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081. Variation in Buprenorphine Induction Practices by Medical Toxicologists Across 36 Medical Centers

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Background: Despite growing adoption of emergency department (ED)-initiated buprenorphine, limited research has characterized variation in clinical practice across ED/inpatient settings in the U.S.

Hypothesis or Research Question: What are the patient-level characteristics and site variability associated with low-dose, high-dose, and standard dose buprenorphine induction practices by medical toxicologists across the US?

Methods: This analysis was conducted using the Toxicology Investigators Consortium (ToxIC) Opioid Use Disorder (OUD) Sub-registry, a database consisting of patients over 13 years of age that received a medical toxicology consultation in the ED/inpatient setting for OUD related visits, including opioid overdose, withdrawal, and OUD evaluations (e.g., patients on inpatient buprenorphine who are admitted for surgery). Data collection includes presentation type (opioid overdose, withdrawal, and/or OUD evaluation), patients' medication for OUD (MOUD) prior experience, induction dose, location of induction, and other clinical data. This analysis focused on patients undergoing buprenorphine inductions. The initial buprenorphine dose was classified using the American Society of Addiction Medicine's Guidelines (ASAM) for low-dose buprenorphine (LDB: 0.25 - 2.00 mg), standard-dose buprenorphine (SDB: 2.00 - 8.00 mg), and high-dose buprenorphine (HDB: 8.01 - 16.00+ mg). Mixed effects ordinal regression models were computed to determine patient-level characteristics associated with buprenorphine induction dose while simultaneously assessing site variation via intra-class correlation (ICC).

Results: Cases in the ToxIC OUD Sub-Registry (N = 1465) represented 36 institutions across 17 states, and 492 (34%) were initiated on buprenorphine. Almost half received initial dose of LDB (48%), 36% received standard doses, and 16% received HDB. Patients who presented with opioid withdrawal or after an overdose were more likely to receive HDB compared to those seen for OUD evaluations (18.9% and 18.2% vs. 9.8%, p=01). HDDB was more likely to be administered in the ED compared to inpatient settings (p<0.001). Patients with prior MOUD experience were more likely to be initiated on LDB (47.3% vs. 39.8%, p=0.04). In the model controlling for age and sex, OUD evaluations were less likely to receive HDB (oR: 0.34; 95%

CI: 0.18, 0.63), and there was significant site variation in buprenorphine induction practices (ICC = 0.39; $p<0.001$).

Conclusion: Thirty-nine percent of the total variation in buprenorphine practices was attributed to differences in medical centers rather than patient-level factors. Future research should examine hospital-level protocols and policies that may impact site characteristics for buprenorphine inductions.

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