

# Drug Checking for the Public Health: Lessons from Practitioners

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- Moderator: Amy Lieberman, J.D., Deputy Director, Harm Reduction, Network for Public Health Law

# Seattle & King County Public Health Thea Oliphant-Wells

# Community Drug Checking

Thea Oliphant-Wells, MSW  
Public Health Seattle & King County

# What is Community Drug Checking?

Drug checking:

- allows people to **identify contents** within a substance and make **informed decisions**
- is **paired with other person-centered health services**, including:
  - Syringe services programs, wound care, HIV & Hep C Testing and Treatment, medications for opioid use disorder (MOUD), and overdose prevention sites
- allows the community to **identify new emerging drug threats**, such as contaminants like xylazine

# How do we check drugs?

## Test Strips

- Single drug: fentanyl, benzodiazepines (ex. Xanax, bromazepam), xylazine, medetomidine
- YES/NO
- Highly sensitive
- False positives with some substances



# How: Spectrometers (fancy science machines)

## FTIR (fourier-transform infrared)

- Shoots a beam of infrared light through the sample and gives a reading to compare with vast libraries of substances
- Can be set up anywhere
- Training is extensive but no background in chemistry required
- Detection limit – about 5%



## GC-MS (gas chromatography mass spectrometry)

- Lab based testing – scientist required
- Can detect trace amounts

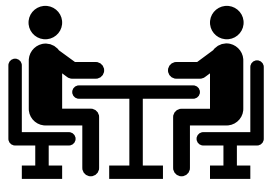
LC-MS testing  
coming soon!



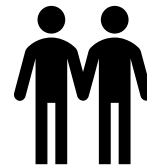
# Typical Drug Checking Encounter



Customer is connected to the Technician. They discuss the type of substance, experience using it, and what technology they are interested in.



Technician explains results, answers questions, and offers harm reduction advice.



FTIR testing is a point-of-care technology that takes about 5-10 minutes for results.



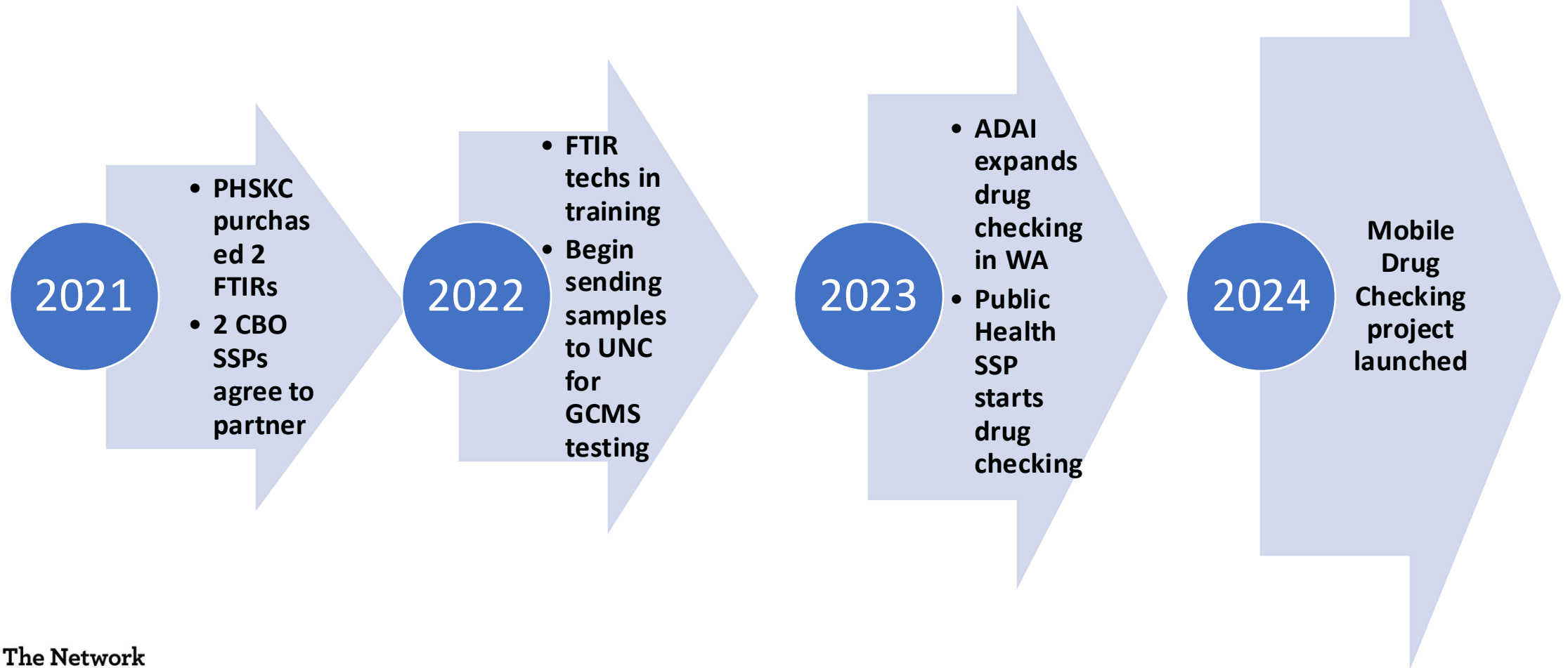
Test Strips are a point-of-care technology that may also be distributed for individual use.



Samples are mailed to lab at UNC for GCMS testing. Results available online or in person in 1-4 weeks.



