

The Problem: A Growing Number of Overdoses Involve Xylazine and Require Emergency Medical Care

The drug supply in the United States is increasingly adulterated with synthetic opioids (e.g., fentanyl) and other toxic substances that can increase the risk of fatal overdose. One such substance is xylazine, a veterinary tranquilizer that can cause skin ulcers and abscesses as well as more serious symptoms like respiratory depression, slowed heart rate, and hypotension in humans.¹ Xylazine is often found in combination with fentanyl.² In fact, fentanyl is involved in nearly all fatal overdoses where xylazine is present.³

Xylazine was first identified as a drug supply adulterant in Puerto Rico and is now widespread across the United States.² The presence of xylazine in fatal overdoses increased from <1% in 2015 to 7% in 2020 across 10 regions, with rates in some areas >25%.³ In Vermont, the presence of xylazine in overdoses has increased dramatically since 2020, with xylazine present in 30% of fatal opioid overdoses in the first quarter of 2022 (Figure 1).⁴

Xylazine is a risk for people who use opioids as it is not detected by fentanyl test strips and, because xylazine is not an opioid, naloxone may not be as effective in reversing an overdose when xylazine is present. However, naloxone should still be administered to reverse the effects of fentanyl, which is likely to be the primary cause of overdose. Emergency medical care, including respiratory and cardiovascular support, is also critical when xylazine is involved or suspected in an overdose.²

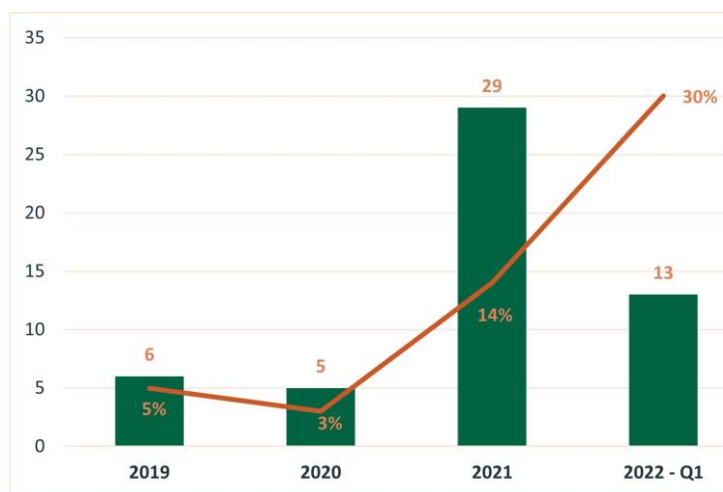


Figure 1. Vermont fatal opioid overdoses involving xylazine, 2019 through the first quarter of 2022.⁴

The Implications: Education is Needed to Ensure that People Receive Necessary Medical Care

In response to the increasing prevalence of xylazine, educational efforts are needed to ensure that people who use drugs and those who respond to overdoses are aware of its risks, the potential limitations of naloxone's efficacy reversing overdoses, and the importance of emergency medical care in the case of overdose when xylazine is involved or suspected. These efforts are particularly important in rural communities where people may have less regular interaction with health care providers and be less likely to seek medical care following an overdose due to transportation barriers, stigma, and other factors. Drug checking services, which are not currently widely available in the United States, are a potential future intervention that could provide people who use drugs and their communities with valuable information about the drug supply. In other countries, these services have been shown to influence the intentions and behavior of people who use drugs, allowing them to make informed choices and potentially reducing harm.⁵

For more information, please contact cora@uvm.edu.

¹ National Institute on Drug Abuse. Research Topics: Xylazine. Available at: <https://nida.nih.gov/research-topics/xylazine>. Accessed July 8, 2022.

² Kariisa M *et al.* Notes from the field: Xylazine detection and involvement in drug overdose deaths United States (2019). *MMWR Morbidity and Mortality Weekly Report*. 70:1300-1302.

³ Friedman J *et al.* Xylazine spreads across the US: A growing component of the increasingly synthetic and polysubstance overdose crisis (2022). *Drug and Alcohol Dependence*. 233:109380.

⁴ Vermont Department of Health. Xylazine involvement in fatal opioid overdoses among Vermont residents (2021). Available at: <https://www.healthvermont.gov/sites/default/files/documents/pdf/ADAP-XylazineBrief.pdf>. Accessed July 8, 2022. 2022 data were obtained via personal communication with the Vermont Department of Health.

⁵ Maghsoudi N *et al.* Drug checking services for people who use drugs: A systematic review (2022). *Addiction*. 117(3): 532–544.