

# Preventing and Reducing Armed Violence What Works?



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Background Paper

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### Cover photograph

P. Sudhakaran/United Nations Operation in Mozambique (1994)

# Preventing and Reducing Armed Violence

## What Works?

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# Executive Summary

Armed violence creates a major social and public health burden throughout the world, has a substantial impact on the health of people everywhere and severely hampers social and economic development. As a result, there is growing international momentum to place armed violence prevention and reduction in development agendas. Much international work is already underway to achieve this aim.<sup>1</sup>

In order to help deliver armed violence prevention and reduction, policy and decision-makers need evidence of effective practice. This briefing paper brings together promising and emerging evidence of what works to prevent interpersonal armed violence (through firearms), primarily in non-conflict situations. The paper provides an overview of the scale of armed violence, its impacts and the risk factors associated with it. It examines both direct approaches to preventing and reducing armed violence, and indirect approaches that do not address armed violence as their primary aim, but target risk factors for violence. Most scientific evidence currently comes from developed countries which generally have greater capacity and resources for designing, implementing and reporting the results of rigorous evaluations. However, the evidence-base from low- and middle-income countries is increasing, and this paper also provides examples of emerging evidence from around the world.

Key findings include:

**Monitoring and understanding the nature of armed violence:** Effectively reducing and preventing armed violence requires diagnosing its patterns and understanding its nature, extent and associated harms. The development of injury surveillance systems and crime and violence observatories has made a significant contribution to these efforts.

**Measures to reduce access to firearms:** Based on evidence from middle- and high-income countries, the effective use of legislation and regulation to reduce access to lethal means can reduce armed violence. Disarmament programmes implemented as part of legislative reforms have also reported success. In post-conflict situations, disarmament can play a key role in peacebuilding processes and crime suppression.

**Law enforcement and criminal justice interventions:** In high-income countries, there is evidence to support the effectiveness of policing strategies that promote community engagement. Problem-oriented policing has successfully reduced youth homicides and firearm assaults. There is emerging evidence that community-based policing models can support police reform in low- and middle-income countries and contribute to increases in citizen security.

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<sup>1</sup> Additional information is available at: [www.genevadeclaration.org/](http://www.genevadeclaration.org/).

**Firearm injury prevention programmes:** In high-income countries, programmes to reduce the risks of unintentional firearm injuries through school- and community-based education have not shown clear evidence of effectiveness. In addition, there is not enough formal evaluation to determine if related public education and awareness campaigns are effective.

**Comprehensive multisectoral approaches:** Programmes that have demonstrated the most success in reducing armed violence, including gang violence, have brought together a range of violence prevention and reduction strategies and are multisectoral and sustainable. Emerging evidence from low- and middle-income countries suggests that the best chances of success come from comprehensive public safety and community security programmes that broadly address the political, economic and social drivers of violence, and have both national and local support and ownership.

**Indirect armed violence prevention approaches:** The World Health Organization has identified 10 key prevention strategies that address the underlying risk factors for violence; all of which can potentially help reduce armed violence.<sup>2</sup> This briefing paper embraces those strategies and covers: strengthening relationships between children and caregivers; developing life and social skills; academic enrichment, mentoring programmes; reducing access to and harmful use of alcohol; environmental and urban design; disrupting illegal drug markets; and programmes that reduce inequalities. By adopting approaches that target key risk factors for armed violence and work to prevent violence in general, it is likely that armed violence reduction can be achieved.

**The evidence gap:** There is a lack of evidence from middle- and, in particular, low-income countries on preventing armed and other violence despite the fact they suffer disproportionate levels of both. This issue needs to be urgently addressed by enhancing routine monitoring, research and evaluation capacity.

**Foundations for armed violence prevention:** Implementing sustained, effective armed violence prevention and reduction strategies requires investing in institutional capacity, infrastructure and good governance. These actions must recognise that the determinants of violence routinely include underlying structural, social and economic inequalities including lack of jobs, poverty, weak criminal justice systems, and norms that support violence.

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<sup>2</sup> See section 5. World Health Organization. Preventing violence and reducing its impact: how development agencies can help. Geneva, World Health Organization, 2008.

# 1. Introduction

Globally, armed violence is a major social and public health burden that has a substantial impact on the health of populations and severely hampers social and economic development. Therefore, preventing armed violence is a critical factor in achieving the Millennium Development Goals (MDGs), and growing international momentum is placing the issue of armed violence prevention on development agendas.<sup>(2)</sup>

*The Geneva Declaration on Armed Violence and Development* provides an important framework for political and civil society commitment to reducing the global burden of armed violence. A vast amount of international work is already underway to help achieve this aim.<sup>3</sup>

**Armed violence is the intentional use of physical force, threatened or actual, with arms, against oneself, another person, group, community, or State that results in loss, injury, death and/or psychosocial harm to an individual or individuals that can undermine a community's, country's or region's security or development achievements and prospects.<sup>(1)</sup>**

To support this work, this briefing paper summarizes evidence on what works to prevent interpersonal armed violence, primarily in non-conflict situations. It aims to provide policy and decision-makers with a broad overview of academic evidence and international experience of armed violence prevention. The briefing concentrates specifically on the use of firearms which are among the most lethal means of violence, and have been the focus of most armed violence research and intervention.<sup>4</sup> The evidence included in this paper has been identified through a comprehensive review of literature.<sup>5</sup> Most evidence comes from developed countries that have generally greater capacity and resources for designing, implementing and reporting rigorous evaluation results. However, the evidence base from low- and middle-income countries is increasing, and the paper also provides examples of emerging evidence from around the world.

The briefing begins with an overview of the scale of armed violence, its impacts and the risk factors associated with it. It then discusses both direct and indirect approaches to preventing and reducing armed violence. Indirect approaches do not primarily address armed violence, but by targeting risk factors they can potentially reduce overall levels of violence.<sup>6</sup>

The review covers:

- **measures to reduce access to firearms** including legislative reforms and disarmament programmes;
- **law enforcement and criminal justice interventions** including policing strategies, sentence enhancement laws, gun courts and measures to strengthen criminal justice systems;
- **firearm injury prevention programmes** including firearm safety programmes and public education and awareness campaigns;
- **comprehensive community-based programmes** covering public safety approaches that combine law enforcement and social intervention at a community level, and peacebuilding initiatives;
- **indirect armed violence prevention measures** covering programmes that have proven effective in reducing interpersonal violence (although their effectiveness in reducing armed violence may not have been measured).

<sup>3</sup> Further information is available at: [www.genevadeclaration.org/](http://www.genevadeclaration.org/).

<sup>4</sup> This briefing focuses on firearms, but armed violence can involve the use of a wide range of weapons, including sharp objects and blunt instruments. Some of the measures discussed in this paper are specific to firearms, but many are transferable to other forms of armed violence as they address the drivers of violent behaviour rather than the specific weapon used.

<sup>5</sup> Literature was compiled from the following sources: bibliographic databases, websites, research networks and contact with armed violence prevention experts.

<sup>6</sup> The review focuses largely on primary prevention programmes that aim to prevent armed violence and its risk factors, but also covers tertiary programmes that seek to reduce armed violence by targeting people already involved in violence.

Table 1 summarizes programme approaches covered in the briefing, and indicates the extent of evidence available to support their effectiveness in preventing armed and interpersonal violence.

**Table 1: Overview of armed violence prevention approaches**

Table 1: Overview of armed violence prevention approaches			
Intervention	Type of violence		Section
	Armed violence	Violence	
<b>Direct approaches</b>			
<b>Measures to reduce access to firearms</b>			
Legislation and regulation	● ●		4.2.1
Disarmament programmes <sup>a b</sup>	● ×		4.2.2
Gun-free zones		⤵	4.2.3
<b>Law enforcement and criminal justice interventions</b>			
Policing strategies	Community policing	● ●	4.2.4
	Directed policing <sup>c</sup>	● ●	
	Problem orientated policing <sup>c d</sup>	● ●	
Sentence enhancement laws		⤵	4.2.5
Juvenile gun courts		⤵	4.2.5
Criminal justice system reforms		●	4.2.6
<b>Firearm injury prevention programmes</b>			
School-based safety education <sup>e</sup>		⤵	4.2.7
Community-based gun safety programmes		⤵	4.2.8
Hospital-based violence prevention programmes <sup>f</sup>	×	×	4.2.9
Public education and awareness campaigns		⤵	4.2.10
<b>Comprehensive community based programmes</b>			
Public safety and community security programmes <sup>d</sup>	● ●		4.2.11
Addressing gang violence through community orientated, multi-strategy interventions	●		4.2.12
<b>Indirect approaches</b>			
Parenting programmes		●	4.3.1
Life skills and social development		● ●	4.3.2
Academic enrichment programmes		●	4.3.3
Mentoring programmes <sup>g</sup>		×	4.3.4
Reducing access to and harmful use of alcohol <sup>h</sup>	●	×	4.3.5
Environmental and urban design		●	4.3.6
Disrupting illegal drug markets		⤵	4.3.7
Programmes to reduce inequalities		⤵	4.3.8

Key to symbols

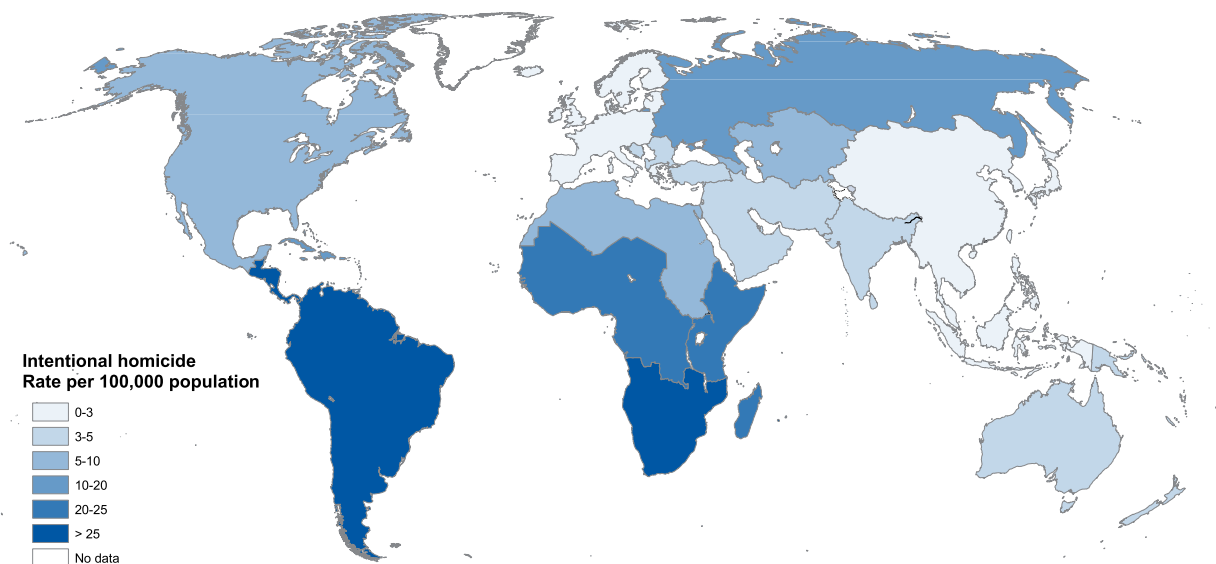
- Supported by evidence from high-income countries
- Emerging evidence from middle- and low-income countries
- × Emerging evidence from high-income countries
- ⤵ Impact unclear or yet to be evaluated

- a Without measures to control access to new weapons, amnesties and buy-back schemes may have little effect.
- b In post conflict situations, disarmament can be an integral part of peacebuilding processes, reducing the risks of re-emerging violence.
- c Long-term effects of these strategies are unknown.
- d Programmes also broadly addressed risk factors for violence, for example, through improving basic services and infrastructure.
- e Can improve firearm safety knowledge and skills.
- f Can improve attitudes towards guns and violence.
- g Poorly implemented programmes may have an adverse effect on at-risk youth.
- h Restricted hours of alcohol sales associated with reduced homicides.

## 2. The scale of the problem

There are many challenges involved in estimating the extent and impacts of armed violence (3, 4). Differences in levels of reporting and recording between countries, and in definitions of violence and conflict, make it difficult to compare or combine measures of global impact (3, 5-7). For instance, the WHO Global Burden of Disease (GBD) Study estimates that 600,000 deaths due to violent intentional injuries occurred in 2004, versus 184,000 deaths through violent injuries due to war and civil conflict (8). By contrast, the Geneva Declaration Secretariat estimated that there were 490,000 homicides in 2004 (of which around 60% are thought to be due to firearms), and an annual average of 52,000 deaths directly due to war and civil conflict (6). However, these are conservative estimates that only include recorded deaths and the real figures may be much higher (6) (see Box 1). In non-conflict situations, homicide rates, and the proportion of homicides due to armed violence, vary widely between countries and world regions. For example, overall the highest concentrations of homicides are found in Africa and Central and South America (Figure 1), while the percentage of homicides resulting from armed violence ranges from 77% in Central America to 19% in Western Europe (6).

**Figure 1: Homicides per 100,000 population by subregion, 2004**



Source: Geneva Declaration Secretariat / UNODC (9)

### Impacts of armed violence

Armed violence has significant and enduring effects on individuals, families, communities and societies. Research from the USA suggests that around one in five intentional gunshot wounds suffered through interpersonal violence is fatal, and around 60 percent of non-fatal firearm injuries require hospitalization (10). Meanwhile, physical consequences can be severe for survivors of gunshot wounds, often leading to long-term medical problems and disability (11, 12). In more problematic cases, shots from a firearm can cause limb amputations or brain or spinal cord injuries (11, 13). Aside from physical injuries, violence (including armed violence) has psychological and social consequences that can be difficult to overcome. For instance, survivors of traumatic injury often experience post-traumatic stress disorder (PTSD), depression or anxiety (14). Even witnessing violence within families or the community can have long-lasting negative effects.