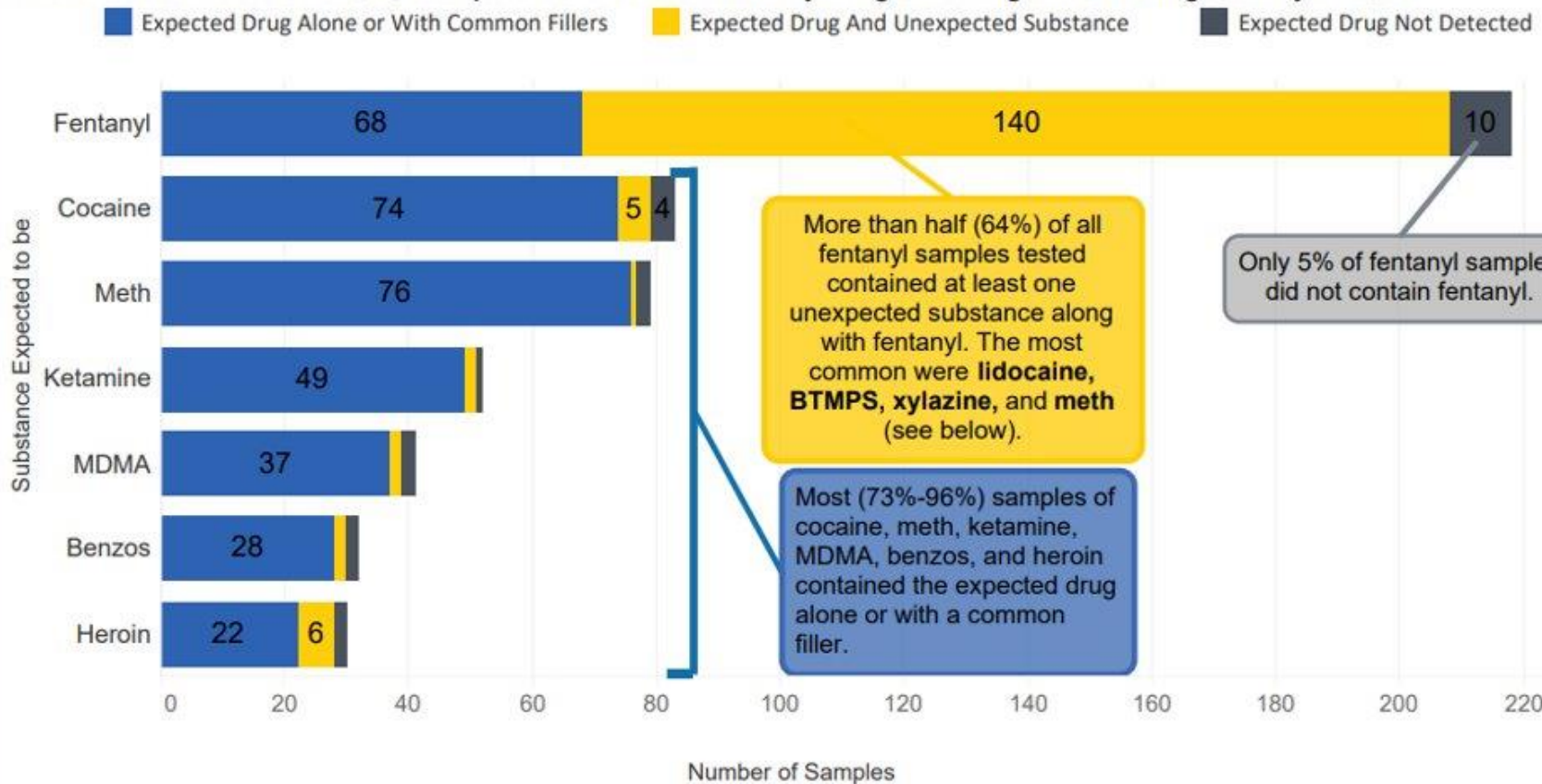
# Community Drug Checking in King County



## 2024 King County Community Drug Checking Results

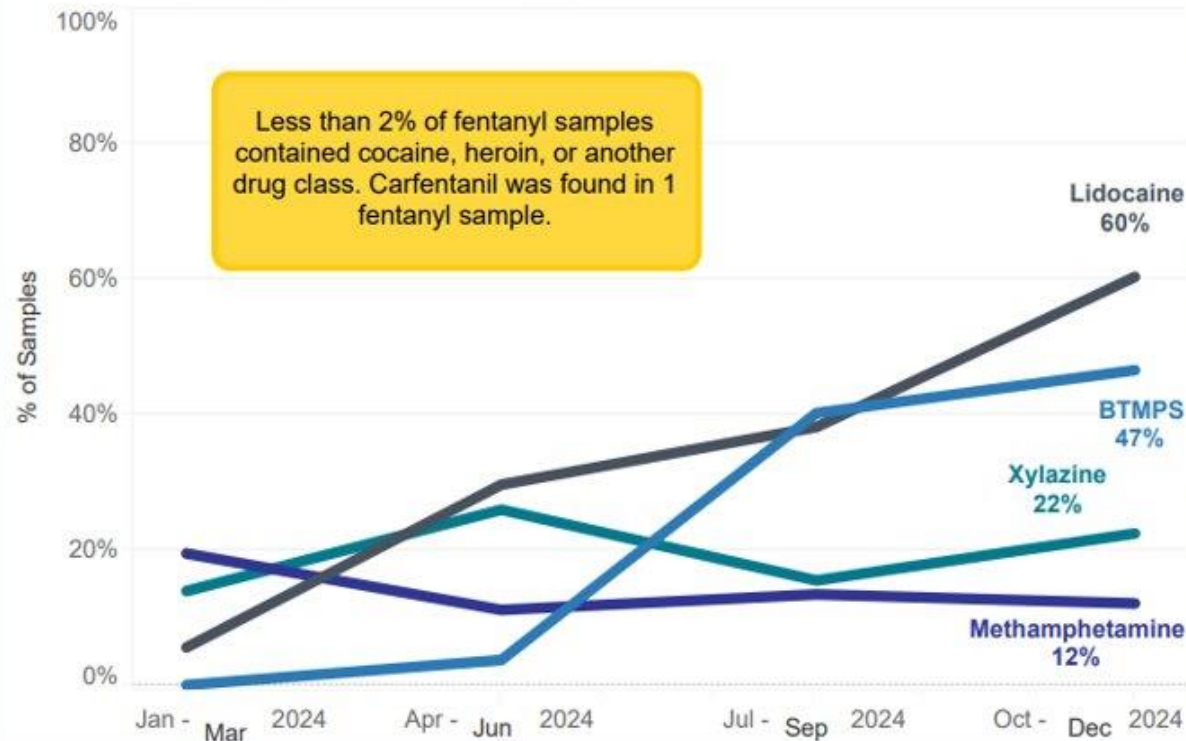
## What Was Tested in 2024?

