

# Toronto's Drug Checking Service

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

**META:PHI Prescribers**

March 8, 2022

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# Acknowledgements

We acknowledge the members of our community advisory board, our partner organizations, and those that have lost their lives – both in the ongoing drug poisoning crisis and long before – due to policies of drug criminalization.

We acknowledge that the land on which we operate Toronto's drug checking service is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee, and the Wendat peoples, and is now home to many diverse First Nations, Inuit, and Métis peoples.

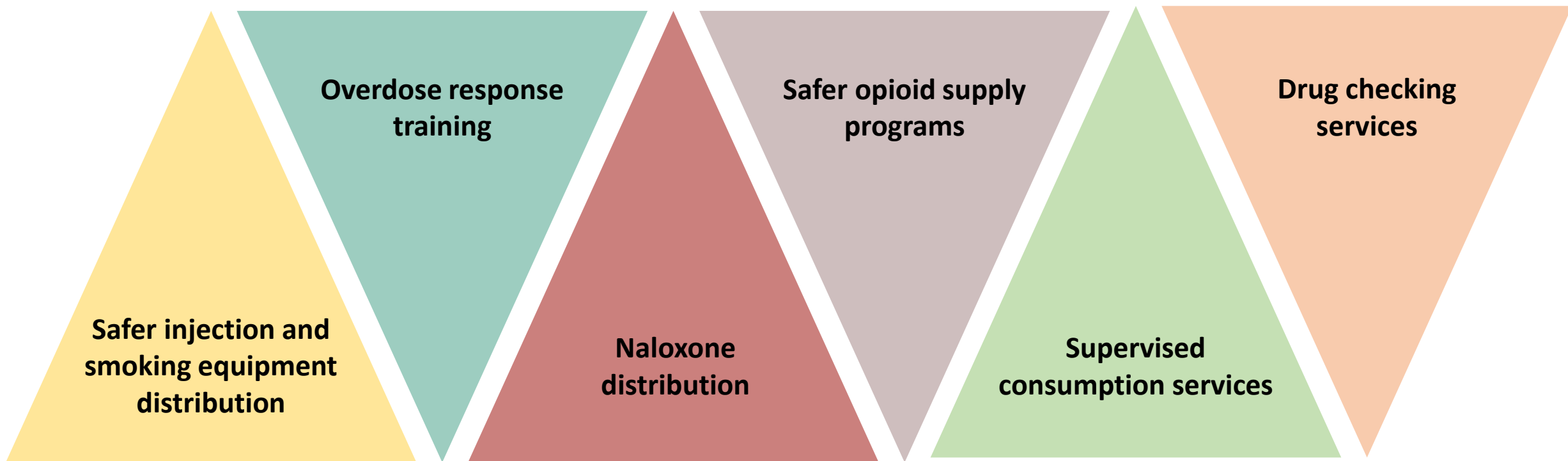
We acknowledge that racialized communities and survivors of colonization are disproportionately impacted by unjust drug policies. We strive to support the development of equitable drug policies that are responsive to the needs of racialized people who use drugs – including Black, Indigenous, and People of Colour – and their communities.



# Items to cover

- Background
- Overview of Toronto's drug checking service
- Key findings
- Discuss implications for clinical care

# Harm reduction services



# What is drug checking?

- An evidence-informed harm reduction tool that provides information on the composition of a drug to an individual
- In use in Europe since the 1990s
- Has risen in popularity in Canada in response to the overdose crisis
- Conducted using a range of technologies and in a variety of settings

# Toronto's Drug Checking Service: overview

- Pilot project – only
- Funded by the Government of Canada's Substance Use and Addictions Program and the St. Michael's Hospital Foundation
- Exempted from the Government of Canada's *Controlled Drugs and Substances Act*
- Formally launched October 2019
- Implementation lasting three years
- “Offsite” drug checking using gas and liquid chromatography-mass spectrometry

# What does Toronto's drug checking service do?

- Offers people who use drugs timely and detailed information on the contents of their drugs, helping them to make more informed decisions
- Shares information on Toronto's unregulated drug supply to help harm reduction workers and clinicians tailor the care they provide to people who use drugs
- Advocates for services and safer alternatives for people who use drugs

