

Public Health Drug Checking

Mary Figgatt

Michigan Harm Reduction Summit

May 17, 2022

Disclosures

I have no relevant financial or nonfinancial relationships to disclose.

Our Team and Funder

NORTH CAROLINA SURVIVORS UNION



Hand drawn by
BRITAIN PECK



Allison



Don



Louise



Brandie



Maryalice



Diane



Nabarun



Mary



Erin

Funding:



Opioid Data Lab

OpioidData.org





rythm™

Balance

Hits

CANNABIS VAPE CARTRIDGE

UPLIFTED



EUPHORIC



CALM



**Vape Rythm Balance Cartridge 1G
Gelato Concentrate**

5mg per dose/ 200 doses per unit

CO2 & Ethanol Processing Method

Ingredients: Cannabis Oil, Cannabis Derived
Terpenes (80mg, 8%)

Net Wt: 0.035 oz (1000 mg) Tested: 03/26/2021

Created On: 03/11/2021 Use By: 03/11/2022

Marijuana Type Used: Flower

Batch: MA-ryVP-0372-1GRAM

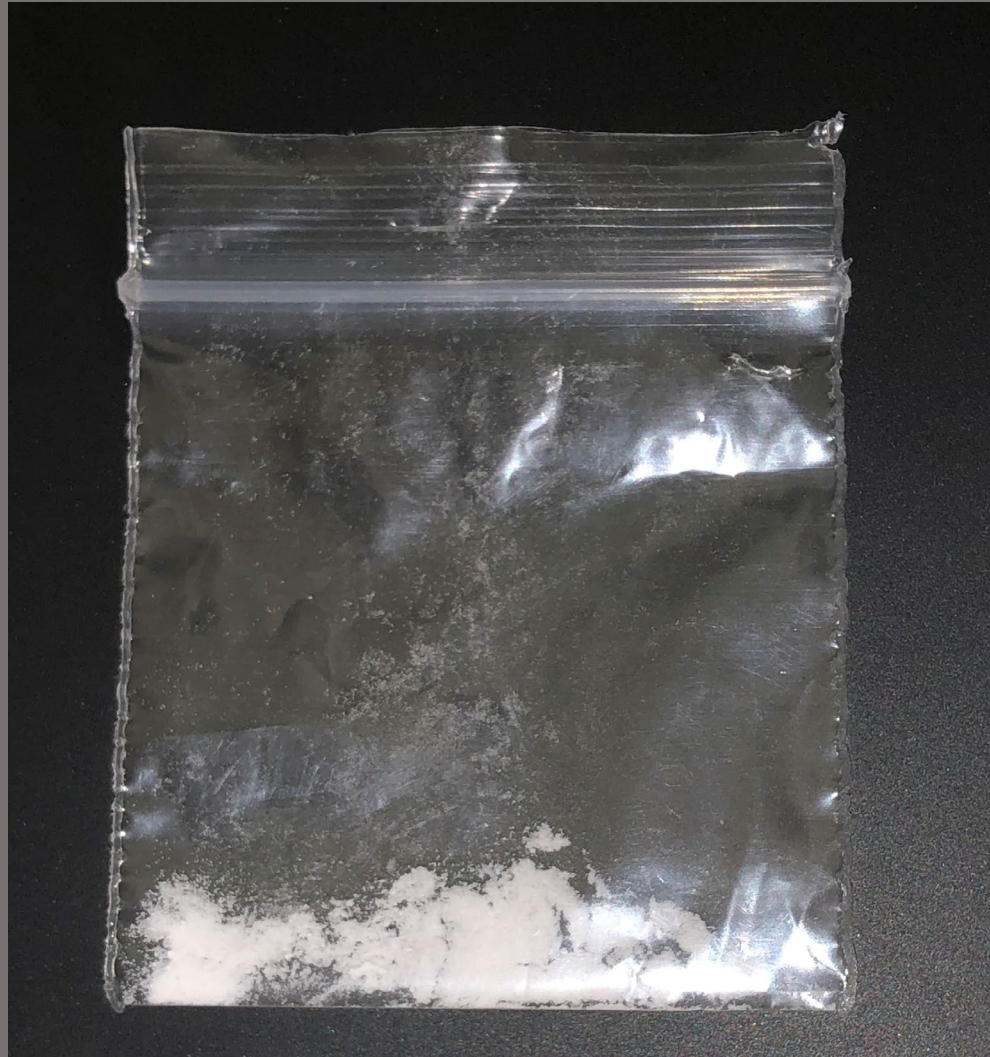
	PKG/SRVG%	MG/PKG	MG/SRVG
TAC:	75.8%	758.00 mg	3.79 mg
THCA:	0.0%	0.00 mg	0.00 mg
THCS:	72.0%	720.00 mg	3.60 mg
THCV:	0.4%	4.00 mg	0.02 mg
CBD:	0.2%	2.00 mg	0.01 mg
CBDA:	0.0%	0.00 mg	0.00 mg
CBG:	2.0%	20.00 mg	0.10 mg
CBN:	0.5%	5.00 mg	0.03 mg
CBC:	0.7%	7.00 mg	0.04 mg

