

Health Consequences of Small Arms Production, Trade and Use: A Public Health Perspective



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**World Health
Organization**

Why public health?

- Health sector:
 - Provides services for survivors
 - Collects data about prevalence, risk factors and health consequences
 - Informs policies to address prevention
 - Fosters and informs prevention programmes
 - Advocates for the recognition of violence as a public health problem



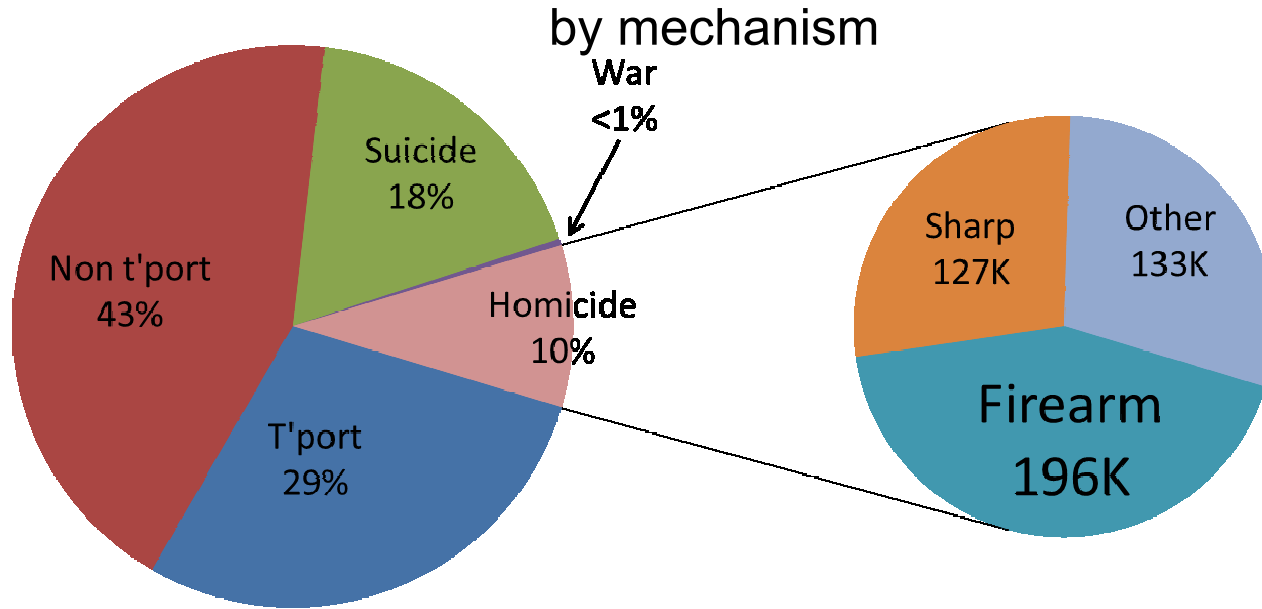
Focus on firearms

- Gunshots most prevalent sub-type of small arms-related injury
- Best documented in respect of health consequences
- High preventability