This chart describes the 640 samples tested at community drug checking sites in King County in 2024:



## Unexpected Substances in Fentanyl

In 2024, King County Community Drug Checking sites tested 218 fentanyl samples. They contained the following substances:

**Lidocaine**

The percentage of fentanyl samples containing lidocaine increased from 6% to 60% between the start and end of 2024. Lidocaine is a local anesthetic that can cause numbness. Other possible effects are not known.

**BTMPS (also known as "boat glue")**

BTMPS was first detected in King County in June 2024. By the end of 2024 BTMPS was present in 47% of fentanyl samples tested. BTMPS is a hazardous industrial chemical with unstudied health effects.

**Xylazine (also known as "tranq")**

The percentage of fentanyl samples containing xylazine varied between 14% and 26% across 2024. Xylazine is an animal tranquilizer that increases the risk of overdose and skin infections.

**Meth**

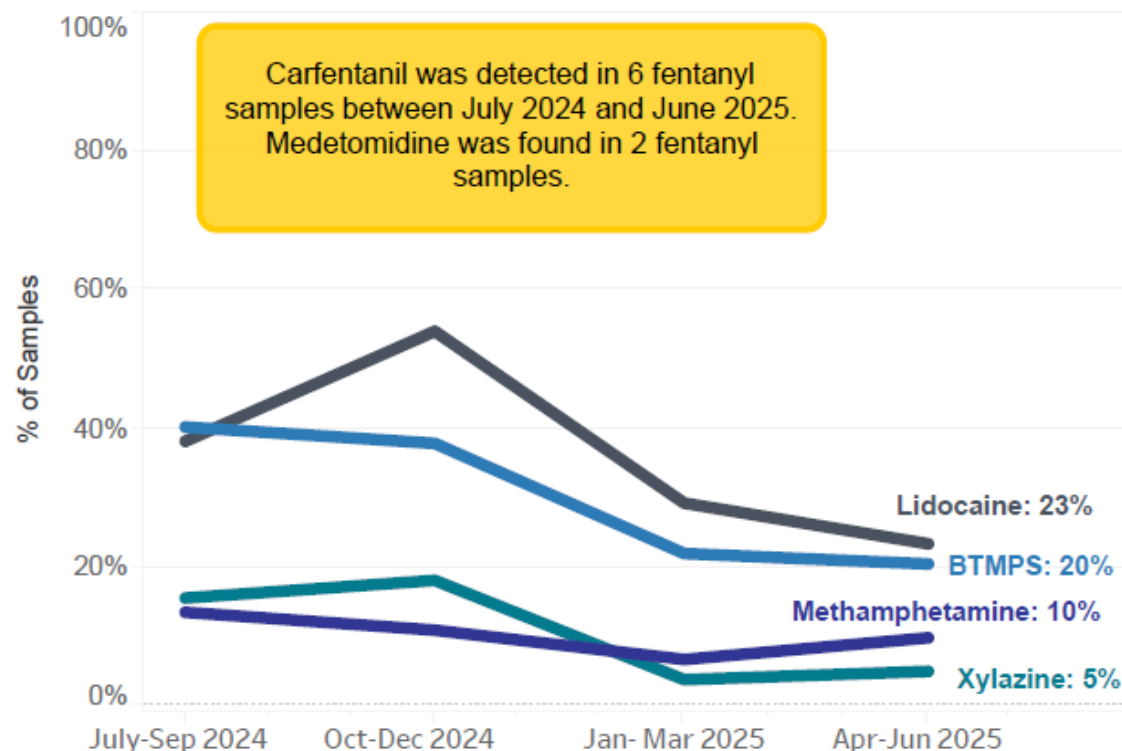
The percentage of fentanyl samples containing meth varied between 11% and 19% across 2024.

This report is based only on samples brought to community drug checking, and does not reflect the drug supply of King County as a whole.



## Unexpected Substances in Fentanyl

Between July 2024 and June 2025, King County Community Drug Checking sites tested 448 fentanyl samples. They contained the following substances:



### Lidocaine

The percentage of fentanyl samples containing lidocaine increased over the course of 2024 but decreased in the first half of 2025. Lidocaine is a local anesthetic that, in high doses, can cause heart problems and seizures.

