

Using public health information to inform, build support and implement policies for gun violence prevention: A case study from the gun ban referendum

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Gun violence is one of the most serious health problems in Brazil. Information on gun deaths and injuries is collected by the Ministry of Health. This data has been used very successfully to inform and design public policies for preventing gun violence. This article analyses the use of public health information by researchers and activists, as well as government officials and the media, to reveal the severity of firearm injuries and deaths and to gain consensus on the need for reforms to national gun laws. It also assesses the resounding 'no' vote in a recent disarmament referendum to decide whether to prohibit the sale of guns and ammunition. The results of the Brazilian referendum are a lesson to other countries struggling to deal with high levels of gun violence, showing that it may not always be enough to have data to back up efforts to change policies – as people's decisions around gun ownership and use, as well as their choices regarding security policies, are motivated by a complex interaction of factors.

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Introduction

Gun violence constitutes one of the most serious health, development and security issues in Brazil. Information on gun deaths and injuries is collected by the Ministry of Health in two systems, the Mortality Information System (*Sistema de Informações sobre Mortalidade*, SIM) and the Hospitalisations Information System (*Sistema de Informações sobre Hospitalizações*, SIH). The information produced in these systems has been used very successfully to inform, build support for, and design public policies for preventing gun violence. These efforts came to a head in recent years, resulting in strict new national gun laws being passed in December 2003. As part of these measures, most civilians were prohibited from carrying guns, a federal gun buy-back and amnesty was launched (some 470,000 guns were collected in a period of one year and three months), and a national referendum to decide whether to end the sale of guns and ammunition to civilians was declared for October 2005. Between July and October, intensive campaigning around the referendum was based heavily on public health data.

This article will analyse the use of public health information by researchers and activists, as well as government officials and the media, to reveal the severity of the firearm injuries in Brazil and to gain consensus on the need for reforms to national gun laws. It also assesses the resounding 'no' vote in the recent disarmament referendum to decide whether to prohibit the sale of guns and ammunitions in the country, in terms of recognising the limits of public health information in campaigning. The results of the Brazilian referendum are a lesson to other countries struggling to deal with high levels of gun violence, showing that it may not always be enough to have data and information to back up efforts to change policies – as people's decisions around gun ownership and use, as well as their choices regarding security policies, are motivated by a complex interaction of factors.

Data to action: Introduction to public health data and gun violence in Brazil¹

In 2002, 38,088 people in Brazil died by guns – the highest recorded number of any country in the world, including countries at war. Clearly, then, gun violence is one of the most pressing health, development and security issues facing the country today.

Public health information has been the principal measure of the impacts of these high levels of violence over time. In spite of some limitations, public health data in Brazil is seen as a more credible source of information on violence (less subject to distortions and more apolitical) than others, for example the police, and is certainly more readily available. In a telling example, the Health Ministry's Mortality Information System (SIM) is the only databank capable of comparing systematised information on rates for each city in Brazil over a period of 25 years. Further, health systems are available online, nearly universally accessible and published within a reasonably short period. Using a health perspective (data)

to frame discussions on armed violence makes the problem a question of public health, and not the exclusive domain of public security.² To some extent, this ‘democratises’ the issue of human security and bolsters the message that preventing gun violence is a collaborative – and urgent – responsibility for everyone.

Overview of public health information on gun deaths and injuries

While the collection of public health data in Brazil is still somewhat limited, relative to other developing countries the systems are quite advanced, systematised, transparent and accessible. The Mortality Information System (SIM) and the Hospitalisation Information System (SIH) are part of DATASUS, the database of the Ministry of Health. DATASUS are national in scope, with detailed information on Brazilian states and cities. Data collection, information flow and data processing are nationally standardised in the SIM and the SIH. However, the quality of information among Brazilian cities varies. There is an average delay of two years for SIM and six months for SIH for releasing data, which limits their utility in documenting current epidemiological patterns and developing prevention strategies based on this information. The SIM started in 1979, which allows us to build a historical series over 25 years. The SIH is much more recent and records on injuries leading to hospitalisation were only kept from 1998.

Based on the World Health Organisation’s International Classification of Diseases (ICD), these databases contain information on the cause of death and/or hospitalisation, as well as on the medium or instrument involved (poisoning, drowning, sharp or pointed object, firearm, etc). The Ministry of Health adopted the 10th revision of the ICD in 1996, and information on the cause of death contained in the SIM has been using these classifications from that year on. Since the SIH database was created in 1998, all the information it contains uses the ICD-10 classifications. The codes used to classify external causes in this study are organised according to intent.

The contextualisation of the death or injury informed by ICD-10 is limited to the intent of the act (if it was homicide, suicide, or unintentional injury). There is no information on, for example, whether the homicide occurred as a result of domestic violence. This type of information can only be conclusive when public security data are included – but these are the hardest to gain access to. Access to information on the use of alcohol and drugs is also extremely irregular – some legal medicine offices analyse the level of these substances, while for others this is not methodologically possible. Even when this information is available, it is not always shared with other relevant sectors.

ICD-10 is only classified by the calibre of gun (small or large calibre) used in deaths or injuries. We know, however, that characteristics such as firepower and the trajectory of

the bullet also impact on the gravity of the injury. More detailed information on the circumstances of the deaths or injuries can contribute to understanding the facts. For example, unintentional firearms injuries could be the result of stray bullets or accidents caused by mishandling. Because stray bullets are a recurring problem in some urban centres, this could be introduced as a separate category in the Brazilian classification.

Mortality Information System

One of the problems with the data contained in the SIM is undefined or unknown causes of death. This occurs, for example, when a person dies without receiving medical assistance and a cause of death cannot be attributed. Undefined or unknown causes are the second largest category in death statistics in Brazil. Another problem occurs when the intent is unknown – that is, when it is impossible to determine if the death can be attributed to unintentional injuries, homicide or suicide.

These problems vary in intensity according to the region, state and city in which they occurred, as well as over time – though, on average, they have tended to decline, particularly from 1990 onwards. In 1999, 14.4 per cent of deaths were classified as undefined or as injuries where the intent was unknown. This percentage had fallen to 13.0 by 2002. In 2002 the state of Maranhão had the highest percentage (40.1) of undefined deaths and Paraná had the lowest (3.7). Using international comparisons, UNESCO defines six per cent as an acceptable limit.³ A clear example of improvements in the quality of data can be found in Rio de Janeiro city. Until 1995 the State Health Department for Rio de Janeiro was responsible for managing the mortality database. From 1995, when the Rio de Janeiro City Health Department took over the responsibility for managing the mortality database, the number of violent deaths where intent was unknown dropped from 46 per cent to 16 per cent – and these numbers continue to fall. Rio City Health Department technical staff now actively seeks to fill in incomplete information by working, for example, with the police to obtain more precise information about the cause of death.

On the other hand, it is also possible to classify intent – for example, death as a result of suicide, homicide or unintentional injuries – and not register the instrument or method used. According to the National Report on Firearms Violence in Brazil,⁴ in the 1990s 15 per cent of all homicides were committed with an unknown weapon, which means that the percentage of firearms in homicides and the gun homicide rates are actually even greater than those presented in this article.

The SIM has quite broad coverage because it records data for every individual who dies and for whom a death certificate is issued. In exceptional cases, such as clandestine burials, data is not recorded in the SIM. In the SIM it is possible to filter data to look at deaths among people who reside in a particular area, or deaths that occur in a particular area. Like the

majority of researchers, we used information organised by residency to determine rates. Sometimes the cause of death cannot be determined. Other times, information by family members, police, paramedics, doctors, or coroners which could contribute to determining a defined diagnostic is not shared.

Another limitation, classification of external causes where intent is unknown, could be reduced if there was more exchange of information among those who work in the fields of security, health, civil defence and the media. The government has suggested that city health departments seek to complement data through conferring with coroners, though in practice this has been sporadic.