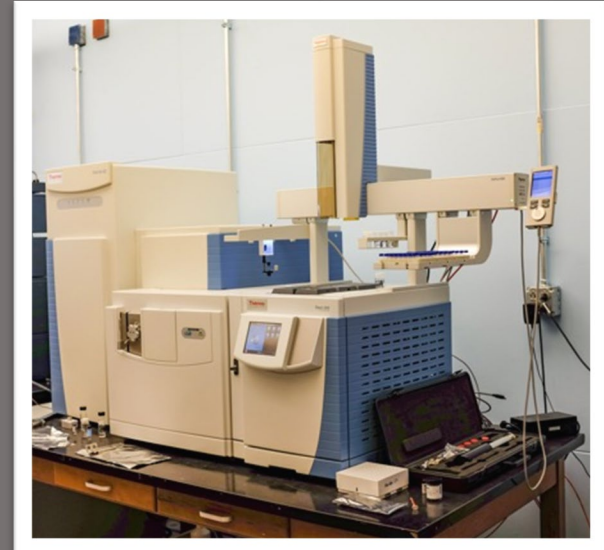
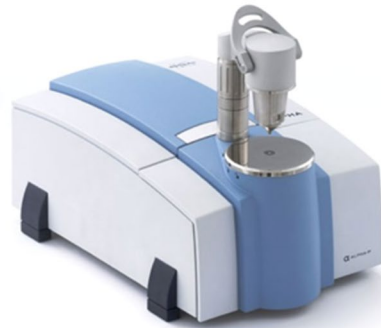
Terpenes:

a-Pinene:	0.05%	0.50 mg	0.01 mg
B-Myrcene:	0.11%	1.10 mg	0.01 mg
B-Pinene:	0.07%	0.70 mg	0.01 mg
Limonene:	0.23%	2.30 mg	0.01 mg
Terpinolene:	0.03%	0.30 mg	0.01 mg
Linalool:	0.16%	1.60 mg	0.01 mg
Caryophyllene:	0.32%	3.20 mg	0.02 mg
Humulene:	0.10%	1.00 mg	0.01 mg
Nerolidol:	0.01%	0.10 mg	0.01 mg
Guaiol:	0.02%	0.20 mg	0.01 mg
Bisabolol:	0.02%	0.20 mg	0.01 mg

