

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

Published in *Clinical Toxicology* 2023;61:89.

184. Confirmed drug exposures in ED patients presenting after opioid overdose with self-harm intent

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Background: The majority of patients who present after an opioid overdose do not intend to overdose. However, deliberate self-harm, including suicide attempts and non-suicidal self injury (NSSI), is often under recognized in this population. The purpose of this study is to determine the confirmed drug exposures present among patients presenting to the emergency department (ED) for an opioid overdose with intent to self-harm. A secondary objective is to determine the differences in confirmed drug exposures between patients with intent to self-harm compared to misuse/abuse.

Methods: This study utilized data from the Toxicology Investigators Consortium (ToxIC) Fentanyl Study, a prospective, observational study of patients presenting to 10 ED sites with suspected opioid overdose from September 2020 to April 2023. Waste serum, drawn as part of routine clinical care, was collected, de-identified, and analyzed using liquid chromatography quadrupole time-of-flight mass spectrometry for the presence of over 1,000 novel psychoactive substances, drugs of abuse, and therapeutic agents. Classification of overdose intent was determined by chart review, and assigned one of the following categories: self-harm (including suicide attempt, NSSI, and unknown), misuse/abuse, therapeutic intent, drug concealment, and unknown. Study enrollment with waiver of informed consent was approved by a central IRB (WCG IRB). Bivariate statistical tests were used to determine the prevalence of confirmed drug exposures between those presenting with self-harm compared to those with misuse/abuse. All analyses were conducted in R v4.2.1.

Results: Patients presenting with self-harm intent comprised 10.6% of the total sample of opioid overdoses. The most prevalent drug exposures included adulterants (59.3%), fentanyl and fentanyl analogs (57.4%), prescription opioids (48.1%), and antidepressants (42.6%). Compared to patients with misuse/abuse intent, patients with self-harm intent had a lower percentage of fentanyl and fentanyl analogs (84.4 vs. 57.4%, respectively, $P < 0.001$) and stimulants (50.8 vs. 33.3%, respectively, $P = 0.02$). Diazepam was found more often in patients presenting with self-harm (22.2%) compared to patients with misuse/abuse intent (7.7%) ($P = 0.001$); however, the overall prevalence of prescription benzodiazepines was not statistically different between the two groups. Even though adulterants were one of the most prevalent drug classes found in patients with self-harm intent, adulterants were much more likely to be found in patients presenting with misuse/abuse compared to those with self-harm intent (76.9 vs. 59.3%, respectively, $P = 0.008$), including xylazine (24.2 vs. 7.4%, respectively, $P = 0.003$). The combination of fentanyl and stimulants were more prevalent among patients presenting with misuse/abuse intent compared to self-harm intent (44.0 vs. 25.9%, $P = 0.02$).

Conclusion: Fentanyl and fentanyl analogs, adulterants, prescription opioids, and antidepressants were the most prevalent confirmed drug exposures in patients presenting with self-harm intent. However, fentanyl/fentanyl analogs and stimulants were statistically more likely to be found in patients with misuse/abuse.