

Presented at the ACMT Annual Scientific Meeting 2025 – Vancouver, Canada

Published in J Med Tox 2025; 21:51-52.

96. Evaluation of Sociodemographic Differences in Xylazine Versus Non-Xylazine Exposures

Keshav Reddy¹, Ekaterina Kalinina¹, Rachel Culbreth², Kim Aldy^{2,3}, Jeanmarie Perrone⁴, Sharan Campleman², Alyssa M Falise², Paul Wax², Jeffrey Brent⁵, Anthony F Pizon¹, On Behalf of the ToxIC DOTS Study Group

¹University of Pittsburgh School of Medicine, Pittsburgh, PA, USA. ²American College of Medical Toxicology, Phoenix, AZ, USA. ³Baylor University Medical Center, Dallas, TX, USA. ⁴Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA. ⁵University of Colorado School of Medicine, Aurora, CO, USA

Background: Xylazine has become increasingly prevalent in illicit drug exposures across the country. Socioeconomic characteristics of people exposed to xylazine has not been explored, and little research has been conducted comparing patient demographics of those exposed to xylazine and other illicit drugs.

Hypothesis: There are differences in socioeconomic characteristics between people exposed to xylazine (intentional and unintentional) and those exposed to all other illicit drugs.

Methods: This is a prospective observational study from the Toxicology Investigators Consortium (ToxIC) Drug Overdose Toxico-Surveillance (DOTS) Reporting Program which consisted of patient interviews, chart reviews, and toxicological blood analysis from patients presenting to emergency departments after overdose at 17 sites nation- wide. Cases positive for xylazine were compared to cases negative for xylazine (all illicit drugs excluding xylazine). Statistical analysis was conducted using Fisher's Exact Test and Chi-Squared Test to compare cohorts.

Results: From April 2023 to September 2024, a total of 95 patients had positive blood testing for xylazine and 399 had other illicit drugs but were negative for xylazine. Sixty-nine percent of patients positive for xylazine were Black and 27% were White, while only 49% of patients negative for xylazine were Black and 38% were White ($p = 0.007$). Patients testing positive for xylazine tended to have lower incomes, with 91% reporting an annual income below \$40,000 compared to only 80% of patients who were xylazine negative ($p = 0.04$). Of patients who tested positive for xylazine, 79% did not progress past a high school education, compared to 64% of those without xylazine ($p = 0.015$). Patients positive for xylazine had a 70% unemployment rate while only 56% of non-xylazine cases reported unemployment ($p = 0.01$). Patients with xylazine were less likely to have a stable housing situation (48%) compared to those without xylazine (55% with stable housing; $p = 0.002$). There were also statistically significant differences in xylazine usage across sites ($p < 0.001$). There were no significant differences between age, sex, marital status, military service, cohabitation status, spending time in a homeless shelter within a year, and family history of drug use.

Conclusion: Patients exposed to xylazine were more likely to be Black, have lower income, lower educational attainment, higher unemployment, and less secure housing. Many of these statistically significant differences may be driven by geographical variabilities. Once blood analyses are finalized, multivariable modeling is needed to understand if differences in sociodemographic characteristics are driven by geography alone. Interventions are needed to mitigate and prevent discrimination for those receiving treatment after overdose.