

Study: Available gun violence data doesn't show the full picture

2 August 2019, by Arabella Breck



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The *Journal of Behavioral Medicine* has published its first special issue dedicated to gun violence, featuring research on gun violence data from Lori Ann Post, director of the Buehler Center for Health Policy & Economics at Northwestern University Feinberg School of Medicine.

The special issue was created in response to a National Rifle Association tweet telling doctors who speak out about gun violence to "stay in their lane."

Post said the study she co-authored, "Bolstering Gun Injury Surveillance Accuracy Using Capture-Recapture Methods," starts at square one of the issue—getting [accurate data](#) on gun violence.

The study was co-authored by Zev Balsen and Federico E. Vaca of Yale University as well as Richard Spano of the University of New Haven.

Post said there have been federal limits on gun research for decades and as a result, there are bills sitting in Congress and bills that have been passed that are often uninformed due to a lack of gun violence research.

"We actually do not know the prevalence of gun shootings," Post said. "My research demonstrates that to answer that question, we would need to look into several data archives such as EMS, emergency departments, medical examiners, police records and even media reports. No single source accounts for all gun shootings."

The study looked at a small slice of information, using data on firearm-related injuries in New Haven, Connecticut, from Aug. 1, 2013, through Dec. 31, 2013.

The results showed the individual data sets miss parts of the population and lead to inaccurate information. Further, there should be "reduced confidence in single-source records for public health surveillance purposes."

The study also found that the most complete single source was the records of the New Haven Police Department but 12 percent of cases found during the study were not recorded by the police.

Post used a research technique called capture-recapture, or mark and recapture, which was originally used by animal wildlife biologists to estimate deer populations.

In Post's research, she identified multiple data sources of gun violence data, looked at the overlap of individuals in each data sample and counted the number of samples in which they appear. From there, she was able to estimate a more accurate prevalence rate for gun [violence](#), which was higher than any single data source showed.

"We really cannot prevent [gun violence](#) if we don't understand it," Post said. "To that end, we really cannot inform effective policy that will prevent gun injuries and deaths until we know how often it happens, risk and protective factors, patterns, who it happens to and who is doing the shooting."

More information: Lori Ann Post et al. Bolstering gun injury surveillance accuracy using capture–recapture methods, *Journal of Behavioral Medicine* (2019). [DOI: 10.1007/s10865-019-00017-4](#)

Provided by Northwestern University

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