

Suicide-by-firearm rates shift in two states after changes in state gun laws

September 1 2015

A new study examining changes in gun policy in two states finds that handgun purchaser licensing requirements influence suicide rates. Researchers estimate that Connecticut's 1995 law requiring individuals to obtain a permit or license to purchase a handgun after passing a background check was associated with a 15.4 percent reduction in firearm suicide rates, while Missouri's repeal of its handgun purchaser licensing law in 2007 was associated with a 16.1 percent increase in firearm suicide rates.

The study, from researchers with the Johns Hopkins Center for Gun Policy and Research, appears in a special issue of *Preventive Medicine* that focuses on gun violence prevention research.

"Although these laws were not designed to reduce suicides, many of the risk factors that disqualify someone from legal gun ownership - domestic violence, history of committing violent crimes, substance abuse, severe mental illness and adolescence - are also risk factors for suicide," says lead study author Cassandra Crifasi, PhD, MPH, an assistant scientist with the Johns Hopkins Center for Gun Policy and Research, part of the Johns Hopkins Bloomberg School of Public Health.

Crifasi cautions the findings do not indicate a clear causal relationship.

"When we examined whether there were changes in suicides committed by other means following the changes in the laws, there was some evidence that Connecticut experienced lower than expected rates of

suicides by means other than firearms," she says. "This suggests that factors other than handgun purchaser licensing may have contributed to the decline in suicides."

There was no significant change in suicide by other means following Missouri's repeal of the law.

Suicide is the second leading cause of death among people ages 15 to 34 in the United States, and half of all suicides are committed with a firearm. In 2013, more than 21,000 individuals in the U.S. committed suicide using a firearm, compared to approximately 11,000 homicides committed with guns.

Prior research had shown that states with handgun purchaser licensing laws tended to have lower [suicide rates](#) than states without such laws after controlling for differences across state populations. This new study is the first to examine whether changes in the policy led to changes in the risk of suicide over time.

"Contrary to popular belief, suicidal thoughts are often transient, which is why delaying access to a firearm during a period of crisis could prevent suicide," says study author Daniel Webster, ScD, MPH, director of the Johns Hopkins Center for Gun Policy and Research. "Just as research indicates that handgun purchaser licensing laws are effective in reducing firearm homicides, they could reduce suicides by firearms as well."

Previous research from the Johns Hopkins Center for Gun Policy and Research found that Connecticut's handgun purchaser licensing legislation led to a 40 percent drop in gun homicides in the state, and Missouri's 2007 repeal of its handgun license law was associated with a twenty-five percent increase in its firearm homicide rates. The laws had no effects on homicides committed by means other than firearms.

Handgun licensing laws require buyers to obtain a permit to purchase that is contingent upon passing a background check, including private sales. They also typically require an in-person application at a law enforcement agency and, in some cases, applicants must successfully complete a safety training course and experience waits while their application is under review.

Public opinion survey data published in *Preventive Medicine* earlier this year from Johns Hopkins researchers show that the majority of Americans (72 percent) and gun owners (59 percent) support requiring people to obtain a license from a local law enforcement agency before buying a handgun to verify their identity and ensure they are not legally prohibited from having a gun.

More information: "Effects of Changes in Permit-to-Purchase Handgun Laws in Connecticut and Missouri on Suicide Rates" was written by Cassandra K. Crifasi, PhD, MPH, John Speed Meyers, MPA, Jon Vernick, JD, MPH and Daniel W. Webster, ScD, MPH.

Provided by Johns Hopkins University Bloomberg School of Public Health

Citation: Suicide-by-firearm rates shift in two states after changes in state gun laws (2015, September 1) retrieved 20 March 2024 from <https://medicalxpress.com/news/2015-09-suicide-by-firearm-shift-states-state-gun.html>

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