### BTMPS (also known as “boat glue”)

BTMPS was first detected in King County in June 2024. The presence of BTMPS increased in 2024 but then decreased in 2025. BTMPS was present in 20% of fentanyl samples in April-June 2025. The effect of this chemical on humans is unknown. In animals, BTMPS has caused serious damage to the heart, eyes, and other organs.

### Methamphetamine

The percentage of fentanyl samples containing meth varied between 7% and 13% between July 2024 and June 2025.

### Xylazine (also known as “tranq”)

The percentage of fentanyl samples containing xylazine varied between 13% and 26% across 2024 and decreased to 4% to 5% in early 2025. Xylazine is a non-opioid animal tranquilizer that causes skin wounds and infections and may affect overdose risk.

# Legal Landscape

- 2021: drug checking is **illegal** based on state paraphernalia law
- 2023: law changed to allow drug checking equipment and offered legal protections for staff providing the service

this subsection, "drug paraphernalia" means all equipment, products, and materials of any kind which are used, intended for use, or designed for use in planting, propagating, cultivating, growing, harvesting, manufacturing, compounding, converting, producing, processing, preparing, (~~(testing, —analyzing,)~~) packaging, repackaging, storing, containing, concealing, injecting, ingesting, inhaling, or otherwise introducing into the human body a controlled substance other than cannabis. Drug paraphernalia includes, but is

Public Health Seattle & King County  
Overdose Prevention & Response  
401 5th Ave Suite 1110  
Seattle, WA 98104

Public Health  
Seattle & King County



## Authorized Community Drug Checking Provider

For verification that this cardholder is providing services on behalf of Public Health  
please contact:

Thea Oliphant-Wells, Program Manager, Public Health Seattle & King County  
[thea.oliphant-wells@kingcounty.gov](mailto:thea.oliphant-wells@kingcounty.gov) 206-477-8204

Community Drug Checking is an important overdose prevention measure supported  
by Washington State Law. (see other side for RCW)

RCW 69.50.4121(3) states, “Public health and syringe service program staff taking samples of substances and using drug testing equipment for the purpose of analyzing the composition of the substances or detecting the presence of certain substances are acting legally and are exempt from arrest and prosecution under RCW 69.50.4011(1)(b) or (c), 69.50.4013, 69.50.4014, or 69.41.030(2)(b) or (c).”

Community drug checking services in King County are provided by community-based organizations and Public Health in partnership with the University of Washington, Addictions, Drugs, and Alcohol Institute (ADAI).

More info: [adai.uw.edu/WAdata/DrugChecking/](http://adai.uw.edu/WAdata/DrugChecking/)

This service is provided with support from the Centers for Disease Control and Prevention, Overdose Data to Action grant.

More info: <https://www.cdc.gov/overdose-prevention/>



# Current Legal Challenges

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No legal protections for  
drug checking participants

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SODA (Stay Out of Drug  
Area) Zones

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Prohibition leads to more  
toxic drugs

# Mobile Services Meet People Where They Are



# Outside In Drug Checking

## Blake Joachim





Outside In  
Drug Checking  
Service



# The Service

## Live 1-on-1 Service:

- Anonymous, confidential, and non-destructive
- Monday, Wednesday, ~Thursday, Friday
- Walk-ins and by appointment
- Downtown, Portland, OR

## Technology:

- FTIR
- Immunoassay test strips
- Mail-in lab based partners (GCMS/LCQTOF)

FTIR



Immunoassay  
Strips



Secondary  
Testing  
(GCMS,  
LCQTOF)





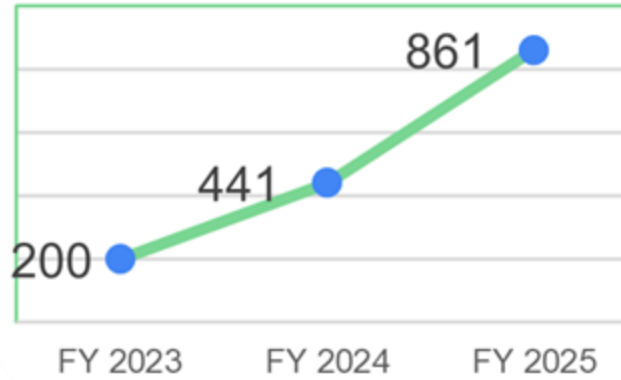
DCing technology has exception under Oregon paraphernalia law, and civil liability protection. (2023 HB2395)

- ORS 475.525 is amended to read:
  - (3) For purposes of this section, **“drug paraphernalia” does not include** hypodermic syringes or needles, **single-use drug test strips, drug testing tools** or any other item designed to prevent or reduce the potential harm associated with the use of controlled substances, including but not limited to items that reduce the transmission of infectious disease or prevent injury infection or overdose
  - (6) A person acting in good faith is immune from civil liability for any act or omission of an acting committed during the course of distributing an item described in subsection (3) of this section.