Firearm related deaths in perspective

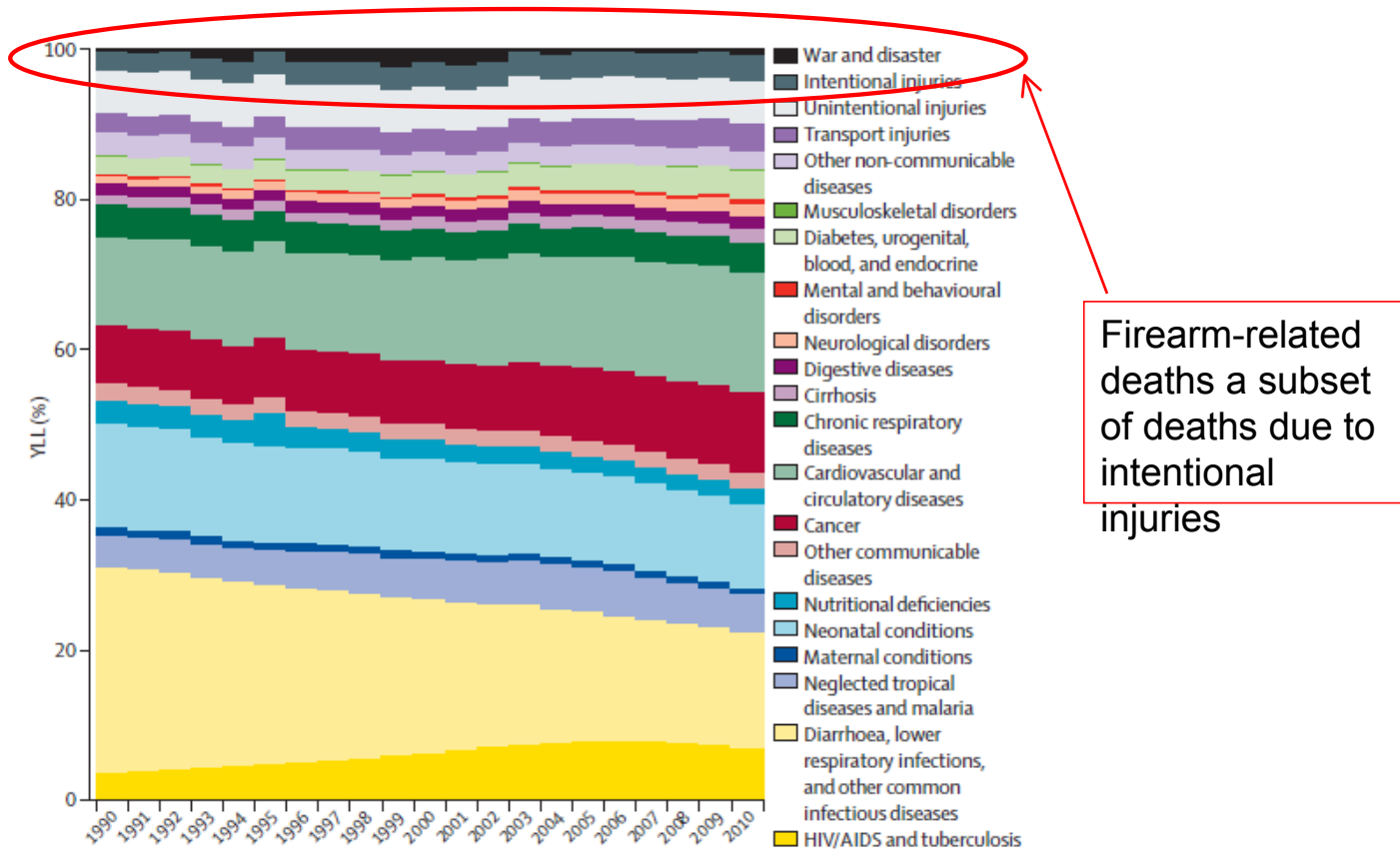
Percent of all global injury-related deaths for 2010 (N = 4.9 million) by means, and number of homicide deaths



Source: Lozano R et al. (2012). Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet*, 380, 2092-2128.

