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Repeat Overdoses and Addiction Treatment History among Patients Presenting to Emergency Departments after a Non-Fatal Overdose across the US

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Aims: This study examined sociodemographic factors and past addiction treatment among patients with recurrent overdoses who presented to the emergency department (ED) after an opioid overdose.

Methods: The Toxicology Investigators Consortium (ToxIC) Drug Overdose Toxicology-Surveillance program consisted of 17 sentinel US sites (2022-2024). The ToxIC DOTS program enrolled patients (ages 13 and older) who presented to participating EDs with severe/life-threatening opioid or stimulant overdoses. Data collection included chart reviews, patient interviews, and qualitative and quantitative toxicology tests. Analyses consisted of bivariate statistical tests and logistic regression. Patients self-reported addiction treatment history and the number of previous overdoses. All patients provided written informed consent, and central and site IRBs approved this study.

Results: In the 2-year study period, 997 patients were enrolled, 689 presented clinically as an opioid overdose, and 640 completed interviews. Almost half (48%) of patients reported a prior overdose requiring naloxone, and 20% reported more than 5. Those with a prior overdose were more likely to report unstable housing (aOR: 0.78; 95% CI: 0.72, 0.85) and lower educational attainment (aOR: 0.90; 95% CI: 0.83, 0.99), adjusting for age, gender, race and ethnicity. Nearly one-fourth of patients with two or more prior overdoses had never received addiction treatment, compared to patients with one prior overdose (31%) and no prior overdose (51%) ($\chi^2=40.1$, df=2, $p<0.001$). The number of prior overdoses was associated with a higher likelihood of previously receiving a naloxone kit; 71% of those with two or more overdoses had received a naloxone kit compared to only 48% for one prior overdose and 28% for no prior overdoses ($\chi^2=91.5$, df=2, $p<0.001$).

Conclusions: Prior overdoses were common among patients presenting after an opioid overdose. Significant treatment gaps remain for high-risk patients. Individualized addiction treatment for those with unstable housing and low educational attainment may be warranted to improve outcomes.