Among children, exposure to violence has been associated with a wide range of negative outcomes including substance use, delinquent and criminal behaviour, anxiety, depression, problems with peer relationships and poor academic achievement (15-18). In later life, people who have suffered adverse experiences in childhood, including violence, are at increased risk of many health conditions, including

heart disease and cancer (19). Even more significantly, many children fear violence in the community so much that they decide to carry their own weapons for protection (20, 21), increasing the potential that they will become perpetrators of armed violence.

The economic costs of armed violence are substantial, including medical treatment, policing and legal services, lost productivity and investment in social capital, and reduced quality of life. Based on lost productivity due to violent deaths, one study estimated that, in 2004, non-conflict armed violence across just 90 countries cost between US\$ 95 billion and US\$ 163 billion (6). In terms of health costs, in El Salvador, hospital treatment for firearms injuries has been estimated to cost over 7 percent of the country's health budget (22). In South Africa, hospital treatment for serious abdominal firearm injuries alone has been assessed at about 4 percent of the country's health budget (23). In Brazil and Colombia, in relation to medical treatment and lost productivity, the costs of gun violence amount to 0.5 percent (Brazil) and 1 percent (Colombia) of their annual national incomes (24).

There are geographical differences in the economic impact of armed violence. North America experiences the highest lost productivity in terms of US dollars, but Latin America suffers the highest impact in terms of percent of gross domestic product (GDP) (6). Therefore, preventing violence can result in economic gain. For instance, a study comparing Costa Rica (which has a low homicide rate) with four neighbouring countries – the Dominican Republic, Guyana, Haiti and Jamaica (which have high homicide rates) – suggested that reducing levels of violence in these countries to the low levels seen in Costa Rica could improve annual economic growth per capita by between 1.7 percent and 5.4 percent (25).

## BOX 1

### The impact of armed violence in conflict situations

Between 2004 and 2007, armed conflicts caused an average of 52,000 violent deaths per year. However, this conservative estimate only includes *recorded* deaths; the real figure may be much higher. In addition, over 200,000 people a year may die indirectly from war and conflict through disruption to basic services and essential resources (6). Reduced access to clean drinking water, food supplies, health care and opportunities for employment can lead to increased poverty, malnutrition, illness and disease. In many cases, war can lead to the displacement of populations into other regions or countries, complicating existing health and social problems, and generating new ones (e.g. lack of post-war shelter). Sexual violence and rape of women can increase in conflict situations, leading to unwanted pregnancy and the spread of sexually transmitted infections such as HIV. Males are more likely to fight and die in conflict situations, but the indirect impacts of conflict can fall more heavily on women. The protracted absence or death of male family members can mean women become single heads of households, facing employment and economic challenges, as well as emotional pain. The costs of an average civil war are estimated to range from between US\$ 60 billion to US\$ 250 billion, resources that are diverted away from essential health and social services.

Source: Geneva Declaration Secretariat (6); Chauvet et al. (26)

## 3. Risk factors and at-risk groups

### BOX 2

#### Protective factors

Just as certain factors can increase risks of violence, a range of factors can protect against it. These form the basis of many primary prevention programmes that seek to strengthen protective factors for individuals, families and communities (see Section 4.3). Examples of protective factors include:

**Individual factors:** e.g. positive self-esteem, social skills, good academic achievement and high intelligence.

**Relationship factors:** e.g. strong parent-child bonds, parental monitoring, family cohesion and association with positive peer groups.

**Community factors:** e.g. strong community infrastructure, access to social support and services and the strength of school bonding.

**Societal factors:** e.g. effective criminal justice systems, economic opportunities, social norms that do not tolerate violence, and values that promote gender equality.

Certain individuals, groups and communities are disproportionately affected by violence. There is no single cause of violence, but rather a wide range of factors that interact at different levels to increase risks of violence. At the individual level, these include biological and personal history factors, such as age, gender, low educational achievement, impulsivity, substance use and a past history of experiencing violence. Personal relationships can also increase the risks of violence, including poor parent-child bonding, family conflict and association with delinquent peers. Risk factors relating to the community in which people live include high levels of unemployment, social isolation and the presence of illegal drug markets. Broader societal factors include policies that maintain economic and social inequalities, cultural norms that accept violence and ineffective criminal justice systems.

Young males are particularly at risk of committing or being victims of armed violence. The risk factors for youth violence in general, carrying a weapon and specifically using firearms, are strongly related and are summarized below.

#### Youth violence

Involvement in youth violence has been associated with psychological/behavioural problems such as hyperactivity, attention deficit disorder, substance use and low cognitive ability. Other influential factors include poor family functioning or cohesion, exposure to violence within the family (either as a witness or victim), and having delinquent friends. Within communities, factors that increase risk of youth violence include living in: urban areas, areas where gangs are present and neighbourhoods with greater levels of deprivation. Alcohol availability may also be an important factor (27). At a wider societal level, economic inequalities, rapid urbanization, social dislocation, and greater social acceptance of violence as a method of resolving conflict have all been identified as influential factors (6, 28, 29).

#### Carrying a weapon

Risk factors for carrying a weapon are similar to those for youth violence. These include: substance use (30-32), involvement in illicit drug trade (33), being exposed to or witnessing violence (34, 35), poor family functioning (20, 36), having delinquent peers (37, 38), living in deprived neighbourhoods (39) and living in urban areas (39, 40). Many young people carry a weapon because they feel unsafe or fear violence (21), which creates a perceived need for self-protection. Further, many young people who carry weapons do so in response to past victimization (20). Consequently, exposure to violence in the community and low levels of social support have been associated with weapon carrying. There are also strong links between a young person carrying a weapon and being a member of a gang (30, 41).

## The use of firearms

Various factors have been associated with the violent use of firearms. These include exposure to firearm violence (42), experiencing abuse as a child (43) and gang membership (28, 29, 44). Gun homicides are more concentrated in communities that have greater availability of firearms (45, 46), higher rates of gun ownership (47, 48), greater alcohol outlet density (49) and lower levels of education (50). At a societal level, risk factors that can contribute to armed violence include: rapidly urbanizing cities and towns; societies emerging from armed conflict; mistrust within society (6, 44); social, political and economic inequalities; unemployment or underemployment; weak or problematic governance; resource scarcity and competition; a disproportionately large youth population; and unequal gender relations (6).

# 4. Prevention and reduction approaches – what works?

This section examines programmes and interventions designed to prevent or reduce firearm-related violence, primarily in non-conflict settings, as well as the intelligence required to deliver them:

- **Violence prevention** programmes target the opportunities and conditions that enable violence to occur, for example by intervening with youth who may be at risk of becoming victims or perpetrators of violence in future.
- **Violence reduction** programmes aim to contain and reduce existing problems by focusing on people who perpetrate violence.

It is often not possible to make a distinction between prevention and reduction initiatives, as programmes may incorporate both goals (e.g. public safety programmes, see Section 4.2.11). This briefing covers both direct approaches (that have a specific aim to reduce armed violence) and indirect approaches (that do not address armed violence as their primary aim, but have shown positive effects on violence prevention in general).

## 4.1 Monitoring and understanding the nature of armed violence

Genuinely effective armed violence prevention and reduction interventions require a clear diagnosis of its context-specific geographic and demographic patterns, as well as risk and protective factors for armed violence (2). Ongoing collection, mapping and analysis of crime and violence data in partnership with local stakeholders helps governments to acknowledge and understand the nature and extent of armed violence and its associated harms. The public health approach to armed violence involves the development of injury surveillance systems that can make a significant contribution to efforts to reduce violence. In Colombia, the systematic collection of data to identify risk factors for violence was central to the public health approach of the DESEPAZ programme (see Box 3). Experience in five African countries has found that a lack of adequate resources and training can hamper the development of effective injury surveillance systems (51).

## DESEPAZ programme

In the city of Cali, Colombia, the Programa de Desarrollo, Seguridad y Paz (Development, Safety and Peace Programme; DESEPAZ) was established in 1992 to address high rates of crime and violence. The programme was coordinated by an epidemiologist, and a permanent working group was established that included representatives from the police, district attorney's office, forensic medicine institute, and municipal government departments of traffic and public health. Violent incidents that occurred in the city were reviewed and analysed on a weekly basis and data were used to develop a range of coordinated violence reduction strategies. One intervention involved a ban on firearms being carried at certain times, including public holidays (see Box 4). The information and reporting system has since been copied and implemented across Colombia as a series of 'crime observatories' coordinated by the Institute for Peace Promotion and Injury and Violence Prevention.

*Source: Inter-American Development Bank (52); Gutierrez-Martinez et al. (53)*

In addition to implementing injury surveillance systems, many low- and middle-income countries, regions and cities are developing **crime and violence observatories**. For example, in Jamaica, the **Crime Observatory Project** brings together data from a national injury surveillance system and various other organizations (including police). The project has a focus on using geographical information systems (GIS) to identify and map crime and violence 'hot spots' and to monitor intervention efforts. Other low- and middle-income countries now have crime and violence observatories, including Guatemala and Honduras. In Guyana and Trinidad and Tobago, Inter-American Development Bank (IDB)-funded citizen security programmes include crime observatories.

## 4.2 Direct prevention approaches

### Reducing access to firearms

#### 4.2.1 Legislation and regulation

Legislation and regulation can reduce access to firearms by controlling their sale, purchase and use. Countries or states with more restrictive firearms policies and lower firearms ownership tend to experience lower levels of firearms violence (47, 54-57). Therefore, legislative reforms to strengthen firearm controls may reduce armed violence and can include:

- licensing and registration schemes for firearms owners and suppliers;
- a minimum age for firearm purchases;
- bans on certain types of firearms;
- controls on where firearms can be carried;
- background checks and psychological testing of firearms purchasers;
- minimum waiting periods between licensing and firearms purchasing;
- limits on the number of firearms that can be purchased;
- safe storage requirements.

Studies from a number of countries have demonstrated the impacts of strengthened national firearms legislation. For example:

- In **Austria**, firearms legislation was reformed in 1997. It required an individual to be 21 years old before they could purchase a firearm, required a valid reason for a person to purchase a firearm, mandated background checks and psychological testing for firearms purchasers, imposed a three-day waiting period between firearm licensing and purchasing, and created safe firearm storage regulations. These reforms were associated with reduced firearms suicides and homicides and a reduced demand for firearms licenses (58).
- In **Brazil**, firearms legislation was reformed in 2003 to: raise the minimum firearm purchase age to 25; make it illegal to own unregistered firearms; prevent firearm carrying outside the home or workplace; introduce purchaser background checks; and, control the flow of firearms into the country. Tougher penalties were introduced for firearms offences and a voluntary disarmament scheme was implemented which returned over 450,000 firearms. A study suggested that between 2003 and 2005 the reforms contributed to an 8.8 percent decrease in firearms mortality. Other factors, including improved law enforcement and community initiatives, are also likely to have contributed to the decline in firearm mortality (59). However, reductions in mortality were not seen in all areas. The authors noted that firearm control measures would have been difficult to implement in sparsely populated, hard to access areas that suffer from ongoing conflicts over property rights (60).
- In **the United States of America (USA)**, studies have explored the impacts of state-level legislative measures including bans on certain types of firearms (61), limits on firearms purchases (62), child access prevention laws (63-66), gun show regulation (67), and preventing people who commit intimate partner violence from possessing or purchasing firearms (68, 69). These studies have reported reductions in firearm availability and mortality, but a US review of firearms legislative measures concluded there was still not enough evidence to clearly establish whether the various legislative measures identified were effective (70).

Local regulations have been used in several Latin American cities to implement bans on firearms in specific locations and at certain times. For example, the **Arms-Free Municipalities Project in El Salvador** banned people from carrying firearms in specific locations in participating municipalities, including parks, schools, plazas and recreational centres. The project also aimed to increase police capacity to enforce the bans, implemented a media campaign on the dangers of firearms that explained the new regulations, set up a voluntary firearms surrender and collection scheme, and evaluated the project to inform future development. The project experienced some implementation difficulties, but reported success in reducing firearms violence, including a 47 percent drop in homicides in participating municipalities (2005-2006). However, reductions in homicides were not sustained over the project period (71, 72).

Introducing and enforcing similar bans in the Colombian cities of Cali and Bogota has been linked to reductions in homicides on days when the ban was in force (see Box 4).

4

## Local Firearms Bans in Colombia

BOX

Between 1983 and 1993, the annual homicide rate in Colombia increased almost fourfold – from 24 to 88 deaths for every 100,000 people. Much of this increase occurred in three of Colombia's largest cities, Bogotá, Medellín and Cali; they accounted for nearly 31 percent of the country's homicides. In Colombia, firearm sales are controlled by the army and an official permit is required to carry a firearm. In most areas, individuals with a permit are allowed to carry concealed firearms anywhere at any time of day. However, in response to increasing levels of violence in Cali and Bogotá, people were banned from carrying firearms at certain times, including holidays, election days and weekends following paydays. The bans were enforced through police checkpoints, searches during traffic stops and routine police work. A study found that incidence of homicides was lower in both cities on days when the ban was in force (73).

## 4.2.2 Disarmament programmes

Disarmament programmes are common features of national and local efforts to reduce armed violence. They aim to reduce the number of weapons in circulation, lowering the potential for people to use them violently. Disarmament programmes can operate at three levels (59):

- **civilian weapons collection schemes** that aim to reduce weapons ownership by civilians;
- **disarming non-state participants** that aims to remove weapons from former combatants;
- **state disarmament** that aims to reduce government weapons stocks.

**Civilian weapons collection programmes** aim to reduce public weapon ownership in order to reduce armed violence. At the same time, they often seek to raise awareness of the dangers of weapons and to make weapon ownership less socially acceptable. Civilian collection schemes can be voluntary or compulsory (e.g. following legislative reforms), yet are considered most effective when they have legitimacy among local populations. Forced attempts to collect weapons often fail (59). The programmes can be weapons amnesties, buy-back schemes or weapons-for-development programmes that link development aid to surrendered arms. In Box 5, the independent research institute Small Arms Survey (59) has identified key features that contribute to effective civilian weapons collection programmes.