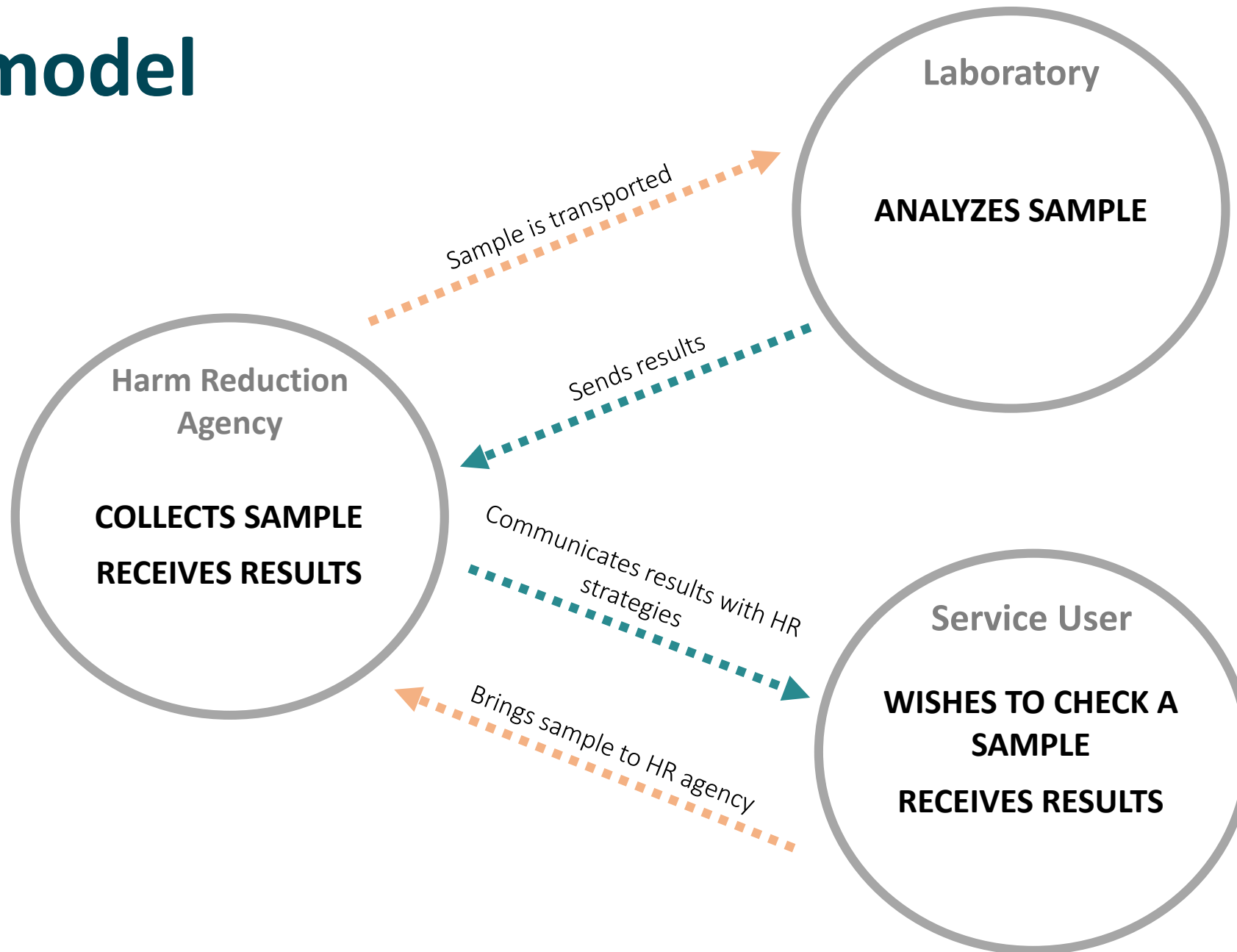


# Who is leading Toronto's Drug Checking Service?



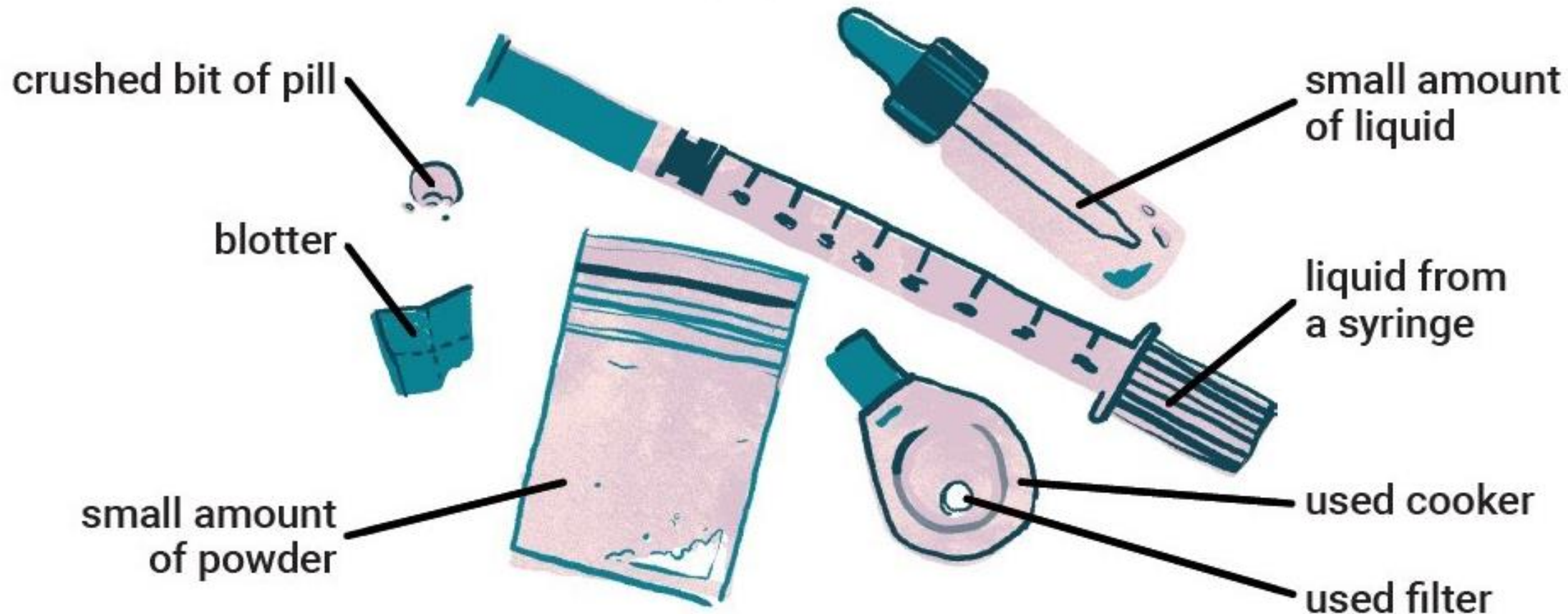


# Our model



# What you give...

A sample, which can be:



## Quantitative results

### Toronto's Drug Checking Service

Coordinated by the Centre on Drug Policy Evaluation  
drugchecking@cdpe.org | www.drugchecking.cdpe.org

#### Analysis Results

This is a comprehensive list of the drugs found in this sample. Non-drug fillers are very likely present, but cannot be identified or reported. **We can tell you how much of the total submitted is: fentanyl, etizolam, cocaine, carfentanil, and caffeine.** All other drugs found are listed from most to least present.