The variable 'colour/race' was included in the SIM records in 1997 and is based on categories developed by the Brazilian Institute for Geography and Statistics (*Instituto Brasileiro de Geografia e Estatísticas*, IBGE). The categories used are *branco* (white), *preto* (black), *pardo* (brown, or of mixed African and Caucasian descent), *amarelo* (yellow, or of Asian descent), and *indígena* (indigenous). While in life these categories are self-denominated, in death they are defined by the coroner. Different interpretations of ethnicity, then, can also confound the data.

Hospitalisation Information System

The impact of firearms on health in the Brazilian population has historically been measured mainly through mortality rates. This data is easy to access, of good quality, and allows for comparisons over 20 years' time. On the other hand, limiting oneself to death statistics obscures the real dimension of the problem. It is also important to seek information on those who are wounded, but do not die, or at least those who were able to make it to the hospital. The SIH can be used to help understand the dimensions of morbidity by firearms. Originally, the SIH was mainly bureaucratic or procedural, that is it was used to direct public funding to local hospitals, identifying only the treatments administered. With pressure from health professionals and researchers, data on the cause of injury was also collected in order to enable public health authorities to work towards the prevention of injuries and deaths.

Coverage in SIH data is more limited, as it only records hospitalisations within the public health system (*Sistema Única de Saúde*, SUS) network. It is estimated that the SUS covers somewhere between 77.5 per cent and 83.5 per cent of hospitalisations in the country. Emergency room cases that do not require in-patient care are not registered in the SIH. Patients who continue using health services after hospitalisation (such as in rehabilitation clinics) are not included in the SIH, although they represent a considerable volume of resources. The SIH provides information describing the gravity of the case, including time of hospital stay, use of resources such as blood and prosthetics, days in the intensive care unit, surgical treatment and death.

The SIH also contains information about the total cost of the hospital stay. It is important to note, however, that these figures refer only to funds that the Health Ministry distributes to hospitals. Because there are other allotments at the state, municipal and other levels, the real cost of hospitalisation is underestimated in data in the SIH. On the other hand, this information makes it possible to compare costs of firearm-related injuries with other injuries leading to hospitalisation.

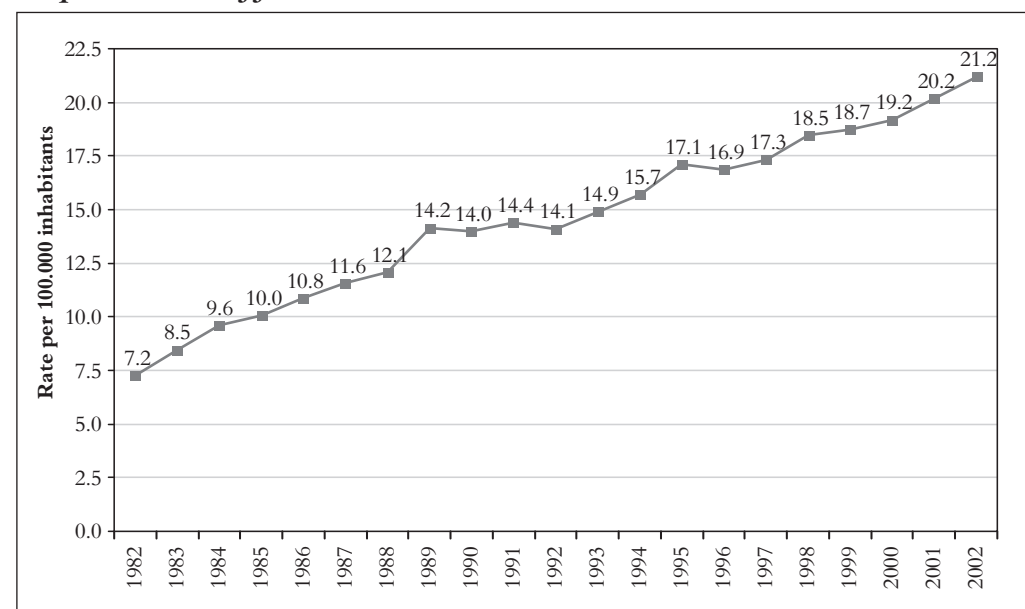
Another relevant issue is that the hospitals in this database are either public or linked to the public system. Because of these limitations, the SIH does not provide a total figure for hospitalisation costs. However, comparisons between different types of hospitalisations can be made, which aids in the analysis of the gravity of the problem. For example, hospitalisation for unintentional injuries and violence cost on average 37 per cent more than other hospitalisations, because these injuries are generally more serious and require more complex treatment. Besides, 70 per cent of hospitalisations that are due to injuries or poisoning are classified as surgical, while this proportion constitutes 22 per cent of total hospitalisations.⁵ Using the same logic, we can arrive at the conclusion that hospitalisations that are due to firearm-related injuries cost 16 per cent more than hospitalisations that are due to traffic and motor vehicle injuries.

Whenever hospitalisation data is analysed, we should also consider access to hospitals and quality of treatment. These parameters will determine the rates of hospitalisation, lethality, resources, length of hospitalisation and other variables used to understand the gravity of the cases. Therefore, data on mortality and morbidity in the SIM and SIH should always be analysed in the context of these other variables. Mortality in hospitals could be considered an indicator of access; though if a person makes it to hospital but then dies, that could also be seen as a negative indicator of the speed and quality of treatment. Although we do not have standardised information on pre-hospital treatment, we know that the growing lethality of firearm-related injuries means more deaths occur before arrival at the hospital.

Focus on guns: Informing and building support for armed violence prevention

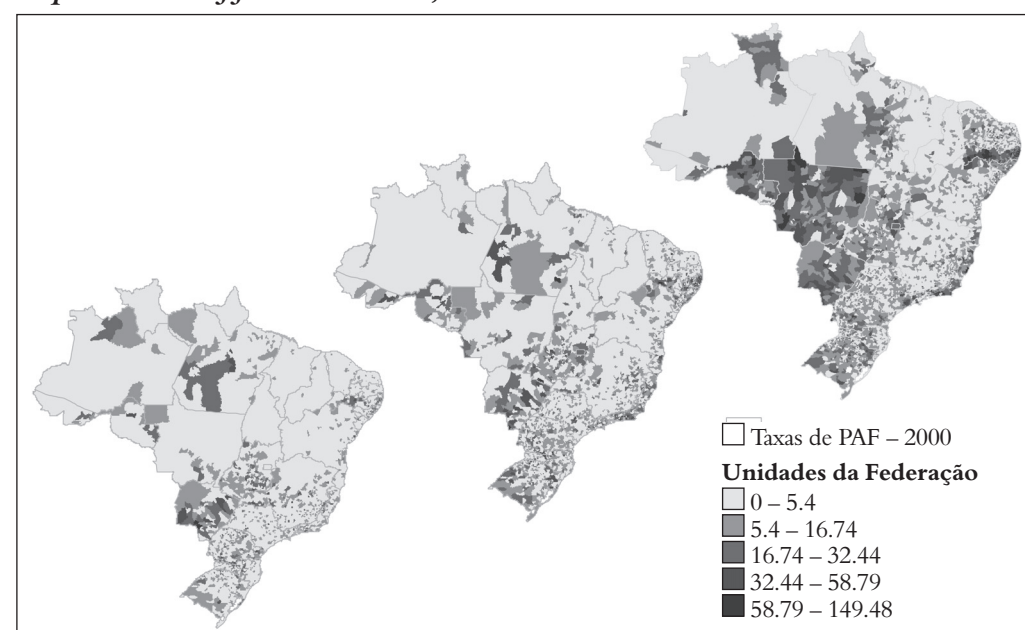
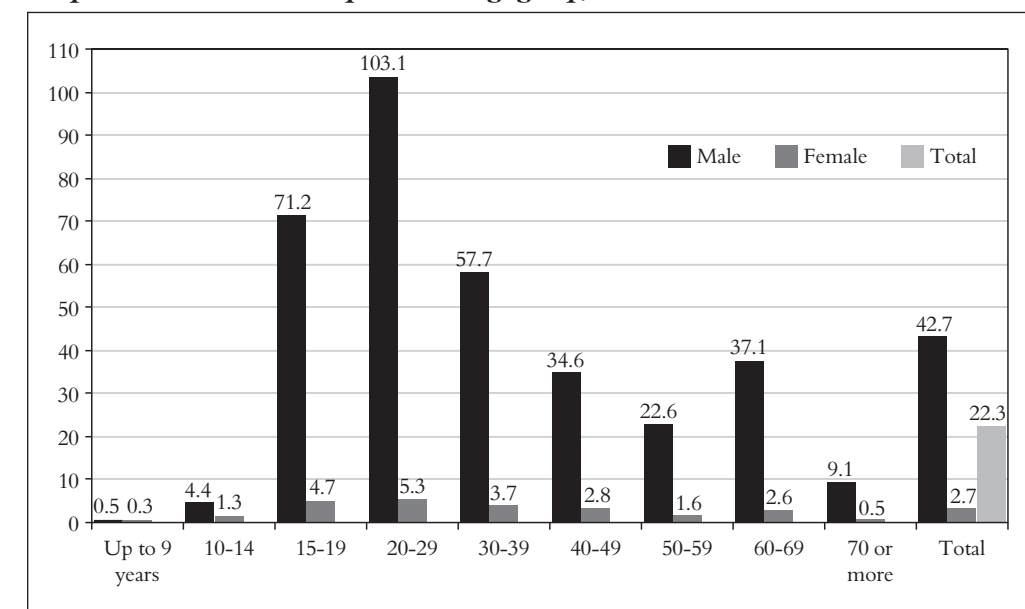
Although public insecurity has been a growing concern in Brazil since the 1980s, civil society groups have been putting forward a specific focus on guns and gun violence from just over ten years ago, around the mid-1990s. The first objective was to isolate guns and gun violence within the broader context of violence and insecurity in Brazil; organisations worked to raise public awareness to the fact that guns were involved in most crime and homicides, and then to show that gun-related death and injury rates were both growing and expanding geographically – so intervention was necessary.

