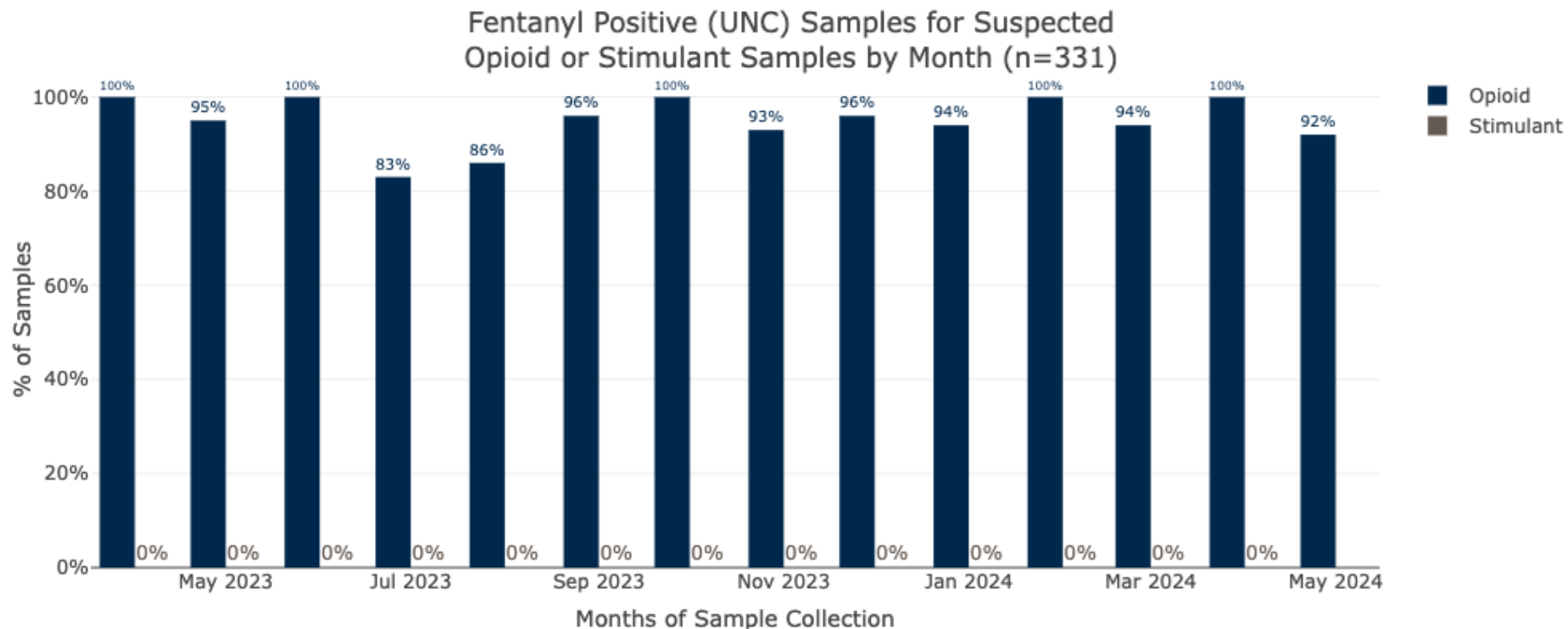
Submitted Sample Counts by Month by UNC Result (n=456)