### BOX 5

#### Key features of effective civilian weapons collection programmes

- strong public support;
- widespread acceptance of government authority;
- public confidence in the ability of state institutions to protect people against violence;
- carefully regulated compensation for victims of violence;
- effective restrictions on attempts to purchase replacement arms;
- effectively controlled international borders.

*Small Arms Survey (59)*

Experiences in several countries have shown that civilian weapons collection programmes carried out alongside legislative reforms can contribute to reduced armed violence.

- In **Australia**, a national firearms buy-back scheme accompanied legislative reforms banning civilian ownership of automatic and semi-automatic shotguns and rifles. The newly-banned firearms were purchased from civilians by the state at cost price. This resulted in over 700,000 weapons being collected and destroyed (74). However, studies on the impact of the reforms and buy-back programme provided mixed findings (74-78). Some found both firearm homicides and suicides went down (74, 76), while another noted a drop only in firearm suicides (77).
- In **South Africa**, a national firearms amnesty took place in 2005 following legislative reforms to strengthen firearm controls. Over 100,000 firearms were handed in during the amnesty without any financial or other incentives. Combined with other efforts, disarmament programmes in South Africa are estimated to have reduced civilian firearms by around 440,000. There has been no evaluation of the disarmament efforts, but trends suggest that firearm homicide rates are falling (59, 79).

- In **Rio de Janeiro, Brazil**, a study measured the effects of a buy-back campaign implemented as part of legislative reforms (see Section 4.2.1). A total of 8,534 weapons were collected. Most people who returned guns said they did so to prevent them from “falling into wrong hands”. Estimates say the buy-back campaign has possibly contributed to an 11 percent decrease in firearm-related mortality in the city. However, it is widely believed that people involved in organized crime did not hand in guns (80).

Without measures to control access to new weapons, amnesties and buy-back schemes may have little effect. Studies of US buy-back schemes have found they have no effects on crime reduction (81), and offer little evidence that firearms are surrendered by those most at risk of criminal behaviour (82, 83). In the **UK**, knife amnesties have shown only short-term effects in reducing knife-related violence (84, 85), with the widespread availability of knives making weapons easily replaceable (86). However, such schemes can still help raise public awareness and address social attitudes. For example, the **Arms Exchange Programme in Mendoza, Argentina**, offered people vouchers for foodstuffs and football matches in exchange for them handing in civilian firearms as part of a long-term, multifaceted approach to improve public security. School children were also encouraged to exchange toy weapons for books and potted plants, and 6,000 toy weapons were surrendered. The programme also resulted in 287 real firearms being returned over a four-day period; a figure that exceeded organizers’ expectations since their goals were predominantly cultural (87).

In **post-conflict situations**, disarmament can be an integral part of peacebuilding processes, reducing the risks that violence will re-emerge. In these instances, the public destruction of collected weapons can be crucial in developing trust in the security sector. The following are examples of disarmament measures that have played a major role in post-conflict crime suppression.

- In **Colombia**, disarmament processes were part of broader disarmament, demobilization and reintegration (DDR)<sup>7</sup> efforts that between 2003 and 2006 collected over 18,000 weapons. This was thought to account for over a third of the insurgent weapons in the country. The programme was believed to have reduced homicides by 13 percent in areas where demobilized groups had been operating, preventing between 650 and 2,300 homicides in its first year (59).
- In **Cambodia**, weapons collection efforts following the end of the civil war removed 130,000 non-government controlled firearms between 1998 and 2006. The measures were set in motion with international assistance and combined with development assistance and support for government and police weapons registration and stockpile storage systems. Data analysis suggested the measures contributed to reducing both firearms deaths and overall homicides (88).
- In the **Solomon Islands**, to help end several years of ethnic conflict, a weapons amnesty by an international mission collected around 4,000 firearms (more than the estimated number in circulation) and 300,000 rounds of ammunition in the first three weeks. The mission also focused on arresting militant leaders, strengthening local police forces and building community confidence, combined with longer-term investment in rebuilding policing, political and economic structures (59). The Solomon Islands have not experienced increases in post-conflict violence seen elsewhere. However, disarmament has brought new security challenges. For example, since people do not have firearms they are less able to protect themselves against crocodile attacks (59).

<sup>7</sup> Disarmament, demobilization and reintegration (DDR) is a key part of the United Nations (UN) system’s multidimensional approach to post-conflict peacebuilding and reconstruction. For more information on the UN approach and standards, visit <http://www.unndr.org/ddrs/framework.php>

## UNDP activity to support post-conflict disarmament

The UNDP supports collecting small arms in post-conflict situations, both through armed violence prevention and DDR programmes, and as part of broader ongoing development activity. Key features of the collection process include:

- using surveys to understand which groups hold weapons and why;
- using appropriately-targeted incentives that appeal to target groups;
- using appropriate disincentives (e.g. legal repercussions) for non-compliance;
- implementing awareness campaigns prior to and during the amnesty period;
- having the weapons collected by accountable authorities (e.g. police, military, peacekeeping forces);
- publicly destroying or recycling collected weapons.

Incentives can be provided to individuals in monetary or non-monetary forms, and can offer developmental benefits (e.g. infrastructure, schools) or can be altruistic. For example, in Croatia almost 40,000 weapons were collected between 2007 and 2009 through altruistic incentives that emphasized civilian responsibility and people's desire for peace. Destroyed weapons were later creatively recycled as sculptures. In Sierra Leone, the Arms for Development project has provided funding for capacity building and community development projects (e.g. schools and health centres) in chiefdoms that are declared arms-free. Between 2004 and 2008, 6,165 firearms and 645 tons of ammunition were collected and 17 projects were implemented.

State weapons stocks can be a major point of access to illicit firearms with people stealing weapons from the stocks or selling them illegally. Subsequently they can be used in crime. Further, actions that divert military weapons surpluses can enable or escalate conflict situations. Over a third of the 200 million military firearms worldwide are surplus stocks (29).

**State weapon destruction programmes** aim to reduce surplus weapons stocks to prevent diversion (and storage depot explosions) and consequently increase state security (59). Country experience has shown that it is realistic to destroy at least 20 percent of any state's small arms and light weapons (SALW) stocks and still maintain adequate stocks for legitimate needs (59). Particularly in post-conflict situations this figure can be much higher. For example, following independence in 2006, **Montenegro** underwent military reform to reduce its armed forces. With international assistance, between 6,000 and 7,000 tons of Montenegro's 9,000 ton munitions stockpile were identified for destruction; the remainder were consolidated for safe storage (29). Ensuring safe storage and appropriate management of government and police weapons stocks is a major component in preventing weapon diversion (see Box 7). The Organization for Security and Co-operation in Europe (OSCE) has produced a handbook that provides guidance on managing national small arms and light weapons stocks (89).

## Securing police weapons stocks in Papua New Guinea

In Papua New Guinea, auditing suggested that over time 30 percent of the country's police guns had been transferred into criminal hands. With international assistance, improved security programmes have included building new armouries, destroying surplus weapons, providing training to police and military staff, and implementing weapon stock-takes. The programmes are thought to have dramatically reduced the transfer of police firearms to criminals.

*Source: Alpers (90)*

### 4.2.3 Gun-free zones

In South Africa, gun-free zones (GFZs) have played an important role within communities to enhance social cohesion, and enable local residents to play a part in creating more secure communities (91), see Box 8. Gun-free zones are voluntarily designated public areas where firearms are not welcome. Zones are frequently found at schools, hospitals, churches, community centres and sports stadiums. The South African Firearms Control Act also provides for creating more formalized firearms-free zones that make it illegal for anyone to allow, store or carry firearms or ammunition into the designated area unless they have an exemption that allows them to do so (92).

8

### Gun-free zones in South Africa

BOX

Since the mid 1990s, hundreds of gun-free zones have been created throughout South Africa. The GFZs have two main aims: to create public spaces in which local residents can feel safe, and to challenge commonly held beliefs that firearms create security. In many communities, the creation of GFZs has allowed local residents to discuss issues of community safety and gun violence, and to make active contributions to public safety in their locality. Establishing GFZs has increased people's feelings of safety and security (91), and reduced the number of people carrying firearms. Lower firearm crime and violence has been reported in some locations where the approach has been successfully implemented (93).

## Law enforcement and criminal justice interventions

### 4.2.4 Policing strategies to reduce armed violence

In high-income countries, law enforcement strategies to reduce the illegal possession, carrying and use of firearms and other weapons are often based on the principles of community, directed and problem-oriented policing.

- **Community policing** focuses on crime and social disorder through delivering police services that include aspects of traditional law enforcement, as well as prevention, problem-solving, community engagement and partnerships.
- **Directed policing** focuses police enforcement activities in high crime areas (crime 'hot spots'), often using 'stop and search' techniques to target suspicious vehicles and individuals and to identify illicit weapons.
- **Problem-oriented policing** is a broader policing approach that identifies and examines a specific problem in a community (such as firearms violence), and that develops customized multi-agency solutions (94). Enforcement activity is typically police-led, but responses involve a wide range of agencies including social, youth and family services, criminal justice departments, schools, health services and local businesses.

### Community policing

In high-income countries, community policing has the following characteristics: decentralized authority and patrol strategies designed to promote communication between police and citizens; a commitment to problem-oriented policing; permitting the public to participate in setting police priorities and developing tactics; and empowering communities to help solve their own crime and disorder problems through sponsoring crime-prevention programmes (95). There is large variation across high-income countries in how community policing models have been implemented. Research has shown that community policing without a clear focus on crime-risk factors generally yields no positive effect on crime (96).

Community policing models have been implemented in low- and middle-income countries to support police reform, and to strengthen accountability of the police to citizens (97) (see Section 4.2.6). Community-based policing approaches have been piloted across Kenya (see Box 9), and various models adopted in other low- and middle-income countries including Brazil, Haiti, South Africa and Uganda. Efforts to introduce community policing in low- and middle-income countries have worked best in those with high-level support for the initiative, and that also have extensive grassroots community organizations (97), for example, South Africa.

## BOX 9

### Community-based policing, Kenya

Since 2003, Saferworld – a UK-based non-governmental organization (NGO) that works to prevent and reduce violent conflict and to promote cooperative approaches to security – has established and managed two pilot community-based policing sites in Kenya, one in a large slum community, and a second in a rural setting. There are various activities typically carried out at each site, including:

- training and awareness-raising for police officers and communities;
- establishing community safety and information centres;
- supporting practical projects (e.g. a street lighting project; see Section 4.3.6);
- setting up anonymous information ‘drop-in’ boxes in order to facilitate information exchange on community safety issues.

The approach has resulted in increases in safety and security at both sites, and improved trust and cooperation between the police, civil society and communities.

*Source: Saferworld (98)*

### Directed policing

Several US studies have evaluated the impacts of **directed policing operations** to reduce firearm violence (99-101). In the city of Indianapolis, two different directed policing styles were used in two high crime areas (102). In one, a general deterrence strategy used vehicle stops to search for weapons and to provide a visible police presence. In the second, a more targeted approach was used that focused stop and search activity on suspicious vehicles and individuals. Evaluation suggested that the targeted approach was associated with reduced gun crime, and the general approach had no effects (102). Overall, the results of studies suggest that directed police patrols can reduce firearm-related violence, but the long-term effects of these strategies are unknown (103). Directed policing has also been a major component in interventions in several Latin American cities to enforce local firearms bans (see Box 4).

### Problem-oriented policing

Most evidence to support **problem-oriented policing** comes from the ‘pulling-levers’ strategy in the USA. This strategy focuses both police enforcement activity and social services resources on violent gang members who often account for considerable urban violence (94). The strategy was initiated in Boston through **Operation Ceasefire**, which used increased enforcement activity and communication between police, members of violent gangs and other local agencies to deliver a clear message that violence would not be tolerated. It also provided counselling and support for gang members, for example in finding employment (see Box 10, and Section 4.2.12). The programme provided a basis to develop similar programmes implemented elsewhere in the US (104-106) and in other countries, including the UK (107).

## Operation Ceasefire in Boston, USA

Operation Ceasefire was developed as part of the Boston Gun Project to address increasing levels of youth homicide in the city. The project brought together a multi-agency partnership of criminal justice agencies, social services and others to examine the nature of youth homicide and develop appropriate responses.

Operation Ceasefire used research and firearms tracing data to target police enforcement and deterrence measures at firearms traffickers and violent gang members. Police adopted a zero tolerance approach to violence and firearms offences and communicated this to gang members through meetings and outreach work. Violent and firearms crimes would be subjected to focused and enhanced enforcement, although non-violent crimes would be dealt with routinely within the criminal justice system. Gang members were also offered support to move away from a life of violence, including job referrals and access to social services. Evaluation of the programme found a significant reduction in youth homicides, firearms assaults and police service call-outs for gunshots (108). Other researchers have highlighted limitations of the evaluations conducted on Operation Ceasefire (100, 109), but studies on later programmes based on this strategy concluded it offered at least short-term effectiveness (94, 110).

### 4.2.5 Sentence enhancement laws and gun courts

In the USA, firearm sentence enhancement laws have introduced minimum sentences or extra prison time for crimes committed with firearms (111). **Project Exile** in Richmond, Virginia involved a coordinated effort by police and the judiciary to prosecute firearms crimes within the federal court system. Prosecution resulted in a mandatory minimum sentence of five years in a federal prison. The programme also included training for police officers and an advertising campaign to promote a message of zero tolerance for firearms offences. Evaluations of the programme have reached mixed conclusions about its impact on homicide rates (112, 113). Taken together with other assessments, there is as yet no clear evidence of the effects of sentencing enhancements on firearm-related crime (111, 114).

