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### Growing Use of Xylazine as an Adulterant in Opioids and Its Effects

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## Abstract

- The United States continues to see an increase in the rates of opioid use disorder.
- According to the CDC, there was a 30% increase in drug overdose deaths from 2019 to 2020.
- Drug overdose deaths involving fentanyl saw a 56% increase from 2019 to 2020 (CDC).

## Background

- Xylazine, according to the National Institute of Health (NIH), is a non-opioid tranquilizer used in veterinary medicine.
- It is a depressant of the central nervous system that induces drowsiness, amnesia, respiratory depression, bradycardia, and hypotension. (NIH)
- Although this drug has not been approved for human use, it can be linked to an increase in opioid overdose deaths due to its role as an adulterant in drugs like fentanyl. (NIH)
- Xylazine was detected in drugs involved in 41% of all opioid-involved unintentional deaths and in 44% of all unintentional overdose deaths with fentanyl involved in the year of 2021 in Philadelphia. (CHART)

## Methods

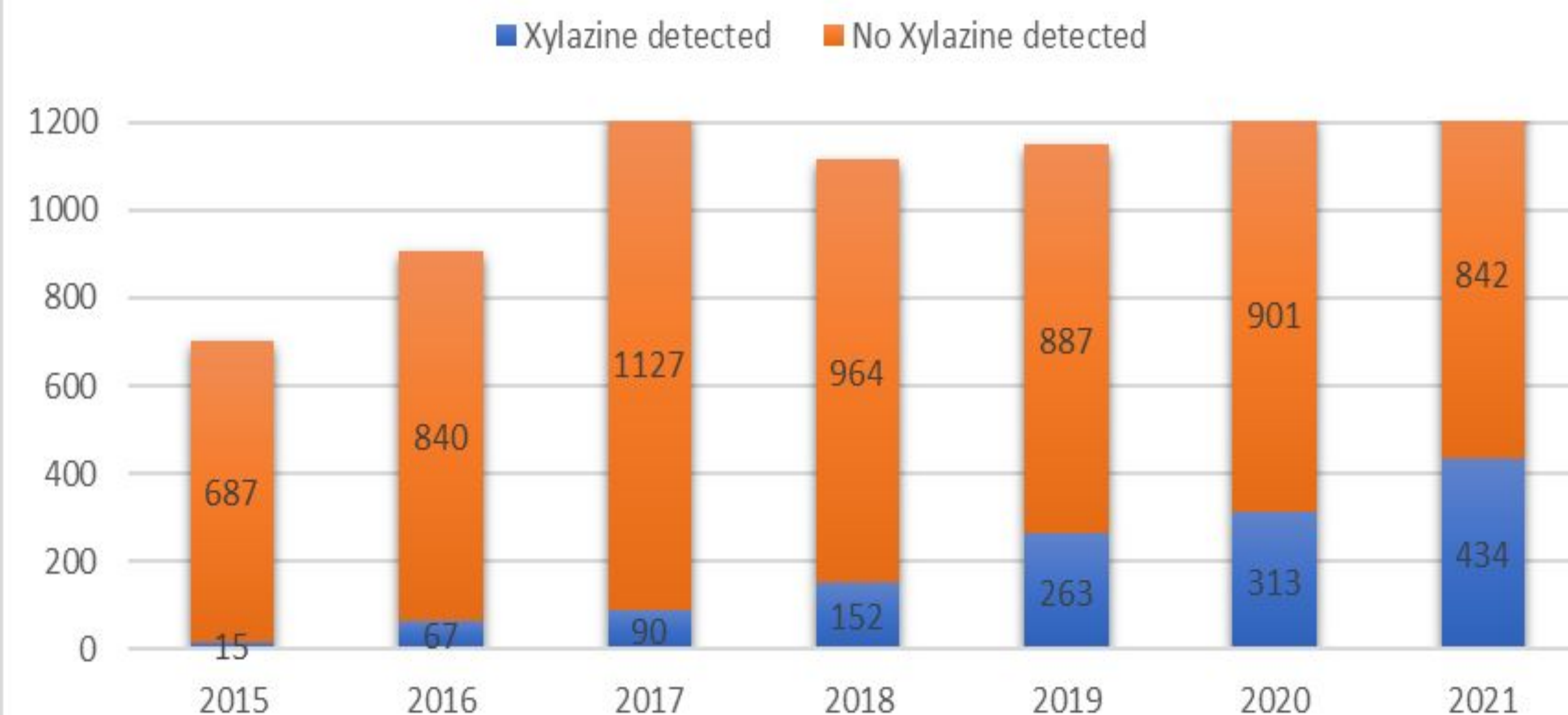
The following types of articles were used to generate this report:

Meta  
Analysis

Systemic  
Review

Case  
Report

## Number of Overdose Deaths with Xylazine Involved from 2015 - 2021



## Results

- Skin abscesses and ulcers develop on various parts of the body irrespective of where the IV drug was injected (Malayala et al.)
- Xylazine's vasoconstrictive properties lead to decreased perfusion of skin, hypotension, and bradycardia leading to further oxygen deprivation of skin (Malayala et al., 2022).
- The decreased perfusion of skin causes impaired wound healing which leaves the door open to infections like cellulitis (Malayala et al., 2022).
- Xylazine is an adulterant in high demand in the among people who inject drug in Philadelphia because it increases the duration of fentanyl which is short acting (Malayala et al., 2022)



## Conclusion

- As the use of xylazine continues, it is reasonable to see an increased occurrence of skin ulcers and abscesses among those who inject drugs
- More research into the effects of xylazine with human use needs to be conducted
- Physicians need to become proficient in identifying effects of xylazine

## References

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