Sample ID: MP172  
Sample type: Substance  
Expected drug(s)<sup>1</sup>: Fentanyl  
Date checked: June 23, 2021  
Sample weight: 10.00 mg (10% of a point)

1.22 mg	(12.2%)	Caffeine
0.96 mg	(9.6%)	Fentanyl (!)
0.20 mg	(2%)	Etizolam (benzodiazepine-related) (!)

7.62 mg (76.2%) remaining very likely contains non-drug fillers, as well as:

MOST  
LEAST

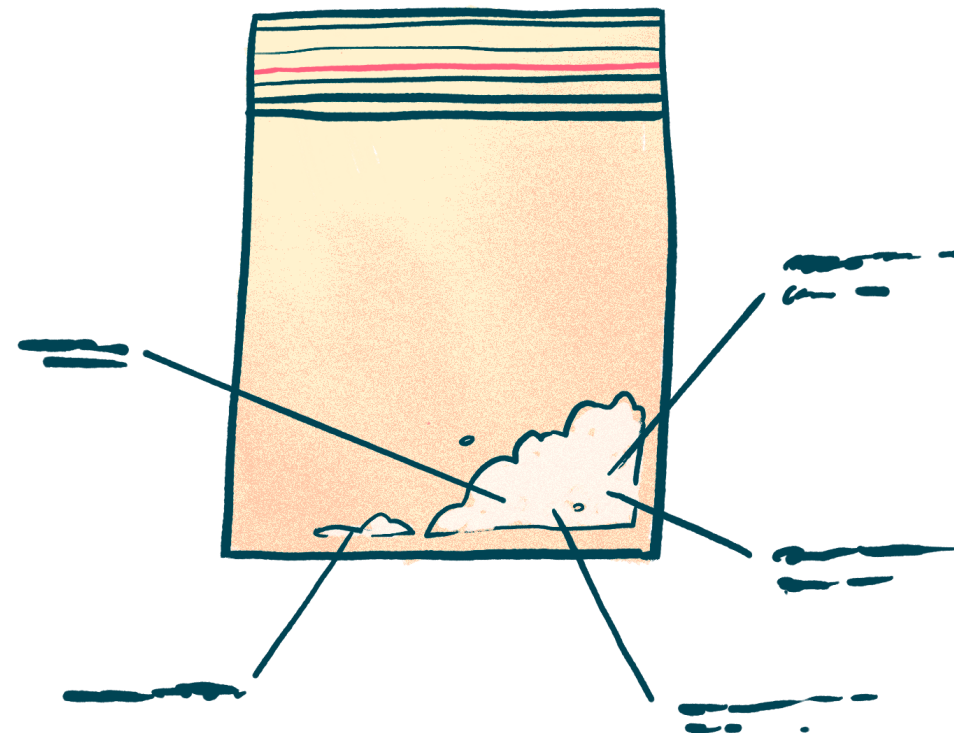
Diphenhydramine (Benadryl)  
Despropionyl fentanyl (4-ANPP) (!)

Not sure what some of these drugs are? **Check our drug dictionary:**  
[www.drugchecking.cdpe.org/drug-dictionary](http://www.drugchecking.cdpe.org/drug-dictionary)

Notes

<sup>1</sup> | When a sample is submitted to be checked, the drug that sample was bought or got as is recorded. We call it the "expected drug".

(!) | This is a noteworthy drug. "Noteworthy drugs" are drugs that that (i) are linked to overdose or other adverse or abnormal effects, (ii) are highly potent or related to highly potent drugs, or (iii) may not be desired by some clients.



**Powder substances:**  
**Opioids**  
**Crack cocaine**  
**Cocaine**

**CURRENTLY WE ONLY QUANTIFY FENTANYL, CARFENTANIL, CAFFEINE, ETIZOLAM, AND COCAINE**

## SEMI-quantitative results

### Toronto's Drug Checking Service

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drugchecking@cdpe.org | www.drugchecking.cdpe.org

#### Analysis Results

This is a comprehensive list of the drugs found in this sample. Non-drug fillers are very likely present, but cannot be identified or reported. While we cannot provide precise information about the amount of each drug found, **drugs are listed from most to least present.**

Sample ID: MP172  
Sample type: Used paraphernalia  
Expected drug(s)<sup>1</sup>: Fentanyl  
Date checked: June 23, 2021

MOST

Caffeine  
Fentanyl (!)  
Etizolam (benzodiazepine-related) (!)  
Diphenhydramine (Benadryl)  
Despropionyl fentanyl (4-ANPP) (!)

