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### **117. Relative Frequency of Polydrug Exposures Involving Opioids and Sedative-Hypnotic Agents in the ToxIC Registry by Race/Ethnicity: 2015-2020**

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**Background:** Race/ethnicity-related differences in the identification of substance use patterns may interfere with the ability to fully identify and intervene in the social determinants contributing to health risk.

**Research Question:** To what degree can variation in race/ethnicity among cases of polydrug exposures related to opioid and sedative use be identified in a medical toxicology-based surveillance system?

**Methods:** An analysis of cases reported to the ToxIC Core Registry (extract version 2021\_sep9.1) between January 1, 2015, and December 31, 2020, with at least one agent reported were included in this analysis. The relative occurrence of multiple drug exposures, including for opioids and/or sedatives, were quantified across the eight race categories plus unknown race. STATA© was used for descriptive analysis.

**Results:** Over this six-year period, 39,104 of 45,056 cases (86.8%) reported at least one agent related to a toxic exposure. Almost one-third of these cases reported more than one agent, of these 42.0% included an opioid, sedative, or both (n = 5,416, 13.9% total). A small subset of cases reported at least one of each class (n = 1,001) reflecting 7.8% of all multiagent exposures. The relative frequency of polydrug exposures across specified race groups ranged between 22.8%-33.8% but was highest in the “Unknown” race category (36.4% of cases reporting any agent). In the mixed opioid-sedative exposure cases, small numbers limited frequency comparisons (<5 cases for Native Hawaiian/Pacific Islander, Mixed, Other categories). The risk ratios (RR) for Non-Hispanic White and Unknown race groups in joint exposure cases were significantly higher, RR = 1.16 (95% CI 1.11-1.22) and RR = 1.22 (95% CI = 1.05-1.43), respectively.

**Conclusion:** The ToxIC Registry does provide a resource for breaking down the distribution of polydrug cases in a real-world practice-based surveillance system; however, the relative frequency of cases reporting race as “Unknown” limits the ability to fully understand exposure differences based on race/ethnicity.