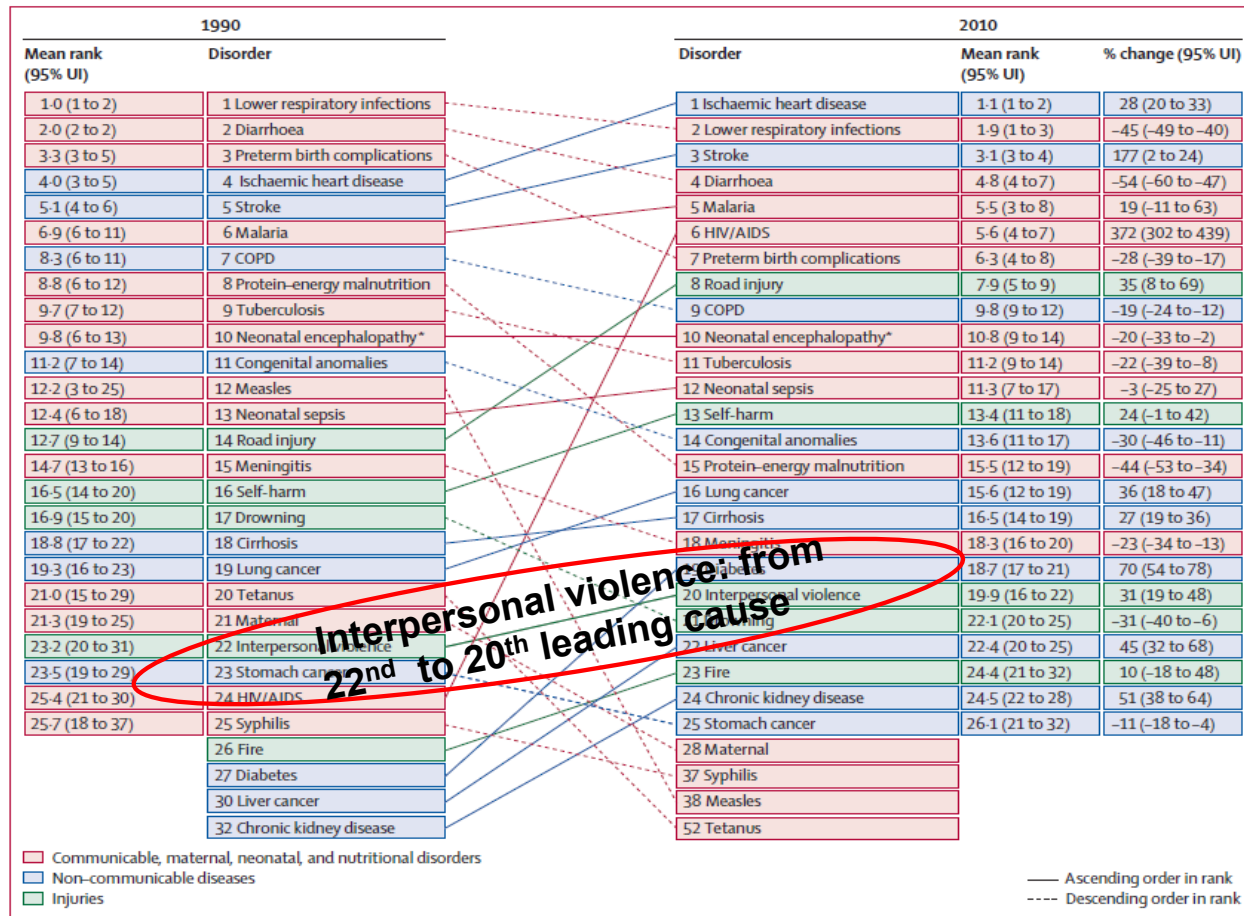
Firearm related deaths in perspective

Percent of global years of life lost from 1990 to 2010 for all ages and both sexes combined by cause and year



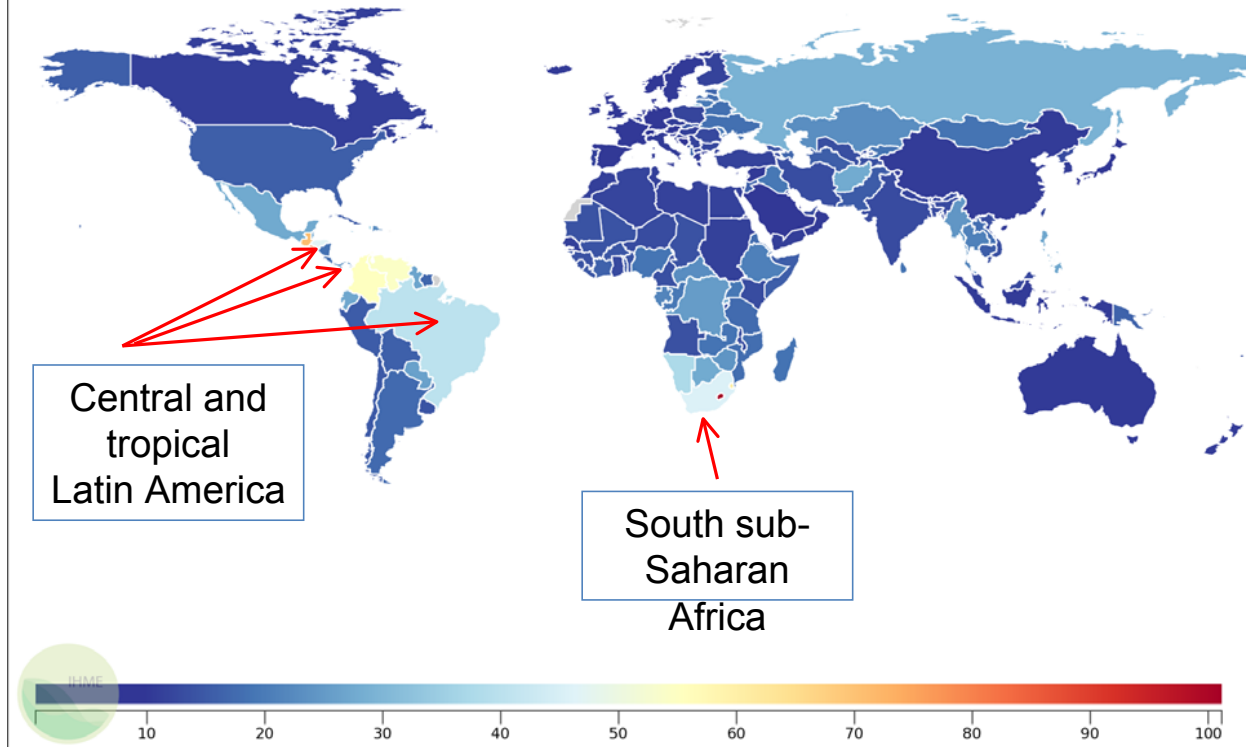
Source: Lozano R et al. (2012). Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet*, 380, 2092-2128.