Gun courts generally target particular types of offenders for faster processing through community-based courts. This model has been applied in both the USA and Jamaica. In Jamaica, gun courts were first introduced in 1974 following a rapid escalation in firearm-related violence (115). Except in homicide trials where a gun was used, gun court trials are conducted without juries, and people found guilty of possessing an illegal firearm can receive a life sentence (116). However, despite the introduction of gun courts, Jamaica has a high and rising rate of homicide (117).

In the USA, juvenile gun courts aim to reduce firearms offences through quicker sentencing and intensive corrective behavioural services (118). For example, the **Jefferson County Juvenile Gun Court** includes a 28-day military style boot camp, a parent education programme, a substance abuse programme, intensive follow-up supervision, and community service (e.g. neighbourhood clean-up and graffiti removal). An evaluation of the programme suggests that it may have reduced the number of re-offences (118). However, systematic reviews of studies into the effectiveness of military style boot camps in the USA conclude that in general these programmes are ineffective in reducing youth violence, and, in some studies, have been found to lead to an increase in repeat offending (119).

### 4.2.6 Strengthening and improving criminal justice systems

Effective and accountable criminal justice systems are vital to preventing and reducing armed violence. If criminal justice systems are weak or corrupt, people may want firearms to protect themselves, and alternative systems of justice and protection such as organized crime groups, can thrive. In low- and middle-income countries, reforming criminal justice systems has been a key component in reducing crime and violence. Experience has shown that effective criminal justice reform requires political will and support from key stakeholders. Reforms should be implemented across the entire criminal justice system and be part of a larger, multisector crime and violence prevention strategy (25).

## Criminal justice reform in the Central African Republic

In the Central African Republic, a combination of instability, poverty and weak infrastructure severely reduced the ability of national institutions to deliver security and justice, particularly outside the capital city, Bangui.

As part of the UNDP *Global Programme on Strengthening the Rule of Law in Conflict/Post-Conflict Situations*, a strong partnership between the Ministry of Justice, the Ministry of Public Safety and Decentralization, the UNDP, the UN Peacebuilding Office and the European Commission has implemented a broad programme of reforms to strengthen the country's justice system. Activities have included: developing a 10-year strategic plan to create a fair, accountable and service-oriented justice system; holding workshops for government representatives, civil society spokespersons and journalists to review new legislation; implementing human rights training and education programmes; building and renovating legal aid centres; furnishing and equipping local courts and police stations; conducting a national prison audit; building women's prisons and providing gender-specific training for female prison staff; supporting infrastructure rehabilitation and procuring information technology for police stations and courts, including a radio network linking criminal justice centres to the capital; training and equipping police officers and disseminating a code of ethics for police.

Baseline data collection has also enabled programme assessment. Early reports indicate the reforms have triggered behavioural changes in police and that trust between targeted communities and police has increased.

Source: UNDP (120)

### Police reform

A police service that has strong community support and is capable of maintaining security can play a major role in facilitating lasting economic, social and political development (121). **Community policing** (see Section 4.2.4) aims to make policing more responsive and accountable to local communities. When implemented appropriately, it is an important strategy to prevent violence. In low- and middle-income countries, international agencies are working with governments to reform police processes and to promote community policing. For example, in Jamaica, in 2006 the United States Agency for International Development (USAID) **Community Empowerment and Transformation (COMET)** project was established to strengthen relationships between police and communities (122). Meanwhile, police reform in post-conflict countries has been supported by the UN Police through activities to restore and promote security, public safety and the rule of law.

### Judicial reform

Fair and effective judicial systems require an independent and professional judiciary, appropriate laws and legal procedures and effective penal systems, including where appropriate, community level traditional dispute resolution systems (123, 124). The World Bank and other international agencies play a key role in providing financial and technical assistance for judicial reform in low- and middle-income countries. Three general themes have emerged as common elements in the World Bank's justice reform assistance (125):

- **Court management and performance:** projects have supported efforts to improve service delivery by strengthening court performance, for example, through introducing case management systems.
- **Access to justice:** projects have aimed to improve the ability of citizens and communities to use courts and other justice services to speed up community conflict resolution, for example, through activities that support community-based or court-annexed alternative dispute resolution.
- **Legal information and education:** development activities have focused on capacity training and building, for example through induction courses and continuing education for judges.

## Prison reform

Prison reform should take into account the needs of the criminal justice system as a whole, and should not be carried out in isolation from broader criminal justice reform (123). The UN Office on Drugs and Crime (UNODC) provides technical assistance on prison reform across four thematic areas:

- **Pre-trial detention:** important elements include improving access to justice, supporting legal and paralegal aid programmes, improving information management and cooperation between courts and prisons, and helping to develop safeguards for pre-trial detainees such as independent monitoring and inspection mechanisms.
- **Prison management:** for example the reform of national prison legislation, training programmes for prison managers and staff (for example, to apply international standards and norms in their daily practice), and contributing to the institutional capacity building of prison administrations.
- **Alternative measures and sanctions:** including introducing and implementing non-custodial sanctions and measures (see Box 12).
- **Social reintegration:** supporting social reintegration of prisoners, for example, programmes that involve prisoners in purposeful life-developing activities so they can reintegrate more easily into society.

### BOX 12

#### Reforming juvenile justice systems

In many criminal justice systems, children are dealt with as adults during sentencing. They are also housed with adult prisoners which puts them at risk of abuse (123). A restorative justice system for children and young people is required. All parties that contribute to its development need to agree that the goal of the process is to restore the offenders to their communities. In some countries, mediated community discussions and meetings (which involve the victim) have reported success in reducing offending behaviour (126).

## Firearm injury prevention measures

### 4.2.7 School-based safety education

Programmes to educate children about firearm safety and violence must be properly designed and evaluated to ensure that they do not result in increases in violence or firearm use, for example, by enhancing the allure of guns for young children, or by establishing a false norm that possessing and carrying guns is normal for adolescents (111). In the USA, school-based programmes aim to reduce unintentional gun injuries through teaching safety behaviours and discouraging gun handling by children. These programmes have been found to increase knowledge about firearm safety among children in the short term (127-130). However, they have shown positive effects on behaviour in simulated but not real-life situations (127, 128). In countries with a high proliferation of small arms and light weapons, efforts have been made to integrate SALW awareness into school curriculums. For example, the South Eastern European Clearinghouse for the Control of Small Arms and Light Weapons (SEESAC) (131) and the Working Group for Weapons Reduction, Cambodia offer these awareness-raising activities (132).

Children and young people may also be exposed to violence in schools. For example, between four percent and 11 percent of US students have carried weapons (e.g. a gun or knife) on school property (133), and in other regions of the world such as Latin America, weapons are often associated with gang violence in schools (134). In countries affected by armed violence and conflict, United Nations Children's Fund (UNICEF) and other international development agencies (e.g. Plan International, an NGO that works to alleviate child poverty) have promoted efforts to tackle violence in schools through activities that make schools safer and more child friendly (135, 136).

#### 4.2.8 Community-based gun safety programmes

Community-based gun safety programmes provide information and advice to gun owners on how to store firearms safely, particularly in households with children. Programmes may also include distributing discount vouchers to purchase safe storage equipment (e.g. lock boxes). In addition, some initiatives attempt to reduce the number of households with guns through promoting alternative security strategies (e.g. security lighting, alarm systems, dead-bolt locks). Programmes have been delivered in a variety of settings, including clinics (137, 138), public spaces (139) e.g. shopping malls, and in the community as a whole through media campaigns (140) e.g. television and radio.

However, all programmes deliver similar messages: any firearms kept in the home need to be locked up, preferably in a secure box and out of the reach of children. The outcomes of community-based gun safety programmes have been mixed. There have been some positive effects reported on safe storage practices (139, 141) (see Box 13), but some evaluations report little or no overall effect (137, 138, 140). Furthermore, these initiatives have been found to be ineffective in decreasing gun ownership levels (137, 138).

### BOX 13

#### Gun safety storage programme

In the southwestern US, a firearm safety programme was implemented in a medical clinic setting, targeting patients who owned a gun. Their physician offered patients a brief counselling session by explaining the dangers of keeping loaded or unlocked firearms in the home, and encouraged them to store guns in a locked cabinet away from children. In addition, participants were offered a brochure called “Keep your family safe”, which provided information on how to reduce the risks associated with firearms. After two to three months, the initiative was evaluated and showed that people taking part in the intervention were three times more likely than a control group to make safe changes in the ways they stored their firearms (e.g. stored unloaded guns, locked up guns, stored guns away from children).

*Source: Albright & Burge (142)*

The safe home storage of firearms can also be encouraged through distributing free-of-charge gun safety equipment such as lock boxes and trigger locks. One initiative in Alaska, USA, distributed these items to 40 households selected because the primary home owner had at least two guns and no gun safe. Safes were installed and trigger locks were demonstrated. Household participants were advised to keep keys stored safely away, and written gun storage safety material was provided. Three months after delivery, 86 percent of gun safes had guns securely locked inside, and 78 percent of households had safely secured all guns in the house. However, trigger locks were not as well received; only 30 percent of the distributed locks were being used (143).

#### 4.2.9 Hospital-based violence prevention programmes for youths

For adolescents, there are now hospital-based programmes that teach the physical and emotional consequences of gun violence. Activities vary between programmes, but in general, young people are invited to a trauma centre where they view images of gunshot injuries, watch and take part in dramatizations of young firearm victims being treated in the emergency department, and discuss the effects of death by firearms on friends and family. There is little quality research evaluating these types of programmes, but the US-based **Cradle to Grave programme** (see Box 14) reported promising effects in terms of improving adolescent attitudes towards guns and violence. Other programmes have reported positive effects on attitudes towards violence (144), but not for gun violence specifically.

## Cradle to Grave violence prevention programme

In the US city of Philadelphia, the hospital-based programme “Cradle to Grave” was developed to address the rising levels of young firearm victims being treated at the hospital. Youths aged from 13-15 from low-income and working class backgrounds were invited to take part in a two-hour programme held in the emergency department. The young people followed the past treatment of a young gunshot victim, from the time he entered the trauma department, through the failed attempts at resuscitation, until his death. This was accompanied by education about inner-city violence, photographs of the effects of gunshots, and discussions around the questions “who would you die for?” and “how much is your life worth?” An evaluation of the programme found that it was effective in improving attitudes towards guns and violence. It was also particularly valuable in diminishing the belief that violence is the only effective way for people to repair damaged self-esteem.

*Source: Goldberg et al. (145)*

### 4.2.10 Public education and awareness campaigns

Public education and awareness campaigns have often been used to increase understanding of the risks and impacts of firearm-related violence. In the USA, programmes have focused on increasing awareness of gun safety in homes (146, 147) and in Serbia on bringing about changes in attitudes to gun possession and safety (148). In post-conflict countries, campaigns to promote public awareness about the dangers of small arms have often been delivered as part of disarmament strategies, for example to support weapons collection in Cambodia (88) (see Section 4.2.2).

Campaigns have also been used to challenge concepts of masculinity often associated with power, bravery and status. For some individuals, violence is used as a way of affirming masculinity and gaining respect and control where it would otherwise be lacking. Firearms can play an important role in this, because in many cultures they are symbols of status, power, and self-protection (24). Programmes to counter this type of thinking are rare, but some promising initiatives have been implemented to challenge traditional concepts of masculinity and violence generally in South Africa (149), Brazil (150) and India (151).

In South Africa, the **Soul City** campaign uses a series of radio and television programmes, newspapers and information booklets to address a range of social problems, including relationships and interpersonal conflict. The impact on armed violence has not been examined in these activities, but the campaign has been associated with positive changes in knowledge and attitudes towards violence against women (149). In Brazil, the **Choose gun free! It's your weapon or me** campaign specifically targeted gun violence (see Box 15).

## Brazil's 'Choose gun free! It's your weapon or me' campaign

In Brazil, the campaign **'Arma Não! Ela Ou Eu' (Choose gun free! It's your weapon or me)** targeted women, and aimed to make men with guns less attractive, as well as mobilize women around the concept of disarmament. The campaign involved well-known and respected female music and television celebrities presenting radio and television public service announcements to increase awareness of armed violence, and to humorously link the use of firearms with sexual performance. Campaign messages included “A good man is one who does not expire before his time”, and “Guys who use guns must have a little problem”. The organizers hoped that women would use arguments and evidence from the campaign to persuade their male partners to disarm. There are no formal evaluations, but the campaign was considered successful in creating female support for disarmament.

*Source: Small Arms Survey (24)*

## Comprehensive community-based approaches

### 4.2.11 Public safety and community security programmes

Many armed violence and reduction programmes use community-based collaborative approaches to reducing violence in high-crime communities rather than focusing on individuals. The community approaches are comprehensive and combine a range of prevention strategies to address risk factors for violence (152). They work with law enforcement and criminal justice agencies and social and community organizations to target youth crime and violence. Key objectives are to enhance both the presence and reputation of the police, and to increase public perceptions of safety in communities (153). Community-based initiatives can reduce violence, including armed violence, but they require an enabling national policy and regulatory environment in order to be sustained.

It is key for these community-based approaches to build the capacity of governments and the criminal justice system (see Section 4.2.6) to engage in developing and implementing violence prevention programmes. In Jamaica, this approach played an important role in developing local security and development plans through the UNDP-supported Jamaica Violence Prevention, Peace and Sustainable Development Programme.

In the USA, a national initiative called **Project Safe Neighbourhoods (PSN)** has focused on creating partnerships between law enforcement and criminal justice agencies, and other organizations including local government, schools and social services. Based on approaches used elsewhere – **Operation Ceasefire** and **Project Exile** (see Sections 4.2.4 and 4.2.5) – the PSN programme aims to reduce firearms violence through enforcement, deterrence and prevention (154).

In Chicago, PSN brought together law enforcement with community-based agencies to deliver a programme that included law enforcement strategies concentrating on high-risk offenders; community- and school-based prevention programmes; community outreach and media campaigns; and offender notification forums to increase communication between authorities and people either involved in or on the verge of violence (155). Evaluation of the law enforcement strategies and the offender notification forums suggest that the programme has reduced neighbourhood crime rates including homicide, with the offender notification forums having the greatest effect (156).

