

Ministry of Health

Office of Chief
Medical Officer of
Health, Public Health
Box 12,
Toronto, ON
M7A 1N3

Fax:
416 325-8412

**Ministère de la
Santé**

Bureau du médecin
hygiéniste en chef,
santé publique

Boîte à lettres 12
Toronto, ON

M7A 1N3
Facsimile :
416 325-8412

**Ministry of the Solicitor
General**

Office of the Chief Coroner
Ontario Forensic Pathology
Service

25 Morton Shulman Avenue
Toronto ON M3M 0B1

Telephone:
(416) 314-4000
Facsimile:
(416) 314-4030

**Ministère du Solliciteur
général**

Bureau du coroner en chef
Service de médecine légale
de l'Ontario

25, Avenue Morton Shulman
Toronto ON M3M 0B1

Téléphone:
(416) 314-4040
Télécopieur:
(416) 314-4060

February 28, 2023

Dear colleagues,

We are writing to share some important information with you regarding substances in the unregulated drug supply in Ontario and risks of acute toxicity.

Data from the Office of the Chief Coroner for Ontario, Health Canada's Drug Analysis Service, and Toronto's Drug Checking Service all indicate a recent increase in xylazine as well as frequent benzodiazepine presence in the unregulated drug supply in Ontario. These substances also are often present together with opioids. While xylazine and benzodiazepines may lead to symptoms and signs that are similar to those associated with opioids, they will not respond to naloxone administration.

Data on opioid toxicity deaths involving xylazine and benzodiazepines

Data from the Office of the Chief Coroner for Ontario show:

- Xylazine was detected in 2-4% of opioid toxicity deaths between 2021 Q4 and 2022 Q3 (preliminary data). For opioid toxicity deaths in which xylazine was detected, fentanyl or fentanyl analogues were also detected in 97% of cases.
- Benzodiazepines were detected in an increasing proportion of opioid toxicity deaths between 2018 and 2022, with preliminary data showing benzodiazepines detected in 63% of cases in 2021 and 41% of cases in 2022.

Information on xylazine and benzodiazepines

Xylazine is typically used by veterinarians for sedation, muscle relaxation, and pain relief for animals. It's sometimes known as "horse tranquilizer." Xylazine is not approved for human use, and can produce significant harmful effects, such as:

- severe skin lesions (i.e. ulcers and abscesses) among people who inject drugs
- central nervous system depression, such as blurred vision, disorientation, dizziness, drowsiness, difficulty moving, slurred speech, and fatigue,
- respiratory depression, such as shallow breathing or apnea,
- cardiovascular effects, such as low blood pressure and slower heart rate, and
- death

Benzodiazepines are a class of medications that may be prescribed or may be accessed through the unregulated drug supply. Benzodiazepines such as etizolam, bromazolam and flubromazepam have been identified more often in the unregulated drug supply in Ontario in the past few years. With acute exposure, benzodiazepines may cause central nervous system depression and respiratory depression, as well as death, typically when present with other substances.

While use of xylazine or benzodiazepines alone is associated with risk of toxicity, the risk of acute toxicity increases further with the concurrent use of other depressants such as opioids and/or alcohol.

Prevention and harm reduction opportunities

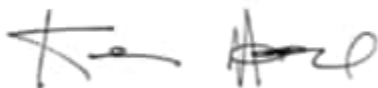
In this context, we recommend that you share information widely within your jurisdictions, including with people who use drugs, organizations that work with people who use drugs, and relevant health care providers to raise awareness of xylazine and benzodiazepine presence in Ontario's unregulated drug supply. Below are some key messages.

1. Evidence indicates that there has been an increase in xylazine and benzodiazepine presence in Ontario's unregulated drug supply. Xylazine is a very toxic animal tranquilizer, and people exposed to xylazine may be at high risk of acute toxicity. Benzodiazepines are drugs that slow brain activity and people exposed to benzodiazepines in combination with opioids may be at high risk of toxicity.
2. It is recommended that people who use drugs take the following measures to reduce their risk of toxicity and death:
 - Don't use drugs alone. If this is not possible, ask a friend or family member to check in on you, or use resources for remote spotting and safety planning.
 - If using drugs with a friend, do not use drugs at the exact same time.
 - Use drugs in a supervised setting such as a Consumption and Treatment Service (CTS), where available.

- Access drug checking services to test your supply, where available.
 - Carry naloxone and know how to respond to an opioid overdose (<https://www.ontario.ca/page/get-naloxone-kits-free>). While naloxone is not effective in counteracting the effects of xylazine or benzodiazepines, it is effective against acute toxicity from opioids, and it can be safely administered to people who have taken both opioid and non-opioid drugs including xylazine and benzodiazepines.
 - For people with opioid use disorder, access to opioid agonist treatments such as buprenorphine/naloxone (trade name, Suboxone), methadone, and slow-release oral morphine (trade name, Kadian) is available across Ontario, including at rapid access addiction medicine (RAAM) clinics.
 - Seek medical care for unusual skin lesions.
3. In all cases of suspected overdose, call 911 for emergency help. Give naloxone if you have it. Remain with the person until emergency help arrives. If trained, provide CPR as needed. The [Good Samaritan Drug Overdose Act](#) provides some legal protection for persons who seek emergency support during an overdose.

If you have any questions, please contact Blaine Bouchard, Manager of the Addictions and Substances Unit at Blaine.Bouchard@ontario.ca or Dr. Fiona Kouyoumdjian, Associate Chief Medical Officer of Health at Fiona.Kouyoumdjian@ontario.ca.

Yours truly,



Dr. Kieran Michael Moore, MD, CCFP(EM), FCFP, MPH, DTM&H, FRCPC, FCAHS
Chief Medical Officer of Health and Assistant Deputy Minister, Public Health



Dr. Dirk Huyer, MD
Chief Coroner