Top 25 causes of global years of life lost, 1990 and 2010



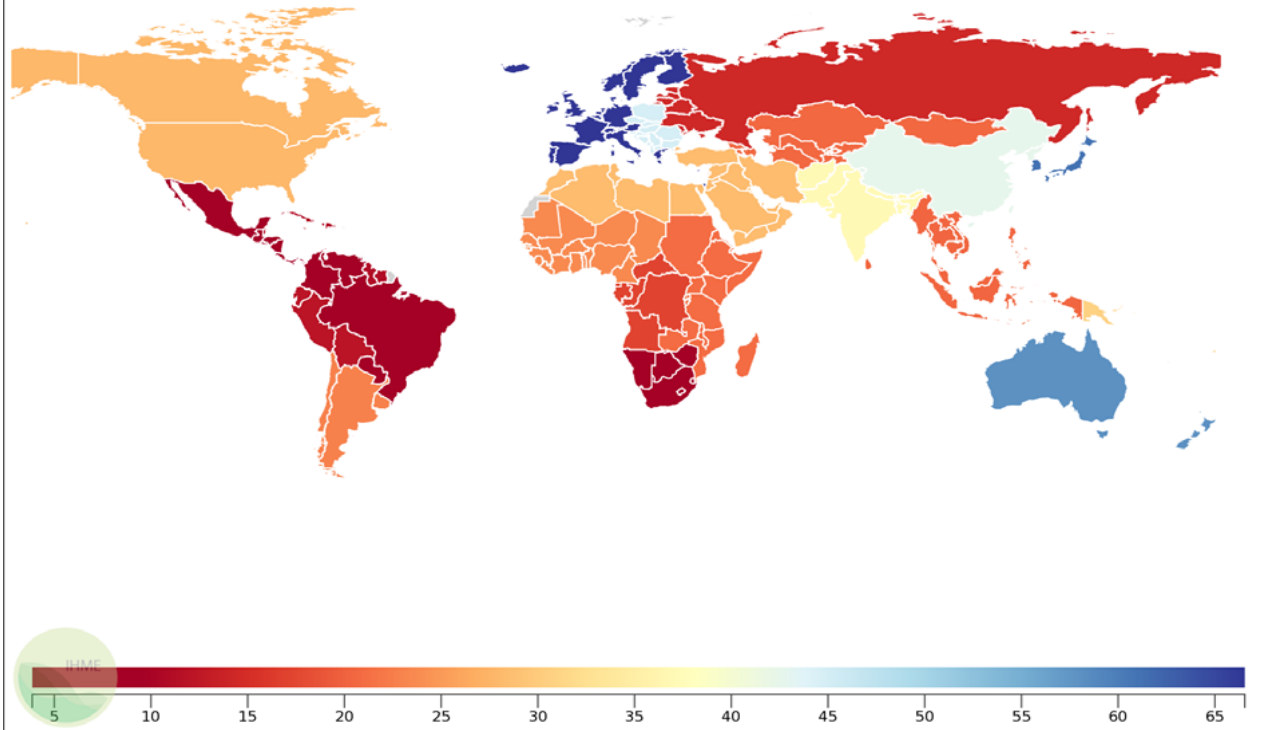
Source: Lozano R et al. (2012). Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet*, 380, 2092-2128.

