

Utilizing the ToxIC Network to Assess the Impact of Opioid and Benzodiazepine Misuse/Abuse in Older Adults

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Background: Prescription opioid and benzodiazepine use among older adults (age > 50 years) continues to rise as the population ages. Although policy changes aimed at reducing unsafe prescribing practices have been enacted, overdose and deaths involving prescription opioids continues to rise in older adults. Factors contributing to this trend remain unclear.

Hypothesis: Prescription opioid and benzodiazepine misuse/abuse is a major problem resulting in significant toxicity in older adults reported to the ToxIC registry.

Methods: Data reported to the ToxIC Database between January 2015 and December 2017 were reviewed. Inclusion criteria were age > 50 years and first or second agent prescription benzodiazepine or opioid. Data collected included demographics, medical history, overdose characteristics, clinical outcomes, and treatment modalities.

Results: Nine hundred twenty-seven cases, with 16 confirmed deaths, were included; 180 misuse/abuse/self-harm cases were reported, including 97 single-agent opioid, 58 single-agent benzodiazepine, and 25 polypharmacy opioid/benzodiazepine cases. Eighty-five (47%) were ages 50–59 years, 56 (31%) were ages 60–69 years, 23 (12.8%) were ages > 70 years, 16 (8.9%) were age unspecified > 50. Eighty-eight (48.9%) were female. CNS depression was the most common clinical symptom (127 (70.5%)), followed by respiratory depression (58 (32.2%)). Major vital signs abnormalities were reported in 58 (30.6%) cases. Naloxone was administered in 75 (61.4%) of opioid or combination overdoses. The top three single agent opioid ingestions were oxycodone, tramadol and methadone. Alprazolam, followed by clonazepam and lorazepam were the most common benzodiazepine ingestions. Sixteen deaths were reported.

Conclusion: Older adults with opioid and benzodiazepine misuse, abuse and self-harm reported to the ToxIC registry suffer significant clinical toxicity including CNS depression, respiratory depression, and vital sign abnormalities. More detailed data describing prescription characteristics, use patterns, clinical complications, and resource utilization from a subregistry is needed.