

## What We Know About Xylazine in Cuyahoga County, Ohio

**Summary:** This data brief describes the drug xylazine and provides a summary of xylazine-involved fatalities in Cuyahoga County occurring from 2020 to mid-2023. Additionally, it examines xylazine drug seizures and the results of xylazine urinalysis tests at both the state and national level.

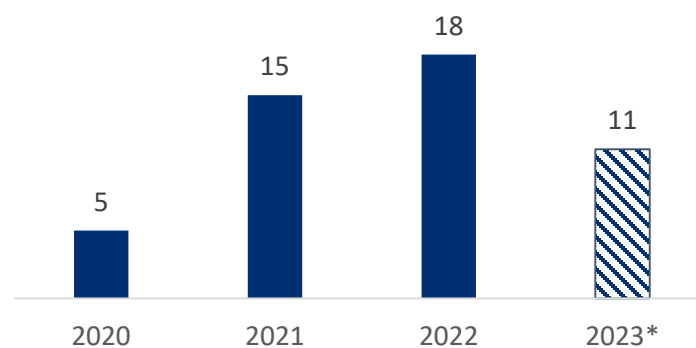
### What is Xylazine? <sup>i</sup>

- Xylazine, also known as “tranq”, is a non-opioid veterinary tranquilizer (or sedative) linked to drug-related overdose deaths in Cuyahoga County since 2020.
- Overdose deaths involving xylazine have spread across the United States, with a significant impact in the Northeast. <sup>ii</sup>
- Xylazine is frequently added to illicit opioids, such as fentanyl, and its use can lead to dangerous respiratory depression when combined with other central nervous system depressants like alcohol.
- Xylazine does not respond to the overdose reversal medication naloxone, however naloxone is still recommended as a life-saving measure for suspected overdoses since xylazine is often present in combination with other drugs like illicit fentanyl.
- Xylazine use can also lead to severe wounds or skin and soft tissue infections that develop quickly and do not respond to traditional treatment. <sup>iii</sup>

### Xylazine-Involved Deaths in Cuyahoga County <sup>iv</sup>

- The number of xylazine-involved deaths in Cuyahoga County has shown a small but steady increase from 2020 to 2022 and such deaths are estimated to increase further in 2023 (see Figure 1).
- 48 of the 49 xylazine-involved deaths in Cuyahoga County from 2020 to 2023\* also involved fentanyl, and the individual case that did not involve fentanyl *did* involve another opioid. Additionally, one third of xylazine cases also involved cocaine.
- The Cuyahoga County Medical Examiner’s Office has not observed typical necrotic tissue damage or severe abscesses/wounds reported with xylazine use in their decedent population.

**Figure 1. Frequency of Cuyahoga County Xylazine-Involved Deaths, 2020 to 2023\***



\*2023 data are incomplete. As of 7 July 2023, there were 11 ruled xylazine-involved deaths.

## Xylazine Drug Seizure Results<sup>v, vi</sup>

- Xylazine was first reported by the National Forensic Laboratory Information System (NFLIS-Drug) in their list of “most frequently identified drugs” in 2019. NFLIS-Drug reports drug seizure results from forensics labs across the country that test drug samples submitted by local, state, and federal law enforcement agencies.
- The number of national xylazine submissions increased 594% from 2019 to 2021. The proportion of xylazine submissions out of the total national submissions also has increased each year (see Table 1).
- The prevalence of xylazine in Ohio follows the national trend and is showing a steady increase each year. Although 2022 submission numbers are not yet available for individual states, it is likely Ohio will report another increase. Ohio also accounts for a very large proportion of the national submission total, averaging around 20% of the total submissions each year.
- In March 2023, Ohio Governor Mike DeWine signed an executive order classifying xylazine as a Schedule III controlled substance, making Ohio one of the first states in the nation to do so. The federal government has not yet scheduled the drug.<sup>vii</sup>