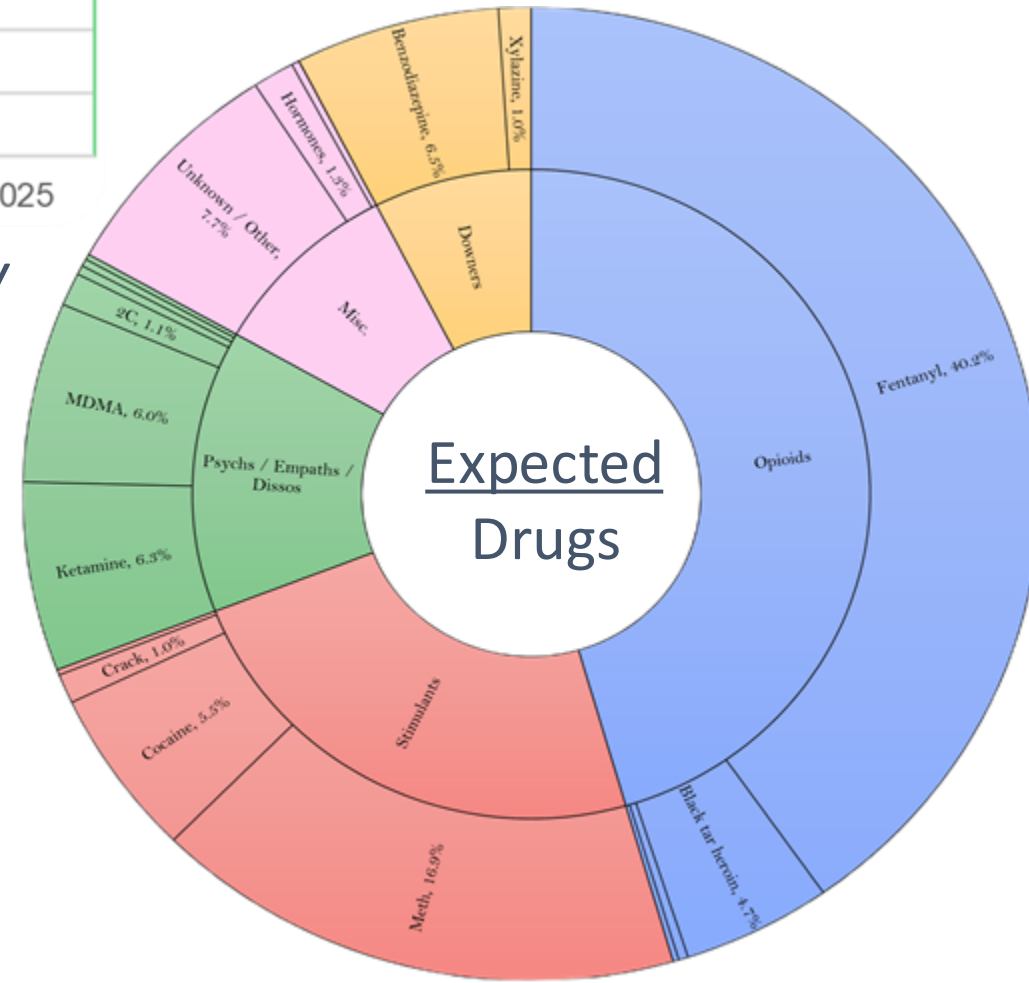
Operating under an "affirmative defense" (ORS\_475.757) which protects SSP staff for handling controlled substances and distributing paraphernalia. (2019)

# Program Stats

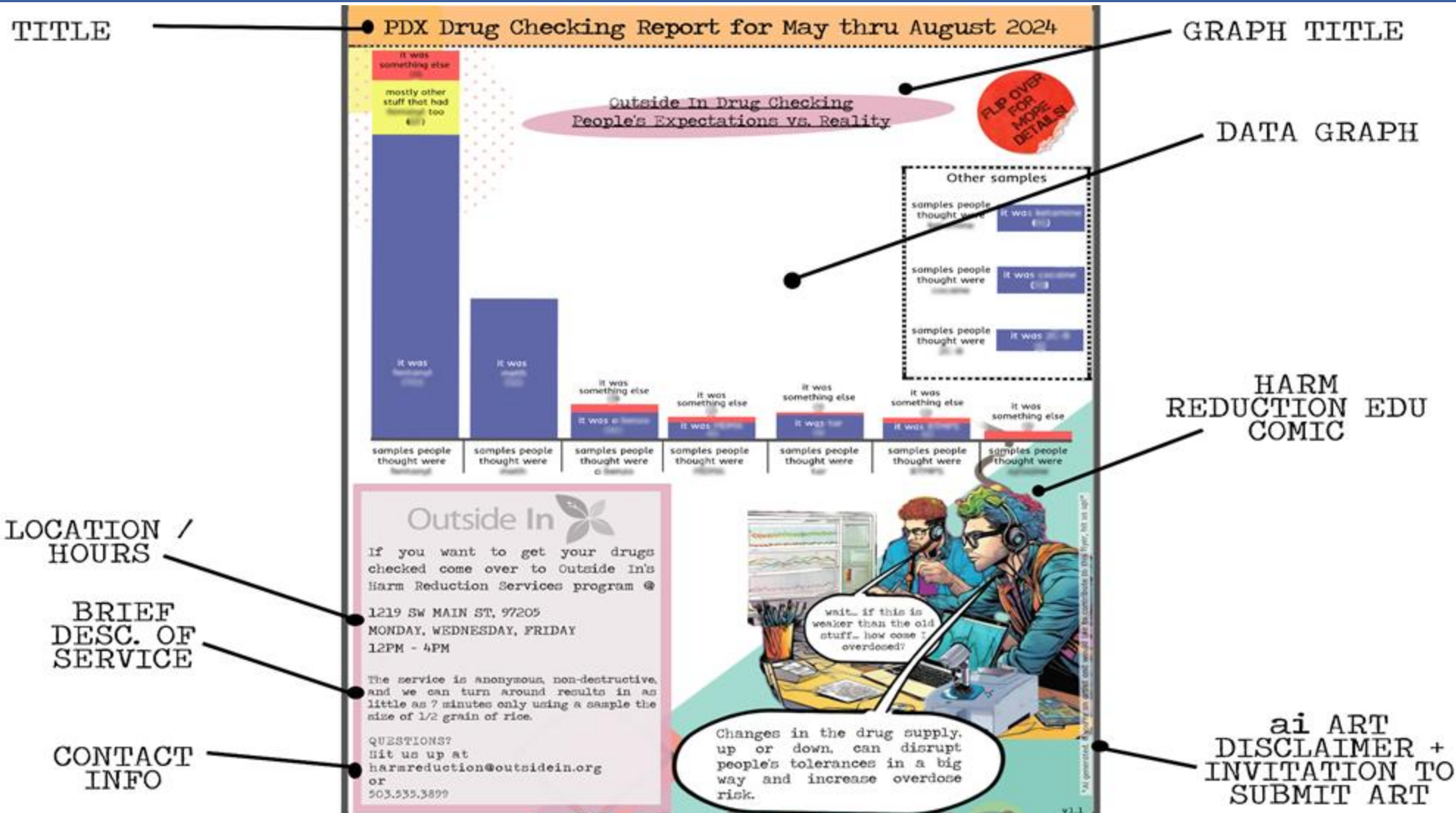
- Soft launch ~Nov 2022
- ~1650 total samples analyzed
- All-time Avg. samples per day: 7.3
- All-time Avg. unique people per day: 4.2
- Currently, of the people we serve:
  - 47.4% new to drug checking
  - 52.6% returning clients



