



Health Alert



City of Chicago
Brandon Johnson, Mayor

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Chicago Department of Public Health
Olusimbo Ige, MD, MS, MPH, Commissioner

Medetomidine in Chicago's Drug Supply May 20, 2024

Summary and Action Items

- Multiple drug samples collected from the West Side of Chicago on May 11, 2024 tested positive for elevated levels of medetomidine. In addition, fentanyl, heroin, xylazine, alprazolam and nitazenes have been detected in the same samples.
- Medetomidine is a new adulterant in Chicago's drug supply. It is a non-opioid sedative like xylazine but considered more potent. It has no approved use in humans.
- Like its dextro-isomer dexmedetomidine (sold as Precedex® or Dexdor®), medetomidine acts on alpha-2-adrenergic receptors to cause sedation, analgesia, bradycardia, prolonged hypotension following initial hypertension, and peripheral vasoconstriction. It can also cause respiratory depression, which can be greater when taken with other opioid and non-opioid sedatives.
- Report overdoses with atypical features to the Illinois Poison Center – 1-800-222-1222 to send specimen for testing.
- Initiate all patients whose overdose was reversed with naloxone on medication for opioid use disorder (MOUD) before discharge from ED or hospital. MAR NOW is Illinois' immediate opioid treatment helpline. Call 833-234-6343 or text "HELP" to 833234.

Medetomidine Detected in Chicago

During May 11-14, 2024 there was an increase in drug overdoses in Chicago. Multiple associated drug samples from the West Side of Chicago tested positive for elevated levels of medetomidine. Medetomidine has not previously been detected in Chicago, although it has recently been detected in [Philadelphia](#). In Chicago, medetomidine has been detected in combination with fentanyl, heroin, xylazine, alprazolam and nitazenes.

Medetomidine Information

Medetomidine is a veterinary tranquilizer like xylazine but is considered more potent. It has no approved use in humans. Like its dextro-isomer dexmedetomidine (sold as Precedex® or Dexdor®), medetomidine is an alpha-2-adrenergic receptor agonist causing sedation, analgesia, bradycardia, prolonged hypotension following initial hypertension, and peripheral vasoconstriction. Other clinical indicators of medetomidine toxicity include dry mouth, mydriasis, hypothermia, and spontaneous muscle contractions (twitching). There are very few documented cases of medetomidine toxicity in humans.

Medetomidine can cause respiratory depression, which can be greater when taken with other opioid and non-opioid sedatives. Naloxone will not reverse the effects of medetomidine, a non-opioid substance. There are no recommended reversal agents for use in humans. Notably, naloxone should still be used for all suspected drug overdoses as fentanyl usually co-occurs with other substances. There are no immunoassay test strips available for detecting the presence of medetomidine in drug or urine samples.

Actions to Take

- Report overdoses with atypical features to the Illinois Poison Center – 1-800-222-1222.
 - Clusters of overdoses can be reported to the CDPH medical director on call – 311 in addition to the IPC.
- Coordinate with the Illinois Poison Center to collect associated drug and biospecimen for testing to DEA Tox (instructions in pdf attachments).
- Counsel patients on the volatility of the current drug supply. Consider distributing patient-facing information on medetomidine and harm reduction/treatment resources (in pdf attachment) to all persons at risk of drug overdose.
- Increase the amount of naloxone and fentanyl/xylazine test strips available on hand and distribute widely to anyone at risk of an overdose.
- Initiate all patients whose overdose was reversed with naloxone on medication for opioid use disorder (MOUD) prior to discharge from ED or hospital.
 - MAR NOW is Illinois' immediate opioid treatment helpline. Call 833-234-6343 or text "HELP" to 833234.
- Visit overcomeopioids.org and chicagohan.org/opioid for more information.