

The Instrument Matters

ASSESSING THE COSTS OF SMALL ARMS VIOLENCE

Examining the impacts of gun violence from an economic perspective can serve as an essential component in the design, monitoring, and evaluation of violence prevention and reduction initiatives. It highlights how every gunshot wound has implications that go far beyond victim and perpetrator, and thus helps justify investment in gun violence prevention and reduction. Small arms violence affects society as a whole, inflicting material costs to survivors, family, and institutions; jeopardizing future output and productivity; and affecting mindsets and wellbeing.

This chapter assesses the contribution of small arms to the costs of violence, and discusses policy implications, particularly in the context of low- and middle-income countries. It also presents the results of three pilot studies undertaken in the Colombian cities of Bogotá and Cali as well as Brazil's Rio de Janeiro. These studies followed draft methodological guidelines developed by the Small Arms Survey for the World Health Organization (WHO) and the US Centers for Disease Control and Prevention (CDC).

Small arms misuse accounts for an excessive proportion of the costs of violence.



Main conclusions include the following:

- Small arms misuse accounts for an excessive proportion of the medical costs of violence. Firearms injuries also tend to affect young, potentially productive segments of the population.
- The type of small arms violence—i.e. whether it takes the form of assaults, suicides, or accidents—influences its lethality and cost.
- In low-income countries affected by gun violence, limited spending on the treatment of firearm injuries often is a sign an unresponsive medical system, which means that gun wounds are less likely to be treated and more likely to be lethal.

Very few estimates of the costs of gun violence exist outside the United States. Existing studies have different purposes, do not focus on the same costs, rely on methods that have not yet been standardized, and result in findings that are difficult to compare. Systematic data gathering on the costs of gun violence, particularly in developing countries, would represent a significant step forward in our understanding of the impacts of small arms violence.

Despite these limitations, there is ample evidence that small arms increase the average cost of violent injuries. Medical costs are significantly higher for gunshot wounds than for other violent injuries, and victims of gun violence are younger than the average victim of violence, resulting in many lost opportunities.

A gunshot victim lies on a stretcher in Bonsucesso Hospital in Rio de Janeiro in January 2005. © Douglas Engle/WPN

Table 8.8 Average medical costs per injury by instrument (2003 PPP USD)

	HGNI, Rio de Janeiro		HSC, Bogotá		HUV, Cali	
	Firearm	Sharp instrument	Firearm	Sharp instrument	Firearm	Sharp instrument
Ambulance	219	119	111	129	176	229
Bed*	2,044	702	0	0	2,470	1,355
Consultations	82	58	108	79	362	222
Examinations	195	161	681	337	1,229	384
Surgery	845	372	1,932	1,602	3,323	2,427
Medication	1,074	85	1,739	563	3,839	1,004
Transfusions**	37	8	0	0	0	0
Other*	24	24	2,233	1,291	4	7
Total	4,521	1,529	6,804	4,001	11,403	5,628

* In Bogotá, bed costs are included under 'Other'.

** In Bogotá and Cali, the costs of transfusions are included in other costs, such as those of surgery.

Source: Small Arms Survey calculations based on ISER (2006b); CERAC (2006c)

Countries and regions pay very different prices, however. Indirect costs such as lost earnings are particularly high among countries affected by highly lethal forms of gun violence, such as assassinations, mass killings, and suicides. The total medical costs of gun violence in low- and middle-income countries tend to be lower than high levels of small arms violence in those countries might suggest. In such settings, costing studies can help identify insufficiencies in poorly resourced medical and rehabilitation systems. Improving the responsiveness of public health systems to gun violence is crucial, as it will both decrease the suffering of victims and increase their probability of surviving their wounds.

Annual productivity losses amount to PPP USD 10 billion in Brazil and PPP USD 4 billion in Colombia.

Small Arms Survey pilot case studies in Brazil (Rio de Janeiro) and Colombia (Bogotá and Cali) reached conclusions that are consistent with those of similar work carried out in the United States and Canada. Extrapolated nationally, firearms injuries cost Brazil and Colombia's respective medical systems purchasing power parity (PPP) USD 88 million (BRL 100 million) and USD 38 million (COP 29 billion) per year. The medical treatment for the average gunshot wound was between 1.7 and 3 times more expensive than that required for treating cuts or stabs, ranging from PPP USD 4,500 to PPP USD 11,500 per injury.

The surveyed victims of firearms violence in Brazil and Colombia also lost more productive time than victims of violent cuts and stabs. Survivors of gun violence spent more days in hospital and were expected to remain inactive while convalescing longer than patients injured by sharp instruments. Consistent with other research on the victims of small arms violence, a particularly high proportion of patients treated for gun injuries were young men. This translates into considerable lost earnings, particularly since the average income earned in Brazil and Colombia is higher among men than women. Based on an extrapolation of results using national mortality and morbidity data, gun violence is threatening PPP USD 10 billion of future earnings (BRL 11.3 billion) in Brazil per year, and PPP USD 4 billion (COP 3,100 billion) in Colombia. ■