Homicide rates per 100K, both sexes, all ages, 2010



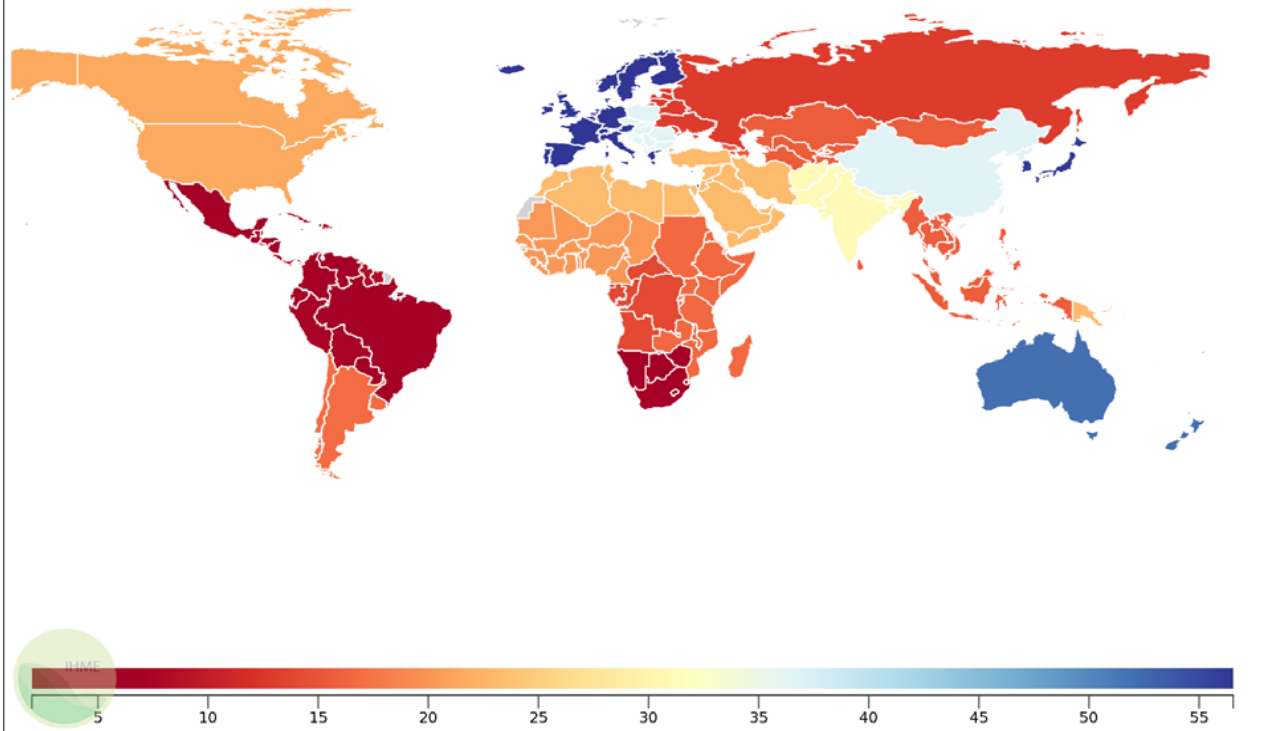
Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. <http://www.healthmetricsandevaluation.org/>

Homicides, both sexes, death rank within region, 2010



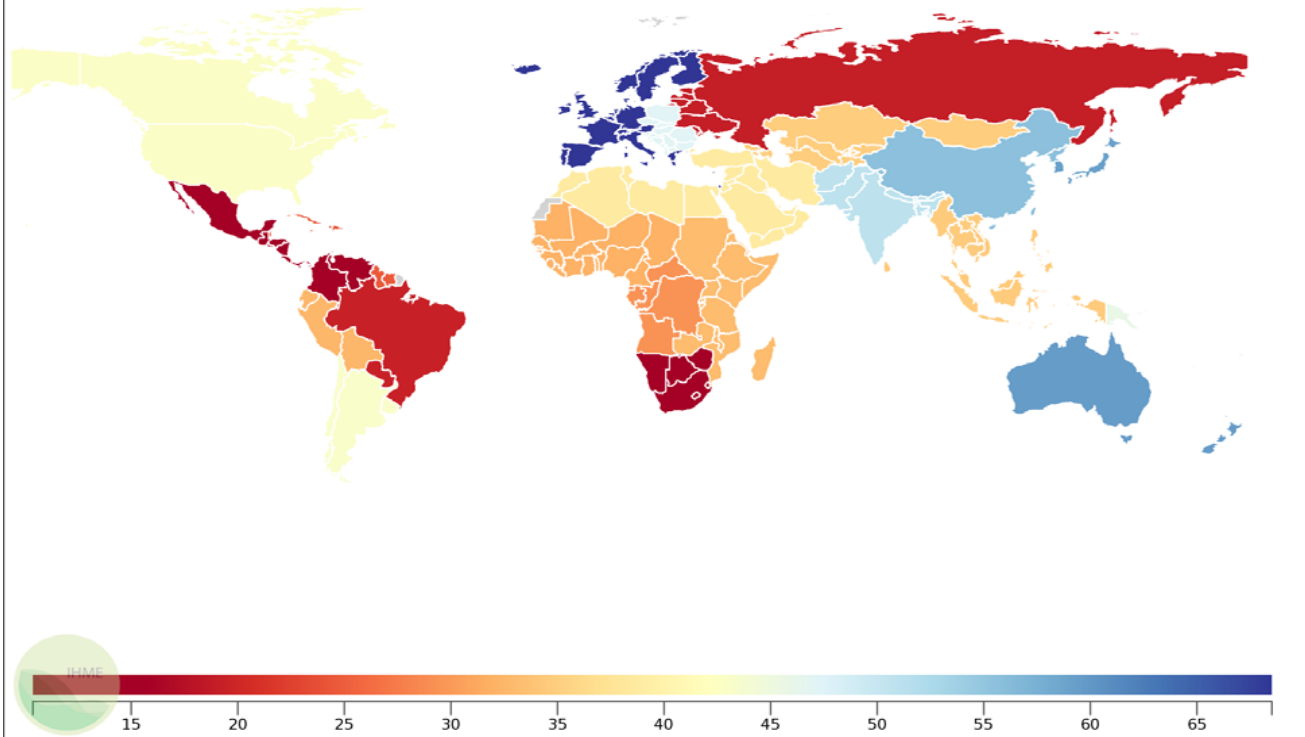
Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. <http://www.healthmetricsandevaluation.org/>

