

# Injuries

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# Injuries

## Introduction

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Injuries and violence are among the most prominent public health problems in the world.

- As well as being a leading cause of mortality – particularly among children and young adults – many of the millions of non-fatal injuries result in life-long disabilities and health consequences.
- Tens of millions more people suffer long-term psychological health effects as a result of an injury or an act of violence.

# Injuries

## Definition and causes

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**An injury is damage to the body.**

It is a general term that refers to harm caused by traffic collisions, drowning, poisoning, falls, burns, and violence - from assault , self-inflicted violence or acts of war.

Reference:

World Health Organization, Injuries and Violence, the Facts, 2014.



# Injuries ... magnitude

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- Injuries kill more than five million people worldwide annually and cause harm to millions more.
- Injuries account for 9% of global mortality, and are a threat to health in every country of the world. Nearly 1.7 times the number of fatalities that result from HIV/AIDS, tuberculosis and malaria combined

# Injuries .... magnitude

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- ✓ Every six seconds someone in the world dies as a result of an injury
- ✓ For every death, it is estimated that there are dozens of hospitalizations, hundreds of emergency department visits and thousands of doctors' appointments.
- ✓ A large proportion of people surviving their injuries incurs temporary or permanent disabilities.

# Injuries and Violence as a Cause of Death:

1. Road Traffic Injuries
2. Suicide
3. Falls

## How injuries and violence claim lives

Causes of injury deaths, world, 2012.