In Latin America and the Caribbean, comprehensive community safety programmes have been implemented in various cities (see Boxes 16 and 17). In addition to addressing firearms violence directly through law enforcement, programmes in middle- and low-income countries have also more broadly addressed the political, economic and social drivers of violence, for example through improving basic services and infrastructure such as education. In Port-au-Prince, Haiti, Viva Rio (a Brazilian NGO) has implemented a range of violence reduction initiatives that support both security and development (see Box 18).

### ***Barrio Seguro (Neighbourhood Security), Dominican Republic***

Capotillo is one of Santo Domingo's highest crime and drug-trafficking areas. In August 2005 a pilot programme, Barrio Seguro, was implemented there with the aim of reducing and preventing violence. Key interventions implemented included:

- increased police patrols in crime 'hot spots';
- the addition of specially trained police patrols;
- situational crime prevention measures, for example, street lighting and new public recreational areas;
- investments that targeted young people, such as building new classrooms in schools and developing cultural workshops and sports clinics;
- general prevention programmes including literacy and civic education programmes.

During the first two months of the programme, assaults and robberies declined by 85 percent, and during an eight-month period, a 70 percent reduction in homicides was noted. The programme has since been copied and implemented in other neighbourhoods within the city.

*Source: UNODC (25)*

### ***Fica Vivo!, Brazil***

In Brazil, the Fica Vivo! ('Stay Alive') programme is a comprehensive community programme with the primary objective of reducing homicides. Based largely on Boston's Operation Ceasefire initiative, it targets at-risk youths, and combines problem-oriented and 'hot-spot' policing with extensive activities for young people (e.g. art, sports and culture workshops). In doing so, the programme aims to improve coordination between law enforcement and social service providers.

Meanwhile, in the Brazilian city of Belo Horizonte a pilot programme was implemented in the Morro das Pedras district, one of the city's most violent areas. Between 1997 and 2001, Belo Horizonte experienced a steep rise in the number of homicides, and analysis revealed that most crime was concentrated in a few areas of the city. Analysis of Fica Vivo! is still at a preliminary stage, but it shows that since it started the number of homicides, attempted murders and robberies within Morro das Pedras has fallen; a 47 percent reduction in the homicide rate occurred in the first five months of the programme (157).

## Viva Rio's security and development programme in Haiti

To help the situation in Haiti, Viva Rio drew on its experience of renewal in slums and cities in Brazil. It has now implemented an integrated approach to promote security and development in Haiti's capital, Port-au-Prince through the activities shown below.

### Security

- Peace accords and lotteries
- Bel Air Vert campaign\*
- Sports and citizenship
- Youth networks and street culture, including child soldier reintegration

### Development

- Water, women and health
- Solid waste management
- Alternative energy
- School communities

The peace accords and lotteries are key components to facilitate peace agreements within existing local power structures (158). One-year school scholarships and other incentives can be won by communities for each month that passes without a violent death. For every two to three months without serious violence, a peace celebration is organized.

Homicides have decreased since the programme started, but it is too early to determine if it has had a specific impact on violence. However, the model developed by Viva Rio has been described as innovative, and serves as an example of south-south collaboration to promote security and development in countries affected by armed violence (158).

*\* The Bel Air Vert (green) campaign aims to change perceptions of the Bel Air suburb and ultimately change its status with the UN from 'red' (highly dangerous) to 'green' (safe) classification. In addition to highlighting data showing reductions in homicide, social activities have included a community petition and the planting of 30,000 saplings in a nursery that is managed by local residents and schools.*

In the USA, the **Chicago CeaseFire Program** was based on a 'public health approach' to violence prevention (159). It combined elements of the gang prevention model (see Section 4.2.12) and Boston's Operation Ceasefire (see Section 4.2.4). The programme targeted small numbers of high-risk individuals, typically gang members with a history of offending and involvement in drug markets. The programme was based on six key strategies: client outreach to engage them with support services; mediating conflicts between gangs; clergy involvement; community mobilization; public education; and, law enforcement. Results were reported as mixed, but more positive than negative. The number of actual and attempted shootings was reduced. However, law enforcement officers were reluctant to share information with project staff, and the law enforcement components of the programme were not delivered as intended. The programme is continuing in Chicago and the approach has since been copied and implemented in Baltimore (**Safe Streets Program**) (160) and in other US cities.

Broader community security and peacebuilding initiatives aim to defuse community violence by encouraging communities to talk about their differences, resolve them in non-violent ways, and improve community cohesion. International agencies have supported these initiatives in different urban and rural settings in low- and middle-income countries. For example, in Jamaica, the **Peace Management Initiative** (PMI) was created in 2002 to address high rates of inner city homicides.

In locations where killings and shootings occurred, PMI used volunteer staff to liaise with inner city communities to provide mediation and conflict resolution services. Once a ceasefire had been agreed, additional interventions were developed to build skills and community cohesion and to promote peace. These included counselling sessions, life-skills training, theatre programmes, a radio station, a dance hall intervention and other cultural activities (161). There have been no formal evaluations of the initiative, but UNICEF has called the work "innovative and promising" (162).

In Kenya, the **Garrisa Project**, is a pilot armed violence and small arms reduction venture supported by the UNDP that focuses on forming and strengthening community peacebuilding and conflict management initiatives in pastoral communities (163) (see Box 19).

**BOX 19**

### The Garrisa Project, Kenya

The overall objective of the Garrisa project is to reduce violence in pastoral conflicts in Kenya. The scheme seeks to enhance the capacity of local mechanisms to reduce violence and engage in peacebuilding; and to foster development. Major activities of the pilot programme have included:

- forming and strengthening district, divisional and local peace committees;
- establishing and developing the capacity of women's peace forums;
- developing skills in peacebuilding and conflict management;
- improving weapons stockpile management and collecting and destroying illicit small arms;
- developing water resources and livelihood improvement.

A comprehensive review of the project showed it had dealt with the root causes of tensions, armed violence and general lack of peace and security in the district, with the result that violent conflict was reduced. The project has since been expanded to cover additional districts in Kenya.

*Source: UNDP Kenya (163)*

#### 4.2.12 Approaches to addressing gang violence

Throughout the world, youth gangs are strongly associated with violent behaviour and the use of firearms. Initiatives that address gang-related violence, encourage gang members to find alternative lifestyles, and prevent young people from joining gangs, are often important parts of armed violence prevention. Globally, a variety of different strategies have been used to address youth gangs and related violence, many of which are included in this document. Approaches range from zero tolerance enforcement activity towards gangs (164) in El Salvador, Guatemala, and Honduras; to community policing (see Section 4.2.4) and interventions such as education programmes, peer mentoring and youth outreach services.

**Community orientated, multi-strategy interventions** that incorporate law enforcement initiatives have shown some success in reducing gang violence. For example, the US-based Office for Juvenile Justice and Delinquency Prevention's comprehensive gang prevention and intervention model has been tested at programme sites across the USA. It has reported some successful, although sometimes mixed, findings (165). Based on US models, five key strategies for tackling gang-related violence have been identified:

1. Community mobilization: involving local citizens, youth, community groups and agencies in creating and coordinating new opportunities for gang-involved or at-risk youth.
2. Social intervention: providing services (via youth agencies, schools, grassroots groups, etc.) to gang-involved and at-risk youth and their families, and using outreach workers to engage youth.
3. Opportunity provision: providing access to a variety of specific education, training and employment programmes or services targeting gang-involved or at-risk youth.
4. Suppression: conducting suppression activities via formal and informal social control procedures, including close supervision and monitoring of gang-involved youth by criminal and juvenile justice agencies, community-based organizations, schools, and grassroots groups.
5. Organizational change and development: developing and implementing policies and procedures that result in the most effective use of available and potential resources.

The US **Operation Ceasefire** model (see Section 4.2.4) has also shown some success in reducing violence associated with gangs.

On the other hand, **'zero tolerance'** strategies that focus solely on repressing and incarcerating gang members have not been successful enough in preventing or reducing youth gang problems (28, 164). In fact, in Central America a review of gangs and violence reduction concluded that aggressive repression approaches appear to have made the problem worse, by increasing violence and potentially pushing gang members towards more organized forms of criminal behaviour (166). The review also suggested that successes through 'gang-friendly' approaches involving interventions such as voluntary weapons amnesties, education and engagement activities targeting at-risk youth, and making environmental improvements in slums have had only minimal impacts in reducing violence in Central America. These measures have been based on evidence of success elsewhere. However, the authors noted that the Central American situation possibly required much larger social and economic investments dealing with gang members' social exclusion, inequality and a lack of employment opportunities.

## 4.3 Indirect intervention approaches

### 4.3.1 Strengthening relationships between children and caregivers

Safe, stable and nurturing relationships with parents and other caregivers are central to a child's healthy development. If children lack these stable relationships, or if they are disrupted, the children often end up being 'at risk' of antisocial behaviour and perpetration of violence later in life (167). Programmes that can improve parent-child relationships include parent training and parent and child initiatives:

- **Parent training programmes** focus on increasing parental skills and abilities. They offer information and advice on issues such as parental health, child development and how to successfully handle a child's behaviour. They also strengthen parents' capacity to adapt to the changing needs of the child. There is strong evidence that parenting programmes can improve children's emotional and behavioural problems both in the short and longer term (e.g. the **Triple P: Positive Parenting Program**, (168) and the **Nurse Family Partnership**,(169)).
- **Parent and child programmes** offer parental training alongside a range of other services, such as early child education, child care, and health and social support for families. The objectives are normally wide-ranging, including, for instance, promoting children's academic success, encouraging parental involvement in their child's education, improving maternal health, encouraging child development and providing parental support and education. Two of the better-known parent and child programmes are **Early Head Start** and the **Chicago Child-Parent Center** programme, both of which have been associated with reducing children's aggressive behaviour (170, 171).

### 4.3.2 Life skills and social development

Developing children's life skills and increasing their prospects in education and employment can help protect them from violence. Interventions to provide life skills and social development often focus on improving children's social and emotional competencies. They are taught how to deal effectively and non-violently with conflict, and helped to finish their schooling and find employment. The 'lessons' are often delivered in school or pre-school settings:

- **Pre-school enrichment programmes** prepare children for school by providing them with academic and social skills at an early age, including language development, increased self-esteem, problem-solving skills, empathy and literacy and numeracy. High quality programmes that target deprived populations can have positive impacts on children, including reduced involvement in violence and improved educational and employment achievements (172).

- **Social development programmes** promote positive social behaviour in children and aim to prevent aggressive conduct. They teach social skills including anger management, moral development, empathy, developing and maintaining healthy relationships, problem-solving and conflict resolution. There is strong evidence these programmes are effective. The evidence shows that well-implemented programmes improve social skills and reduce aggression in young people (172).

Most evidence of the effectiveness of life-skills and social development programmes comes from developed countries, but they are increasingly being used in low- and middle-income countries (see Box 20).

**BOX 20**

### Life-skills training in Colombia

In 1993, the Ministry of Health in Colombia commissioned the NGO Fe Y Alegria (Faith and Joy) to develop and pilot a life-skills training programme for schools, based on WHO's life-skills education materials (173) adapted to the situation in Colombia.

The programme covered violence prevention and alcohol and tobacco use, and aimed to approach these problems through developing young people's interpersonal skills and meeting their social and emotional needs. It was to be particularly targeted at marginalized youth. The initial programme had three main themes: expressing and managing feelings; assertiveness; and managing conflict. This has since been expanded to include critical thinking and decision-making skills. The programme also included a training component for teachers to enable them to deliver the curriculum. The teacher training covered theories of adolescent psychology, the course curriculum and teaching methods. Teachers were also taught to provide teacher training to other teachers.

In primary schools, the life-skills training programme was conducted as part of the standard curriculum, and taught for two hours per week. The impact of the pilot project was not fully evaluated, but interviews with both teachers and parents revealed they felt their children's behaviour improved; they were more polite, attended school more often, and reduced their aggression in the classroom. In 1999, the life-skills training programme materials were circulated more widely to schools in Colombia.

These programmes have also been developed and implemented in several other countries in Latin America and the Caribbean (174).

#### 4.3.3 Academic enrichment programmes

Academic enrichment programmes aim to improve children's academic achievement and school involvement by supporting their studies and offering recreational activities outside normal school hours. By improving academic achievement and reducing truancy, they have the potential to protect against violence. Studies evaluating the impacts of academic enrichment programmes on violence have reported mixed findings (172). However, some positive effects have been associated with the Open Schools Programme implemented in Brazil (see Box 21).

**BOX 21**

### The Open Schools Programme in Brazil

The Open Schools initiative promotes human development through a culture of peace, and by providing the community with education and access to facilities they find useful (175). Public schools open at the weekend to enable community members to take part in educational, cultural, sports and training activities. During school hours, school gates that were previously locked are now open. A preliminary evaluation of Open Schools suggests it has had a positive effect on levels of violence. Schools and the surrounding areas reported that violence committed against other individuals or against school property and equipment had dropped. Other positive outcomes include a reduction in breaches of school discipline in São Paulo, and in Rio de Janeiro the belief among both educators and students that the programme had helped make the school environment more peaceful.

#### 4.3.4 Mentoring programmes

In mentoring programmes a caring adult is paired with a young person to provide guidance, either with the general goal of promoting positive youth development, or through focusing on education or employment goals. Mentoring programmes can be stand-alone or implemented as one component of a youth development programme. There is evidence that mentoring programmes offer modest benefits, and at-risk youth appear most likely to benefit from participation (176). However, findings are often mixed (177), and poorly implemented programmes may have an adverse effect on at-risk youth. One of the more widespread, better known peer mentoring programmes is the **Big Brothers/Big Sisters of America (BB/BSA)**, which has reported some positive improvements in youth behaviour (178, 179).

