

North Carolina Can Lead National Fatal and Non-Fatal Firearm Injury Data Collection Efforts

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To the Editor—Over 1600 North Carolinians lost their lives to firearm violence in 2020, an 18% rate increase from the year prior [1]. Firearm injuries are entirely preventable; one key to prevention, however, is identifying and responding to the circumstances that precipitate fatal and nonfatal firearm injuries. For fatalities, researchers have been effective in compiling data through the National Violent Death Reporting System (NVDRS), which links data from death certificates, law enforcement reports, and medical examiner reports, providing circumstance and context information that can give insights into the nature of events that result in firearm deaths. North Carolina was an early contributor to NVDRS and has become a leader in data excellence.

The nonfatal part of the firearm injury equation, however, is not well-described in a single data source. Medical records data are commonly used for this purpose, though these data do not capture all events, and researchers frequently note that intent and other characteristics about the incident itself may not be accurately captured. Based on emergency department (ED) data, it is commonly stated that nonfatal firearm injuries are at least twice as common as fatal firearm injuries. Kauffman and colleagues contextualized this ratio by merging death data with nonfatal firearm injury data from the Healthcare Cost and Utilization Project National Emergency Department Sample [2]. They found that firearm assault injuries occurred at double the rate of self-inflicted firearm injuries, and that firearm assault injuries were less likely to result in death (the case fatality rate was 25.9% for assaults and 89.4% for self-injury) [2]. Thus, we see that while most firearm deaths are due to suicide, most firearm injuries—combining fatal and nonfatal events—are due to assault.

In the absence of a reliable national data source to describe fatal and nonfatal firearm injuries, we are overly reliant on death data alone to inform policy decisions and priorities, and we remain underinformed of the basic surveillance and circumstance information that could help to prioritize prevention activities to reduce the firearm injury burden on racial and ethnic minorities.

North Carolina is well-equipped with the data assets and expertise needed to address this challenge. With funding from the CDC's Firearm Injury Surveillance Through Emergency Rooms (FASTER) program, researchers affiliated with the University of North Carolina Injury Prevention Research Center have achieved an individual-level linkage

between NC-VDRS data and statewide ED data collected by the North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT). In addition, RTI International, which recently launched a new Center for Evidence-Based Strategies to Reduce Firearm Violence, has developed unparalleled expertise in the use of the FBI's National Incident Based Reporting System (NIBRS), which collects law enforcement data on crimes. NIBRS recently achieved near-complete coverage in North Carolina, and plans are in place to add data fields that will capture and identify gunshot injuries. These data can provide a complement to ED data to help establish intent and other characteristics of the incident, leading to better capture and understanding of nonfatal events within the larger context of gun violence. With these resources, North Carolina is positioned to be a leader in addressing this nationwide firearm injury data challenge. **NCMJ**

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