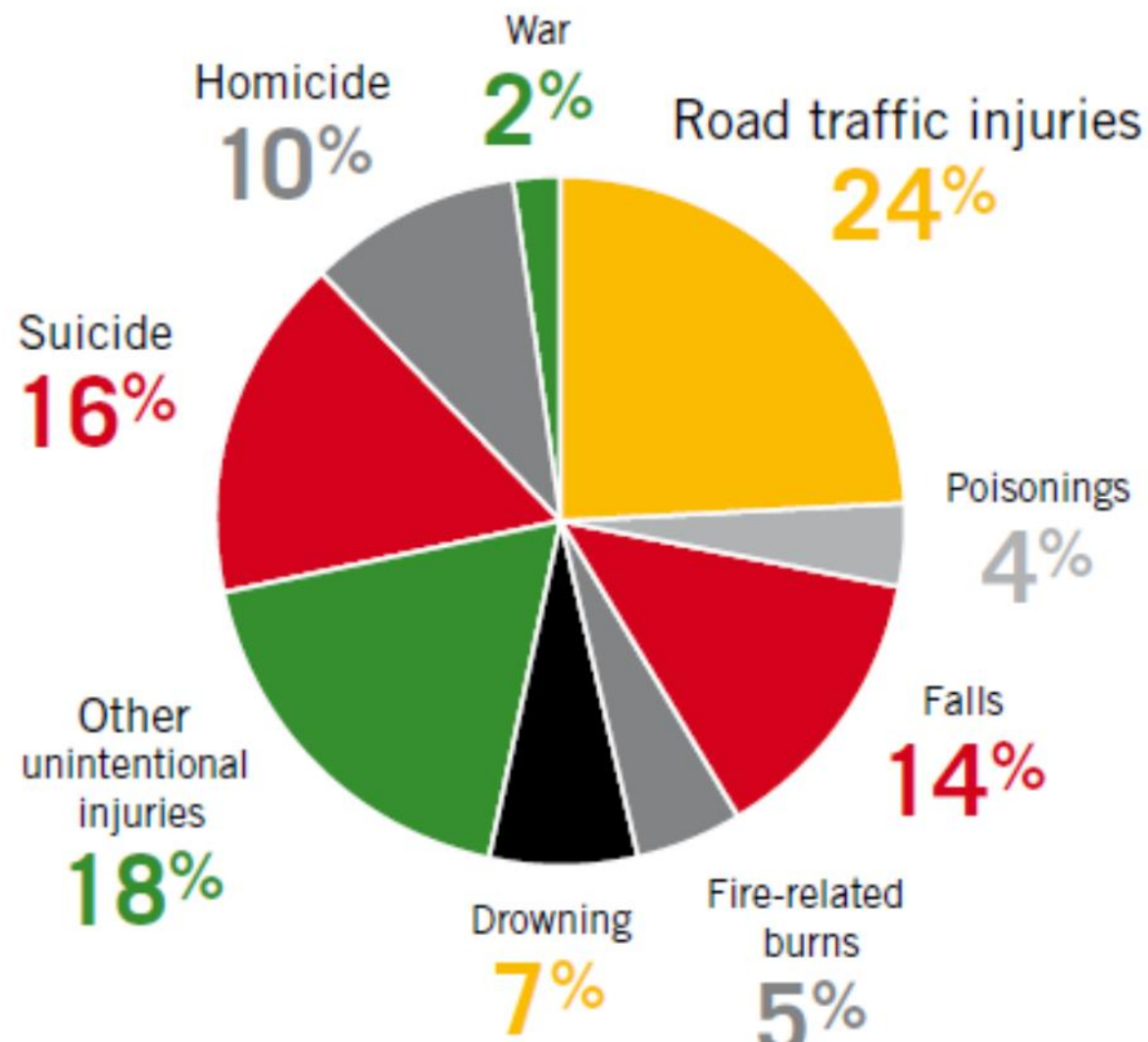


Table 1:

## Injury deaths rise in rank

Leading causes of death, 2012 and 2030 compared.

Total 2012	Total 2030
1 Ischaemic heart disease	1 Ischaemic heart disease
2 Stroke	2 Stroke
3 Chronic obstructive pulmonary disease	3 Chronic obstructive pulmonary disease
4 Lower respiratory infections	4 Lower respiratory infections
5 Trachea, bronchus, lung cancers	5 Diabetes mellitus
6 HIV/AIDS	6 Trachea, bronchus, lung cancers
7 Diarrhoeal diseases	7 Road traffic injuries
8 Diabetes mellitus	8 HIV/AIDS
9 Road traffic injuries	9 Diarrhoeal diseases
10 Hypertensive heart disease	10 Hypertensive heart disease
11 Preterm birth complications	11 Cirrhosis of the liver
12 Cirrhosis of the liver	12 Liver cancer
13 Tuberculosis	13 Kidney diseases
14 Kidney diseases	14 Stomach cancer
15 Suicide	15 Colon and rectum cancer
16 Birth asphyxia and birth trauma	16 Suicide
17 Liver cancer	17 Falls
18 Stomach cancer	18 Alzheimer's disease and other dementias
19 Colon and rectum cancers	19 Preterm birth complications
20 Alzheimer's disease and other dementias	20 Breast cancer
21 Falls	21 Endocrine, blood, immune disorders

Source: WHO Global Health Estimates, 2014, [www.who.int/healthinfo/global\\_burden\\_disease/projections/en/](http://www.who.int/healthinfo/global_burden_disease/projections/en/)  
Index.html

# Injuries, as a cause of death

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- Two of the three leading causes of injury deaths – **road traffic injuries and falls** – are predicted to rise in rank compared to other causes of death.
- Road traffic injuries are predicted to become the 7th leading cause of death by 2030 (table 1), with falls rising to become the 17<sup>th</sup> leading cause of death and suicide remaining in the top 20.



# Injuries, the non-fatal consequences

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The millions of deaths that result from injuries represent only a small fraction of those injured.