# of samples per FY







DISCLAIMER OF  
SERVICE  
CAPABILITIES  
AND LIMITSNARRATIVE  
CONTINUITYCOMMON  
LANGUAGECOMMUNITY  
INPUT**One more thing...**

No drug checking technology is perfect.

At Outside In, we use multiple different drug checking technologies (test strips, FTIR, GCMS) each of them have their own strengths and limitations. Combined they give us lots of information and provide a snapshot of the PDX drug supply, but this report and it's results should not be thought of as a full report on the drug supply. Use this report, alongside common sense harm reduction techniques, to keep yourself and your community safe and informed. ♥

**Fentanyl (100% total)**

In May, the fentanyl supply in PDX experienced a dramatic shift. Kicking off what people were calling "the drought". Portland was not alone in seeing these changes. We saw a major drop in the amount of fentanyl in the supply and we began seeing "new" cuts and buffs. Samples were inconsistent, low quality, and unpredictable. Instead of samples being just mannitol, fentanyl, and precursors; cuts like acetaminophen, BTMPS, lidocaine, xylazine, inositol, MSM and lactose were present. This has continued in our supply to this day.

Of the 100 fentanyl samples we tested, 100 had variable amounts of fentanyl. 100 samples had only trace amounts of fentanyl and 100 samples were bunk, with no fentanyl present. 100 samples that didn't have any fentanyl instead contained xylazine. The supply has somewhat stabilized but is still very different from our Jan-April newsletter. Less than a handful of samples tested from May-Aug were similar in composition and strength as they were earlier in the year.

**BTMPS (100% total)**

Bis(2,2,6,6-tetraethyl-4-piperdyl) sebacate is a new cut that is showing up in the fentanyl that is often used in industrial settings. In the short and long term, it is harmful; but it has not been widely tested on humans and complete health effects are unknown. We also do not know why it has been introduced to the supply. BTMPS, commonly called "Bug Spray Dope" (due to it's bad taste when smoked) was in 45% of all fentanyl samples. Of the 100 samples that people were expecting to have BTMPS, 100 had the chemical in it.

GroundScoreRatio

58%

**Meth (100% total)**

PDX meth was, entirely just meth 100. No expected meth samples contained anything other than meth. No fentanyl whatsoever.

**Black tar heroin (100% total)**

The tar was mostly what it was expected to be, a combination of opiates usually heroin + 6-MAM & acetyl-codeine (metabolites). 100 sample however, was pseudo-tar, mixture of sugar + fentanyl that just looked and felt like tar.

**MDMA (100% total)**

The 100 samples of crystal form MDMA tested were just MDMA (clear, white, gray, purple, black, and pink colored). The 100 pill from sample was MDMA with trace amounts of ketamine.

100 samples were not MDMA at all. One ground-score sample was Fluoroamphetamine + meth + trace 25C-NBOMe and the other was a glucose pill.

**Benzodiazepines (100% total)**

100 samples had benzos present, mostly bromazolam with one clonazepam. 100 samples were not benzos. One was fentanyl + meth, one was ibuprofen + heroin and one was just bunk. BTMPS was present in 100 bromazolam sample.

**Xylazine (100% total)**

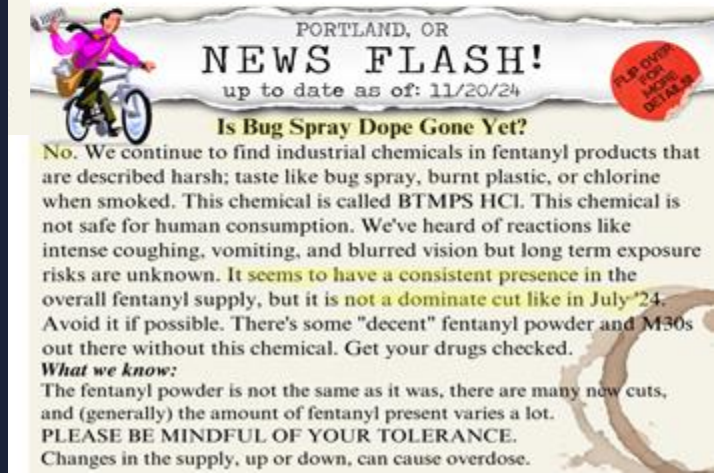
Of the 100 fentanyl samples brought in expected to have xylazine, none did. However, we did see an increase in the amount of xylazine present in the fentanyl supply. Jan-April xylazine was detected in 0% of fentanyl samples, May-Aug xylazine was present in 11% of them.