#### 4.3.5 Reducing access to and harmful use of alcohol

Globally, 30 percent of violent deaths are related to alcohol, ranging from 8 percent in the Middle East and North Africa to 56 percent in Europe and Central Asia. Studies across the world have shown that alcohol use commonly precedes aggressive behaviour, and that harmful drinking is associated with being both a perpetrator and a victim of violence. Consequently, measures to reduce the availability and harmful use of alcohol can work to reduce violence (180). These can include:

- **Regulating alcohol availability** by restricting hours of sales or reducing the density of alcohol outlets. In Brazil, restricted hours of alcohol sales have been associated with reduced homicide levels (see Box 22).
- **Raising alcohol prices**, for example, through increased taxes, state monopolies or establishing minimum prices. Few studies have examined the effectiveness of such measures, but estimates suggest that alcohol price increases would reduce violence. However, both regulatory and pricing measures can be complicated in societies that have large informal alcohol economies outside of state control.
- **Brief interventions and treatment for alcohol dependence** may reduce violence. Brief interventions to moderate alcohol use by non-dependent drinkers have been tested in a wide range of countries.
- **Community interventions to improve drinking environments** - a combination of community mobilization, responsible beverage service training and strict enforcement of legislation can reduce violence in drinking environments.

### BOX 22

#### Reducing alcohol service hours in Brazil

In the city of Diadema, Brazil, the law on the sale of alcohol was changed in 2002 so that alcohol retailers could not sell alcohol after 11p.m. at night. Before that date, an estimated 60 percent of murders took place in areas with high numbers of drinking establishments. A review of the new law estimated it reduced homicides by almost nine per month. This represented a 44 percent reduction from expected levels and prevented an estimated 319 homicides over three years (181, 182).

#### 4.3.6 Environmental and urban design

Most of the world's people now live in urban centres (2). Rapidly urbanizing areas often experience a convergence of several key risk factors for violence, for example, overcrowded living conditions, limited or unequal service coverage, perceptions of inequality across groups, and young people frustrated by the lack of social and economic opportunities (183). Therefore, urban areas are a key focal point for violence prevention programmes.

Crime prevention through environmental design is an essential approach that recognizes that violence is often related to 'place' and 'space'. This approach focuses on upgrading physical structures and instituting environmental renewal programmes. For example, in Kenya, Adopt-A-Light is a slum and street lighting initiative that has improved security in the slums of Nairobi (184). UN-Habitat's Safer Cities programme was launched in 1996 to address urban crime and violence in African cities, but has since expanded its activities across middle- and low-income countries. Safer cities' activities are designed to promote good urban city governance by targeting crime prevention through environmental design, social prevention and by supporting new and alternative forms of justice (see Section 4.2.6).

#### 4.3.7 Disrupting illegal drug markets

A wide range of evidence links firearms to the presence of, and people's involvement in, illegal drug markets (185). Illegal drug markets lack formal controls and therefore violence can play a major role in solving disputes, sanctioning informers, and protecting territory and profits. Firearms are widely used by people involved in drug markets, both to commit violent acts and for self-protection. The huge profits associated with illegal drug markets can make them attractive, particularly in societies with high levels of unemployment and inequality. Violence is also associated with the effects of drugs, and with crimes committed by users in order to acquire more drugs (186). Measures to disrupt the illegal drug trade and reduce demand for drugs should therefore help lessen the need for and availability of firearms.

There are strong links between firearms violence and illegal drug markets, but there is little published evidence to demonstrate effective ways to disrupt these markets and to reduce related violence. Experience from Latin America has suggested that aggressive, repressive approaches can serve to make the violence worse (186). Elsewhere, researchers have noted the resiliency of drug markets; police crackdowns have shown only short-lived impacts, and have created displacement and negative impacts on public health (187).

Reviews have identified a need for broader approaches that involve a range of agencies, incorporate community involvement and are responsive to the needs of local drug-using populations, for example by increasing treatment services for drug users. In the US, Operation Ceasefire in Boston (see Box 10, Section 4.2.4) and similar projects have combined enforcement activity with communication between police and violent gang members (many of whom are involved in illegal drug markets) and the offer of social support. These measures have been reported as being successful in reducing violence, but their impact on drug use is unknown.

#### 4.3.8 Programmes to reduce inequalities

There is growing evidence that poor social policies, unfair economic arrangements and 'bad' politics create inequalities between and within countries (188). Inequality between groups in society is an important risk factor for violence (189). The WHO Commission on Social Determinants of Health recommends three principles of action for closing the health gap in a generation:

- 1. Improve daily living conditions:** Improve the well-being of girls and women and the circumstances in which their children are born; strongly emphasize early child development and education for girls and boys; improve living and working conditions, create inclusive social protection policy; and create conditions for people to have a flourishing life in their older years. Policies to achieve these goals will involve civil society, governments, and global institutions.
- 2. Tackle the inequitable distribution of power, money and resources:** In order to address health inequities and unfair conditions of daily living, it is necessary to address inequalities (such as those between men and women) in the way society is organized. This requires a strong public sector that is committed, capable, and adequately financed. Achieving this also requires more than strengthened government – it requires strengthened governance: legitimacy, space, and support for civil society, an accountable private sector, and for people across society to agree on what constitutes public interests, and to reinvest in the value of collective action. In a globalized world, the need for governance dedicated to equity applies equally at community and global levels.

**3. Measure and understand the problem and assess the impact of action:** Acknowledging that there is a problem, and ensuring that health inequity is measured – within countries and globally – is a vital platform for action. National governments and international organizations, supported by WHO, should set up national and global health equity surveillance systems to routinely monitor health inequity and the social determinants of health, and should evaluate the health equity impact of policy and action. Creating the organizational space and capacity to act effectively on health inequity requires investment in training policy-makers and health practitioners, and public understanding of the social determinants of health. It also requires a stronger focus on social determinants in public health research.

Development programmes that primarily aim to reduce inequalities by improving access to education and health services and reducing poverty, are likely to also have benefits for armed violence prevention. These indirect programmes often contain elements, or can be modified to include elements, that address the risk and protective factors for, and consequences of, armed violence.

The OECD provides indicative examples of how programmes that target health and education can be adapted to include armed violence reduction components (2) (see Box 23). In this context, it is critical to ensure that area-based development can respond to mapped inequalities. This concept is directly linked to the third recommendation of the WHO Commission on Social Determinants of Health. The success of programmes that address the link between inequalities and armed violence is yet to be directly evaluated. However, since some of the key risk factors for violence such as poor parenting, low academic achievement and poor social skills are also strongly linked to inequalities, it is likely that measures to reduce inequality will have important positive impacts on levels of violence.

**BOX 23**

### **Health and education: examples of armed violence reduction components**

Components include:

- education and public health-related efforts (at all levels) to raise awareness of the costs and impacts of armed violence, landmine risk, cultures of violence, negative gender relations, gender-based violence, humans rights issues and benefits of a culture of peace;
- programmes to ensure the equal access of girls to schooling and to prevent them from dropping out;
- assistance to armed violence victims, including outreach to victims of domestic and gender-based violence;
- ensuring safe access to, and delivery of, education and health services to areas and populations that are excluded, and/or experiencing/at risk of armed violence;
- education- and health-related programmes that encourage social cohesion and community development;
- early childhood education and development of primary school curricula that encourage non-violent resolution of disputes;
- programmes to improve the educational prospects for at-risk children and youth, especially activities likely to result in viable employment;
- health and education programmes to reduce and prevent domestic violence and gender-based violence;
- developing public health systems' capacities for violence and crime reporting (data collection, analysis, reporting);
- developing public health systems' capacities and outreach to improve their reporting of domestic and gender-based violence;
- reforming education curricula to nurture a culture of peace, gender equality, respect for people's differences, peacebuilding and social inclusion.

Source: OECD (2)

## 5. Conclusions

The promising and emerging evidence on preventing armed violence gathered together in this briefing paper helps identify significant improvements in understanding prevention and offers several important areas for consideration.

There is a lack of evidence from middle- and, in particular, low-income countries on preventing armed and other violence. This is despite the fact that these countries suffer disproportionate levels of violence. This needs to be urgently addressed through boosting monitoring and evaluation capacity. In cases where supportive evidence has emerged (e.g. in Latin America and the Caribbean) successful armed violence reduction has been based on developing robust surveillance systems. Investment in these systems is a fundamental part of creating targeted armed violence prevention strategies.

Most of the existing evidence base has come from a few high-income countries. This makes it important to consider issues associated with the 'transferability' of measures. However, there are some consistent themes already emerging that suggest multisectoral approaches with national and local ownership and support offer the best chances of success. A systems approach should include a common strategy across health, security, justice and education sectors, with active participation from civil society and community organizations. Even at the community level, implementing and sustaining these approaches requires investment in institutional capacity, infrastructure and governance. International agencies can play a major role in these developments.

The World Health Organization has identified ten key prevention strategies that address the underlying risk factors for violence in general. These strategies can potentially contribute to reducing armed violence (see Box 24). Approaches to address armed violence need to recognize the cultural and environmental components that contribute to developing violent individuals and societies. The determinants of violence routinely include underlying structural, social and economic factors such as inequalities, lack of jobs, poverty, weak criminal justice systems and norms that support violence. Attempts should be made to better understand relationships between these factors and armed violence and to ensure that broader development programmes address them.

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BOX

### Promising strategies for reducing the incidence and effects of violence

Strategies include the need to:

1. increase safe, stable, and nurturing relationships between children and their parents and caregivers;
2. reduce availability and abuse of alcohol;
3. reduce access to lethal means of violence;
4. improve life skills and enhance opportunities for children and youth;
5. promote gender equality and empower women;
6. change cultural norms that support violence;
7. improve criminal justice systems;
8. improve social welfare systems;
9. reduce social distance between conflicting groups;
10. reduce economic inequality and concentrated poverty.

Source: WHO (190)

## References

- 1 *Promoting development through the reduction and prevention of armed violence: resolution / adopted by the General Assembly, 16 December 2008, A/RES/63/23*. United Nations General Assembly, 2008 (<http://www.unhcr.org/refworld/docid/496e021f2.html>, accessed 22 March 2010).
- 2 *Armed violence reduction: enabling development*. Paris, OECD, 2009.
- 3 Obermeyer Z, Murray CJL, Gakidou E. Fifty years of violent war deaths from Vietnam to Bosnia: analysis of data from the world health survey programme. *BMJ*, 2008, 336:1482-1486.
- 4 Spagat M et al. Estimating war deaths. *Journal of Conflict Resolution*, 2009, 53:934-950.
- 5 *The world health report 2001*. Geneva, World Health Organization, 2001.
- 6 *Global burden of armed violence*. Geneva, Geneva Declaration Secretariat, 2008.
- 7 Richmond TS, Cheney R, Schwab CW. The global burden of non-conflict related firearm mortality. *Injury Prevention*, 2005, 11:348-352.
- 8 *Disease and injury regional estimates for 2004*. Geneva, World Health Organization, ([http://www.who.int/healthinfo/global\\_burden\\_disease/estimates\\_regional/en/index.html](http://www.who.int/healthinfo/global_burden_disease/estimates_regional/en/index.html), accessed 25 March 2010).
- 9 *International Homicide Statistics (IHS)*. Vienna, UNODC, 2008 (<http://www.unodc.org/unodc/en/data-and-analysis/ihs.html>, accessed 22 March 2010).
- 10 Annett JL et al. National estimates of nonfatal firearm-related injuries. Beyond the tip of the iceberg. *JAMA*, 1995, 273:1749-1754.
- 11 Carrillo EH et al. Spinal cord injuries in adolescents after gunshot wounds: an increasing phenomenon in urban North America. *Injury*, 1998, 29:503-507.
- 12 DiScala C, Sege R. Outcomes in children and young adults who are hospitalized for firearms related injuries. *Pediatrics*, 2004, 113:1306-1312.
- 13 Harrison-Felix C et al. Brain injury as a result of violence: preliminary findings from the traumatic brain injury model systems. *Archives of Physical Medicine and Rehabilitation*, 1998, 79:730-737.
- 14 Bryant RA et al. The psychiatric sequelae of traumatic injury. *The American Journal of Psychiatry*, 2010, 167:312-320.
- 15 Slovak K, Singer M. Gun violence exposure and trauma among rural youth. *Violence and Victims*, 2001, 16:389-400.
- 16 Buka SL et al. Youth exposure to violence: prevalence, risks and consequences. *American Journal of Orthopsychiatry*, 2001, 71:298-310.
- 17 Zinzow HM et al. Witnessed community and parental violence in relation to substance use and delinquency in a national sample of adolescents. *Journal of Traumatic Stress*, 2009, 22:525-533.
- 18 Lynch M. Consequences of children's exposure to community violence. *Clinical Child and Family Psychology Review*, 2003, 6:265-274.
- 19 Felitti VJ et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, 1998, 14:245-258.