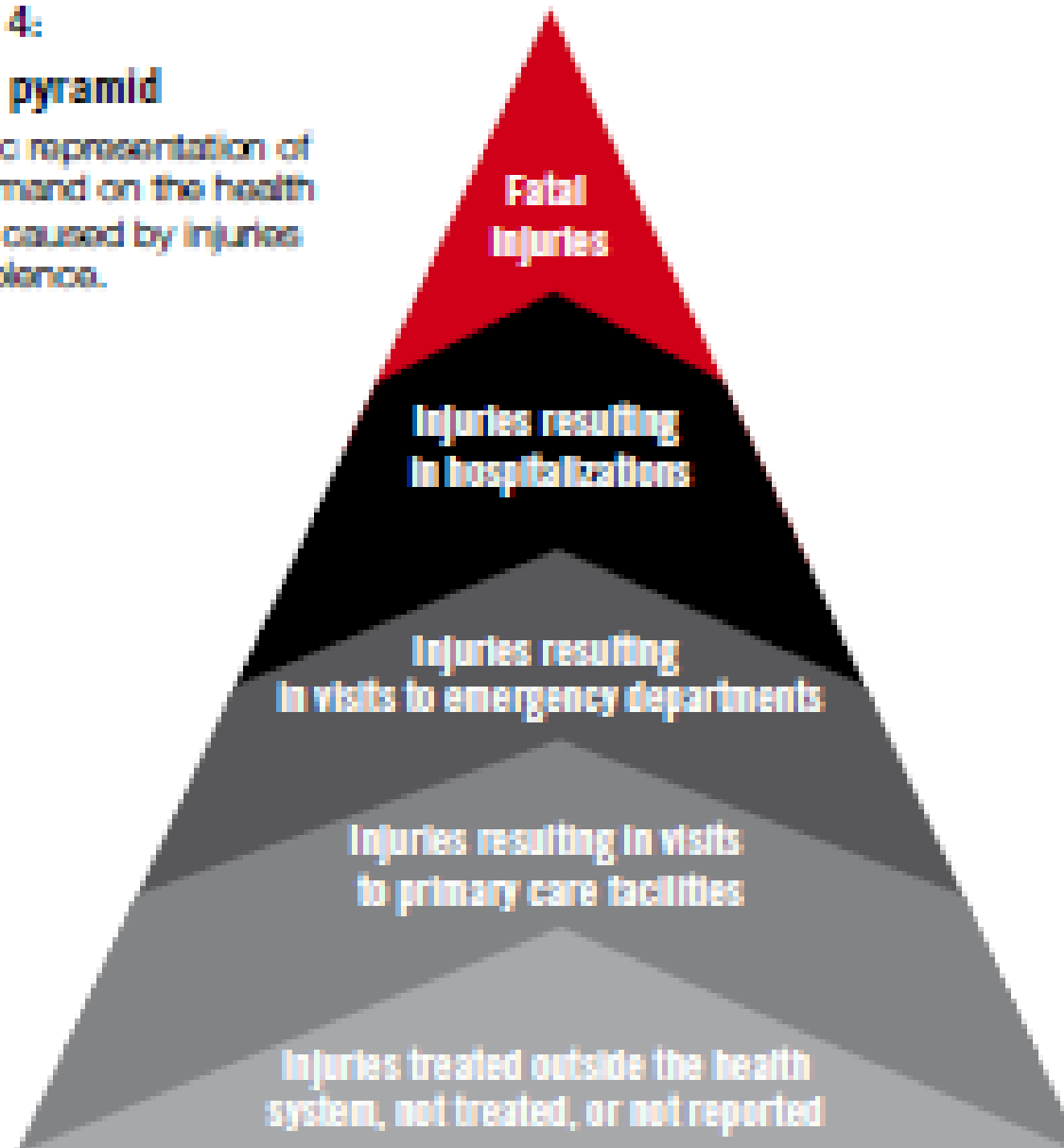
Tens of millions of people suffer injuries that lead to hospitalization, emergency department or general practitioner treatment, or treatment that does not involve formal medical care.

The relative numbers of fatal and nonfatal injuries are graphically depicted in a pyramid, as shown in Figure 4.

**Figure 4:**

**Injury pyramid**

Graphic representation of the demand on the health sector caused by injuries and violence.



