

A Vicious Cycle: Mental Health and Pediatric Gun Violence

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Purpose: Gun violence affects children by inflicting premature morbidity, disability, and death. Mental health and substance abuse may precede a firearm trauma, however there is a paucity of literature with respect to the relationship of firearm intent and prolonged effects. Thus, this study examines firearm injury intent with respect to psychiatric conditions.

Methods: The Nationwide Readmissions Database 2010-2014 was queried for all pediatric firearm injuries. Outcomes of interest were incidence and predictors of psychiatric conditions related to firearm trauma. X2 analysis was utilized with significance defined as $p < 0.05$.

Results: 13,861 children were hospitalized after firearm injury. Most were teenage males (16 years [15-17], 86%) from an urban setting (98%), and the majority were publicly insured (63%). Mental health conditions were present in 14% and drug use/dependence was seen in 12%. 11% required repeat hospitalization within one year of their injury and cases of mental illness nearly doubled (23% from 14%, $p < 0.001$), half of which were new diagnoses. Particularly, rates of depression (8% vs 2%, $p < 0.001$) and post-traumatic stress disorder (7% vs 4%, $p < 0.001$) were increased from the time of original trauma. Firearm injury intent groups comprised assault (60%), unintentional (29%), or self-inflicted (4%). Overall mortality after firearm injury was 6% and increased to 37% in self-inflicted injuries. Assault and unintentional injuries were more common in those with public insurance while those sustaining self-inflicted injuries had higher injury severity, mortality, and were more likely to have pre-existing mental health and/or drug abuse, Table 1.

Conclusion: There is a high coexistence of mental health conditions and substance abuse in children afflicted with firearm injuries, especially in those with self-inflicted injuries. These psychiatric conditions not only precede trauma but are also increased as another repercussion of trauma. Thus, preventative efforts focused on mental health may help decrease the vicious cycle of gun violence.