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Title

Exploring risk factors for firearm death

Priority 1 (Research Category)

Acute and emergency care

Presenters

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Abstract

Context: Firearm violence is a rising cause of death in the US. More than 38,000 individuals die annually from firearm violence. The estimated annual cost of firearm injuries were \$174.1 billion. Objective: This study aimed to improve firearm injury surveillance by examining social determinants, circumstance factors, and clinical indicators among victims of firearm violence. Study Design and Dataset: We conducted secondary analysis on de-identified, multi-state, case-level data from the National Violent Death Reporting System Restricted Access Database (NVDRS-RAD). Population Studied: Firearm deaths in NJ from 2013-2017 were included in the study (N=2,441). Outcome Measures: Forms of firearm death include homicide, suicide, homicide-suicide, and other manners of death. Results: Most deaths were due to homicides (54%) or suicides (37.7%). Mean age was 40 and 24.1% of deaths were youth violence. Ninety percent were males, 39% white, and 47% African American. Most deaths were due to homicides (54%) or suicides (37.7%). Mean age was 40 and 24.1% of deaths were youth violence. Ninety percent were males, 39% white, and 47% African American. Approximately one-tenth of deaths were due to intimate partner violence (IPV) (11.8%) or crime-related activities (13.1%). The rates of mental health, substance, and alcohol problems were 19.3%, 8.9%, and 3.8%, respectively. Two fifths were in-hospital deaths (41.4%). Approximately 29.4% had multiple bullets and 40% had multiple wounds. Almost half of deaths were related to gunshot wounds to the head (48%).

Caucasians, individuals with mental health issues, and alcohol users were at higher risk for suicide ($p<.001$). Youths and African Americans had higher rates for homicide ($p<.001$). Caucasians, women, and victims of IPV were at higher risk for homicide-suicide ($p<.001$). Conclusions: Forms of firearm violence may be associated with various health related risk factors and consequences. Findings from NJ can inform NJ and other states of prevention and intervention initiatives that are locally relevant. By better understanding forms of firearm violence and their factors among various populations, we can develop tailored prevention and intervention strategies in clinical settings and communities. Clinical safety protocols are needed for individuals with risk factors, such as suicidal ideations, youth violence, and IPV.