

New research examines the evolution of the firearm epidemic in the US

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High rates of firearm fatalities in the U.S. are principally due to elevated rates of homicide among black, non-Hispanic and Hispanic males age 20-40 years and suicide among white, non-Hispanic males age 70-85+.

according to a new study. Findings from the study will be presented during the Pediatric Academic Societies (PAS) 2019 Meeting, taking place on April 24—May 1 in Baltimore.

Each day, over 100 [firearm](#) deaths occur in the U.S. In 2016, there were over 3,000 pediatric deaths (0-19 years). Over the past decade, total fatalities from firearms increased by 25% and are now the leading cause of [death](#) in young adults (15-24 years). Few studies have explored the interaction of urbanicity, sex and race/ethnicity in firearm fatalities across the spectrum of age.

Researchers analyzed firearm fatalities over a 26-year period as reported in the Centers for Disease Control's Web-based Injury Statistics Query and Reporting System. There were 897,026 firearm fatalities in the U.S., including 97,366 pediatric deaths, that occurred during the study period.

Though all-intent total firearm [fatality](#) rates peaked in the early 1990s, over the past decade, maximum and average rates have trended upward especially via suicide among females and in non-[metropolitan areas](#). Marked disparities in rates of firearm fatalities exist by sex and race. Suicide rates were highest among white, non-Hispanic males age 70-85+, and rates of homicide were highest among black, non-Hispanic males and Hispanic males age 20-40. Unintentional deaths peaked among black and Hispanic males age 20-40 and 70-85+ in the 1990s, but then decreased over time. Males have higher rates of suicide, homicide and unintentional deaths compared to females. Black [males](#) had maximum and average homicide rates an order of magnitude higher compared to all females. Non-metropolitan areas had high rates of suicide and unintentional deaths, while metropolitan areas had high rates of homicide. The study concluded that public health approaches to firearm violence need to consider underlying demographic trends and differences by intent.

A related study found that child access prevention (CAP) laws could save lives and the passage of negligence laws across all states has the potential to reduce firearm fatalities in children up to age 17. Over 50,000 pediatric firearm fatalities have occurred since 1990.

Researchers examined the association between state CAP firearm laws and total and intent-specific firearm death rates in children 0-17 years old from 1991 to 2007. Since 1989, nine states have passed recklessness laws and 16 states have passed negligence laws.

The study found that recklessness laws were not associated with significantly lower firearm death rates for any intent in any age group and were associated with an increase in unintentional fatalities among 14 to 17-year-olds. Negligence laws were associated with significantly lower firearm death rates overall, by homicide, and by unintentional intent, but not by [suicide](#) across age groups. The broadest negligence laws reduced unintentional deaths by up to 69% in children 10 to 13 years of age and firearm [homicide](#) deaths up to 36%.

More information: Eric Fleegler, MD, MPH, one of the authors of the studies, will present findings from "Evolution of the firearm epidemic in the United States, 1990—2016" on Monday, April 29 at 3:30 p.m.

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