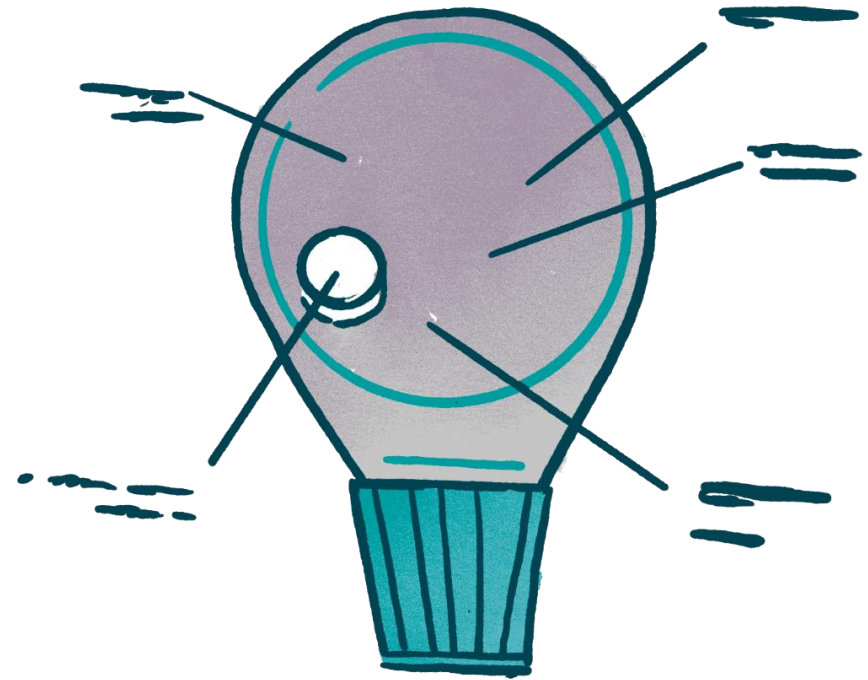
LEAST

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Used paraphernalia  
Liquid and blotter substances  
Some powder substances





**What's in Toronto's  
unregulated drug  
market?**

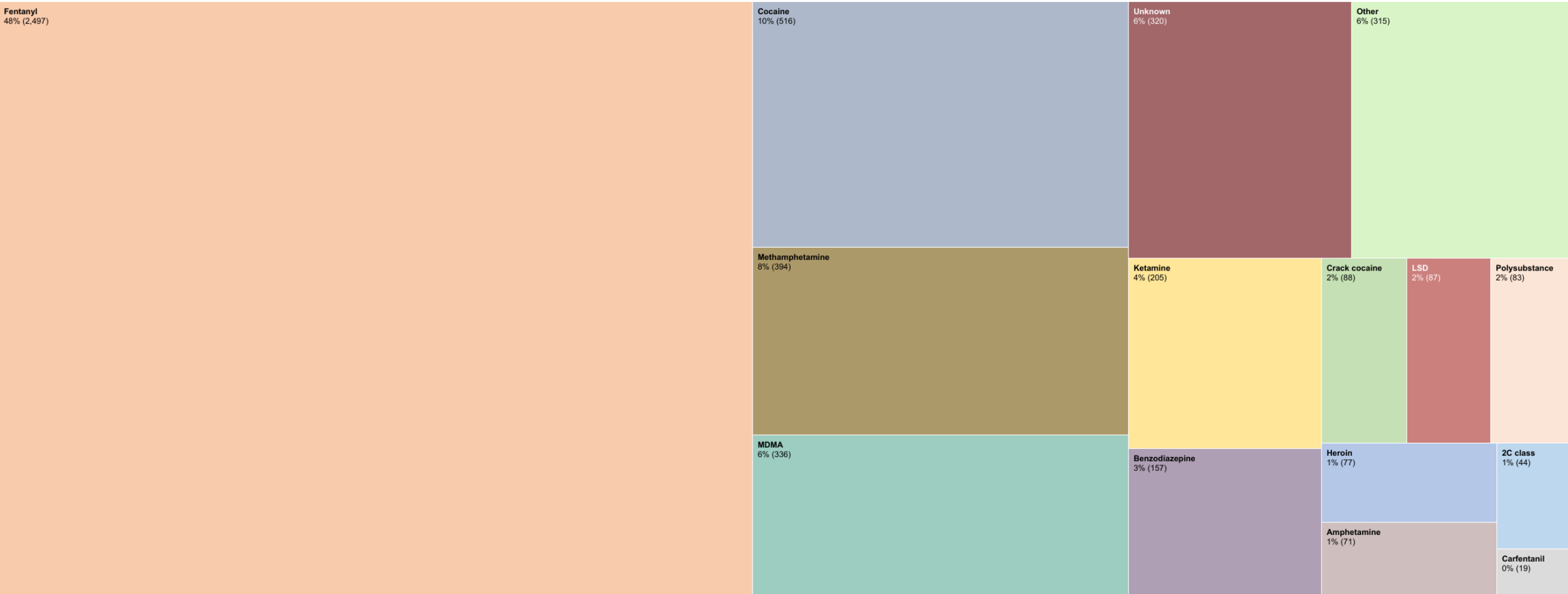
# Checked samples by sample type

(Oct10/19 – Feb25/22)

[www.drugchecking.cdpe.org](http://www.drugchecking.cdpe.org)







# Checked samples by expected drug

(Oct10/19 – Feb25/22) | [www.drugchecking.cdpe.org](http://www.drugchecking.cdpe.org)

# Proportion of substances that contain only the expected drug

Oct10/19 – Feb25/22 | [www.drugchecking.cdpe.org](http://www.drugchecking.cdpe.org)