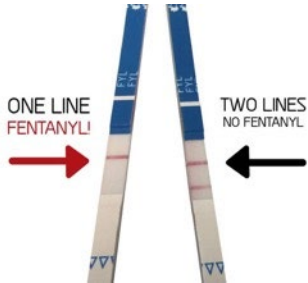
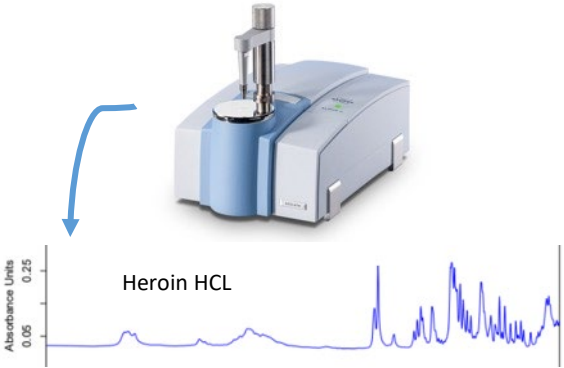
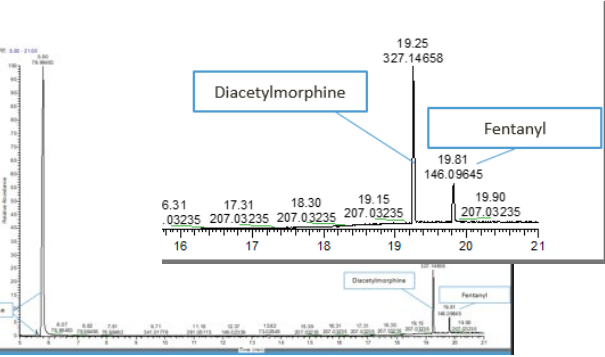


1A40A01000010CD000033730







	Fentanyl Test Strips (FTS)	Fourier-Transform Infrared Spectroscopy (FTIR)	Gas Chromatography-Mass Spectrometry (GCMS)
What does it tell us?	Presence/absence of fentanyl	Presence of thousands of different substances, including fentanyl	Chemical formulation confirmation of opioids, byproducts, and fillers
Benefits	Inexpensive, easy to use, quick turnaround for testing	Comprehensive range of substances, quick turnaround for testing	Extremely wide range of substance detection, much more sensitive analysis.
Limitations	Testing is limited to fentanyl detection, false positives	Reliability of results, FTIR machine is expensive but has little to no ongoing costs once purchased, requires training of the operator	Expensive, not as timely
What does it look like?			

Source: UNC Mass Spec Lab

Principles and Practice



What are the benefits of drug checking?

Drug checking tools **expand our knowledge** to reveal what is actually in street drugs.

Studies have shown that drug checking encourages **safer drug use practices**.^{1,2}

People can adjust drug use **behaviors**, make informed **decisions** about their health, and implement other **harm reduction** practices.

1. Peiper N, et al. Fentanyl test strips as an opioid overdose prevention strategy: findings from a syringe services program in the Southeastern United States. *Int J Drug Policy*. 2019;63:122-128.

2. Measham F. City checking: Piloting the UK's first community-based drug safety testing (drug checking) service in 2 city centres. *Br J Clin Pharmacol*. 2020;86(3):420-428.

Public Health Drug Checking


At the individual level, drug checking is a **service**.

At the community level, drug checking helps to **monitor the drug supply**.

The approach is **centered in public health and harm reduction**.

