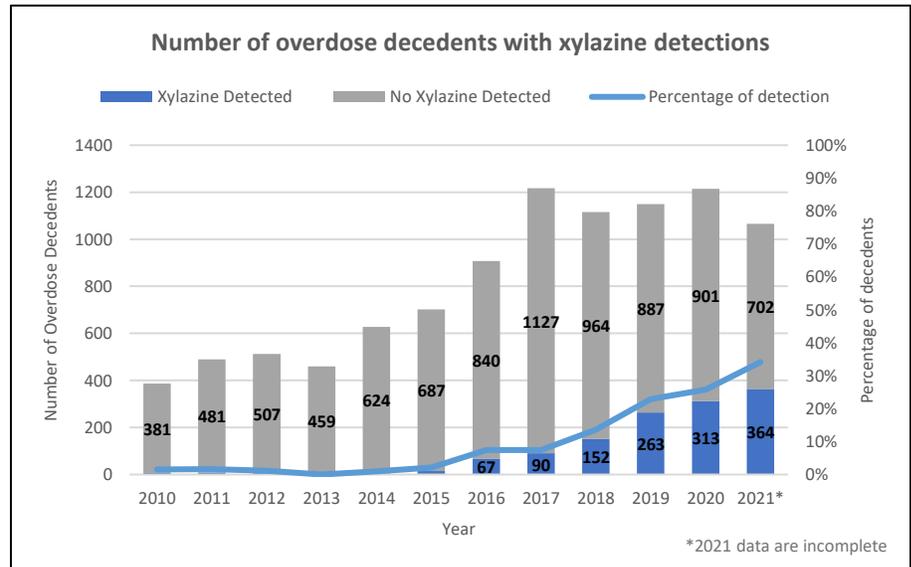


Health Alert

Risks of Xylazine Use and Withdrawal in People Who Use Drugs in Philadelphia March 16, 2022

Drug-related morbidity and mortality remain high in Philadelphia, where 1,214 people died from unintentional overdoses in 2020 and thousands more experienced non-fatal overdoses and skin and soft tissue infections related to injection drug use.

Complicating both the medical and public health response to this crisis is the widespread adulteration of street drugs with xylazine, a veterinary anesthetic and analgesic. Xylazine (known as “tranq”) was identified in 313 overdose decedents in 2020, up from just 6 in 2010. In 2021, 91% of samples of purported heroin or fentanyl from Philadelphia also contained xylazine, making it the most common adulterant in the drug supply. When xylazine is identified, it is almost universally found in the presence of fentanyl.



Xylazine is an alpha-2 adrenergic agonist that is added to street opioids for synergistic effects and/or to prolong their effects, particularly that of fentanyl, which has a short duration of action. Clinically, its predominant effect is profound sedation without significant vital sign abnormalities. While xylazine does not cause the severe respiratory depression observed with opioid intoxication, the profound mental status depression may cause airway compromise leading to suffocation. Naloxone should be administered for respiratory depression because xylazine and fentanyl are typically found together. Providers may find that naloxone will be ineffective for some patients as xylazine intoxication is not reversed by naloxone. Patients should be educated about this to avoid incorrectly attributing these incidents to “naloxone resistant fentanyl” or “naloxone resistant opioids”. Supportive care, including airway management, may be needed for patients with sedation in the presence of normal respirations.

Chronic xylazine use can lead to physiologic dependence and a withdrawal syndrome, marked by irritability, anxiety and dysphoria.

The Philadelphia Department of Public Health is alerting providers to the presence of xylazine in Philadelphia-area street drugs and to presume exposure among people using heroin and/or fentanyl. Inpatient treatment for opioid withdrawal may be more difficult than standard opioid withdrawal protocols and require additional pharmacologic treatments if the patient is also withdrawing from xylazine. While the literature on treatment protocols is still emerging, local addiction medicine and toxicology experts recommend the following medications be considered for inpatient management of xylazine withdrawal:

- Dexmedetomidine
- Tizanidine
- Clonidine
- Guanfacine
- Ketamine
- Gabapentin
- Pentobarbital
- Benzodiazepines (with caution)

Opioid withdrawal should be treated early, with liberal use of comfort medications in order to mitigate any pain and discomfort that could further exacerbate the manifestations of xylazine withdrawal.

Additionally, xylazine use has been associated with severe skin ulceration. These wounds are not limited to the injection site but may occur elsewhere on the body. Outpatient providers should be aware of the heightened risk of skin and soft tissue infections among people who use drugs and provide both wound care treatment and harm reduction education (e.g., swab area with alcohol prior to injecting, rotate injection site, avoid injecting into wounds) to reduce the risks of exacerbating local infections and acquiring communicable diseases.

The Philadelphia Department of Public Health is working to raise awareness about the presence of xylazine in drugs purchased on the street and intends to support additional wound care services in the community.

Patient resources:

- Naloxone
 - Learn how to get and use naloxone – www.phillynaloxone.com
- Substance Use Disorder Treatment
 - Behavioral Health Services Initiative (uninsured): 1-215-546-1200
 - Community Behavioral Health (Medicaid): 1-888-545-2600
 - <http://dbhids.org/addiction-services>