**Methamphetamine  
(n=335)**

83%

**Cocaine (n=501)**

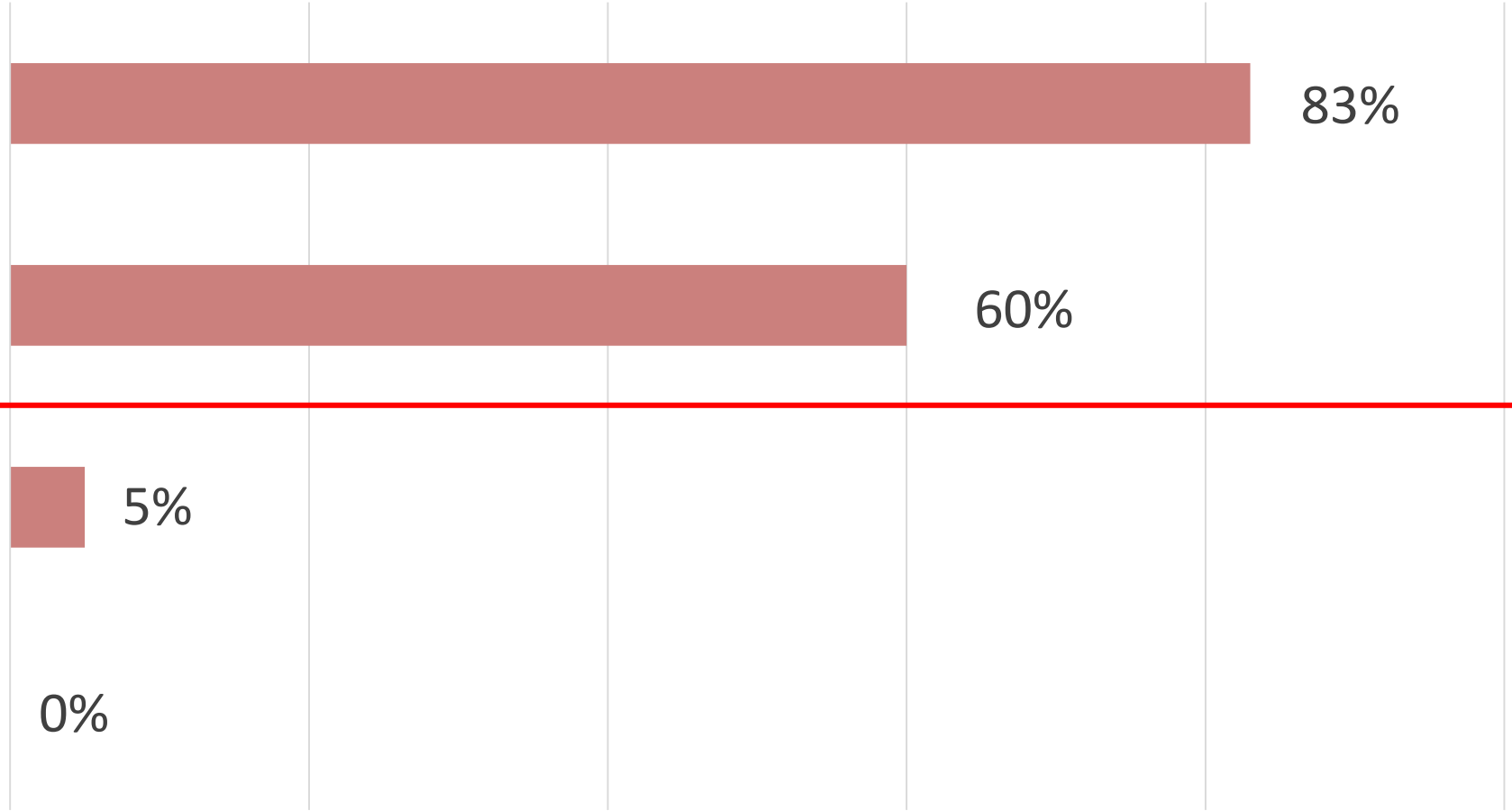
60%

**Fentanyl (n=1013)**

5%

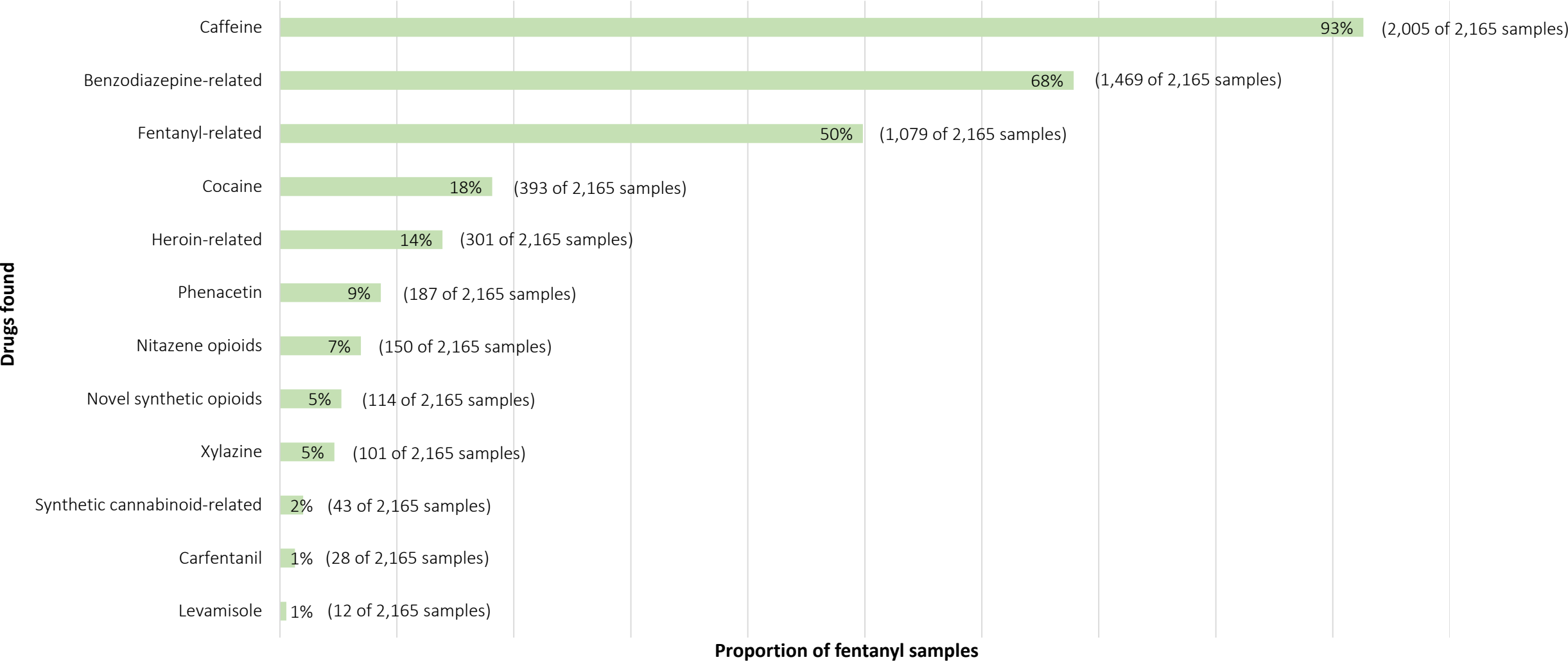
**Heroin (n=57)**

0%



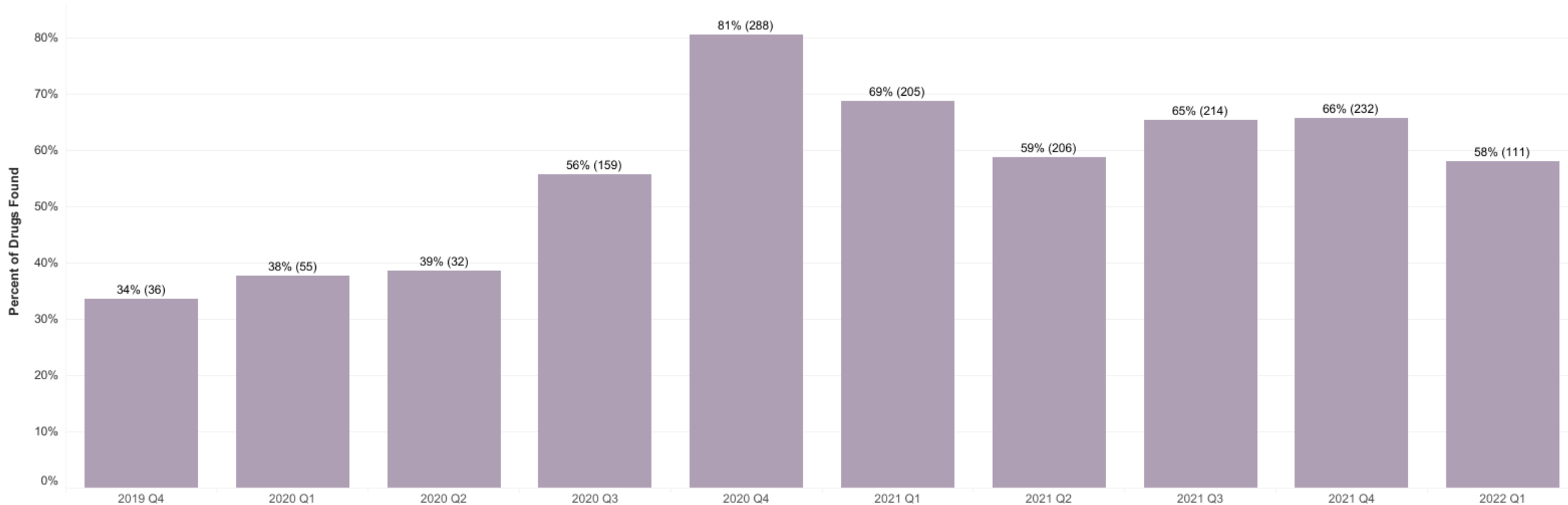
# Other drugs found alongside fentanyl in expected fentanyl samples

Oct10/19 – Feb25/22 | [www.drugchecking.cdpe.org](http://www.drugchecking.cdpe.org)



# Benzodiazepine-related drugs found in expected fentanyl samples over time

Oct10/19 – Feb25/22 | [www.drugchecking.cdpe.org](http://www.drugchecking.cdpe.org)



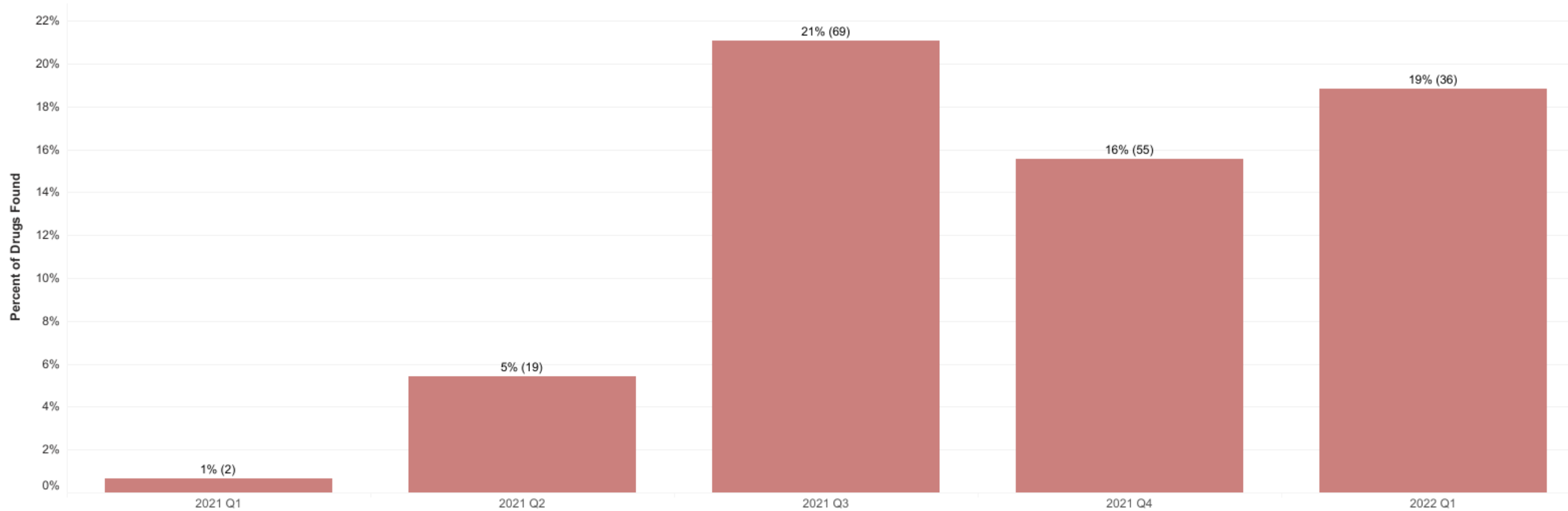
# Benzodiazepine-related drugs identified in Toronto's unregulated fentanyl supply