ACCEPTED MANUSCRIPT

Drug Checking for Novel Insights into the Unregulated Drug Supply

Nabarun Dasgupta , Mary C Figgatt

American Journal of Epidemiology, kwab233, <https://doi.org/10.1093/aje/kwab233>

Published: 15 September 2021 **Article history** ▼



PDF

Split View

Cite

Permissions

Share ▼

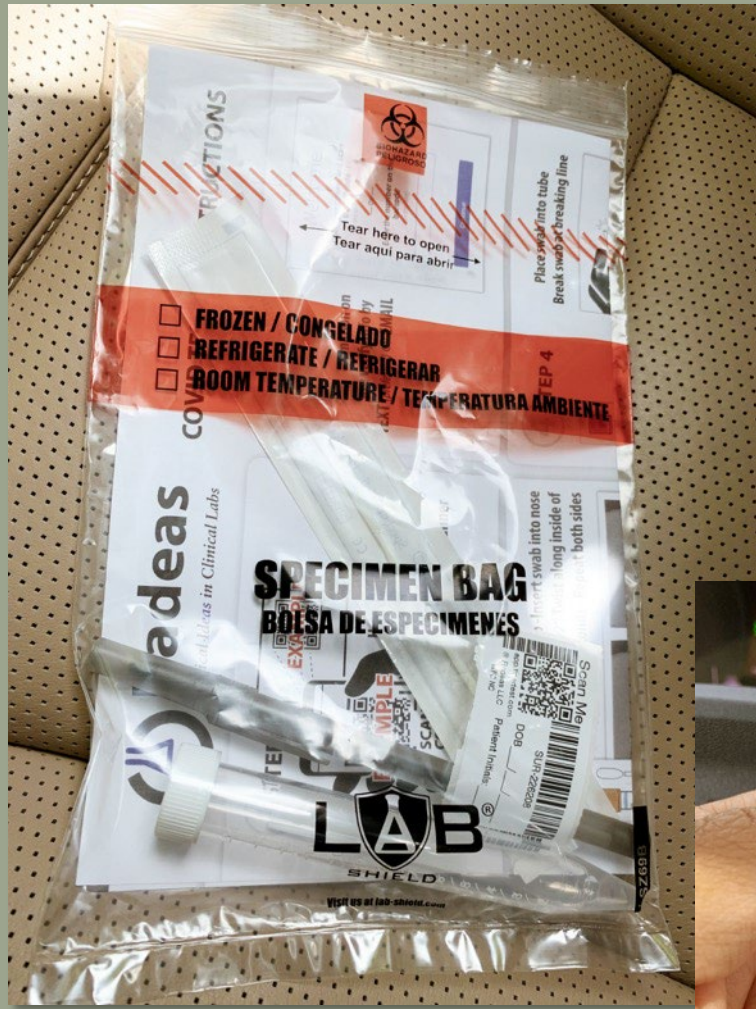


Drug checking in practice

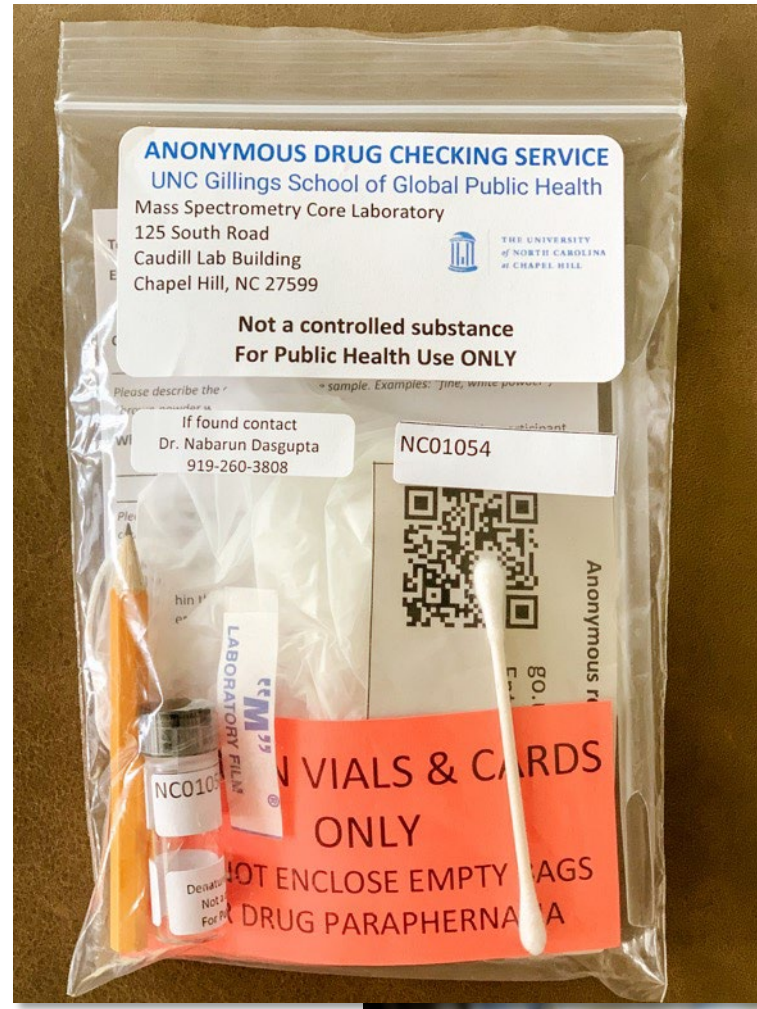
- Emphasizing and promoting individual autonomy and anonymity
- Leading through lived experience of drug use and science
- Aligning the science with community needs
- Incorporating new technologies and repurposing existing ones