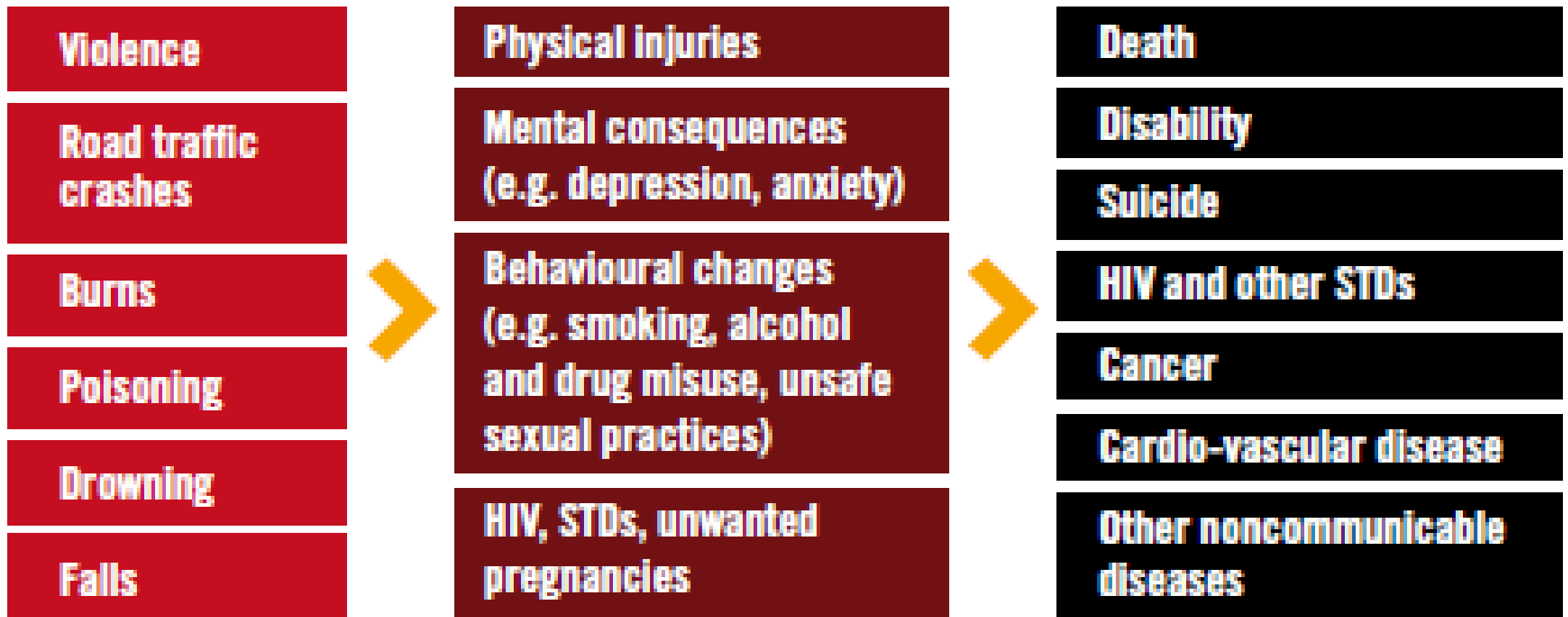
# Injuries ...non-fatal Consequences

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Many of those who survive acts of violence, road traffic crashes, suicide attempts or other causes of injury are left with temporary or permanent disabilities.

- ✓ All causes of injury have health consequences beyond the physical injury (Figure 5).

**Figure 5:**  
**Consequences of injuries and violence**



# Injuries ...non-fatal Consequences

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- ✓ In particular, child maltreatment, intimate partner violence and sexual violence have been shown to have a broad array of adverse health effects that can persist over a lifetime.
- ✓ These forms of violence contribute significantly to depression, sexually transmitted diseases and unwanted pregnancies, while also increasing the likelihood of engaging in risky behaviours, such as smoking and the harmful use of alcohol and drugs.
- ✓ Via these behaviours, they can lead to cancers, cardiovascular diseases, diabetes, liver disease and other chronic diseases.

# Injuries and Violence ...

## Who is more vulnerable?

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The nature of injuries and violence varies considerably according to age, gender, region and income group.

- For example, in low- and middle-income countries in the Western Pacific, the leading injury-related causes of death are road traffic injuries, suicide and falls. The leading cause of injury death in the high-income countries of the world is suicide, with road traffic injuries and falls second and third.

# Injuries are a leading cause of death among young people

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Injuries affect all age groups but have a particular impact on young people and people in their prime working years.

For people between the ages of 15 and 29 years, three injury-related causes are among the top five causes of death. Road traffic injuries are the leading cause of death in this age group, with suicide and homicide the second and fourth leading causes of death respectively – together accounting for more than one quarter of all deaths in this age group.

Among the elderly, falls are the most common cause of injury death.

