

Presented at the North American Congress of Clinical Toxicology 2023 – Montreal, Canada

Published in *Clinical Toxicology* 2023;61:28.

56. Xylazine trends over time

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Background: Xylazine is a veterinary anesthetic agent, which has been found increasingly in illicit fentanyl and other illicit opioids. This study attempted to determine variation in the frequency of samples containing xylazine over time along with stratification by geographic region.

Methods: The Toxicology Investigators Consortium (ToxIC) Fentalog Study is a regionally diverse multi-center toxico-epidemiology study which consists of patients presenting to 10 participating EDs with suspected acute opioid toxicity from 9/21/2020 to 5/1/2023. In addition to chart review of medical records, waste serum, drawn as part of routine clinical care, is collected and analyzed using liquid chromatography quadrupole time-off light mass spectrometry for the presence of over 1,000 novel psychoactive substances, drugs of abuse, and therapeutics. A central IRB approved this study with waiver of consent. For this interim analysis dates of active sample collection (11/2020–8/2021 and 2/2022–11/2022) were divided into five month periods; periods; 1: (11/2020–3/2021); 4/2021–8/2021); 3: (2/2022–6/2022); 4 (7/2022–11/2022). Regions were considered West (California, Oregon), Midwest (Michigan, Missouri); East (New York, New Jersey, Pennsylvania). Utilizing unadjusted bivariate regression, the four time periods and three regions were examined.

Results: Among the total sample of cases with analytes (n .740), 20.4% (n . 151) biologic samples contained xylazine. Xylazine was detected in 36/96 (37.5%) samples in period 1, 56/211 (26.5%) in period 2; 22/149 (14.7%) of samples in period 3; and 38/177 (21.4%) of samples in period 4. These were not significantly different. However, there was a significant change when stratified by region. Xylazine was found in 2/85 (2.4%) of samples from the West; 17/184 (9.2%) of Midwest samples; and 133/464 (28.6%) of samples from the East. Thus, the odds of fentanyl containing xylazine is 13.1 (95% CI 3.19–54.1) comparing East to West. There was no significant difference in the odds of fentanyl containing xylazine in the East vs. Midwest.

Conclusion: Over the last 2 years, the number of patients testing positive for xylazine in our sample did not significantly change; however, regional sample variation was significant with xylazine more commonly detected in the East compared to the West.