Drug Checking by Mail





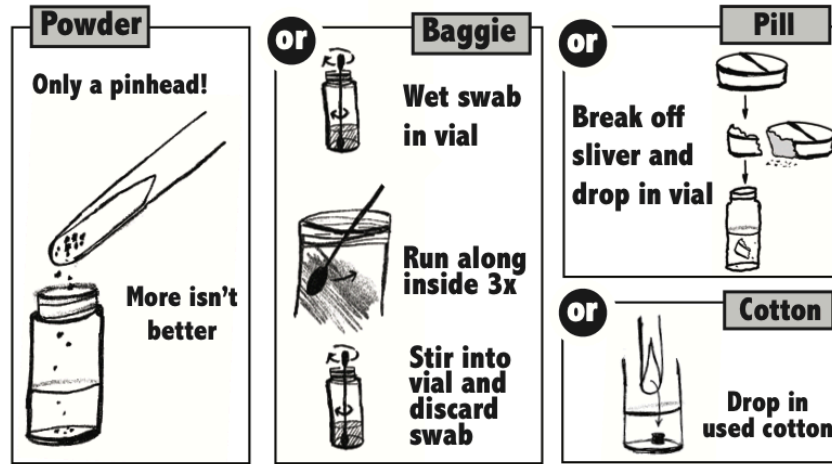
Drive-thru
Self-administered
COVID Test Kit



UNC
Drug
Checking
Kit



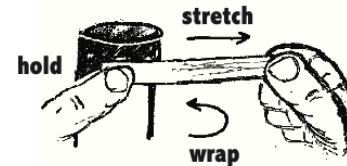
- 1** Unfold paper cloth, lay out supplies.
- 2** Unpeel wax tape to unscrew vial.
- 3** Wear gloves to prevent contamination.



- 4** Close vial tightly. Seal using wax tape.

Hold tape in closed fist to warm up for 3 seconds.

Remove tape from white backing.



- 5** Complete back of this card.
Card and vial go back in bag.
- 6** Give QR code to donor for results.



Completely Anonymous

These questions help us figure out how to analyze your sample in our lab at UNC.

circle one

spatula

swab

pill

cotton



today's date

month

date

circle if sample involved in overdose

yes

no

don't know

describe to warn others:

describe color

city or neighborhood

circle expected drugs

heroin

fentanyl

xylazine

cocaine

crack

meth

weed

Delta-8

CBD

benzo

other:

MDMA

unknown

circle & describe sensations

normal nice weird

weaker stronger long

more up unpleasant

more down hallucinations

describe:

circle any textures

crystals

pill

fake pill

powder

edibles

oil/wax



plant/leaf

chunky

other:

shiny

flaky

dull

sample number

What even is “heroin” anymore?

