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## Xylazine in Maryland - Initial Report

### Executive Summary

To respond to the potential threat of xylazine, [Overdose Data to Action](#) developed the Maryland Xylazine Workgroup to address questions, share data, and make recommendations for practice, surveillance and policy development. The workgroup is an interagency and multidisciplinary team of professionals working in overdose surveillance, prevention and response. This report summarizes the efforts of the workgroup and presents critical information about xylazine in Maryland. [The Xylazine in Maryland Initial Report](#) includes an addendum with more recent data, utilizing 2021 State Unintentional Drug Overdose Reporting System (SUDORS) mortality data, drug checking data from the Rapid Analysis of Drugs (RAD) program, and Maryland State Police drug seizure testing data through May 2023. This executive summary provides a broad overview of major findings and recommendations, including how analysis of more recent data may demonstrate a leveling off or slowing rate of increase of xylazine in Maryland and disparities among who is experiencing fatal xylazine-involved overdose.

### Contributing Partners and Data Sources

- Baltimore County Overdose Data to Action
- Center for Harm Reduction Services, Maryland Department of Health
  - Rapid Analysis of Drugs ([RAD](#)) data
- Center for Environmental, Occupational & Injury Epidemiology; Environmental Health Bureau, Maryland Department of Health
  - State Unintentional Drug Overdose Reporting System ([SUDORS](#)) data
- Johns Hopkins University
- Office of the Deputy Secretary, Public Health Services, Maryland Department of Health
- Office of the Chief Medical Examiner
  - Toxicology screening of overdose decedents
- Vital Statistics Administration
  - [Overdose fatality data](#)

### Major Findings

- Xylazine is commonly-detected among decedents in Maryland, especially in Baltimore City and Baltimore County. 17% of opioid overdose decedents in 2020 were xylazine positive and more than one-fourth (27.8%) of decedents in 2021 were xylazine-positive.

- Most decedents who test positive for xylazine had illicitly-manufactured fentanyl (IMF) as a cause of death, which strongly suggests that xylazine is being found with IMF.
- Information about xylazine in the drug supply from the Rapid Analysis of Drugs (RAD) program was consistent with what we learned from overdose decedents. Specifically, among the samples of drug paraphernalia tested since October 2021 (1417 samples), xylazine was identified in 40.2%. Over 80% of those samples contained one other substance compound (ie - fentanyl). Xylazine was most prevalent in samples that also included fentanyl and related compounds; 35.1% of xylazine samples also contained fentanyl.
- A pilot conducted on 30 overdose decedents who tested positive for xylazine in an initial OCME toxicology report generated new information about quantification of xylazine in post-mortem toxicology overdose decedents. Findings showed that xylazine-positive decedents usually had fentanyl and stimulants as CODs. Xylazine concentrations ranged widely – most decedents had concentrations between 3.3 to 125ng/mL, and two had concentrations above 200 ng/mL. Xylazine would be typically considered to contribute to death if it produces a similar effect or acts by the same mechanism as the drugs significantly contributing to death (usually fentanyl). However, not enough is known about the drug to make cause of death determinations.
- The proportion of decedents who were xylazine-positive was lowest in early 2020, peaked in early 2021 and may have leveled off thereafter. Taken along with findings from the RAD program, Maryland State Police, and from preliminary Maryland Vital Statistics Administration data, the trend analysis provides early evidence that the proportion of overdose decedents who are xylazine-positive is no longer increasing (see report addendum).
  - Although this is promising news, there were >20 xylazine-related deaths per month throughout all of 2021 and Maryland is a long way from the January 2020 estimate of <5% of opioid overdose decedents being xylazine-positive.

## Recommendations

### 1. *Build and maintain an infrastructure to respond to the problem.*

Maryland's strong infrastructure for overdose response can be leveraged to address the potential threat of xylazine. Carrying out this recommendation will include: [a] continuing to meet as a workgroup, expanding to monitor any emerging drugs [b] identifying additional stakeholders to join the group, and [c] seeking funding to expand on the initial work if needed.

### 2. *Continue to monitor the issue.*

Our workgroup considers the potential threat of xylazine to be substantial enough to warrant continued monitoring. We committed to continuing to: [a] review the literature on the topic, [b] monitor issuance of public health advisories, law enforcement alerts, and policy initiatives, [c] analyze the data available to generate new information about xylazine in the drug supply and in the toxicology of people who have overdosed. We plan to investigate options for assessing capacity of xylazine testing among overdose patients within the healthcare system, as well as [capacity for treating xylazine-related skin and soft tissue infections](#). It is currently very low.

#### a. Report Addendum recommendations:

- i. We need to better understand xylazine-related morbidity; this information would complement the data on mortality and provide a more complete picture of the problem of xylazine in Maryland. It is critical to determine the proportion of people with non-fatal overdose who are xylazine-positive, and also to identify the prevalence of other xylazine-related health problems, such as skin infections.
  - ii. It will be critical to monitor the demography and geography of overdose involving xylazine to develop targeted prevention strategies and ensure that prevention strategies reach vulnerable populations. Data from 2021 highlight notable disparities. Most xylazine-involved overdose deaths occurred in the greater Baltimore area, and 41% of xylazine-positive overdose decedents are Black, despite that Black people comprise 30% of the state’s population.
3. *Disseminate information about the problem to stakeholders in Maryland and beyond.*

The workgroup values disseminating [information about xylazine](#) to agencies, organizations, and communities across the state with the goal of facilitating an effective and broad response to overdose and emerging drugs found in Maryland. This includes sharing findings with local health departments, harm reduction organizations, people who use drugs, and others responding to overdose in Maryland.

  - a. Report Addendum recommendation:
    - i. Qualitative assessments with people who sell and use illicitly-manufactured fentanyl (IMF) could generate critical knowledge to inform prevention and policy development. A qualitative assessment could address some of the many unknowns about xylazine – such as motivations for and awareness of using it, perceptions about its effects (i.e., how it makes people feel), knowledge about and experience of its health risks, risk reduction behaviors and communication, willingness to adopt strategies to avoid it (e.g., use of test strips), service utilization, and how and why it is added to IMF.
4. *Investigate factors underlying the emergence of xylazine in the drug supply.*

Our final recommendation is about understanding the source of xylazine and how it makes its way into the drug supply. Completing this recommendation will involve working with both people who use drugs and law enforcement in Maryland and neighboring states, as well as reviewing data and reports on drug trafficking, drug seizures, and trends in the drug supply (e.g., from National Forensic Laboratory Information System [NFLIS], the National Drug Early Warning System [NDEWS]).<sup>39,40</sup>