

A recent [Morbidity and Mortality Weekly Report](#) (MMWR) investigated the role of xylazine in fatal drug overdoses. Xylazine is not a controlled substance and not approved for human use. It is a drug used in veterinary medicine and is used as a sedative with analgesic properties.ⁱ The Centers for Disease Control and Prevention (CDC) used the State Unintentional Drug Overdose Reporting System (SUDORS) to assess how often xylazine was present in toxicology and how often it contributed to death. The analysis found among 45,676 overdose deaths reported from 38 states and the District of Columbia in 2019, xylazine was detected in toxicology in 1.8% of the deaths and xylazine was listed as a cause of death in 64.3% of deaths in which it was detected in toxicologyⁱⁱ. The Vermont Department of Health investigated the role xylazine has in fatal opioid overdose deaths in Vermont.

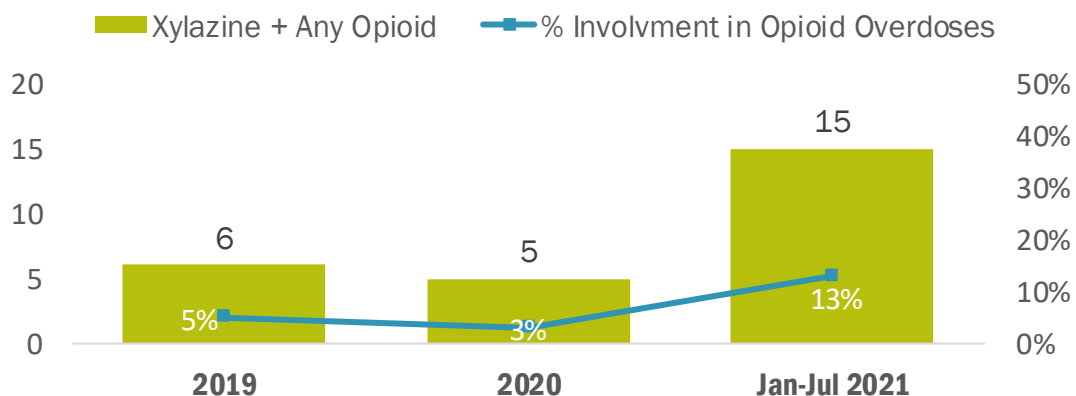
KEY POINTS

- Xylazine involvement in fatal opioid overdoses is increasing.
- Xylazine is often co-occurring in fentanyl involved fatal opioid overdoses.
- As Xylazine is an emerging trend, additional clinical and harm reduction information need to be studied.

Fatal Opioid Overdoses Involving Xylazine Among Vermont Residents

In 2019 and 2020, xylazine was involved in fewer than seven fatal overdoses involving opioids annually (6 in 2019 and 5 in 2020). In the first seven months of 2021, xylazine-involved opioid overdoses already accounted for more than twice the total opioid overdose deaths involving xylazine for 2019 and three times as many in 2020. To date, xylazine involvement in fatal drug overdoses has only been identified in overdoses which also involve opioids. In 2021, all overdose deaths which involved xylazine (15) also involved fentanyl. A few (3) involved heroin, methamphetamines (3) and about half involved cocaine (8). This suggests that xylazine is becoming more common in Vermont's drug supply. The Drug Enforcement Administration reports that xylazine is becoming an increasingly common adulterant in drug mixtures. It has been seized in large quantities in California, Pennsylvania, and Connecticut.ⁱⁱⁱ

The involvement of xylazine in fatal opioid overdoses has increased in 2021 through July compared to previous years.



Why is this important?

It is difficult to monitor xylazine. It is not FDA approved for human use and is not controlled under the federal Controlled Substances Act (CSA). Xylazine does not appear in the Vermont Prescription Monitoring System.

Xylazine is used for sedation, anesthesia, muscle relaxation, and analgesia in horses, cattle, and other non-human mammals. In humans xylazine can cause respiratory depression which can exacerbate the respiratory depression caused by opioids and increase the risk of overdose death.^{iv} According to the MMWR, naloxone might not be as effective in fully reversing opioid overdoses when xylazine is present with fentanyl and there is no specific pharmaceutical antidote specific to xylazine.

Key Takeaways

Xylazine involvement in fatal opioid overdoses is increasing in Vermont. Xylazine and opioids target the respiratory system, which can amplify the symptoms of an opioid overdose such as slowed breathing.

Xylazine involvement is increasing in fatal opioid overdoses.

Narcan only works on opioids, meaning it will not address the impact Xylazine may have on a person's breathing. If it is suspected that a person has used opioids, Narcan should still be used to address the impact opioids may have on a person's breathing. 9-1-1 should be called for any suspected overdose or if a person is having a difficult time breathing.

As Xylazine is an emerging trend in its relation to opioid overdoses, additional clinical and harm reduction information need to be studied.

Sources:

Fatal overdose data are from the [Vermont Vital Statistics System](#) and only include deaths that occurred among Vermont residents. Data from 2020 and 2021 are preliminary and subject to change.

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ⁱ Reyes JC, Negrón JL, Colón HM, et al. The emerging of xylazine as a new drug of abuse and its health consequences among drug users in Puerto Rico. *J Urban Health* 2012; 89:519–26.

ⁱⁱ [Notes from the Field: Xylazine Detection and Involvement in Drug Overdose Deaths — United States, 2019 \(cdc.gov\)](#)

ⁱⁱⁱ [Xylazine \(usdoj.gov\)](#)

^{iv} Ruiz-Colón K, Chavez-Arias C, Díaz-Alcalá JE, Martínez MA. Xylazine intoxication in humans and its importance as an emerging adulterant in abused drugs: A comprehensive review of the literature. *Forensic Sci Int*. 2014 Jul; 240:1-8. doi: 10.1016/j.forsciint.2014.03.015. Epub 2014 Mar 26. PMID: 24769343.