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### **111. Intentional Pharmaceutical Overdoses: Comparison of Self-harm, Misuse/abuse and Therapeutic Misadventure ToxIC Case Registry Entries**

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**Background:** Drug overdose due to intentional ingestion can be classified into three categories: attempt at self-harm (e.g., suicide), recreational misuse/abuse, or therapeutic misadventure. In 2014, the ACMT ToxIC Case Registry added these classifications to Intentional Pharmaceutical Poisonings. The ToxIC Registry includes all patients seen at the registered sites by a board-certified medical toxicologist.

**Hypothesis:** Cases of intentional pharmaceutical overdose would demonstrate a unique distribution of drug classes involved depending upon whether they were due to self-harm, misuse/abuse, or therapeutic misadventure, but the distributions of severity and treatments given would be relatively normative with regard to all types of intentional overdose.

**Methods:** Retrospective review (1/2014–11/2014) of the ACMT ToxIC Case Registry analyzing data from the intentional pharmaceutical overdoses. Analysis was performed using descriptive statistics and chi square comparisons across the three groups within intentional pharmaceutical overdose.

**Results:** Of 3,318 cases involving intentional pharmaceutical overdose, 71 % involved self-harm, 18 % misuse/abuse, and 11 % therapeutic use. Sixty-one percent were female. Type of ingestion and gender associations were significant ( $p < .001$ ). Single-drug ingestions varied by type of ingestion (52 % of self-harm, 58 % misuse/abuse, and 68 % of therapeutic use) involving single drugs ( $p < 0.001$ ). Ingestions were also associated with drug class for analgesics (31% of self-harm), antidepressants (20% of self-harm), cardiovascular (18 % of therapeutic), anticholinergic/antihistamine, anticonvulsants (13 % of therapeutic use), and lithium (15 % of therapeutic) ( $p$  values  $< 0.001$ ). Antidotes use varied by intent ( $p < 0.001$ ). Type of toxicity was also associated with intent for cardiovascular, GI/hepatic, hematologic and renal/muscle ( $p < 0.001$ ), and pulmonary systems ( $P = 0.02$ ). Toxidromes were associated with intent, 40 % of self-harm toxidromes, sedativehypnotic; and 30 % of misuse/abuse ( $p < 0.001$ ).

**Discussion:** The ToxIC Case Registry represents a novel mechanism for understanding the more severe types of poisonings. Identifying the agents responsible and illness severity from exposure may inform prescribing and preventative practices may lead to decreases in this type of exposure in the future.

**Conclusions:** Data from the ToxIC may help characterize the more severe type of intoxications associated with this type of ingestion.