Official health data shows that the risk of dying by guns in Brazil is 2.6 times higher than in the rest of the world and the great majority of these deaths (90 per cent) are homicides.

Graph 1: Timeline of firearm death rate in Brazil

Further, gun violence rates have tripled in the past twenty years, from 7.2 per 100,000 residents in 1982 to 21.2 per 100,000 residents in 2002 (Graph 1).

At the same time, gun violence has spread geographically throughout the country – the number of cities with elevated levels of gun violence has increased over the period (Map 1).

Map 1: Timeline of firearm death rate, 1980-1991-2000**Graph 2: Firearm death rate per sex and age group, Brazil 2002**

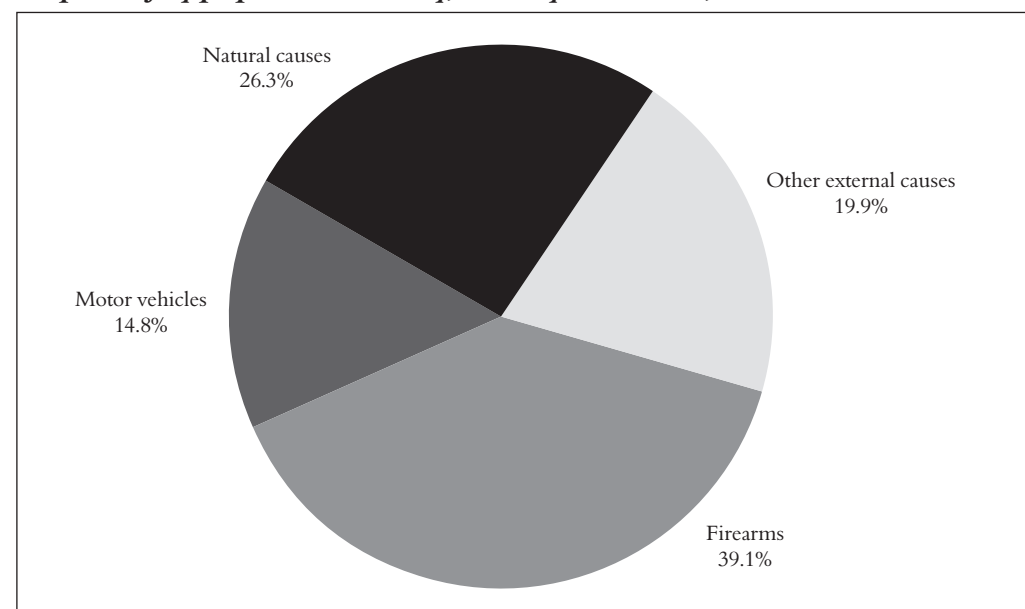
Activists used public health data from the outset, but also public health language: guns came to be seen as a ‘vector’ of the ‘epidemic’ of violence, making it more lethal and prolific.

The public health approach also allowed policy-makers, activists and researchers to start to characterise the impacts of the gun violence and unpack the different ways that different segments of the population are affected by the problem. As elsewhere in the world, the vast majority of deaths and injuries are among men, and especially young, poorer men.

In Brazil the risk of a young man between 20 and 29 years dying by firearms is five times higher than for the rest of the population and two times higher than for the rest of the male population. The risk of death for these young men is 38 times higher than that of the female population and 20 times higher when compared to the female population in the same age group (Graph 2). These data made it very evident that gun violence was a serious problem that would have important demographic impacts in the future if it continued unchecked. Campaigners have used this data to appeal to the public to halt the trend of ‘missing men’ in the country.

No bacterium, virus or motor vehicle kills more adolescent males in Brazil than guns. Among adolescents between 15 and 19 years of age that died in 2002, 39.1 per cent were killed by guns (Graph 3).

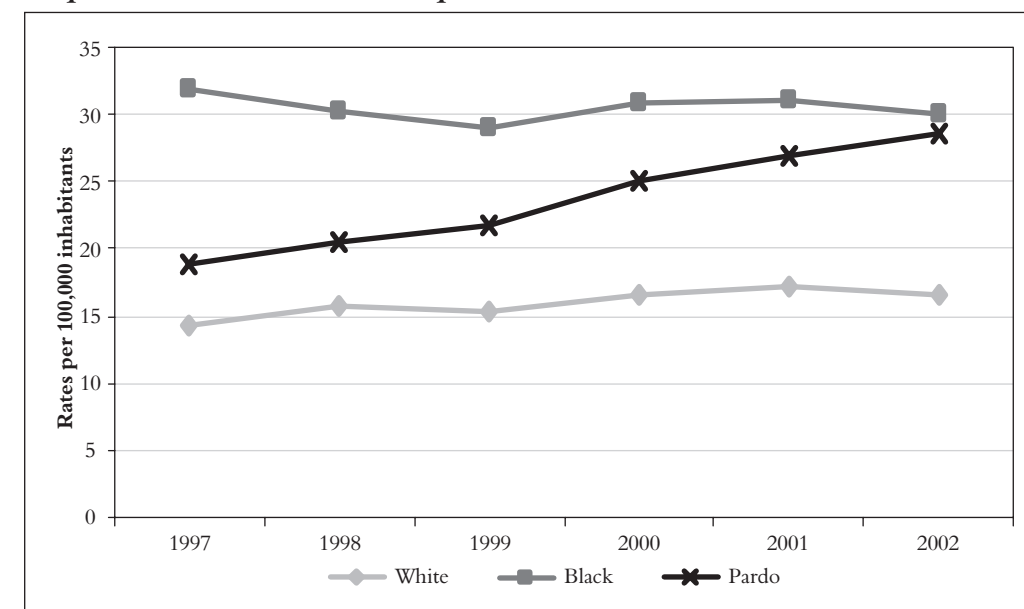
In nine state capitals in Brazil, guns caused more than *half* of the external deaths in this age group: Vitória (70 per cent), Recife (63 per cent), Rio de Janeiro (58 per cent), Salvador

Graph 3: Injury proportional mortality, 15 – 19 year old males, Brazil 2002

(58 per cent), Belo Horizonte (58 per cent), Maceió (54 per cent), Cuiabá (53 per cent), Florianópolis (53 per cent) and João Pessoa (51 per cent).

