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### 197. Is Chronic Pain Associated With Fentanyl or Fentanyl-Analog Overdoses in ED Patients?

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**Background:** While the current wave of the opioid epidemic is driven by fentanyl and synthetic analogues (fentalogs), it remains unclear whether chronic pain and prescription opioid misuse are risk factors for fentalog overdose.

**Hypothesis:** Among emergency departments (ED) patients presenting with confirmed opioid overdose, are chronic pain and prescription opioid history associated with fentalog overdose (compared to prescription opioids)?

**Methods:** The ToxIC Fentalog Study is an ongoing prospective observational cohort from 2020-present at 10 participating hospitals across the US. Qualitative toxicological analyses were performed on waste serum using liquid chromatography quadrupole time-of-flight mass spectrometry to detect over 1100 psychoactive substances. History of chronic pain and prescription opioid use were assessed via chart review. Associations between chronic pain, prescription opioid misuse, and confirmed fentalog overdose (compared to prescription opioid overdose without fentalogs) were assessed using logistic multivariable regression models.

**Results:** Of the 1289 patients with toxicology results available, 203 (15.7%) had past medical histories of chronic pain, and 239 (18.5%) had a prior prescription opioid misuse history. Among those reporting chronic pain, 41.4% (N = 84) also had current or previous prescription opioid misuse histories. Compared to confirmed prescription opioid overdose, those with chronic pain and prescription opioid misuse histories were significantly less likely to present with fentalog overdose (aOR: 0.89; 95% CI: 0.80, 0.99). An interactive effect was found between chronic pain and prescription opioid misuse such that chronic pain was not associated with a reduced odds of fentalog overdose alone (controlling for prescription opioid misuse) in the multivariable model (aOR: 0.99; 95% CI: 0.92, 1.06).

**Conclusion:** In ED patients with confirmed opioid overdose, prescription opioid misuse history modified the association between chronic pain and prescription opioid overdose (compared to

fentanyl overdose). Future work should focus on improving overdose prevention programs for those with chronic pain and prescription misuse histories.