- 20 Thurnherr J et al. Youths carrying a weapon or using a weapon in a fight: what makes a difference? *Health Education Research*, 2009, 24:270-279.
- 21 Walker A et al. *Crime in England and Wales in 2008/09*. London, Home Office, 2009.
- 22 Paniagua I et al. Wounds caused by firearms in El Salvador, 2003-2004: epidemiological issues. *Medicine, Conflict and Survival*, 2005, 21:191-198.
- 23 Allard D, Burch VC. The cost of treating serious abdominal firearm-related injuries in South Africa. *South African Medical Journal*, 2005, 95:591-594.
- 24 Small Arms Survey. *Small Arms Survey 2006: unfinished business*. Cambridge, Cambridge University Press, 2006.
- 25 United Nations Office on Drugs and Crime, The World Bank. *Crime, violence, and development: trends, costs, and policy options in the Caribbean*. A joint report by the United National Office of Drugs and Crime (UNODC) and the World Bank, 2007.
- 26 *The security challenge in conflict-prone countries. Conflicts challenge paper*. Copenhagen, Copenhagen Consensus Centre, ([http://www.humansecuritygateway.com/documents/CP\\_Collier\\_securitychallengeinconflictpronecountries.pdf](http://www.humansecuritygateway.com/documents/CP_Collier_securitychallengeinconflictpronecountries.pdf), accessed 22 March 2010).
- 27 Livingston M. A longitudinal analysis of alcohol outlet density and assault. *Alcoholism: Clinical and Experimental Research*, 2008, 32:1074-1079.
- 28 Mercy JA et al. Youth violence. In: Krug EG, Dahlberg L, Mercy JA, Zwi AB, Lozano R eds. *World report on violence and health*. Geneva, World Health Organization, 2002.
- 29 Small Arms Survey. *Small Arms Survey 2008: risk and resilience*. Cambridge, Cambridge University Press, 2008.
- 30 Kingery PM, Coggeshall MB, Alford AA. Weapon carrying by youth: risk factors and prevention. *Education and Urban Society*, 1999, 31:309-333.
- 31 MacDonald JM et al. The relationship between life satisfaction, risk-taking behaviors, and youth violence. *Journal of Interpersonal Violence*, 2005, 20:1495-1518.
- 32 Lloyd JJ, Delva J, Arria AM. Recent weapon carrying and substance use among United States Virgin Islands youth. *Substance Use & Misuse*, 2000, 35:1207-1225.
- 33 Lizotte AJ et al. Factors influencing gun carrying among young urban males over the adolescent-young adult life course. *Criminology*, 2000, 38:811-834.
- 34 Kodjo CM, Auinger P, Ryan SA. Demographic, intrinsic, and extrinsic factors associated with weapon carrying at school. *Archives of Pediatric and Adolescent Medicine*, 2003, 157:96-103.
- 35 Barroso CS et al. Youth exposure to community violence: Association with aggression, victimization, and risk behaviors. *Journal of Aggression, Maltreatment and Trauma*, 2008, 17:141-155.
- 36 Orpinas P, Murray N, Kelder S. Parental influences on students' aggressive behaviors and weapon carrying. *Health Education & Behavior*, 1999, 26:774-787.
- 37 Rountree PW. Weapons at school: are the predictors generalizable across context? *Sociological Spectrum*, 2000, 20:291-324.
- 38 Prinstein MJ, Boergers J, Spirito A. Adolescents' and their friends' health-risk behavior: factors that alter or add to peer influence. *Journal of Pediatric Psychology*, 2001, 26:287-298.

- 39 House of Commons Home Affairs Committee. *Knife crime: seventh report of session 2008-09*. London, The Stationery Office, 2009.
- 40 Stein BD et al. Prevalence of child and adolescent exposure to community violence. *Clinical Child and Family Psychology Review*, 2003, 6:247-264.
- 41 Vaughn MG, Howard MO, Harper-Chang L. Do prior trauma and victimization predict weapon carrying among delinquent youth? *Youth Violence and Juvenile Justice*, 2006, 4:314-327.
- 42 Bingenheimer JB, Brennan RT, Earls FJ. Firearm violence exposure and serious violent behavior. *Science*, 2005, 308:1323-1326.
- 43 Casiano H et al. Childhood maltreatment and threats with weapons. *The Journal of Nervous and Mental Disease*, 2009, 197:856-861.
- 44 Kennedy BP et al. Social capital, income inequality, and firearm violent crime. *Social Science and Medicine*, 1998, 47:7-17.
- 45 Shenassa ED, Daskalakis C, Buka SL. Utility of indices of gun availability in the community. *Journal of Epidemiology and Community Health*, 2006, 60:44-49.
- 46 Wiebe DJ et al. Homicide and geographic access to gun dealers in the United States. *BMC Public Health*, 2009, 9:199.
- 47 Miller M, Hemenway D, Azrael D. State-level homicide victimization rates in the US in relation to survey measures of household firearm ownership, 2001-2003. *Social Science and Medicine*, 2007, 64:656-664.
- 48 Murnan J, Dake JA, Price JH. Association of selected risk factors with variation in child and adolescent firearm mortality by state. *Journal of School Health*, 2004, 74:335-340.
- 49 Laranjeira R, Hinkly D. Evaluation of alcohol outlet density and its relation with violence. *Revista de Saude Publica*, 2002, 36:455-461.
- 50 Price JH, Mrdjenovich AJ, Dake JA. Prevalence of state firearm mortality and mental health care resources *Journal of Community Health*, 2009, 34:383-391.
- 51 Zavala DE, Hazen JM. *Understanding violence: the role of injury surveillance systems in Africa*. Geneva, Geneva Declaration, 2009.
- 52 Guerrero R. *Programa Desarrollo, Seguridad y Paz, DESEPAZ de la Ciudad de Cali [Development, Safety and Peace Programme, DESEPAZ Cali City]*. Washington DC, Inter-American Development Bank, 1999.
- 53 Gutierrez-Martinez MI et al. The evaluation of a monitoring system for violent and non-intentional injury mortality in Colombian cities. *International Journal of Injury Control and Safety Promotion* 2007, 14:77-84.
- 54 Ajdacic-Gross V et al. Changing times: a longitudinal analysis of international firearm suicide data. *American Journal of Public Health*, 2006, 96:1752-1755.
- 55 Killias M, van Kesteren J, Rindlisbacher M. Guns, violent crime, and suicide in 21 countries. *Canadian Journal of Criminology*, 2001, 43:429-448.
- 56 Rosengart M. An evaluation of state firearm regulations and homicide and suicide death rates. *Injury Prevention*, 2005, 11:77-83.

- 57 Conner KR, Zhong Y. State firearm laws and rates of suicide in men and women. *American Journal of Preventive Medicine*, 2003, 25:320-324.
- 58 Kapusta ND et al. Firearm legislation reform in the European Union: impact on firearm availability, firearm suicide and homicide rates in Austria. *The British Journal of Psychiatry* 2007, 191:253-257.
- 59 Small Arms Survey. *Small Arms Survey 2009: shadows of war*. Cambridge, Cambridge University Press, 2009.
- 60 Marinho de Souza MdF et al. Reductions In firearm-related mortality and hospitalizations in Brazil after gun control. *Health Affairs*, 2007, 26:575-584.
- 61 Webster DW, Vernick JS, Hepburn LM. Effects of Maryland's law banning "Saturday night special" handguns on homicides. *American Journal of Epidemiology*, 2002, 155:406-412.
- 62 Weil DS, Knox RC. Effects of limiting handgun purchases on interstate transfer of firearms. *JAMA*, 1996, 275:1759-1761.
- 63 Webster DW et al. Association between youth-focused firearm laws and youth suicides *JAMA*, 2004, 292:594-601.
- 64 Cummings P et al. State gun safe storage laws and child mortality due to firearms. *JAMA*, 1997, 278:1084-1086.
- 65 Hepburn L et al. The effect of child access prevention laws on unintentional child firearm fatalities, 1979-2000. *The Journal of Trauma*, 2006, 61:423-428.
- 66 Webster DW, Starnes M. Reexamining the association between child access prevention gun laws and unintentional shooting deaths of children. *Pediatrics*, 2000, 106:1466-1469.
- 67 Wintemute GJ. Gun shows across a multistate American gun market: observational evidence of the effects of regulatory policies. *Injury Prevention*, 2007, 13:150-155.
- 68 Vigdor ER, Mercy JA. Do laws restricting access to firearms by domestic violence offenders prevent intimate partner homicide? . *Evaluation Review*, 2006, 30:313-346.
- 69 Vidgor ER, Mercy JA. Disarming batterers: the impact of domestic violence firearm laws. In: Ludwig J, Cook PJ eds. *Evaluating Gun Policy: Effects on Crime and Violence*. Washington DC, Brookings Institution Press, 2003.
- 70 Hahn RA et al. Firearms laws and the reduction of violence: a systematic review. *American Journal of Preventive Medicine*, 2005, 28:40-71.
- 71 Cano I. *Living without arms? Evaluation of the Arms-Free Municipalities Project: An experience in risk-taking in a risky context*. San Salvador, United Nations Development Programme, 2007.
- 72 Muggah R, Stevenson C. *On the edge: considering the causes and consequences of armed violence in Central America*. Forthcoming.
- 73 Villaveces A et al. Effect of a ban on carrying firearms on homicide rates in 2 Colombian cities. *JAMA*, 2000, 283:1205-1209.
- 74 Chapman S et al. Australia's 1996 gun law reforms: faster falls in firearm deaths, firearm suicides, and a decade without mass shootings. *Injury Prevention*, 2006, 12:365-372.
- 75 Ozanne-Smith J et al. Firearm related deaths: the impact of regulatory reform. *Injury Prevention*, 2004, 10:280-286.

- 76 Neill C, Leigh A. *Weak tests and strong conclusions: a re-analysis of gun deaths and the Australian firearms buyback*. Discussion paper no. 555. Canberra, Centre for Economic Policy Research, 2007.
- 77 Baker J, McPhedran S. Gun laws and sudden death: did the Australian firearms legislation of 1996 make a difference? . *British Journal of Criminology*, 2007, 47:455-469.
- 78 McPhedran S, Baker J. Australian firearms legislation and unintentional firearms deaths: a theoretical explanation for the absence of decline following the 1996 gun laws. *Public Health*, 2008, 122:297-299.
- 79 Lamb G. *Under the gun: an assessment of firearm crime and violence in South Africa*. Pretoria, Institute for Security Studies, 2008.
- 80 Dreyfus P et al. *Small Arms in Rio de Janeiro. The guns, the buyback, and the victims. A study by the Small Arms Survey, Viva Rio, and ISER*. Geneva, Small Arms Survey, Graduate Institute of International and Development Studies, 2008.
- 81 Cook PJ, Ludwig J. Aiming for evidence-based gun policy. *Journal of Policy Analysis and Management*, 2006, 25:691-735.
- 82 Kuhn EM et al. Missing the target: a comparison of buyback and fatality related guns. *Injury Prevention*, 2002, 8:143-146.
- 83 Romero MP, Wintemute GJ, Vernick JS. Characteristics of a gun exchange program, and an assessment of potential benefits. *Injury Prevention*, 1998, 4:206-210.
- 84 Bleetman A et al. Effect of Strathclyde police initiative "Operation Blade" on accident and emergency attendances due to assault. *Emergency Medicine Journal*, 1997, 14:153-156.
- 85 *Knife amnesty: impact on knife-enabled offences*. . London, Metropolitan Police Service, 2006 ([http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/06\\_12\\_06\\_knife\\_amnesty.pdf](http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/06_12_06_knife_amnesty.pdf), accessed 19 November 2008).
- 86 Eades C et al. *'Knife Crime'. A review of evidence and policy*. London, Centre for Crime and Justice Studies, 2007.
- 87 Godnick W. *Transforming attitudes towards the tools of violence: the Arms Exchange Program in Mendoza, Argentina*. Ploughshares Working Paper 01-5. Waterloo, Project Ploughshares, 2001.
- 88 Willie C. Finding the evidence: the links between weapons collection programmes, gun use and homicide rates in Cambodia. *African Security Review*, 2005, 15:57-73.
- 89 *Handbook of best practices on small arms and light weapons*. Vienna, Organization for Security and Co-operation in Europe, 2003.
- 90 Alpers P. *Gun-running in Papua New Guinea: from arrows to assault weapons in the Southern Highlands*. Geneva, Small Arms Survey, 2005.
- 91 Kirsten A. *Islands of safety in a sea of guns: gun-free zones in South Africa's Fothane, Diepkloof, and Khayelitsha*. Geneva, Small Arms Survey, 2006.
- 92 *The difference between a gun free and a firearm free zone*. Johannesburg, Gun Free South Africa, (<http://www.gca.org.za/Resources/InformationonGunFreeZones/tabid/1759/language/en-US/Default.aspx>, accessed 25 March 2010).
- 93 Kirsten A. *The role of social movements in gun control: an international comparison between South Africa, Brazil and Australia*. Durban, Centre for Civil Society, 2004.

- 94 Braga AA. Pulling levers focused deterrence strategies and the prevention of gun homicide. *Journal of Criminal Justice*, 2008, 36:332-343.
- 95 Skogan WG, Hartnett SM. *Community policing Chicago style*. New York NY, Oxford University Press, 1997.
- 96 Sherman LW, Eck JE. Policing for crime prevention. In: Sherman LW, Farrington DP, Welsh BC, Layton MacKenzie D eds. *Evidence-based crime prevention*. New York NY, Routledge, 2002.
- 97 Davis RC, Henderson NJ, Merrick C. Community policing: variations on the Western model in the developing world. *Police Practice and Research*, 2003, 4:285-300.
- 98 *Implementing community-based policing in Kenya*. London, Saferworld, 2008.
- 99 Cohen J, Ludwig J. Policing crime guns. In: Ludwig J, Cook PJ eds. *Evaluating gun policy*. Washington DC, Brookings Institution Press, 2003.
- 100 Ludwig J. Better gun enforcement, less crime. *Criminology and Public Policy*, 2005, 4:677-716.
- 101 Sherman LW, Rogan DP. Effects of gun seizures on gun violence: hot spots patrol in Kansas City. *Justice Quarterly*, 1995, 12:673-693.
- 102 McGarrell EF et al. Reducing firearms violence through directed police patrol. *Criminology and Public Policy*, 2001, 1:119-148.
- 103 Koper CS, Mayo-Wilson E. Police crackdowns on illegal gun carrying: a systematic review of their impact on gun crime. *Journal of Experimental Criminology*, 2006, 2:227-261.
- 104 Kennedy DM, Braga AA. Homicide in Minneapolis: research for problem solving. *Homicide Studies*, 1998, 2:263-290.
- 105 McGarrell EF et al. Reducing homicide through a "lever-pulling" strategy. *Justice Quarterly*, 2006, 23:214-229.
- 106 Tita G et al. *Reducing gun violence: results from an intervention in East Los Angeles*. Santa Monica CA, Rand Corporation, 2003.
- 107 Silvestri A et al. *Young people, knives and guns: a comprehensive review, analysis and critique of gun and knife crime strategies*. London, Centre for Crime and Justice Studies, King's College London, 2009.
- 108 Braga AA et al. *Reducing gun violence: the Boston Gun Project's Operation Ceasefire*. Washington DC, National Institute of Justice, 2001.
- 109 Fagan JA. Policing guns and youth violence. *The Future of Children*, 2002, 12:133-151.
- 110 Corsaro N, McGarrell EF. Testing a promising homicide reduction strategy: re-assessing the impact of the Indianapolis "pulling levers" intervention *Journal of Experimental Criminology*, 2009, 5:63-82.
- 111 Committee on Law and Justice. *Firearms and violence: a critical review*. Washington DC, The National Academies, 2004.
- 112 Raphael S, Ludwig J. Prison sentence enhancements: the case of Project Exile. In: Ludwig J, Cook PJ eds. *Evaluating gun policy*. Washington DC, Brookings Institution Press, 2003.
- 113 Rosenfeld R, Fornango R, Baumer E. Did Ceasefire, Compstat, and Exile reduce homicide? *Criminology and Public Policy*, 2005, 4:419-450.