Although the number of women killed by firearms is low compared to men, guns are used in 42.4 per cent of homicides against women. Although guns are more regularly used for and by men, women, too, suffer the loss and consequences they bring – they are widowed, orphaned, left without siblings or children. Fear, insecurity, anger and financial difficulties are all part of the legacy left by the deaths and/or incapacitating injuries caused by guns. Further, even when a gun is not fired, it can be used to threaten and intimidate women, particularly in situations of domestic violence. A rapid analysis of women who denounced domestic abuse at eight of the nine *Delegacias da Mulher* in Rio de Janeiro⁶ found that, among women who responded that their abuser had a gun at home, 75.6 per cent said the accused threatened them, 73 per cent said that the presence of the gun stopped them from verbally or physically responding to the violence, and 68 per cent said that they wanted to break off their relation with the accused but did not do it because they feared retaliation with the gun. In order to fully understand the specific impacts of gun violence on women, then, it is important to complement health data with other qualitative studies and other approaches to information gathering.⁷

In the period 1997-2002 gun death rates among the black population were the highest, followed by those among black and white mixed-race (*pardo*) and, finally, whites.⁸ If we analyse the black and *pardo* categories together, we see a 40 per cent increase in the mortality rates. In 2002 the mortality rate among whites was 16.6 and among blacks nearly two times higher – 30.1 per 100,000 residents (Graph 4).

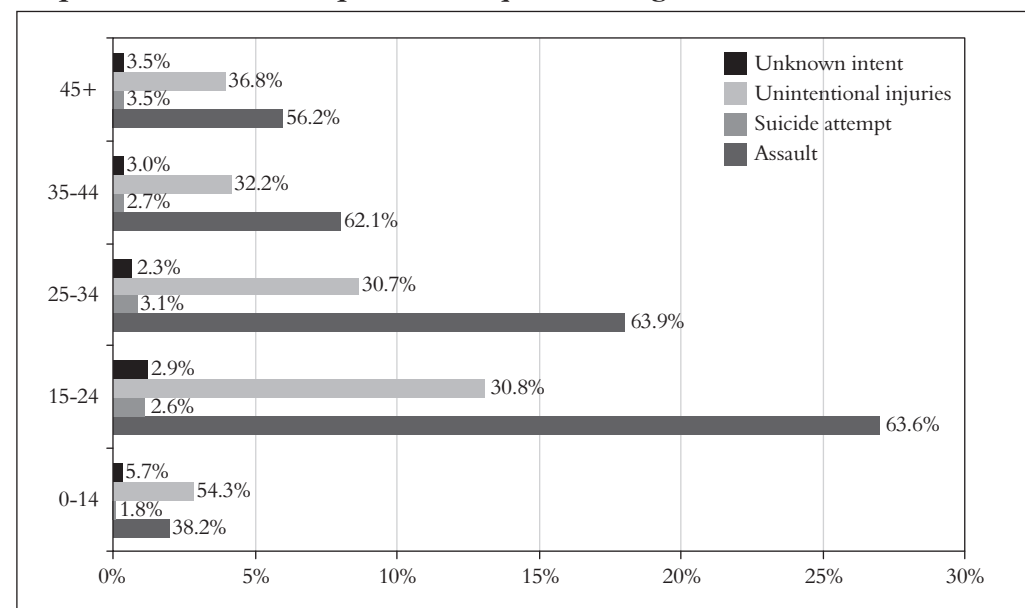
Graph 4: Firearm-related death rates per race/colour

The lack of perspectives for personal, professional and social status – the impossibility of having dreams and making them come true – generates a sense of impotence and low self-esteem, mainly among young men, who may resort to armed violence to express these frustrations. If there were a way to measure the value of a life, certainly in Brazil this would be inversely related to the firearm-related death rates. Life expectancy among youth goes down in tandem with lowered life expectations. The availability and misuse of firearms to deal with these feelings of impotence are the reasons behind this extremely worrying situation.

Public health data – both the SIM and the SIH – were extremely important in these initial phases to characterise the problem, providing an accurate and (perhaps more importantly) credible assessment of the human impacts of gun violence in terms of deaths and injuries. This information was used by civil society groups and by the government to design interventions aimed to protect the specific groups considered most at risk.

Building the case for tighter gun laws: The Disarmament Statute

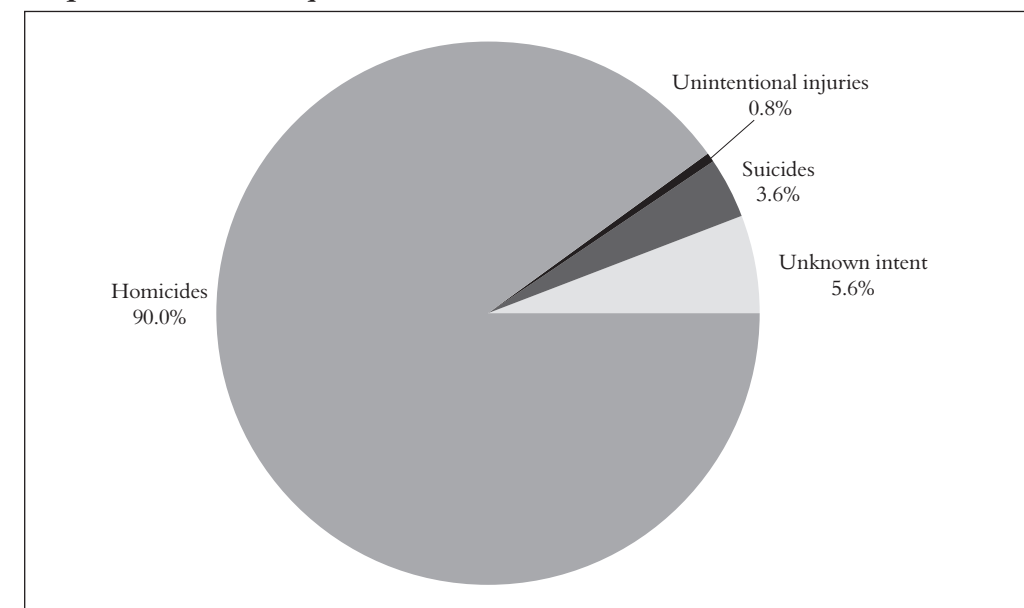
As we can see, the the SIM and the SIH made it possible to isolate and analyse guns in the general context of violence and establish the need for specific research, campaigning and policy work on this issue. Once guns had been placed firmly in the centre of the debate on violence and public insecurity, activists and researchers turned their attention to lobbying for relevant changes in the legislation.

Graph 5: Firearm wound hospitalisations, by intent and age

Already by the late 1990s, civil society groups had begun pushing the government to address these spiralling rates of violence by tightening gun laws. In order to build public support for this, civil society groups had to focus next on correcting misinformation – myths – on gun ownership and gun violence. Perhaps the most important myth in this context was that which equated guns with self-protection or safety. Accordingly, civil society groups worked to build consensus on the idea that having a gun in the home or carrying one actually puts a person more at risk to die as a result of firearm injuries.

For this, it was important to have access to good information on hospitalisations, which reveals victimisation characteristics that are different to those who are killed. When analysing the intent of injuries of those who are hospitalised, researchers found that in Brazil, for every three people hospitalised for gun-related injuries, one was wounded unintentionally. This information tended to be overlooked in the media, which focused on more sensationalistic shoot-out stories – cops and robbers, tragic stray bullets, etc – than on families in the home. The national data was also complemented by international studies (such as Kellermann⁹), although domestic data is generally more useful in mobilising public opinion, as international studies may be seen to have only to do with a certain (different) social context. This difference is particularly important in comparing two countries with very different socio-economic and developmental levels, such as the United States and Brazil, so it was quite important to generate national data as well.