Heroin
Raleigh, NC

October 11, 2021

- Xylazine
- Heroin
- Fentanyl
- Caffeine
- 4-ANPP
- Lidocaine
- Quinine
- Flurofentanyl
- 6-MAM
- Acetaminophen

Heroin
High Point, NC

September 11, 2021

- Heroin
- 6-MAM
- Fentanyl
- 4-ANPP
- Dimethylsulfone
- Tramadol
- Cocaine

Heroin
High Point, NC

September 17, 2021

- Fentanyl
- 4-ANPP

Fake blue Roxi 30
Myrtle Beach, SC

September 8, 2021

- Fentanyl
- 4-ANPP

Photo	Sample Name [↑]	Active Contents [↑]		Date [▼] [↑]	Location	Data Source [↑]
		Substance	Ratio / Amounts [↑]			
	Tic Tac Molly Code: 26732 Sold as: Molly	• MDMA	• 1	Oct 13, 2021	Grand Rapids, MI	DrugsData
	Xanax Alprazolam Code: 01910 Sold as: Xanax (Alprazolam)	• Alprazolam	• 1	Jun 07, 2021	Westland, MI	DrugsData
	3-HO-PCP Code: Zabba Sold as: 3-HO-PCP	• 3-HO-PCP	• 1	Jun 07, 2021	Canton, MI	DrugsData
	AD 30 Code: DD6B8 Sold as: Adderall	• Caffeine • Methamphetamine • Methylsulfonylmethane	• 30 • 5 • 1	May 17, 2021	MI	DrugsData
	Acid Blotter; Tabs Code: GR001 Sold as: LSD-25	• LSD	• 1	Jan 25, 2021	Grand Rapids, MI	DrugsData
	LSD Blotter Code: A53B3 Sold as: LSD	• LSD	• 1	Jul 13, 2020	Grand Rapids, MI	DrugsData
	Crystal Ketamine Code: KETA9 Sold as: Ketamine	• Ketamine	• 1	Jul 06, 2020	Detroit, MI	DrugsData
	XTC Code: SMCLB Sold as: MDMA	• MDMA • MDA	• 1 • trace	Jun 23, 2020	Detroit, MI	DrugsData
	Red Porsche Code: RP420 Sold as: Ecstasy	• MDA • MDMA	• 12 • 1	Jun 09, 2020	MI	DrugsData
	MDMA Code: TooT22 Sold as: MDMA	• MDMA	• 1	Feb 21, 2020	Rothbury, MI	DrugsData

Drug Checking Results

Summary

Drug Comparison

Results Table

FILTER

Use the inputs below to filter the drug checking database results. Click on the ? icons for more info.

TIME RANGE

06/01/2018 →

04/10/2022

2018 2019 2020 2021 2022

DRUG CATEGORY

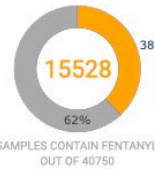
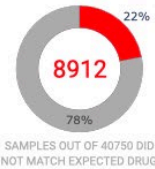
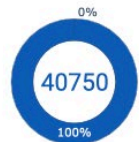
Select Drug Category

