

Presented at XXXV International Congress of the European Association of Poison Centres and Clinical Toxicologists (EAPCCT) 26-29 May 2015 - St Julian's, Malta

Published in Clin Toxicol 2015 53:233-403

### **128. Suicidal adolescents: Examining self-poisonings within the pediatric population**

Lynn A Farrugia , Katherine L Boyle , Jennifer L Carey , on behalf of the Toxicology Investigators Consortium Division of Toxicology, University of Massachusetts Medical School, Worcester, USA

**Objective:** Suicide is a major public health problem in the USA, and listed as third-leading cause of death in 10-24 year-olds. Among adolescents, the lifetime prevalence of suicidal ideation and attempt is 12.1% and 4.1%, respectively. Poisonings are a common method of self-harm encountered in the ED. Our objective was to characterize ingestions and outcomes in adolescents with self-harm attempts reported in the ToxIC database.

**Methods:** We retrospectively searched ToxIC (Toxicology Investigators Consortium), a national case registry, to identify cases categorized as "Intentional Self-Harm" among 13 to 18-year-olds. Cases reported as "Unlikely tox related" were excluded. All cases fitting criteria from creation of the database in 2010 through 1 November 2014 were included in the analysis.

**Results:** There were 2,226 cases of toxicologic exposures in ages 13-18 reported in ToxIC. Of these 783 were categorized as "Intentional pharmaceutical overdoses", with 604 subcategorized as "Attempt at self-harm". There were 466 cases of "suicide attempt" (77.2%), 26 cases of "No suicide intent" (4.3%), and intent was not reported or unknown in the remaining cases. Of patients with suicide attempt, 442 (94.8%) had signs/symptoms, 344 (73.8%) were given toxicologic treatment, and 163 (34.9%) were admitted to the ICU. Among patients with no suicide intent, 25 (96.2%) had signs/symptoms, 16 (61.5%) required toxicologic treatment and 7 (26.9%) were admitted to the ICU; there were no significant differences between groups in these three categories. Patients presenting with suicide attempt were predominantly female (76.8% versus 23.2%,  $p \leq 0.05$ ). A single agent was ingested in 276 (59.2%) of attempts and 188 (40.3%) cases involved multiple agents ( $p \leq 0.05$ ) (data missing in two cases). The top three most commonly ingested pharmaceutical classes were analgesics, antidepressants and anticholinergics/antihistamines, with 201, 161, and 119 exposures, respectively, in the suicide attempt group and 18, 4 and 7 exposures, respectively, in the no suicide intent group.

**Conclusion:** Females presented after attempted suicide more frequently than males, consistent with previous studies. Comparisons between suicide attempt and no suicide intent groups suggests that patients without intent have similar risk for illness severity. The most common classes of agents ingested did not differ between those with suicidal intent and those without. This study describes characteristics of adolescents with toxicologic exposures. Continued research is needed to prevent pharmaceutical overdose in this population.