Further, data from the SIH showed that unintentional injuries were the main causes of hospitalisation of girls and boys of 0-14 years of age with firearm injuries. Every day, nearly two children/young adolescents are hospitalised as a result of unintentional firearm-related

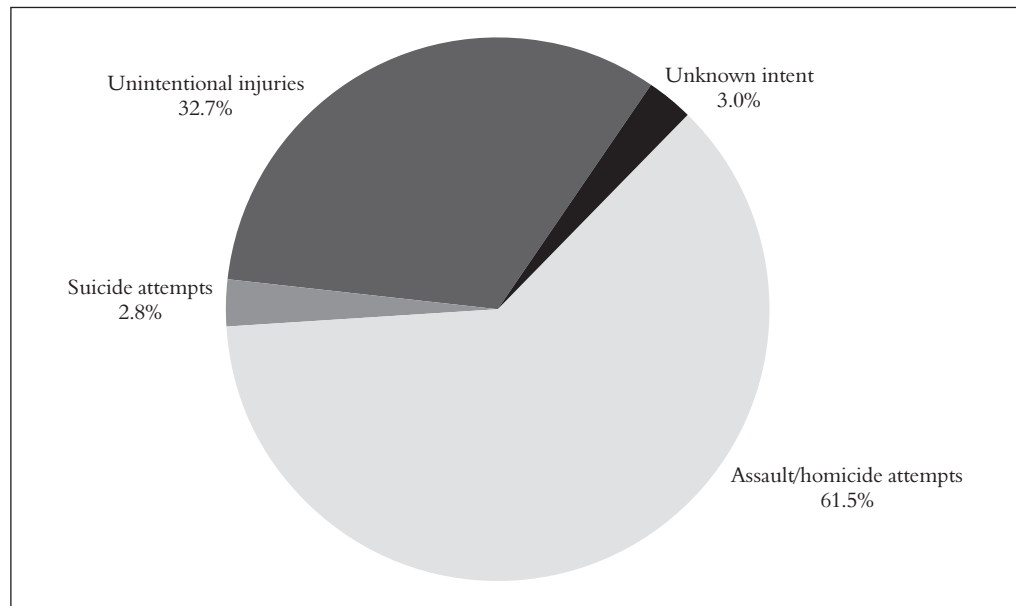
Graph 6: Firearm death by intent, Brazil 2002

injuries and one due to aggression. Aggression (intent to wound or kill) was the leading cause of hospitalisation in all other age groups, though unintentional injuries were pronounced in all of them. Of the total hospitalisations due to firearm-related injuries in 2002, 42 per cent were youth between 15 and 24 years of age. In this group, aggression was involved in 63 per cent of the cases (Graph 5).

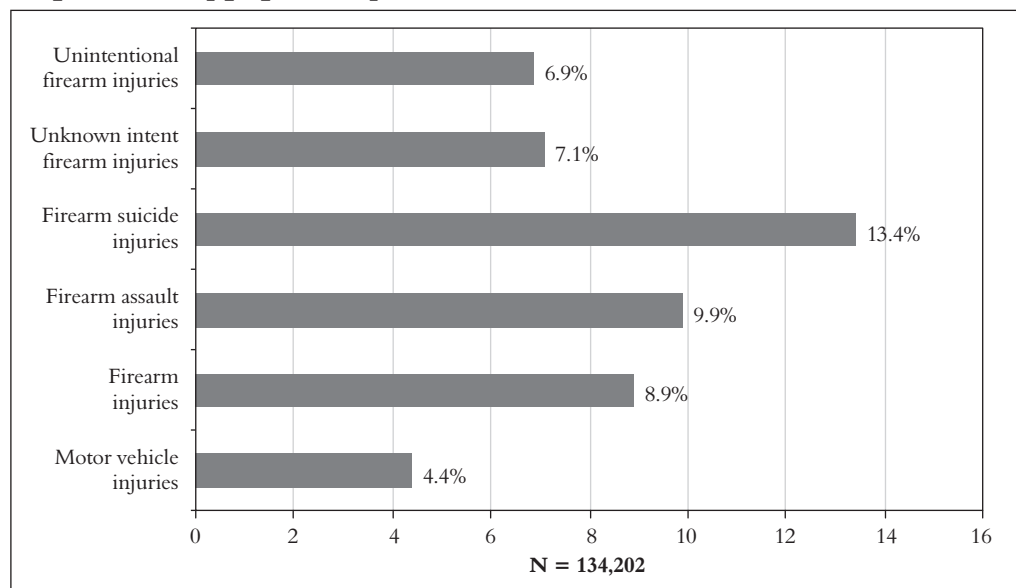
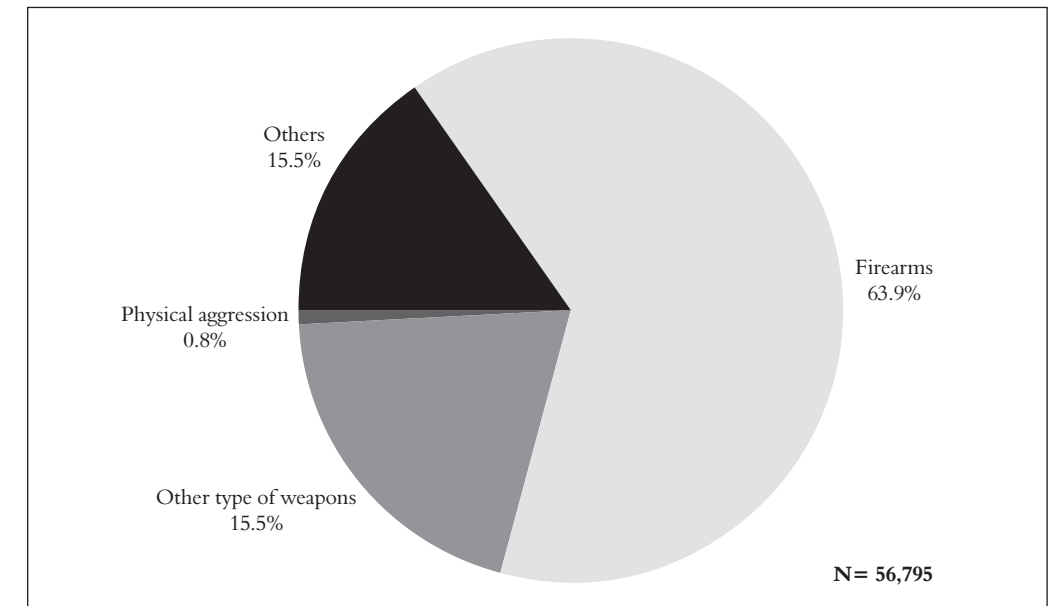
Public health data was seen as a truthful scientific analysis of what actually happens when one attempts to use guns for self-defence, or to protect families or property. This was quite important in stemming a building argument that was in danger of becoming a ‘common-sense’ approach to the problem of insecurity (i.e. justifying the desire to own guns as a measure of protection or defence). Following this gradual shift in opinion, the next step was to convince people that controlling guns would help save lives.

This can be done by using health data to demonstrate the lethality of armed violence. In the context of Brazil, this argument was well supported by public health data. The discussion was framed by the argument that while removing or controlling guns would not completely *end* violence in Brazil, it would certainly reduce the number of lethal cases of violence. Reducing the number of firearms in circulation and being used by the population, then, would reduce the number of deaths.

Armed violence in Brazil is highly lethal, with nearly double the number of deaths compared to injuries (38,088 deaths versus 19,519 hospitalisations in 2002). For every four people who are wounded intentionally with firearms, three die. In other words, guns kill far more people in Brazil than they wound.