TEST CITY

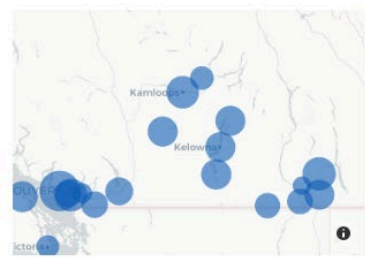
Select City

TEST SITE

Select Site

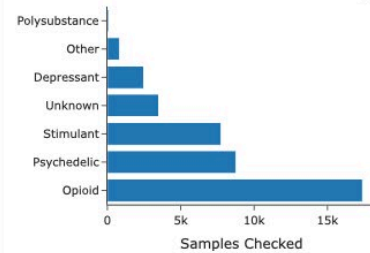


Geographic Sample Distribution

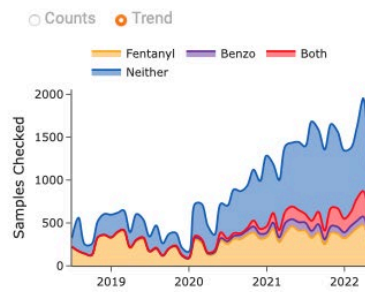


Drug Checks Performed

Drug Checks Over Time

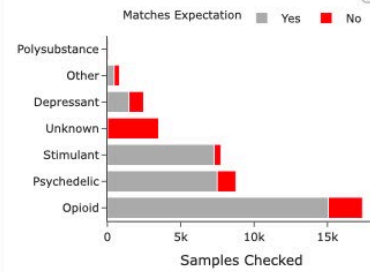


Detection of Fentanyl and Benzodiazepines



Expected Sample Matches

Sample Matches Over Time

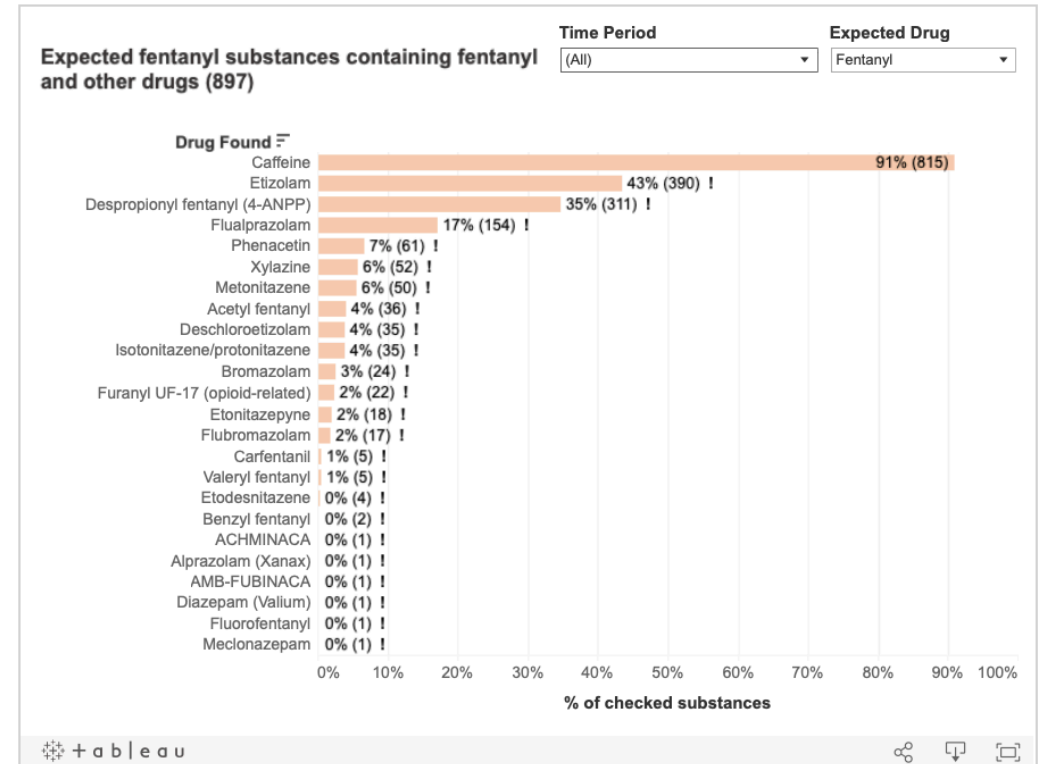


Toronto's Drug Checking Service

Coordinated by the **Centre on Drug Policy Evaluation**

Other drugs found

This graph shows the other drugs most commonly found in addition to the expected drug in substances checked, along with all unexpected noteworthy drugs found. It can be filtered by expected drug and the time period during which a substance was checked. **Note** that this graph does not include used equipment.



Thanks for listening!



Allison



Don



Louise

Mary Figgatt
@mary_figgatt
mfiggatt@unc.edu



Brandie



Maryalice



Diane

OpioidData.org
OpioidDataLab@unc.edu



Nabarun



Mary



Erin

Funding:



Foundation for
Opioid Response Efforts