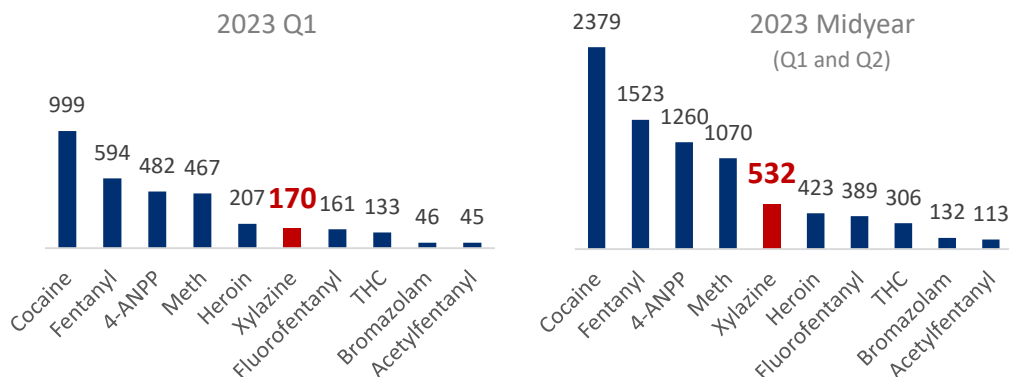
**Table 1. National and State (Ohio) Xylazine Drug Seizures Submissions 2019 to 2022\***

Year	National Submissions	% of total national drug submissions (all drug-types)	Ohio Submissions	Ohio % of national xylazine submissions
2019	1055	0.07%	172	19.5%
2020	2428	0.19%	496	25.7%
2021	7326	0.55%	1316	21.9%
2022*	4482	0.78%	Not available	Not available

\*Estimated number and percentage of total drugs submitted from January 1, 2022, through June 30, 2022, and analyzed by September 30, 2022, as reported by NFLIS Drug

- The Cuyahoga County Regional Forensic Science Lab (CCRFSL) reported xylazine as a top ten drug submission for the first time in 2023 (see Figure 2). Drug chemistry tests run on seized drugs submitted by public safety agencies in the first quarter of 2023 showed 170 were positive for xylazine. By midyear xylazine submissions increased 113% from the previous quarter (2023 Q1 = 170, 2023 Q2 = 362).<sup>viii</sup>

**Figure 2. CCRFSL Top 10 Drug Seizure Submissions, 2023 Q1 and 2023 Midyear (Q1 and Q2) Submissions**



### Xylazine Urinalysis Testing in Ohio and Nationally<sup>ix</sup>

- Millennium Health, a national drug testing laboratory, began offering urinalysis testing for xylazine via liquid chromatography with tandem mass spectrometry (LC-MS/MS) at the beginning of April 2023. Since then, in Ohio, the xylazine positivity rate is 2.4% (see note below).
- Nationally, 99.3% of specimens that are positive for xylazine also are positive for fentanyl, while 13.7% of those that are positive for fentanyl are also positive for xylazine.

Note: Positivity rate data are derived from specimens collected in clinical settings from individuals seeking healthcare services and for whom xylazine tests were ordered by clinicians based on medical necessity.

**Conclusion:** Xylazine is increasingly present in the U.S. and local drug supply and is contributing to overdoses. In the state of Ohio, xylazine is now a Schedule III controlled substance. Illicit use of xylazine (knowingly or unknowingly) can be dangerous. In nearly all xylazine-involved death cases in Cuyahoga County, fentanyl also contributed to the cause of death. Given the frequent combination of fentanyl/fentanyl analogs with other drugs driving overdose deaths in Cuyahoga County, and nationally, naloxone administration remains a significant harm reduction measure.

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<sup>i</sup> See the National Institute on Drug Abuse

<sup>ii</sup> [Drug Overdose Deaths Involving Xylazine, NCHS](#)

<sup>iii</sup> See [COSSAP Resource for Xylazine](#)

<sup>iv</sup> Xylazine-involved death data provided by the CCMEO

<sup>v</sup> See [NFLIS-Drug Publications](#)

<sup>vi</sup> See the [Cuyahoga County Board of Health](#)

<sup>vii</sup> See news release [Classification of Xylazine as Schedule III](#)

<sup>viii</sup> See [CCMEO Monthly Overdose Statistics](#)

<sup>ix</sup> Data provided by Millennium Health's Clinical Science Liaison



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