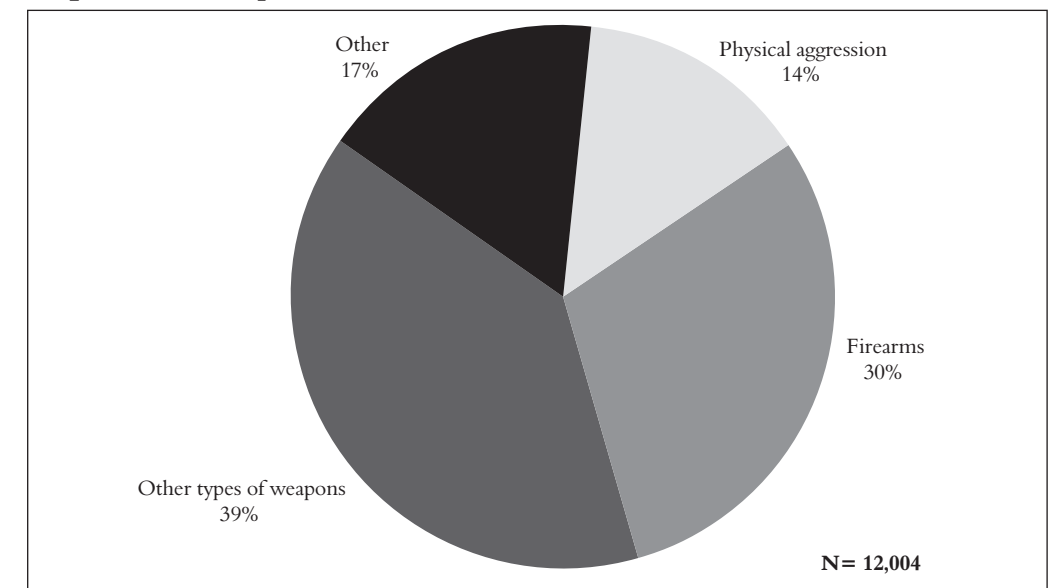
Graph 7: Firearm injury hospitalisation, by intent, Brazil 2002

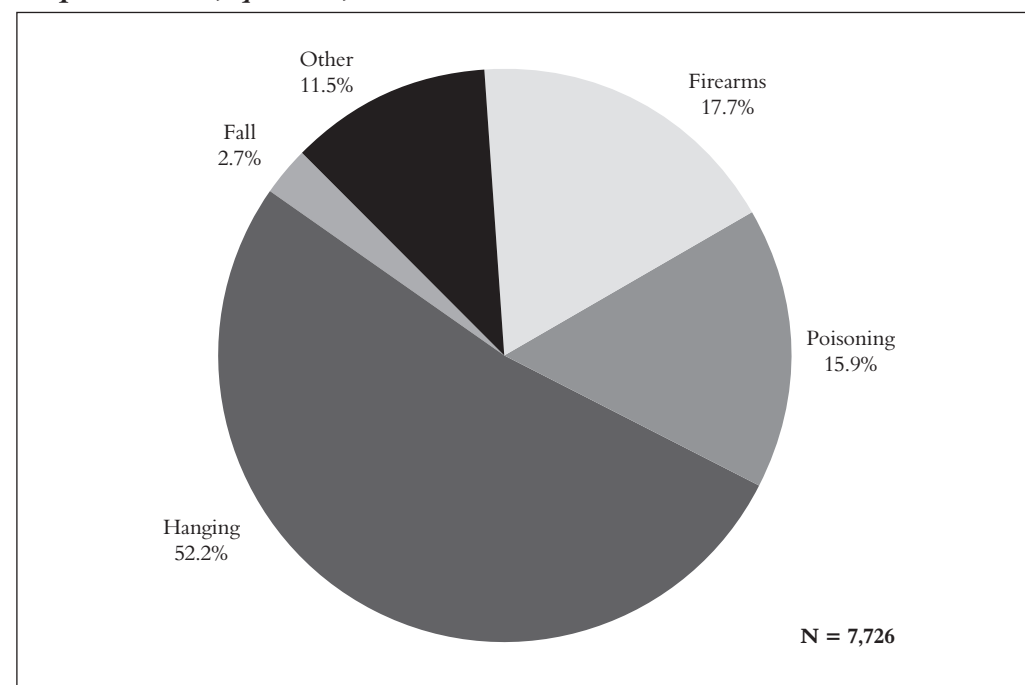
Acts of aggression are the most frequent cause of both death and hospitalisation: 61.5 per cent of gun-related hospitalisations were the result of acts of aggression (intent to wound or kill), but among deaths, this percentage was considerably higher, at 90.0 per cent (Graphs 6 and 7). In other words, when a person has the intention of hurting himself or herself or another using a gun, the chance of killing is high. We should note that many people who make it to hospital might still die during or after hospitalisation as a result of complications from the original injury.

Graph 8: Lethality proportion, by intent, Brazil 2002**Graph 9: Homicides, by method, Brazil 2002**

Among hospitalisations for firearm injuries, attempted suicides were the most lethal: 13.4 per cent (Graph 8).

Another way that health data can be used to emphasise the lethality of firearms is to compare hospitalisations and deaths by guns compared to other instruments. Owing to the highly lethal nature of gun violence, the percentage of assaults with firearms (30 per cent) is lower

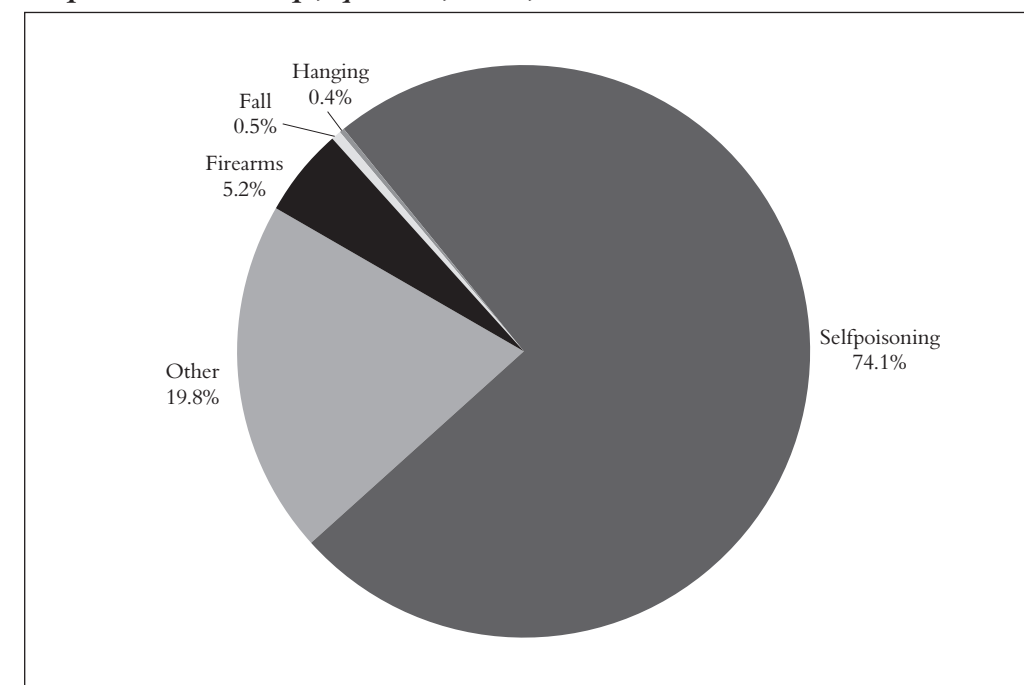
Graph 10: Assault, by method, Brazil 2002

Graph 11: Suicide, by method, Brazil 2002

than in homicides where firearms are used (63.9 per cent), as shown in Graphs 9 and 10. Injuries from other, less lethal, weapons are more likely to result in hospitalisation (39 per cent) than death (19.8 per cent).