Homicides in males, death rank within region, 2010



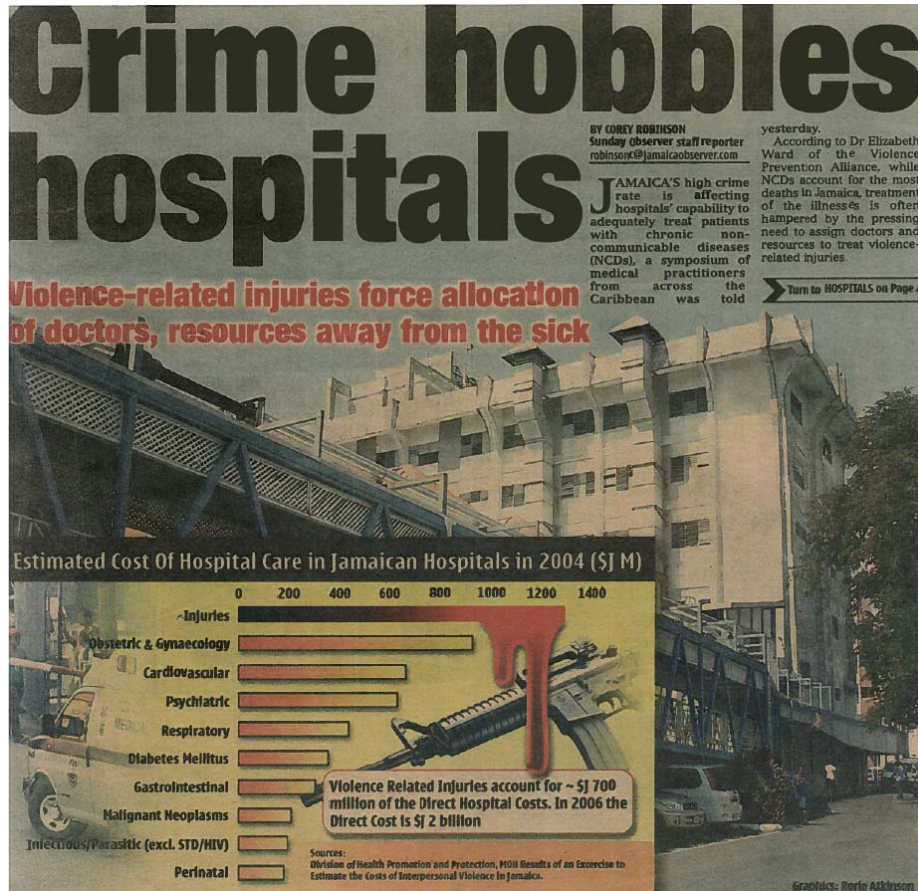
Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. <http://www.healthmetricsandevaluation.org/>

Homicides in females, death rank within region, 2010



Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. <http://www.healthmetricsandevaluation.org/>

Country case study: Jamaica



Annual costs:
 Direct medical costs
 J\$4.3 million.
 Lost productivity
 J\$12.8 billion.
 This fiscal burden is
 equivalent to
 nearly 3% of GDP.

Source: Ward E. et al. (2009). Results of an exercise to estimate the costs of interpersonal violence in Jamaica. *West Indian Med. J.* 58(5). 446-451.



Country case study: South Africa



Serious abdominal gunshot injuries cost at least 13-fold more than the annual per capita South African government expenditure on health. This fiscal burden of approximately US\$2.9 million is equivalent to almost 4% of the annual health budget.

Source: Allard D, Burch VC. (2005). The cost of treating serious abdominal firearm-related injuries in South Africa. *South African Medical Journal*, 95 (8), 591-594.