While we are seeing some xylazine in PDX, it is still not common and often only present in small quantities.

EXAMPLES  
OF  
OUTLIER  
SAMPLES



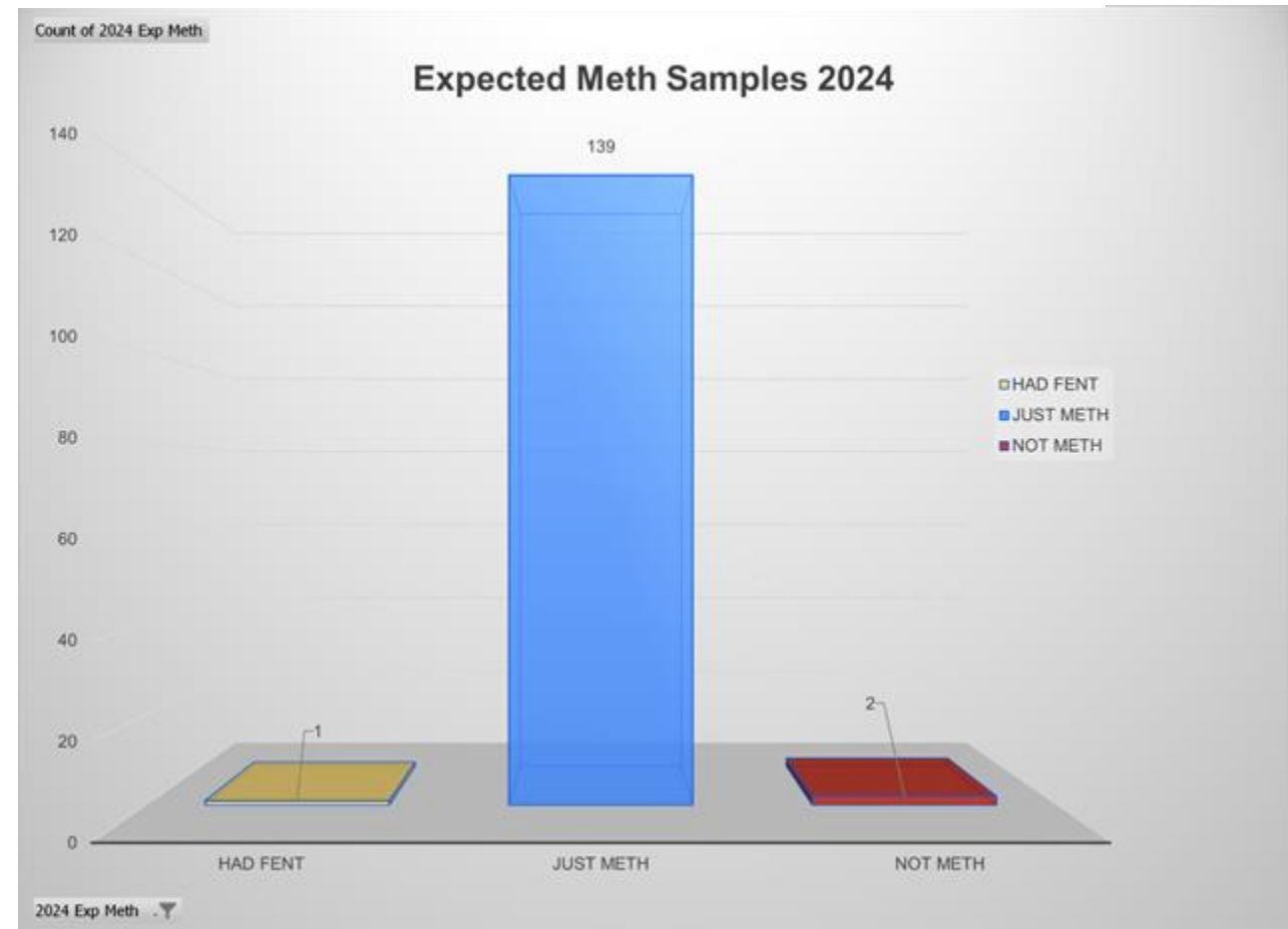
Bis  
(2,2,6,6-  
tetramethyl-  
4-  
piperidyl)se  
bacate