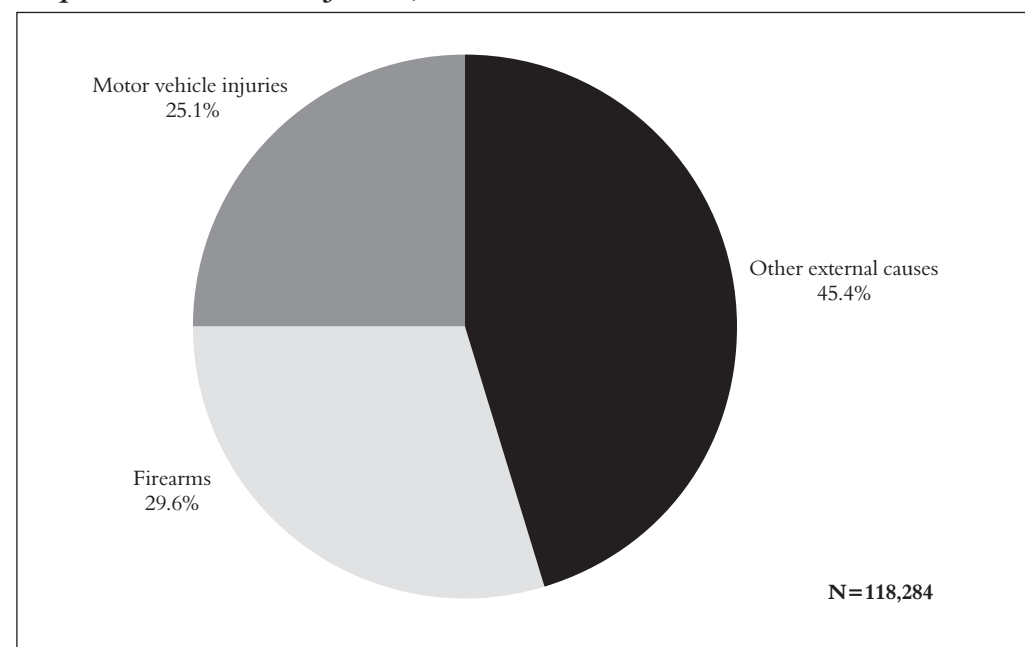
While 2.8 per cent of people hospitalised as a result of firearm-related injuries had attempted suicide (Graph 7), 3.6 per cent of firearm-related deaths were suicides (Graph 6). These low percentages could be due to two factors: Brazil has a relatively low suicide rate, especially compared to homicides (in 2002, the rates were 4.6 and 32.5 per 100,000 residents, respectively); and firearms were used less often in suicides than in homicides. Because guns are so lethal, the percentage of guns used in *attempted* suicides (5.2 per cent, Graph 12) was lower than in suicides (17.7 per cent, Graph 11). Self-poisoning, usually through ingesting large amounts of medicine or insecticides, which are easier to access, accounted for 74.1 per cent of hospitalisations among attempted suicides (Graph 12). Easy access to the method or instrument used to attempt suicide is an important risk factor, as is shown in the international literature.¹⁰

One specific comparison that was particularly useful in influencing public opinion was between armed violence and motor vehicle injuries. Death and injuries due to traffic incidents have been assimilated as a public health issue by the general population, and it has also been clear that policies such as enforcing traffic codes or making it law to wear a seatbelt have had a significant impact in reducing traffic-related deaths and injuries. Brazil is one of the few countries in the world where guns actually kill more than traffic injuries, as can be seen in Graph 13.

Graph 12: Suicide attempt, by method, Brazil, 2002

Although there are more hospitalisations for traffic or motor vehicle injuries, firearm injuries are more lethal, require a lengthier period of hospitalisation and cost more. The average time of hospitalisation for a firearm-related injury was seven days – for traffic or motor vehicle injuries it was six days. The lethality of people hospitalised for firearm-related injuries was 8.9 per cent, while for traffic or motor vehicle injuries it was 4.4 per cent (Graph 8). Considering that 64.3 per cent of the firearm-related injuries requiring hospitalisation were inflicted intentionally (aggressions and suicide attempts) and traffic or motor vehicle injuries were generally unintentional, we could expect that the gravity of the injuries (measured by indicators like length of hospitalisation and lethality) would be lower for traffic or motor vehicle injuries than for firearm injuries. In addition, the introduction of the Brazilian Traffic Code (*Código de Trânsito Brasileiro*) has brought a notable decline in death rates due to traffic and motor vehicle injuries, while the injuries sustained are also less serious. It is our hope that a preventative approach to public security policy – the Disarmament Statute – can help bring positive changes in this area.

In Brazil, most firearm-related deaths are homicides, and the victims of most fatal traffic and motor vehicle injuries are pedestrians. By contrast, in more developed countries most firearm-related deaths are suicides and traffic deaths occur mainly among those inside the car (the driver or passengers). As, symbolically, guns and cars represent power over others, this was an important piece of information for understanding the more deep-rooted and cultural issues surrounding violence in Brazil.

Graph 13: External causes of deaths, Brazil 2000

Implementing public policies for gun violence prevention

Using the above strategies, researchers, activists, government officials and the media were able to reveal the severity of the problem in Brazil and reach consensus on the need for reforms to national gun laws. After nearly a decade of organising, these efforts came to a head in late 2003, resulting in strict new national gun laws – known as the Disarmament Statute – being passed on 22 December. As part of these measures, most civilians were prohibited from carrying guns, a federal voluntary weapons collection and amnesty was declared, and a national referendum to decide whether to end the sale of guns and ammunitions to civilians was set for October 2005.

While the Disarmament Statute was approved in December 2003, it was not until 15 July 2004 that the federal government officially promulgated the law – this meant that the mechanisms to implement the law had not been decided on and put in place until then. The pro-gun lobby had battled to attempt to revert the process – they especially contested the voluntary collection campaign and the referendum to end gun sales – but ultimately they were defeated by pressure from civil society. On 15 July 2004 the National Disarmament Campaign was launched, created to encourage a voluntary weapons handover throughout Brazil. During the campaign, the population had the opportunity to turn in firearms with an amnesty and receive compensation. Those who turned in weapons received between R\$100 and R\$300 (US\$45 and US\$135), according to a federal government table, independent of which state the person was in or whether the gun was legally registered or not.

Civil society groups which had participated over several years in the disarmament debate were active in the campaign. Viva Rio, a Rio-based NGO at the forefront of this work, participated in the national committee of the campaign led by the Justice Ministry and participated actively in collecting weapons in Rio de Janeiro state, as well as in capacity-building workshops for state disarmament committees in all Brazilian states. It also provided technical assistance and training to other civil society organisations that wished to collect firearms, mainly churches. The experience of involving civil society institutions in the collection and destruction was relatively new internationally.

The Voluntary Weapons Collection Campaign was scheduled to end on 23 December 2004, but its success led Justice Minister Márcio Thomaz Bastos to extend the campaign, first for six more months, until 23 June 2005, and then again until 23 October 2005, when the referendum on the banning of gun sales was held. The first collection post was opened on 4 August and from then until 23 October Viva Rio collected nearly 12,000 guns in 59 posts throughout the state of Rio de Janeiro. One of these posts was in the NGO itself. Two mobile posts operating out of trailers circulated throughout the state, one in partnership with the civil police and the Radio Globo and the other in partnership with the federal police. Together, these mobile posts received 1,681 guns.

Health data is also used as a tool to measure the impact of gun violence prevention measures. In 2004, DATASUS registered an eight per cent drop in gun deaths from 2003, representing some 3,234 fewer deaths than the previous year¹¹ and providing evidence for the effectiveness of gun control – in this case, specifically the Disarmament Statute and the Voluntary Weapons Collection campaign – as part of a strategy to mitigate the impacts of gun violence. This information was heavily used by NGOs and the media during the run-up to the referendum.

Another important statistic – this one from police data, which was used at this phase to complement health data – was that, in Rio de Janeiro, the majority of crime guns had been legally purchased and registered. A report released just before the referendum, on 3 October 2005, by the Rio de Janeiro state government with information from the state civil police found that in Brazil, most of the crime guns seized by police were once legally owned. A commonly held belief in Brazil is that guns used to commit crimes were either acquired on the illegal market or diverted from state security forces. In reality, it was found that 72 per cent of crime guns were once legally owned and that 65 per cent of registered guns used in crime once belonged to civilians. It also found that guns that had once been legally owned were used in 78 per cent of armed theft, 67 per cent of rapes at gunpoint, 58 per cent of gun homicides, and 32 per cent of kidnappings at gunpoint.¹²

At this stage then, in terms of organising for support for disarmament, civil society groups felt the timing was right to make the arguments a bit more sophisticated, to focus on

impacts and use public health data complemented by other sources, in order to convey the urgency of action. It was important to show that changing gun laws had made significant advances in reducing gun violence in other countries and in Brazil as well. This use of information became increasingly relevant in the run-up to the referendum in order to mobilise people to vote to end gun sales in Brazil. The message – conveyed largely using public health information and disseminated now on a massive scale by the Brazilian media – had become: guns are a problem that affect all of us, and we can no longer afford to stand by and do nothing.