Public health actions to prevent violence

Intervention	Type of violence					
	CM	IPV	SV	YV	EA	S
1. Developing safe, stable and nurturing relationships between children and their parents and caregivers						
Parent training, including nurse home visitation	●			○		
Parent-child programmes	○			○		
2. Developing life skills in children and adolescents						
Preschool enrichment programmes				○		
Social development programmes				●		
3. Reducing the availability and harmful use of alcohol						
Regulating sales of alcohol			○			
Raising alcohol prices			○			
Interventions for problem drinkers		●				
Improving drinking environments				○		
4. Reducing access to guns, knives and pesticides						
Restrictive firearm licensing and purchase policies				○		○
Enforced bans on carrying firearms in public				○		
Policies to restrict or ban toxic substances						○
5. Promoting gender equality to prevent violence against women						
School-based programmes to address gender norms and attitudes		●	○			
Microfinance combined with gender equity training		○				
Life-skills interventions		○				
6. Changing cultural and social norms that support violence						
Social marketing to modify social norms		○	○			
7. Victim identification, care and support programmes						
Screening and referral		○				
Advocacy support programmes		●				
Psychosocial interventions				○		
Protection orders		○				

KEY

- Well supported by evidence (multiple randomized controlled trials with different populations)
- Emerging evidence

CM – Child maltreatment; IPV – Intimate partner violence; SV – Sexual violence; YV – Youth violence; EA – Elder Abuse; S – Suicide and other forms of self-directed violence

**Policies to address social determinants:
Inequalities
Unemployment
Education access
Etc.**

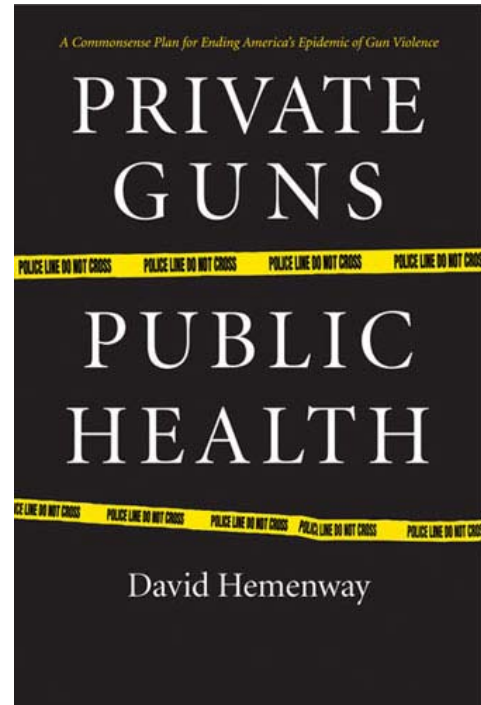


World Health Organization

Curbing gun violence: lessons from public health success

Table. A Public Health Approach to Reducing Gun Violence

Established Public Health Success	Application to Gun Violence Reduction
Tobacco Taxation	Taxation of guns and ammunition to better represent societal costs and provide funding for gun safety and violence reduction programs
Change social and cultural norms, with particular focus on protecting youth	Change depictions of gun violence in advertising, television, movies, video games, and other media; broad media and spokesperson campaigns on the consequences of gun violence
Media and educational campaigns	Sustained, multicomponent media and educational campaigns to reduce gun violence, gun suicides, and unintentional fatalities, including how to recognize at-risk persons
Patient education and counseling	Routine primary care education and counseling to increase gun safety and prevent gun violence
Unintentional poisoning Childproof safety packaging	Key or security code locking devices on guns
Toxicity reduction (eg, reducing the numbers of pills per bottle, or the concentrations of poisons)	Reduced magazine clip size; restrictions on rapid-fire assault rifles
Routine pediatrician counseling on safe storage and use	Routine primary care education and counseling on safe and secure storage and use of guns/ammunition and on recognizing at-risk behaviors
National Poison Control Center Network	National and community-based prevention programs, including well-publicized hotlines for discussing potential at-risk family members or friends



