

The firearm pandemic: Time to act and flatten the curve

Is South Africa (SA) at war? More murders have been reported in the first quarter of 2022 in SA than in 6 months of armed conflict in Ukraine.^[1,2] Globally, SA has the eighth-highest homicide rate, with firearms the second-leading cause.^[3] Despite an ~10% decrease in national homicides between 2009 and 2017 (38.4 to 34.5 per 100 000 population), there was no change in the firearm homicide rate, meaning firearms now account for a greater share of overall homicides.^[3] Firearms were the most frequently used weapon for homicide from April to June 2022, corresponding to the 14.5% increase in illegal possession of firearms and ammunition when compared with the same months in 2021.^[1] Nationally in 2017, men were 8.5 times more likely to be killed by a firearm than women, with those aged 20 - 34 years disproportionately affected.^[3]

The drivers of firearm violence stem from complex intersections among social and structural determinants of health, such as poor access to education, poverty, high unemployment rates, exposure to community violence, racial residential segregation and high income inequality. The Western Cape Province (WC) has one of the highest firearm homicide rates nationally, and is equipped with a local mortality surveillance system allowing for monitoring of homicide.^[4] WC mortuary data showed firearm homicides increased by 6% from 2019 to 2020, with incidence rates of 28.9 per 100 000 population and 30.4 per 100 000 population, respectively, while the proportion of stab-related homicides decreased by 6% from 2019 to 2020. Firearm injuries are more lethal than stab wounds, with the case fatality for firearm incidents 12% - 15% higher at the scene of injury. In one large mortuary in the WC South Metropole, the average rate of homicide was 54.3 per 100 000 population between 2007 and 2016, to which firearms contributed 40.4% (22 per 100 000 population) and showed increasing trends that surpassed sharp force homicide since 2012.^[5] Children are not spared. Firearms have been the leading cause of homicide among children < 18 years from 2017 to 2021, with increasing trends annually, ranging from 36.2% in 2017 to 49.2% in 2021 (personal communication IJM, unpublished data).

Firearms allow a person 'to kill quickly, at a distance, with little strength or determination'.^[6] Furthermore, robberies where firearms are used by the perpetrator and robberies where the victim has a firearm independently increase the risk of homicide for the victim.^[6] In robberies where the victim is killed, firearms are more frequently stolen, entering the illegal pool of weapons that help to sustain violent crime in SA.^[7] Recent national SA crime statistics found that privately owned firearms accounted for >90% of lost or stolen firearms. Most of these firearms were handguns issued for 'self-defense'.^[8] The presence of a firearm in the home increases the risk for homicide and suicide among family members, and it is less likely to be used for protection against intruders.^[9]

Firearm violence puts tremendous strain on the healthcare system.^[10] Fifty-six percent of SA emergency medical services (EMS) personnel reported being assaulted or threatened while on duty in 2015, and there is no doubt that fear for their own safety hinders service delivery.^[11] In 2020, there were 70 reported attacks on EMS personnel in the WC at gunpoint.^[12] In response, high-risk suburbs of Cape Town have been identified as 'red zones', meaning attacks on EMS personnel are so frequent in these areas that EMS, forensic pathology service and neighboring primary healthcare facilities' personnel are forbidden from entering without a SA Police Service (SAPS) escort.^[13] A recent study found that 30% of EMS personnel reported post-traumatic stress disorder symptoms.^[14]

Hospitals face a large burden caring for patients with firearm injuries. District hospitals within the Cape Town metropole such

as Mitchells Plain District and Wesfleur Hospitals show predictable patterns of gunshot presentations, peaking on weekends and at the end of the month, with gunshot victims comprising ~7% of trauma presentations at both facilities.^[15] At Groote Schuur Hospital, a tertiary facility, an average of 62 patients a month presented with firearm injuries (in 2020 - 2021), and 28% of in-hospital trauma deaths in 2021 were firearm-related. More than half of those admitted require exhaustive, complex management, including repeat surgeries, critical care and prolonged admissions, and extensive rehabilitation.