Other = not stimulant or opioid

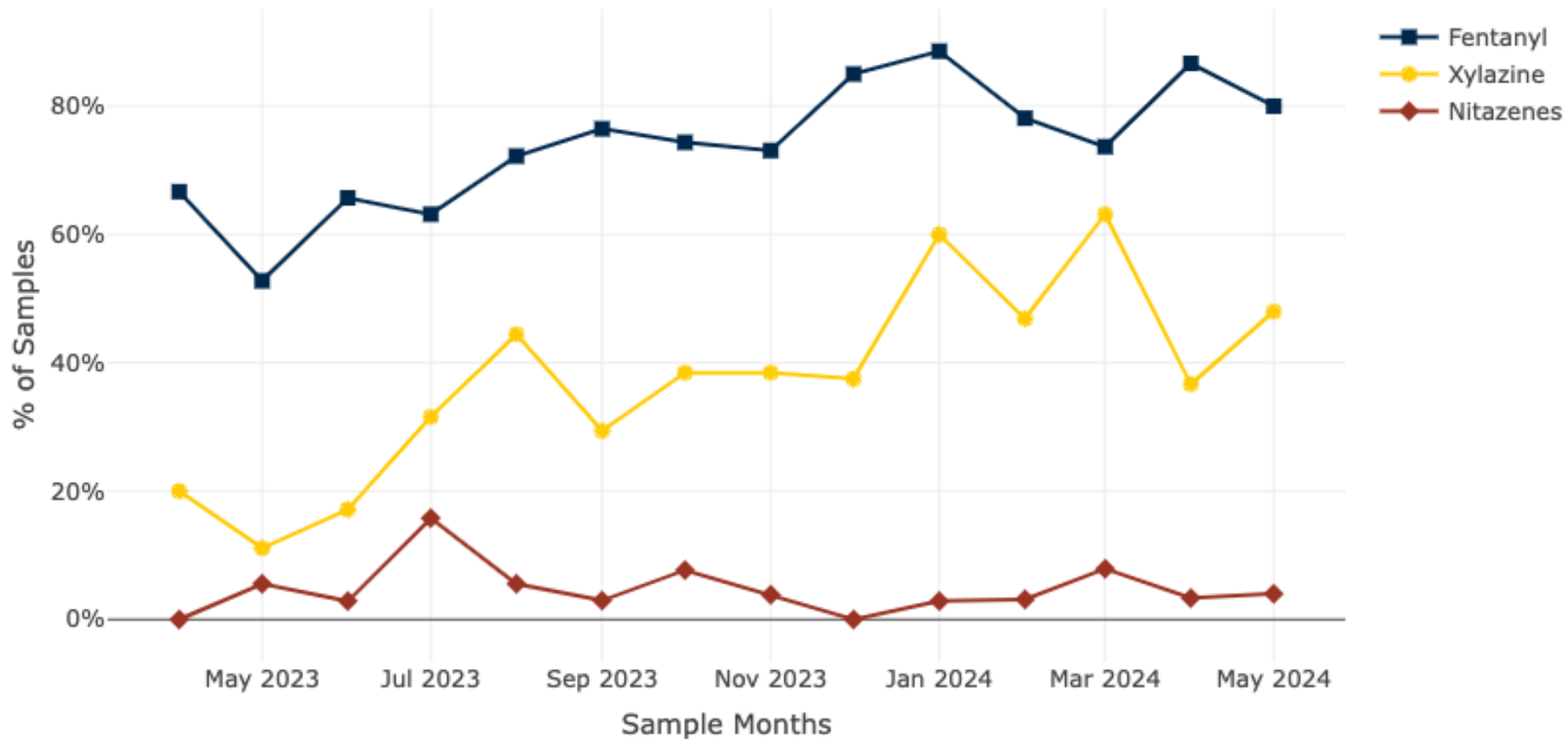
Red Project Drug Checking Services

- Samples are tested onsite using FTIR, FRS, BTS, and XTS, and sent to UNC Street Drug Analysis Lab (<https://www.streetsafe.supply/>) for testing using GCMS
- All results are posted publicly to Streetcheck (<https://www.info.streetcheck.org/>)
- From April 2023 to April 2024, Red Project has checked over 400 samples



In Grand Rapids, the presence of fentanyl in opioid samples >80%,
BUT fentanyl is NOT present in the stimulant samples

Percent of Submitted Samples (n=456)



Significant Results

- **Presence of fentanyl-** ubiquitous in opioids, nonexistent in stimulants
- **Presence of xylazine-** increasing in the community
- **Presence of nitazenes-** only 1st identified in US late 2022; identified in GR every month

Impact

- Actionable information has led to individuals cutting down use, disposing of substances, using with friends, doing tester shots, etc
- Actionable information has led to new testing processes by MEs, and has been shared around the state of MI

A question of ethics: who and what is our canary in the coal mine regarding the illicit drug supply?

Challenges to Implementation

Public Perception

- **Divisive politicization** of public health issues
- Data and science have supported harm reduction interventions for decades- however, *public opinion is not based in data and science*
- **Substance use is criminalized-** it has never been fully medicalized- and as a result we have been stuck in an abstinence only mindset, which works against achieving improved public health outcomes



Challenges to Implementation

- Public Policy

- The Drug War- essentially a war against people, not inanimate objects
- **Syringe Access- HB 5178**, yet more is needed...
- Naloxone Distribution
- **Drug Checking- HB 5179**, yet more is needed...
- Moving beyond basic harm reduction approaches to upstream interventions

Photo with permission from <https://drugpolicy.org/>



References

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Thank you!

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