Unregulated fentanyl supply trends: Toronto, Ontario

December 13 – 26, 2025

Between **December 13 – 26, 2025**, 126 samples[1] were collected from people who use drugs by the collection site members of **Toronto's Drug Checking Service**, the flagship program of Ontario's Drug Checking Community. Samples were analyzed by analysis site members of the program using **gold standard technologies that are validated for overdose prevention drug checking**. Of these 126 samples[1], 59 were expected[2] to be fentanyl (93% were drug samples[3] and 7% were used drug equipment).

Key findings[4]

- On December 16, we first **detected a "new" benzodiazepine-related drug, ethylflualprazolam**. Ethylflualprazolam is related to alprazolam (Xanax). Its strength and the duration of its effects are unknown. During this reporting period, we found ethylflualprazolam in three expected[2] fentanyl samples[1] collected in Toronto's downtown core. Ethylflualprazolam has also been found by our drug checking colleagues elsewhere in Canada, as well as by Health Canada's Drug Analysis Service in samples submitted by Canadian law enforcement agencies and public health partners. We will keep the community informed as we learn more.
- **The expected[2] fentanyl samples[1] we check continue to be heavily contaminated by veterinary tranquilizer medetomidine**. This reporting period, 81% of the expected[2] fentanyl samples[1] collected in Toronto contained medetomidine. We are finding medetomidine at similar rates in samples collected elsewhere in Ontario. We have developed **a poster** to raise awareness and share what we know about medetomidine. We encourage you to print and post it in your community.
- **The average amount of the para-fluorofentanyl found in expected[2] fentanyl samples[1] this reporting period is significantly higher than what we typically find**. This may mean stronger fentanyl is circulating in our community.
- 10% of the expected[2] fentanyl samples[1] were known to be **associated with an overdose** – these samples contained at least one high-potency opioid[5] (an opioid considered to be roughly as strong as or stronger than fentanyl) in combination with a veterinary tranquilizer
- 34% of the expected[2] fentanyl samples[1] **contained multiple high-potency opioids**[5], including fluorofentanyl, **fentanyl**, **carfentanil**, a **methylfentanyl-related drug**, and/or **protodesnitazene**. Using

high-potency opioids[5] in combination increases the risk of overdose and greater than normal doses of naloxone may be required to reverse an overdose.

- 88% of the expected[2] fentanyl samples[1] **contained fluorofentanyl** (at this time, para-fluorofentanyl is circulating, which is considered to be roughly as strong as fentanyl)
- 3% of the expected[2] fentanyl samples[1] **contained carfentanil** (considered to be up to 100 times stronger than fentanyl)
- 3% of the expected[2] fentanyl samples[1] **contained a methylfentanyl-related drug** (at this time, ortho-methylfentanyl is circulating, which is considered to be roughly as strong as fentanyl)
- 3% of the expected[2] fentanyl samples[1] **contained a nitazene opioid**, including **butonitazene** or protodesnitazene
- 58% of the expected[2] fentanyl samples[1] **did not contain fentanyl** – these samples instead contained fluorofentanyl, a methylfentanyl-related drug, and/or protodesnitazene
- 88% of the expected[2] fentanyl samples[1] **contained at least one other central nervous and/or respiratory system depressant**, including veterinary tranquilizers and/or benzodiazepine-related drugs. Using high-potency opioids[5] in combination with other central nervous and/or respiratory system depressants increases the risk of dangerous suppression of vitals (e.g., slowing down of breathing, blood pressure, heart rate) – as well as complicates overdose response.
    - 81% of the expected[2] fentanyl samples[1] **contained a veterinary tranquilizer** – 81% contained medetomidine and 3% contained **xylazine**
    - 24% of the expected[2] fentanyl samples[1] **contained a benzodiazepine-related drug**, including **desalkylgidazepam**, ethylflualprazolam, **bromazolam**, or **ethylbromazolam**
- Amount of drugs found in expected[2] fentanyl drug samples[3]:

In 24 expected[2] fentanyl drug samples[3]:			
0.3%	was the **average amount[6] of fentanyl found**	**0.1 – 0.9%**	was the **range[7] of fentanyl found** in half of the drug samples[3]
In 47 expected[2] fentanyl drug samples[3]:			
5.0%	was the **average amount[6] of fluorofentanyl found**	**1.3 – 7.5%**	was the **range[7] of fluorofentanyl found** in half of the drug samples[3]
In 44 expected[2] fentanyl drug samples[3]:			
0.8%	was the **average amount[6] of medetomidine found**	**0.4 – 1.8%**	was the **range[7] of medetomidine found** in half of the drug samples[3]
In 2 expected[2] fentanyl drug samples[3]:			
0.2%	was the **average amount[6] of xylazine found**	**0.1 – 0.3%**	was the **range[7] of xylazine found** in half of the drug samples[3]

In 2 expected[2] fentanyl drug samples[3]:

0.5% was the **average amount[6] of bromazolam found**

0.4 – 0.5% was the **range[7] of bromazolam found** in half of the drug samples[3]

Expected fentanyl drug samples

- 44% (24) of the expected[2] fentanyl drug samples[3] **contained fentanyl and other drugs**, including:
  - 100% (24) contained caffeine
  - 75% (18) contained at least one additional high-potency opioid[5]:
    - 75% (18) contained fluorofentanyl **(!)**
    - 8% (2) contained carfentanil **(!)**
    - 4% (1) contained a methylfentanyl-related drug **(!)**
  - 75% (18) contained a veterinary tranquilizer:
    - 75% (18) contained medetomidine **(!)**
    - 4% (1) contained xylazine **(!)**
  - 17% (4) contained a benzodiazepine-related drug:
    - 8% (2) contained ethylflualprazolam **(!)**
    - 4% (1) contained bromazolam **(!)**
    - 4% (1) contained ethylbromazolam **(!)**
  - 4% (1) contained butonitazene **(!)**
  - 4% (1) contained phenacetin **(!)**