Oct10/19 – Feb25/22 | [www.drugchecking.cdpe.org](http://www.drugchecking.cdpe.org)

	Drug name	First identified	Found in what number of expected opioid samples checked*
1	Etizolam	October 15, 2019	1,221
2	Flualprazolam	November 12, 2019	488
3	Deschloroetizolam	November 10, 2020	364
4	Bromazolam	April 19, 2021	88
5	Flubromazolam	November 7, 2019	81
6	Flubromazepam	May 13, 2021	62
7	Meclonazepam	January 23, 2020	48
8	Alprazolam (Xanax)	December 20, 2019	23
9	Diazepam (Valium)	January 19, 2021	17
10	Desalkylflurazepam	March 12, 2021	15
11	Flurazepam (Dalmane)	April 13, 2021	14
12	Temazepam	March 19, 2021	1
13	Clonazepam	July 13, 2020	2
14	Clonazolam	December 29, 2021	1

# Nitazene opioids found in expected fentanyl samples over time

Oct10/19 – Feb25/22 | [www.drugchecking.cdpe.org](http://www.drugchecking.cdpe.org)





# Nitazene opioids identified in Toronto's unregulated fentanyl supply

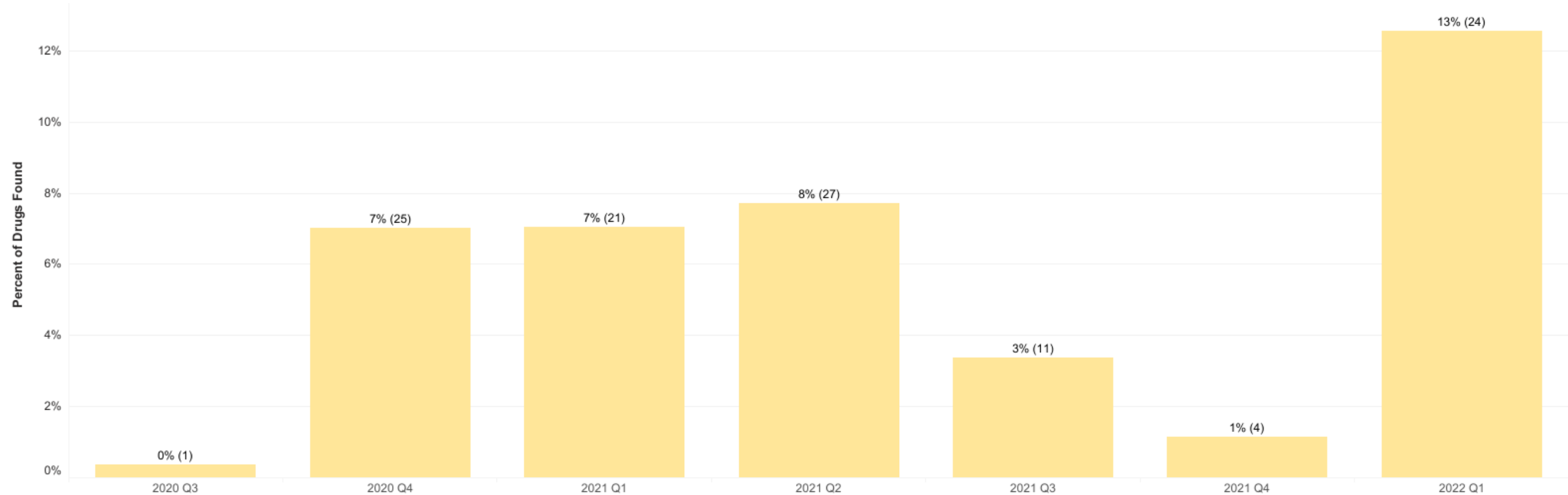
Oct10/19 – Feb/25 | [www.drugchecking.cdpe.org](http://www.drugchecking.cdpe.org)

	Drug name	First identified	Found in what number of expected opioid samples checked*
1	Metonitazene	May 31, 2021	73
2	Isotonitazene/protonitazene*	February 12, 2021	71
3	Etonitazepyne	July 13, 2021	48
4	5-Aminoisotonitazene	May 17, 2021	7
5	Etodesnitazene	June 24, 2021	6
6	Etonitazene	May 5, 2021	3
7	N-desethyl isotonitazene	Feb 3, 2022	1

\*reported together because of the inability to distinguish compounds using GC-/LC-MS

# Xylazine\* found in expected fentanyl samples over time

Oct10/19 – Feb25/22 | [www.drugchecking.cdpe.org](http://www.drugchecking.cdpe.org)



\*first found in October 2020

# Average<sup>1</sup> amount of fentanyl

Based on 570 expected fentanyl substances checked by Toronto's drug checking service  
August 2020 – Feb 2022

A sample 0.01 gram (10 mg)	A dose <sup>2</sup> 0.1 gram ("a point")	Assumed daily dose <sup>2</sup> 1 gram
390 µg / sample ~30 – 40 mg of morphine <sup>3</sup> / sample	3,900 µg / dose ~300 – 400 mg of morphine <sup>3</sup> / dose	39,000 µg / day ~3,000 – 4,000 mg of morphine <sup>3</sup> / day