Lessons from the gun ban referendum

On 23 October 2005 there was a nation-wide referendum to decide whether to end gun and ammunitions sales throughout Brazil. The radical move represented the first time Brazil had ever held a national referendum, and the first referendum anywhere in the world to decide national gun laws. On that day registered Brazilian voters (voting is mandatory in Brazil) answered the question: “Should the sale of guns and ammunition to civilians be prohibited?” An incredible amount of work went into campaigning around the issue, both on the ‘yes’ and ‘no’ sides. Public health data featured largely in the ‘yes’ campaigners’ arguments, as part of the strategy highlighted in the previous sections of this article. However, in spite of having data on the ‘yes’ side, the referendum was defeated, with 64 per cent of the population voting ‘no’.

The important lesson was that data alone was not enough – especially in the context of an intense national campaign like that for the Brazilian referendum. Several factors influenced the outcome of the vote; among the most important we can count:

- *Unfavourable political climate: corruption scandal and high levels of police brutality.* With the Lula government (which had been for many hope of a new political era of social justice) in the midst of one of the worst and most highly publicised corruption scandals in recent history, the populace may have felt that a ‘no’ vote was a way to express dissatisfaction with the government. Further, 2005 was a year of intense – and high-profile – police corruption, with the largest police massacres of all time occurring in March, resulting in the deaths of 29 innocent people in the outskirts of Rio. Thus, the sentiment of many voters was that the referendum would take guns out of the hands of ‘honest citizens’ and leave them all with the criminals and with the untrustworthy and violent police. In essence, the ‘no’ vote became tantamount to a ‘no, I don’t feel safe’ and ‘no, I don’t trust the government or the police to keep me safe’ – rather than a ‘no’ to the idea of gun control itself.
- *Data was confusing and not presented in a way that appealed in a fresh way to people’s emotions.* It cannot be ignored that a large percentage of the Brazilian electorate is poorly educated and

not accustomed to analysing or interpreting statistical data. For many, the presentation of numbers and percentages was unclear, and the pro-gun lobby exploited people’s natural mistrust of these numbers by saying that they were manipulated, that they did not add up, etc. At the end of the day, a discourse borrowed from the National Rifle Association (NRA) on the ‘right’ to have firearms was more convincing to the people. The pro-gun lobby was quite successful in utilising this approach, making impassioned pleas in a television campaign that harkened back to the military dictatorship, to Nelson Mandela’s struggle against apartheid, to women’s suffrage and other rights struggles. The main message transmitted in these ads was, “Even if you or I never want to own or use a weapon ourselves, don’t let the government take away this right for others or for our future.” Aside from the TV campaign, the pro-gun lobby invested in massive email and radio campaigning, translating images and publicity pieces from the US into Portuguese.

- *The pro-gun lobby had equal time in the media.* Historically, the mass media in Brazil has been quite supportive of disarmament. However, as part of the referendum campaign, the federal government provided equal time to both sides of the discussion and the media was strictly forbidden to cover the issue in a way that could be interpreted as favouring one side or the other. This meant that in the months prior to the vote, the Brazilian population heard the pro-gun arguments more than ever before. The lobby also used women and victims to convey their message, while the disarmament campaign relied on famous stars and singers – a tactic which had worked well in the past, but was seen as out of touch with reality of the majority of Brazilians in this period of intense information exchange.
- Finally, there was some confusion as the referendum itself, as Brazil is a new democracy and had never held a national referendum before. People found the question itself to be confusing and were also confused by the ballot methods, which involved relating a ‘yes’ vote to a number at the electronic ballot boxes.

A large-scale telephone survey conducted by campaigners in the weeks prior to the referendum mapped which arguments on both sides the population had assimilated most convincingly. The top three most widely accepted arguments from the ‘no’ side were: criminals should be disarmed, not honest citizens; the government is not doing its part to reduce crime and armed violence; and disarmament is useless because there will still be arms trafficking and contraband. Approval of these statements increased or remained constant over the period. In contrast, acceptance of the ‘yes’ arguments largely decreased. The three most widely accepted arguments from the ‘yes’ side were: the prohibition of the sale of firearms and ammunition may not resolve all problems with violence, but it is an important step; if every ‘honest citizen’ wanted to be as well-armed as the criminal, violence would explode; and disarmament helps save lives and is worth the effort no matter how many lives are saved.

Conclusion

In spite of the disappointing results of the referendum, it is important to remember that some 33 million Brazilians did vote for the sale of firearms and ammunitions to be prohibited. These people were clear and sharply focused on one message: that disarmament could save lives. The 'no' voters made their choice based on a number of diverse factors – they did not, on the whole, disagree that guns and gun violence are a problem in Brazil, they took the vote as an opportunity to express dissatisfaction with the government and the state security apparatus. The consensus and consolidation of gun violence as an urgent concern for the Brazilian agenda can be seen as positive outcomes of the process, which can be built upon to further disarmament initiatives in the future. Public health data was instrumental in building this consensus: in isolating guns in the context of violence; in bringing truth to the myth that guns should be used for self-protection; in gaining support for the idea that fewer guns in circulation can result in fewer deaths; and in convincing the population that guns are a problem that affects everyone and no one can afford to do nothing about it.

Notes

- 1 Unless otherwise stated, all public health data cited is from the Brazilian Health Ministry, DATASUS, 2002. Information and health data used throughout this article are based on Luciana Phebo, The impact of firearms on health in Brazil, in R César Fernandes et al, *Brazil: The arms and the victims*, Small Arms Survey, Viva Rio, ISER, 2005. The complete report is available at <www.vivario.org.br>.
- 2 Brazil's 17-year military dictatorship ended only in 1989, and a lethal legacy of that regime is the current police structures. Badly integrated, inefficient and corrupt, the military and civil police routinely compete and undermine the other rather than cooperate to guarantee public safety. Worse, they are notoriously violent and discriminatory, causing public security institutions to be largely mistrusted and discredited by civil society. Security and defence institutions have traditionally been shrouded in secrecy and characterised by a lack of transparency and low levels of cooperation with civil society.
- 3 Julio Jacobo Waiselfisz, Mapa da violência IV: Os jovens do Brasil Juventude, Violência e Cidadania, UNESCO, Instituto Ayrton Senna e Secretaria Especial de Direitos Humanos, 2004.
- 4 Maria Fernanda Tourinho Peres, Violência por armas de fogo no Brasil – Relatório Nacional, NEV/USP, Organização Pan-Americana de Saúde, Small Arms Survey, 2004.
- 5 Roberto Iunes, *Revista de Saúde Pública* 31(4), supl São Paulo, 1997.
- 6 Research developed between 12 September 12 and 13 October 2005; during this month questionnaires to be filled by victims were left in eight DEAMs (Departamento Estadual de Administração de Material) of Rio de Janeiro's metropolitan area: Belford Roxo, Campo Grande, Caxias, Centro, Jacarepaguá, Niterói, Nova Iguaçu and São Gonçalo. We obtained answers to 615 questionnaires.
- 7 An 18-month research-action project, Women and girls in contexts of armed violence in Rio de Janeiro, a partnership between the Rio-based NGO and the Peace Studies Group at the University of Coimbra in Portugal and supported by the Ford Foundation, aims to fill this gap. Results will be published by August 2006. More information on the project can be obtained by writing to <jessica@vivario.org.br>.
- 8 The data from the SIM about race is classified based on 'colour of skin'. The categories are black, white, *pardo* or mixed-race, yellow, and indigenous population.
- 9 A L Kellermann, Injuries and deaths due to firearms in the home, *Journal of Trauma* 45(2), 1998, pp 263–267.
- 10 It is 11 times more likely that a gun in the home will

be used to commit suicide than to kill or wound someone in legitimate self-defence: Kellermann, op cit, pp 263–267.

- 11 DATASUS, Ministry of Health (2004), cited in 'Impacto da campanha do desarmamento no

índice nacional de mortalidade por arma de fogo', Ministério de Saúde / Secretaria de Vigilância em Saúde, August 2005, p 4.

- 12 Rio de Janeiro Public Health Secretariat, October 2005, p 12.