- 114 Marvell TB, Moody CE. The impact of enhanced prison terms for felonies committed with guns. *Criminology*, 1995, 33:247-281.
- 115 Gendreau P, Surridge CT. Controlling gun crimes: the Jamaican experience *International Journal of Criminology and Penology*, 1978, 6:43-60.
- 116 Black L. Jamaica. In: Duffy MP, Gillig SE eds. *Teen gangs: a global view*. Westport CT, Greenwood Publishing Group, 2004.
- 117 Lemard G, Hemenway D. Violence in Jamaica: an analysis of homicides 1998–2002. *Injury Prevention*, 2006, 12:15-18.
- 118 Office of Juvenile Justice and Delinquency Prevention. *Juvenile gun courts: promoting accountability and providing treatment*. Washington DC, Office of Juvenile Justice and Delinquency Prevention, 2002.
- 119 *Youth violence: a report of the Surgeon General*. Washington DC, Department of Health and Human Services, 2001.
- 120 *Global programme on strengthening the rule of law in conflict and post-conflict situations: annual report 2009 (Draft)*. New York, United Nations Development Programme,
- 121 Groenewald H, Peake G. *Police reform through community-based policing: philosophy and guidelines for implementation*. New York, International Peace Academy, 2004.
- 122 *Community Empowerment and Transformation Project*. Jamaica, USAID, 2009 (<http://jamaica.usaid.gov/en/Activity.1062.aspx>, accessed 17 March 2010).
- 123 *Prison reform and alternatives to imprisonment: guidance note to UNODC field offices*. Vienna, United Nations Office on Drugs and Crime, 2009.
- 124 Bourne M, Greene O. *Armed violence, governance, security sector reform, and safety security and access to justice* Bradford, Centre for International Cooperation and Security, 2004.
- 125 Justice Reform Practice Group. *Initiatives in justice reform 2009*. Washington DC, The World Bank, 2009.
- 126 United Nations Office on Drugs and Crime. *Handbook on planning and action for crime prevention in Southern Africa and the Caribbean Regions*. New York, United Nations, 2005.
- 127 Gatheridge BJ et al. Comparison of two programs to teach firearm injury prevention skills to 6- and 7-year-old children. *Pediatrics*, 2004, 114:e294-e299.
- 128 Himle MB et al. An evaluation of two procedures for training skills to prevent gun play in children. *Pediatrics*, 2004, 113:70-77.
- 129 Howard PK. Evaluation of age-appropriate firearm safety interventions. *Pediatric Emergency Care*, 2005, 21:473-479.
- 130 Liller KD et al. Evaluation of the "Respect Not Risk" Firearm Safety Lesson for 3rd-Graders. *Journal of School Nursing*, 2003, 19:338-343.
- 131 *SALW awarness in schools: towards a national curriculum*. Belgrade, SEESAC, 2005.
- 132 *Cambodian Peace and Disarmament Education project*. Phnom Penh, Working Group for Weapons Reduction, 2003.
- 133 Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance - United States, 2007 *Morbidity and Mortality Weekly Report* 2008, 57.

- 134 United Nations Secretary General. *World report on violence against children*. Geneva, United Nations, 2006.
- 135 Osher D et al. *UNICEF Child Friendly Schools programming: global evaluation final report*. Washington DC, American Institutes for Research, 2009.
- 136 *Living without fear: the global campaign to end violence in schools*. Woking, Plan, 2008.
- 137 Oatis PJ et al. Pediatric practice based evaluation of the Steps to Prevent Firearm Injury program. *Injury Prevention*, 1999, 5:48-52.
- 138 Grossman DC et al. Firearm safety counseling in primary care pediatrics: a randomized, controlled trial. *Pediatrics*, 2000, 106:22-26.
- 139 Coyne-Beasley T, Schoenbach VJ, Johnson RM. "Love Our Kids, Lock Your Guns". A community-based firearm safety counseling and gun lock distribution program. *Archives of Pediatric and Adolescent Medicine*, 2001, 155:659-664.
- 140 Sidman EA et al. Evaluation of a community-based handgun safe-storage campaign. *Pediatrics*, 2005, 115:e654-e661.
- 141 Barkin SL et al. Is office-based counselling about media use timeouts, and firearm storage effective? Results from a cluster-randomized, controlled trial. *Pediatrics*, 2008, 112:e15-e25.
- 142 Albright TL, Burge SK. Improving firearm storage habits: impact of brief office counselling by family physicians. *Journal of the American Board of Family Practice*, 2003, 16:40-46.
- 143 Horn A et al. Community based program to improve firearm storage practices in rural Alaska. *Injury Prevention*, 2003, 9:231-234.
- 144 Chang DC et al. A multidisciplinary youth violence-prevention initiative: impact on attitudes. *Journal of the American College of Surgeons*, 2005, 201:721-723.
- 145 Goldberg AJ et al. An analysis of inner-city students' attitudes towards violence before and after participation in the "Cradle to Grave" programme. *Injury*, 2010, 41:110-115.
- 146 Becker TM, Olson L, Vick J. Children and Firearms: A Gunshot Injury Prevention Program In New Mexico. *USA Journal of Public Health*, 1993, 83:282-283.
- 147 Roberto AJ et al. The Firearm Injury Reduction program: formative evaluation insights and implications. *Social Marketing Quality*, 1998, 4:25-35.
- 148 *SASP test in North East Serbia evaluation report*. Belgrade, SEESAC, 2005.
- 149 Usdin S et al. Achieving social change on gender-based violence: A report on the impact evaluation of Soul City's fourth series. *Social Science and Medicine*, 2005, 61:2434-2445.
- 150 Pulerwitz J et al. *Promoting gender-equity among young Brazilian men as an HIV prevention strategy*. Horizons Research Summary. Washington DC, Population Council, 2006.
- 151 Verma RK et al. From research to action: addressing masculinity and gender norms to reduce HIV/AIDS related risky sexual behaviour among young men in India. *Indian Journal of Social Work* 2004, 65:634-654.
- 152 Office of Juvenile Justice and Delinquency Prevention. *Promising strategies to reduce gun violence*. Washington DC, Office of Juvenile Justice and Delinquency Prevention, 1999.
- 153 Cunningham W et al. *Supporting youth at risk: a policy toolkit for middle income countries*. Washington DC, The World Bank, 2008.

- 154 McGarrell EF et al. *Project Safe Neighborhoods - A national program to reduce gun crime: final project report*. East Lansing MI, School of Criminal Justice, Michigan State University, 2009.
- 155 Meares T, Papachristos AV, Fagan J. *Homicide and gun violence in Chicago: evaluation and summary of the Project Safe Neighborhoods program*. Chicago IL, Project Safe Neighborhoods, 2009.
- 156 Papachristos AV, Meares T, Fagan J. Attention felons: evaluating Project Safe Neighborhoods in Chicago. *Journal of Empirical Legal Studies*, 2007, 4:223-272.
- 157 'Stay Alive' Program: *simple actions, effective results*. Belo Horizonte, Center for Crime and Public Safety Studies, and Federal University of Minas Gerais, 2002 (<http://www.crisp.ufmg.br/StayAlive1.pdf>, accessed 11 March 2010).
- 158 Moestue H, Muggah R. *Social integration, ergo, stabilization: assessing Viva Rio's security and development programme in Port-au-Prince*. Rio de Janeiro, Viva Rio, 2009.
- 159 Skogan WG et al. *Evaluation of CeaseFire - Chicago*. Chicago IL, Northwestern University, 2008.
- 160 Webster DW, Vernick JS, Mendel J. *Interim evaluation of Baltimore's Safe Streets program*. Baltimore MD, Center for the Prevention of Youth Violence, John Hopkins Bloomberg School of Public Health, 2009.
- 161 Levy H et al. Towards peace in Jamaica: learning to build community. In: Baksh R, Munro T eds. *Learning to live together: using distance education for community peacebuilding*. Vancouver, Commonwealth of Learning, 2009.
- 162 *Mitigating the impact of armed violence on children and communities: what works?* Kingston, UNICEF Jamaica, 2008 ([http://www.unicef.org/jamaica/media\\_12428.htm](http://www.unicef.org/jamaica/media_12428.htm), accessed 18 March 2010).
- 163 Kenya Country Office. *Armed violence and small arms reduction in pastoral communities in Kenya*. Nairobi, UNDP Kenya, 2010.
- 164 Rodgers D, Muggah R, Stevenson C. *Gangs of Central America: causes, costs, and interventions*. Geneva, Small Arms Survey, 2009.
- 165 *Best practices to address community gang problems: OJJDP's comprehensive gang model* Washington DC, Office of Juvenile Justice and Delinquency Prevention 2008.
- 166 Jütersonke O, Muggah R, Rodgers D. Gangs, urban violence, and security interventions in Central America. *Security Dialogue*, 2009, 40:373-397.
- 167 *Preventing violence through the development of safe, stable and nurturing relationships between children and their parents and caregivers*. Geneva, World Health Organization, 2009.
- 168 Sanders MR, Bor W, Morawska A. Maintenance of treatment gains: a comparison of enhanced, standard, and self-directed Triple P-Positive Parenting Program. *Journal of Abnormal Child Psychology*, 2007, 35:983-998.
- 169 Olds DL et al. Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow-up of a randomized controlled trial. *JAMA*, 1998, 280:1238-1244.
- 170 Love JM et al. The effectiveness of early head start for 3-year-old children and their parents: lessons for policy and programs. *Developmental Psychology*, 2005, 41:885-901.
- 171 Reynolds AJ et al. Long-term effects of an early childhood intervention on educational achievement and juvenile arrest: A 15-year follow-up of low-income children in public schools. *JAMA*, 2001, 285:2339-2346.

- 172 *Preventing violence by developing life skills in children and adolescents*. Geneva, World Health Organization, 2009.
- 173 Navarrete MLV. *Regional study on school health and nutrition in Latin America and the Caribbean. Life skills training in Colombia: a case study*. World Bank/Pan American Health Organization 1999.
- 174 Mangrulkar L, Vince Whitman C, Posner M. *Life skills approach to child and adolescent healthy human development*. Washington DC, Pan American Health Organization, 2001.
- 175 *Open schools programme in Brazil*. Paris, UNESCO, 1995-2010 (<http://www.unesco.org/en/brasilia/special-themes/preventing-youth-violence/open-schools-programme/>, accessed 15 March 2010).
- 176 DuBois DL et al. Effectiveness of mentoring programs for youth: a meta-analytic review. *American Journal of Community Psychology*, 2002, 30:157-197.
- 177 Rhodes JE. Improving youth mentoring interventions through research-based practice. *American Journal of Community Psychology*, 2008, 41:35-42.
- 178 Tierney JP, Grossman JB, Resch NL. *Making a difference. An impact study of Big Brothers/Big Sisters*. Philadelphia, Public/Private Ventures, 1995.
- 179 Grossman JB, Tierney JP. Does mentoring work? An impact study of the Big Brothers Big Sisters program. *Evaluation Review*, 1998, 22:403-426.
- 180 *Preventing violence by reducing the availability and harmful use of alcohol*. Geneva, World Health Organization, 2009.
- 181 *Prevention of Murders in Diadema, Brazil: The Influence of New Alcohol Policies*. Calverton MD, Pacific Institute for Research and Evaluation, 2004.
- 182 Duailibi S et al. The Effect of Restricting Opening Hours on Alcohol-Related Violence. *American Journal of Public Health*, 2007, 97:2276-2280.
- 183 Willman A. *Preventing and reducing armed violence in urban areas. OECD Programming Note*. Paris, OECD, 2010.
- 184 *2006 Best Practices Database: street and slum lighting project*. Nairobi, UN-HABITAT, 2006 (<http://www.unhabitat.org/bestpractices/2006/mainview.asp?BPID=196>, accessed 22 March 2010).
- 185 *Guns, knives and pesticides: reducing access to lethal means*. Geneva, World Health Organization, 2009.
- 186 Stevens A, Bewley-Taylor D. *Drugs markets and urban violence: can tackling one reduce the other?* Oxford, The Beckley Foundation Drug Policy Programme, 2009.
- 187 McSweeney T, Turnbull PJ, Hough M. *Tackling drug markets and distribution networks in the UK: a review of the recent literature*. London, Institute for Criminal Policy Research, King's College 2008.
- 188 Commission on Social Determinants of Health. *Closing the gap in a generation: health equity through action on the social determinants of health. Final report of the Commission on Social Determinants of Health*. Geneva, World Health Organization, 2008.
- 189 Rutherford A et al. Violence: a public health priority? *Journal of Epidemiology and Community Health* 2007, 61:764-770.
- 190 *Preventing violence and reducing its impact: how development agencies can help*. Geneva, World Health Organization, 2008.

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