Restrictive firearm legislation prevents firearm violence, thus saving lives, preventing injuries and reducing costs to society.^[16] Globally, firearm legislation simultaneously targeting multiple forms of restrictions in a narrow period, such as restricting firearm access by safer storage, and regulating the carrying of guns, firearm licensing and purchasing, have been found to be most effective in decreasing firearm-related deaths.^[16] Colombia, a country with the fourth highest rate of firearm deaths in the world, had a 22% reduction in firearm mortality among cities that implemented bans on carrying firearms in public.^[17]

The Firearms Control Act (FCA) No. 60 of 2000 was signed into law in SA in 2001. The FCA required training tests for licences and background checks, banned certain types of firearms, set limits on type of gun owned, and increased the age requirement for firearm ownership. Before the law was enacted, SA's homicide rate was 67 per 100 000 population; by 2009 the homicide rate decreased to 38 per 100 000.^[18] This reduction was attributed to the reduction in the proportion of firearm homicides, which continued until 2011, undoubtedly credited to the successful implementation of the FCA in 2004.^[19] Unfortunately, studies examining the effectiveness of the FCA on firearm homicide rates showed that the benefit of this legislation was limited to the first decade of its implementation.^[20] Firearm homicides started to increase in 2012 due to relaxed enforcement of the FCA, including the police finalising >1 million outstanding firearm licences in 2010.^[21]

We are concerned about the considerable number of illegal firearms circulating in criminal networks. New clauses to strengthen firearm control in the FCA must be accompanied by strict enforcement, clear regulations and extensive operations to retrieve illegal firearms. We support all restrictions to reduce the risk of loss or theft that may result in firearms transferring from the legal into the illegal pool. This includes mechanisms to introduce ballistic sampling of all legally owned firearms, including those owned by private security companies, to aid in investigating crimes committed with firearms, to enhance reporting of loss and theft of firearms, and amnesty to dispose of unwanted firearms.

We support and welcome the Draft Firearms Control Amendment Bill 2021 that was published by the Civilian Secretariat for Police Services. The draft Bill will strengthen firearm control and reduce the circulation of firearms in our country, thereby saving lives. The proposed changes will align SA's firearm law with international firearms protocols, and they are based on the evidence that limiting access to firearms reduces firearm violence.

Pradeep H Navsaria, MB ChB, MMed (General Surgery)

Department of Surgery, Faculty of Health Sciences, University of Cape Town and Groote Schuur Hospital; Vice-President: Trauma Society of South Africa; Governor/President: American College of Surgeons South Africa Chapter; Trauma Advocacy Group, University of Cape Town, South Africa

pradeep.navsaria@uct.ac.za

Lea A Marineau, MSN, CNE

School of Nursing, Johns Hopkins University, Baltimore, USA

Sithombo Maqungo, MB ChB, MMed (Orthopaedic Surgery)

Orthopaedic Trauma Service, Division of Orthopaedic Surgery, Division of Global Surgery, University of Cape Town, South Africa; President: SA Orthopaedic Trauma Society; Trauma Advocacy Group; board member: Childsafe and Gun Free South Africa

Megan Prinsloo, MPH, PhD (Public Health)

Burden of Disease Research Unit, South African Medical Research Council, Cape Town, South Africa; Institute for Life Course Development, Faculty of Education, Health and Human Sciences, University of Greenwich, London, UK; Division of Public Health Medicine, School of Public Health, Faculty of Health Sciences, University of Cape Town, South Africa

Itumeleng J Molefe, MB ChB, MMed (For Path)

Forensic Pathology Service, Western Cape Government, Observatory Forensic Pathology Institute/Groote Schuur Hospital; Division of Forensic Medicine & Toxicology, Department of Pathology, Faculty of Health Sciences, University of Cape Town, South Africa; international corresponding member: National Association of Medical Examiners; Trauma Advocacy Group, University of Cape Town, South Africa

Peter Hodkinson, MB ChB, PhD

Division of Emergency Medicine, University of Cape Town; Trauma Advocacy Group, University of Cape Town, South Africa

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