Unexpected noteworthy drugs found in other expected drug samples

- 3% (2) of the remaining drug samples[3], meaning drug samples[3] that weren't expected[2] to be fentanyl, **contained an unexpected noteworthy drug**, including:
  - One **expected[2] crack cocaine drug sample[3]** contained phenacetin **(!)**
  - One **expected[2] benzodiazepine drug sample[3] that did not contain[9] a benzodiazepine-related drug** contained medetomidine **(!)** and fluorofentanyl **(!)**

Not sure what some of these substances are? View our drug dictionary: www.drugchecking.community/drug-dictionary/

Notes

1 | Samples: Includes both drugs and used drug equipment. Drugs could be a small amount of powder, crystals, rocks, blotter, or liquid, or a crushed bit of a pill. Used equipment could be a used cooker or filter, or leftover liquid from a syringe. For more information, view our terms of service.

2 | Expected (drug): 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". Knowing the expected drug helps us tailor our harm reduction advice. It also helps us understand contamination to drugs rather than combinations of drugs (e.g., fentanyl was found in a heroin sample rather than fentanyl and heroin were found together).

3 | Drug samples: Could be a small amount of powder, crystals, rocks, blotter, or liquid, or a crushed bit of a pill.

4 | Our key findings for the specified time period are based on results from both drugs and used drug equipment. **There are limitations associated with including results from used drug equipment samples in unregulated drug market monitoring for a specified time period**. Drug equipment – like cookers – are often re-used. The **mass spectrometry technologies we use** are so sensitive that very trace amounts of substances may be found. This means that when equipment is re-used, substances from past use may be found and included in results for the sample that is being checked. This can compromise the accuracy of drug market monitoring for a specified time period. For example, the substance was found in the used equipment sample but, if the equipment was re-used, is that substance circulating in the supply now or when the equipment was previously used. This is less of an issue for drug samples, which is why we prefer to rely on results from drug samples for time period-specific unregulated drug market monitoring. However, it is not always possible for a service user to submit a drug sample. We do the best we can with the samples we have access to.

5 | High-potency opioids: We classify an opioid "high-potency" if it is considered to be roughly as strong as or stronger than fentanyl.

6 | Average amount: We arrange the amounts of a substance found as a proportion of the total fentanyl drug sample from smallest to largest, determine the median (i.e., the middle number), and use that number as the "average". For more information, view our **amount of drugs found graph**.

7 | Range: Known as the interquartile range, represents the middle 50% of the amounts of a substance found as a proportion of the total fentanyl drug sample. For more information, view our **amount of drugs found graph**.

8 | Reporting similar substances together: These substances have a very similar chemical structure, and it is not currently possible for Toronto's Drug Checking Service to differentiate between them. For this reason, we report these substances together. For more information, view our **drug dictionary**.

9 | Drug samples that unexpectedly contain noteworthy drugs and not the expected drug: Our reports highlight unexpected noteworthy drugs found in all checked drug samples. When noteworthy drugs are found unexpectedly in a drug sample and the expected drug is not present, we flag it but are hesitant to consider it contamination of the expected drug. Instead, we assume there is an issue with the expected drug: the person who sold or provided the drugs accidentally mixed up their drugs, the service user accidentally mixed up their drugs, or the expected drug was recorded incorrectly during sample collection. These samples require special consideration.

10 | High-potency opioid contamination: Based on the information we have about this sample, we are reporting it as contaminated with a high-potency opioid. However, it is very unusual that our program finds high-potency opioids unexpectedly in samples expected to be stimulants, psychedelics, and depressants, and these samples always require special consideration. There is increasing consensus in the drug checking community that the unexpected presence of high-potency opioids in other drug types is the product of accidental cross contamination rather than intentional adulteration. Cross contamination may result from poorly cleaned scales, storing drugs together (e.g., storing LSD in a baggie that was originally used for storing cocaine), or using drug equipment with different batches of drugs.

(!) | Unexpected noteworthy drug: "Noteworthy drugs" are drugs that (i) are linked to overdose or other adverse effects, (ii) are highly potent or related to highly potent drugs, or (iii) may not be desired by some service users. Noteworthy drugs are flagged when they are unexpectedly found in checked samples.

About Toronto's Drug Checking Service and Ontario's Drug Checking Community: Ontario's Drug Checking Community, for which Toronto's Drug Checking Service is the flagship program, is a national leader in drug checking service delivery and community-led unregulated drug market monitoring and education. This public health and safety program offers the most precise, timely, and accessible information on the unregulated drug supply to reduce harm and inform evidence-based responses to the worsening toxic opioid supply crisis.

Collection site members in Toronto: Casey House | Fred Victor | Parkdale Queen West Community Health Centre (Parkdale site) | South Riverdale Community Health Centre (Moss Park site) | Street Health | The Neighbourhood Group (Kensington Market Overdose Prevention Site) | Toronto Shelter and Support Services (Harm Reduction Unit)

Analysis site members: Centre for Addiction and Mental Health (Clinical Laboratory and Diagnostic Services) | St. Michael's Hospital (Department of Laboratory Medicine and Drug Checking Unit)

Our program is coordinated by a small central team that operates from within the Drug Checking Unit at St. Michael's Hospital.

Our work would not be possible if people who use drugs did not donate their drugs to our program in an effort to reduce the harms associated with using unregulated substances and facilitate community-led drug market monitoring and education.

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