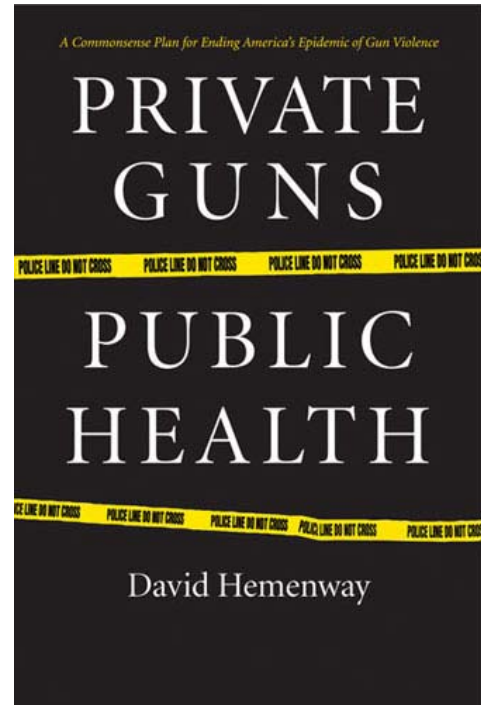
World Health Organization

Source: Mozaffarian D et al. (2013). Curbing gun violence: lessons from public health successes. *JAMA*, 309 (6), 591-594.

Curbing gun violence: lessons from public health success

Table. A Public Health Approach to Reducing Gun Violence

Established Public Health Success	Application to Gun Violence Reduction
Motor vehicle safety Crash safety standards	Reduced magazine clip size; restrictions on rapid-fire assault rifles
Automobile safety inspections	Periodic safety inspections of firearms, including documentation of home storage and safety measures
Passive protection (padded interiors, collapsible steering columns, air bags)	Smart guns with automatic security or locking devices
Active protection (seat belts, child seats, motorcycle helmets)	Regulations for safe storage of guns and ammunition
Driver education	Mandatory gun safety classes
Licensing	Licensing with periodic renewal, including safety test and background check
Speed limits	Reduced magazine clip size; restrictions on rapid-fire assault rifles
Drunk-driving legislation	Stricter legislation and penalties for violators of gun safety and gun violence laws
Age requirements	Minimum age requirements for use of certain guns and ammunition
Governmental and private advocacy (eg, Mothers Against Drunk Driving)	Strong, active nonprofit advocacy focused on reducing gun violence



Source: Mozaffarian D et al. (2013). Curbing gun violence: lessons from public health successes. *JAMA*, 309 (6), 591-594.

WHO (with UNODC and UNDP) Global status report on violence prevention

- A. National plans and mechanisms for collaboration and exchange
 - B. Capacity for collecting data
 - Homicides
 - Non-fatal violence
 - C. Primary prevention responses
 - Policies
 - Programmes
 - Laws
 - D. Health, social services, and legal services
- Armed violence
 - Gang violence
 - Violence related to organized crime
 - Child maltreatment
 - Youth violence
 - Intimate partner violence
 - Sexual violence
 - Elder maltreatment

WHO (with UNODC and UNDP) Global status report on violence prevention

Ministry of Police

Ministry of Justice

Minsitry of Defence

- Firearm laws on civilian access
 - Mandatory background checks
 - Handgun restrictions
 - Rifle and shotgun restrictions
 - Automatic firearm restrictions
 - Public carrying
- Specific programmes (e.g. gun buy backs)

WHO (with UNODC and UNDP) Global status report on violence prevention



The Global status report on violence prevention will be launched in late 2014.

For more information about this project please visit:

http://www.who.int/violence_injury_prevention/violence/en/
or contact Dr Alexander Butchart butcharta@who.int



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WHO Violence Prevention Alliance

VIOLENCE
PREVENTION
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GLOBAL CAMPAIGN FOR VIOLENCE PREVENTION
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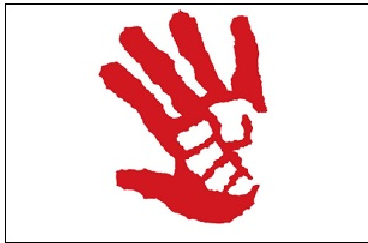
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Building global commitment to violence prevention



The Violence Prevention Alliance (VPA) is a network of WHO Member States, international agencies and civil society organizations working to prevent violence. VPA participants share an evidence-based public health approach that targets the risk factors leading to violence and promotes multi-sectoral cooperation. Participants are committed to implement the recommendations of the *World report on violence and health*.

Please find the full report [here](#)

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[Global Campaign for Violence Prevention](#)

6th Violence Prevention Milestones Meeting, Mexico City, 13-14 November 2013

Save the date!

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The Ministry of Health, on behalf of the Government of Mexico, invites you to the

6th Milestones meeting of the Global Campaign for Violence Prevention
November 13 and 14 2013, and the

Second Meeting of Ministers of Health of the Americas
November 15 2013,

which will take place in Mexico City.



www.cenpra.salud.mx

www.who.int/violenceprevention



World Health Organization

Thank you – and for more information



http://www.who.int/violence_injury_prevention/violence/en/



<http://www.facebook.com/whovioleneprevention>



<http://twitter.com/WHOviolencenews>



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