

Study shows alarming increases of firearm deaths in US school-age children

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Charles H. Hennekens, M.D., senior author, first Sir Richard Doll Professor, and senior academic advisor in FAU's Schmidt College of Medicine, and collaborators, used data from the Multiple Cause of Death Files of the US National Center for Health Statistics. The listed causes of death were classified as accident, assault, suicide or undetermined. There were no deaths classified as terrorism. Credit: Florida Atlantic University

Firearm-related deaths in school-age children are increasing at alarming rates in the United States where homicide rates are about 6- to 9-fold higher than those in comparably developed countries. This epidemic poses increasingly major clinical, public health and policy challenges.

A study led by researchers at Florida Atlantic University's Schmidt College of Medicine explored temporal trends in deaths from firearms among U.S. schoolchildren by age and race from 1999 to 2017. Their report quantifies these recent epidemics using data from the Multiple Cause of Death Files of the U.S. National Center for Health Statistics (NCHS).

Results of the study, just published in the *American Journal of Medicine*, show that from 1999 to 2017, 38,942 firearm-related deaths occurred in 5 to 18 year olds. These included 6,464 deaths in children between the ages of 5 to 14 years old (average of 340 deaths per year), and 32,478 deaths in children between the ages of 15 to 18 years old (average of 2,050 deaths per year).

"It is sobering that in 2017, there were 144 [police officers](#) who died in the line of duty and about 1,000 active duty military throughout the world who died, whereas 2,462 [school-age children](#) were killed by firearms," said Charles H. Hennekens, M.D., senior author, first Sir Richard Doll Professor, and senior academic advisor in FAU's Schmidt College of Medicine.

Statistically significant increases in firearm-related deaths began in 2009, with the first [epidemic](#) among 5 to 14 year olds followed by a second epidemic that began in 2014 among 15 to 18 year olds. Each of these epidemics has continued through 2017, the most recent year for which U.S. mortality data are currently available. Percentages of all deaths due to firearms were 5.6 at ages 5 to 14 years old and 19.9 at ages 15 to 18 years old.

Black children aged 5 to 14 years old experienced statistically significant increases in firearm-related deaths beginning in 2013. Between 2013 and 2017, racial inequalities in [firearm-related deaths](#) between blacks and whites increased significantly among 5 to 14 year olds as well as 15 to 18 year olds.

The listed cause of deaths in the school-age children were, 61 percent due to assault; 32 percent due to suicide; 5 percent accidental; and 2 percent undetermined. Blacks accounted for 41 percent of overall deaths, and 86 percent of all deaths were in boys.

Among the 5 to 14 year olds, cause of death was classified as accident, 12.8 percent (830 deaths); suicide, 29.6 percent (1,912 deaths); assault, 54.8 percent (3,545 deaths), and undetermined, 2.7 percent (177 deaths). Among the 15 to 18 year olds, cause of [death](#) was classified as accident, 3.5 percent (1,121 deaths); suicide, 32.9 percent (10,688 deaths); assault, 62.3 percent (20,247 deaths), and undetermined, 1.3 percent (422 deaths). There were no deaths classified as terrorism.

Hennekens and study co-authors Alexandra Rubenstein, a second-year premedical student at Bowdoin College in Brunswick, Maine; Sarah K. Wood, M.D., senior associate dean for [medical education](#) in FAU's Schmidt College of Medicine; and Robert S. Levine, M.D., an affiliate professor in FAU's Schmidt College of Medicine and a professor at Baylor College of Medicine in Houston, Texas, believe that combatting the epidemic of mortality due to firearms among U.S. schoolchildren without addressing firearms is analogous to combatting the epidemic of mortality from lung cancer due to cigarettes without addressing cigarettes.

Provided by Florida Atlantic University

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