

The Disabling Consequences of Firearm Injury

A Missing National Conversation

Nora Ellen Groce, PhD

Director, Leonard Cheshire Research Centre

University College London, London, United Kingdom

The recent National Student Walkout and the #MarchforOurLives are encouraging steps towards ending an epidemic of preventable violence that leaves Americans with a gun homicide rate that, according to Everytown USA, is 25 times the average of other high-income countries.

We all, by now, know the debate. In general, our attention has been focused on firearm *mortality* – the number of people killed by firearms each year in the US, and increasingly on the firearm *morbidity* rate - the number of people injured but not killed by firearms. And the numbers are sobering. Every day, according to the Centres for Disease Control, 96 Americans die by firearm violence. An additional 200 Americans are thought to be injured, although estimating the exact number injured is more difficult with figures ranging from 2:1 to as high as 5:1 – in other words, for every American killed another 5 are injured. The exact rate of those injured to killed is complicated by the fact many hospitals only track those patients admitted, not those treated and released. And of course, this number does not include those who, for whatever reason, choose not to go to emergency rooms when shot.

However, there is another group that should also be part of this discussion. A group that provides an additional compelling case for why firearms should be strictly controlled: children and adults who are permanently disabled as a result of firearm violence.

Certainly, the potential for a gunshot or a rifle blast to permanently injure a child or adult is well understood. Bullets can and do cause severe spinal cord injury, brain damage and neurological impairments, as well as significant damage to bones and soft tissues. They can lead to disfigurement, sensory and cognitive impairments and amputation. Psychological impairments have been

little explored among individuals in civilian populations disabled through firearm violence or among those who acquire psychological impairments due to a firearms incident. This apparent lack of public awareness of the disabling consequences of firearm injuries is all the more alarming because, increasingly, improved accuracy and power of firearms allow greater havoc.

Strikingly, the exact number of those permanent disabled by firearm violence is not known. A limited number of studies of firearm violence and disability in the late 1980s and early 1990s were followed by little subsequent research, probably reflecting the fact that neither the Centres for Disease Control nor the National Institutes of Health have been allowed to fund research to obtain more accurate information.

The few studies available show a significant rate of disability among firearm survivors. For example, Graham and Weingarten's surgical team in Detroit found 40% of all their spinal cord injuries linked to firearms: paediatrician Tanz and his colleagues, studying gunshot injuries in children, reported 20-25% of all nonfatal gunshot-injured children sustained permanent, primarily neurologic damage; and a study I did with my colleague Dr. Linda Degutis using a narrower definition of disability, still found that 3% of all those treated for firearm injuries at Yale New Haven Hospital were eventually classified as permanently disabled. More recent work by the advocacy group **Surviving Gun Violence** has reviewed data from a number of countries and found corresponding rates of disability among firearm survivors. So it is imperative that we understand, as we lobby for gun control, that even inexperienced shooters to have a good chance of hitting what they aim at and causing severe and permanent injuries when someone is hit.

While there are national calculations on lost productivity due to premature firearm-related deaths, comparable statistics on premature and preventable firearm-related disabilities are not available. Such essential discussions must take into account not only lost productivity but also the tremendous strain these preventable disabilities place on available health resources, as well as the enormous stress they impose on individuals, families, and communities.

Even if gun control is not on your agenda, it important to keep in mind that we *all* pay for this. Health care, rehabilitation, social support and social services already cost the United States billions. Many would argue that there is relatively little room in the system for much expansion— and where expansion is

planned, it is anticipated for aging baby-boomers, not for a growing wave of firearm victims whose disabilities are avoidable.

Such discussions must also take into consideration the devastating impact on individuals and families who face financial disaster as they struggle to meet unreimbursed medical expenses and the long term needs of the individual who has been shot. If disabled by firearm violence, an individual may lose out on an education, it will limit their options for employment, it may limit their social lives and their ability to fully participate in their community.

The impact of the disability is something also felt at the household level - households with disabled members have higher costs of daily living and tend to be poorer. This impact can also be intergenerational, with poorer households of firearm victims less likely to afford to provide children with skills training or higher education; and where family members, (more often woman) – withdraw from work and community life to stay home to help provide or supplement needed care.

And here's one final thought: firearm victims are disproportionately young – and the lifelong disabling consequences of firearm violence is largely absent from our national conscience and our current debate. Film, TV and social media rarely depict this longer term impact of firearm violence: no one rolls off into the sunset in a wheelchair; no one is shown needing help dressing or feeding or using the toilet because of a permanent - and preventable - firearm-related brain injury.

We may not have all the facts and figures we would like to show the impact of permanent disability due to firearm violence, but we certainly have enough information to state that the avoidable disabling consequences of firearm violence should be an important part of our national debate on firearms. Change is needed and it is needed now.

Professor Nora Ellen Groce is chair of the Leonard Cheshire Research Centre at University College London, London, United Kingdom.

www.ucl.ac.uk/leonard-cheshire-research