Study identifies three state laws that 'substantially reduce' gun deaths

10 March 2016

Gun-related deaths in the U.S. could be reduced by more than 80 percent if three laws implemented in some states were extended nationally, an analysis led by Boston University researchers shows. In a study published in *The Lancet*, a research team analyzing state-level data from 2010 on gun-related deaths and 25 state-specific gun laws identified three laws that were most strongly associated with reductions in overall gun-related mortality. Laws requiring firearm identification through ballistic imprinting or microstamping were found to reduce the projected mortality risk by 84 percent; ammunition background checks, by 82 percent; and universal background checks for all gun purchases, by 61 percent.

Federal implementation of all three laws would be projected to reduce the national mortality rate—10.1 per 100,000 people in 2010—to 0.16 per 100,000, the study says.

"Very few of the existing state-specific firearms laws are associated with reduced mortality, and this evidence underscores the importance of focusing on relevant and effective firearms legislation," said senior study author Dr. Sandro Galea, dean of the School of Public Health at Boston University.

"Implementing universal background checks for the purchase of firearms or ammunition, and firearm identification nationally could substantially reduce mortality in the U.S."

Lead author Bindu Kalesan, director of the Evans Center for Translational Epidemiology and Comparative Effectiveness Research at Boston University School of Medicine, said the study is the first to assess a broad array of gun laws and other relevant state-level data.

"The findings suggest that very few of the existing state gun-control laws actually reduce gun deaths, highlighting the importance of focusing on relevant and effective gun legislation," she said. "Background checks for all people buying guns and ammunition, including private sales, are the most effective laws we have to reduce the number of gun deaths in the U.S."

The research team constructed a state-level dataset using counts of firearm-related deaths in each state in 2010, information on 25 state laws implemented in 2009, and state-specific characteristics including gun ownership rates, non-firearm homicide rates, and unemployment rates. Of the 25 laws, nine were associated with reductions in mortality, while nine others—such as the so-called "stand your ground" laws, allowing individuals to use deadly force in self-defense when faced with a perceived threat—were associated with increased mortality. Seven other laws were found to have no correlation with gun-related death rates.

The researchers used a statistical model to determine the independent association of various firearms laws with gun-related homicides, suicides and overall deaths. They also projected the potential reduction of mortality rates if the three most effective firearms laws were enacted at the federal level.

Laws requiring background checks for both guns and ammunition were the most effective legislation identified in the study, showing "the protective effect" of state laws that close loopholes in the federal Brady Law, which requires criminal background checks only for guns sold through licensed firearm dealers.

Only seven states had universal background checks in 2010, while just three states had firearm identification laws that require ballistic identification or micro-stamping of guns that leave markings on the cartridge cases they expel when fired, making it possible to link the cases to particular guns.

The authors noted that their findings corroborated an earlier, smaller state-level study that found local background checks were associated with a 22 percent lower homicide rate.

More than 31,600 people died by guns in the U.S. in 2010 - a rate of 10.1 deaths per 100,000 people. Analyzed by state, Hawaii had the lowest rate (3.31 per 100,000), while Alaska had the highest rate (20.3).

More information: *The Lancet*, www.thelancet.com/journals/lan … (15)01026-0/abstract

Provided by Boston University Medical Center

APA citation: Study identifies three state laws that 'substantially reduce' gun deaths (2016, March 10) retrieved 11 October 2022 from https://medicalxpress.com/news/2016-03-state-laws-substantially-gun-deaths.html