## Why drug checking?

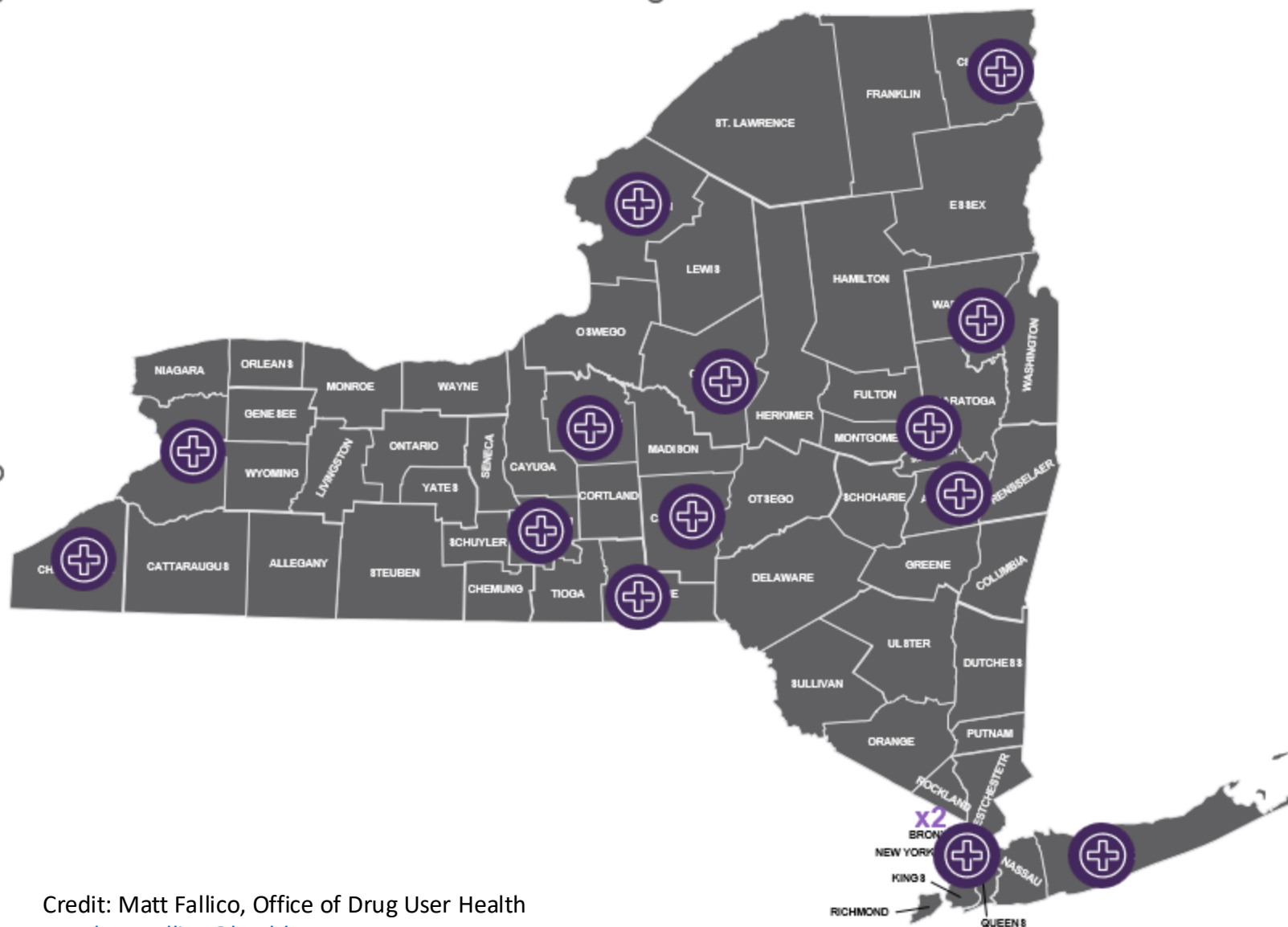
- Bodily Autonomy
- Risk Reduction
- Community Engagement & Outreach
- Debunking Drug War Propaganda + Misinformation
- Liberate access to technology and drug supply information for people who use drugs

“All the drugs have fentanyl in them”



Carmelita Cruz  
NY Department of Public Health

The New York State Department of Health oversees eight (8) community-based drug checking programs operating in fifteen (15) unique locations across New York.



Credit: Matt Fallico, Office of Drug User Health  
[Matthew.Fallico@health.ny.gov](mailto:Matthew.Fallico@health.ny.gov)



# Drug Checking Data Dashboard



[https://www.health.ny.gov/diseases/aids/consumers/prevention/oduh/drug\\_checking\\_data.htm](https://www.health.ny.gov/diseases/aids/consumers/prevention/oduh/drug_checking_data.htm)



> J Public Health Manag Pract. 2024 Oct 10. doi: 10.1097/PHH.0000000000002061.  
Online ahead of print.

## Development, Evaluation, and Initial Findings of New York State Department of Health Community Drug Checking Pilot Programs

Emily R Payne <sup>1</sup>, Guy J Thomas, Matthew Fallico, Allan Clear, Maka Gogia, Lucila Zamboni

Affiliations + expand

PMID: 39387612 DOI: 10.1097/PHH.0000000000002061

### Abstract

**Context:** The illicit drug landscape in the United States is dynamic, featuring a risky and erratic drug supply. Drug checking programs (DCP) have been successfully implemented and studied extensively in Canada and Europe but are scarce in the United States. Integrating DCP at harm reduction programs provides an opportunity to engage people at the point-of-care and deliver a combination of harm reduction services, access to healthcare services, and linkages to treatment.

**Program:** The New York State Department of Health (NYSDOH) developed and supports operation of 8 pilot community DCP sites throughout the state. The DCP were trained to utilize Fourier-transform infrared spectroscopy (FTIR) technology to deliver real-time results to participants.

**Implementation:** The NYSDOH community DCP pilot began development in 2022. Partnerships were formed across multiple domains including other DCP, universities, forensic laboratories, syringe service and harm reduction programs, and legal and regulatory offices within the NYSDOH. The first pilot sites began operating in mid-2023 and program expansion is on-going.

Credit: Matt Fallico, Office of Drug User Health  
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518-473-8778

# Questions?

Please take this survey to evaluate conference sessions.



THANK YOU