<sup>1</sup> Median

<sup>2</sup> Assuming the 10 mg sample is completely representative of the drug that sample is taken from,  
which may be unlikely given the Chocolate Chip Cookie Effect

<sup>3</sup> Range assumes fentanyl is 80 – 100 times stronger than morphine

# Average<sup>1</sup> amount of etizolam

Based on 203 expected fentanyl substances checked by Toronto's drug checking service  
August 2020 – Feb 2022

A sample 0.01 gram (10 mg)	A dose <sup>2</sup> 0.1 gram ("a point")	Assumed daily dose <sup>2</sup> 1 gram
0.22 mg / sample ~1.2 – 2.2 mg of diazepam <sup>3</sup> / sample	2.2 mg / dose ~11 – 22 mg of diazepam <sup>3</sup> / dose	22 mg / day ~110 – 220 mg of diazepam <sup>3</sup> / day

<sup>1</sup> Median

<sup>2</sup> Assuming the 10 mg sample is completely representative of the drug that sample is taken from,  
which may be unlikely given the Chocolate Chip Cookie Effect

<sup>3</sup> Range assumes etizolam is 5 – 10 times stronger than diazepam

**Why is Toronto's  
Drug Checking  
Service  
important?**



# Sharing information on the regulated supply

- Regularly share key findings
- Reports
- Alerts
- Website
- Social media
- Community meetings and presentations
- Academic publications and presentations

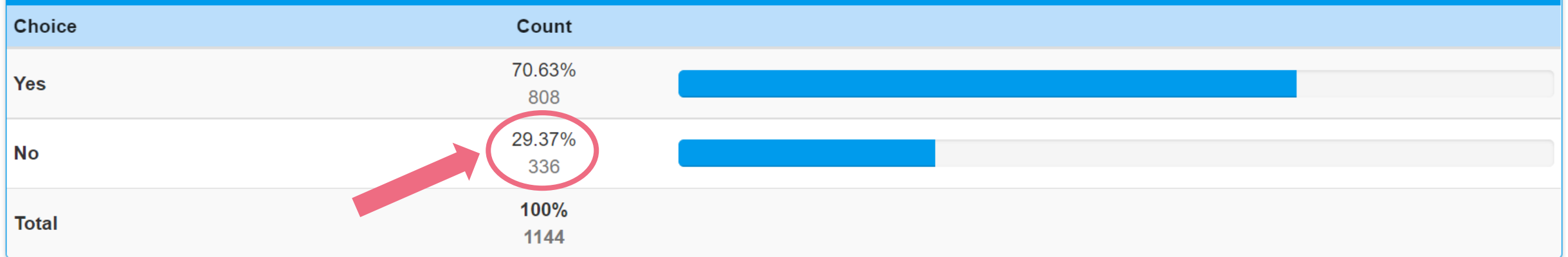




# Drug checking provides a gateway to accessing harm reduction services

Have you previously accessed harm reduction services at this or another frontline harm reduction agency?

Respondents: 1144



# Our results inform clinicians and care

Physicians	<ul style="list-style-type: none"><li>• Help clinicians and patients to <b>better understand withdrawals, adverse effects, and tolerances</b></li><li>• <b>Inform individual care plans</b> (e.g., treatment plans, prescribing, and titration)</li><li>• Act as an engagement tool and opportunity to <b>foster more robust relationships between patients who use drugs and care teams</b></li><li>• Allow patients who use drugs <b>more agency and opportunity to participate in their care</b>, by understanding what drugs are in their system and what drugs they are frequently (likely unknowingly) using</li></ul>
Nurse practitioners	
Pharmacists	
Nurses	
Paramedic services	
Community health care workers	

# We are under constant pressure to scale

45 The Esplanade | 5800 Yonge Street | 69 Fraser Avenue | Bond Hotel | Comprehensive Treatment Clinic | Delta Hotel | Dixon Hall | Fred Victor | Homes First Society | LAMP | MOVID Team | Regent Park CTS | Rexdale Comfort Hotel | Shelter Hotel Overdose Prevention Project | St. Stephen's | Strachan House | Street Health | The Hub | The Neighbourhood Group

## Actively accessing (Toronto-based)

## Requested to join (Toronto- or Ontario-based)

Addiction Services of Thames Valley (London) | Bancroft FHT | Black Coalition for AIDS Prevention (Toronto) | Casey House (Toronto) | Grey Bruce Health Unit | Kingston Community Health Centre | Lawson Research Institute (London) | London InterCommunity Health Centre | Municipality of York (Public Health) | Niagara Region Public Health | Northumberland County | Ontario Shores (Whitby) | Porcupine Health Unit | Public Health Sudbury | Sault St. Marie IDA Pharmacies | Toronto East Health Network | Wellington Guelph Drug Strategy



# Thank you!

- Questions or comments? You can reach us at [drugchecking@cdpe.org](mailto:drugchecking@cdpe.org).
- Interact with our drug checking data on our website – it's updated every other week: [www.drugchecking.cdpe.org](http://www.drugchecking.cdpe.org). We also regularly post alerts, reports, and other information about Toronto's unregulated drug supply.

# Questions

1. How does knowing what and how much people are using from the unregulated drug supply change how you care for them?
2. What kinds of drug checking information is most relevant to your practice?
3. How could we support clinician education and uptake?
4. How can we reach the medical community?

# Chocolate chip cookie effect



**Your analysis results may not be representative of the rest of the drugs in the batch you took your sample from.** You can imagine your batch as a chocolate chip cookie. If you check a piece of the cookie that is only dough, your results may not identify chocolate as present. Mixing a powder or scratching different parts of a pill when preparing a sample can increase the representativeness of your sample.