# Poverty Increases the Risk of Injury

About 90% of injury-related deaths occur in low- and middle-income countries.

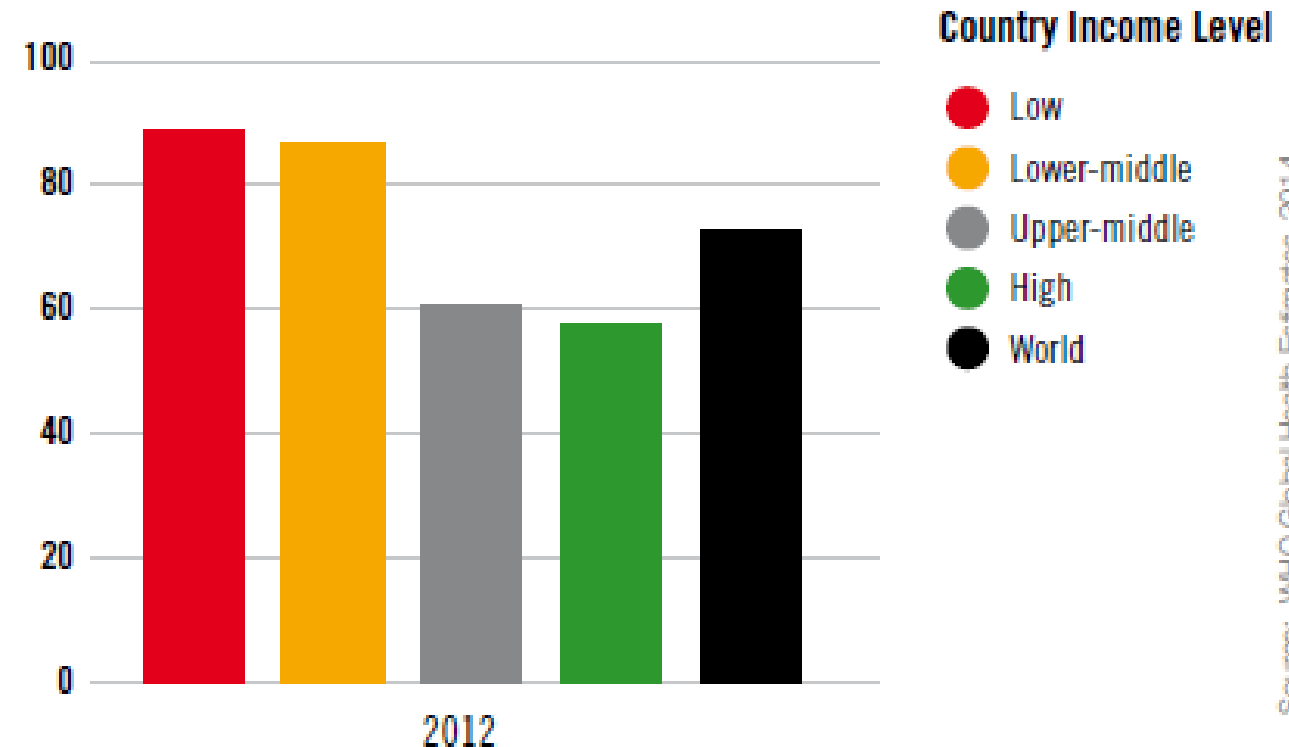
- Across the world, injury death rates are higher in lower-income countries than in higher-income countries (see Figure 6).

Figure 6:

Poorer countries are worst-affected by injuries and violence

Injury death rates by country income level, world, 2012.

Injury deaths per 100 000 population





# Poverty Increases the Risk of Injury

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Even within countries, injuries show strong social class gradients. This means that people from poorer economic backgrounds have higher rates of death from injury and non-fatal injuries than wealthier people.

This uneven distribution of injuries is related to a number of factors such as living, working and travelling in less safe conditions, less focus on prevention efforts in poorer areas, and poorer access to quality emergency trauma care and rehabilitation services.

# Poverty Increases the Risk of Injury

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As well as being at increased risk, disadvantaged families are hardest hit by the financial pressure resulting from injuries.

Poor families are less likely to have the financial resources to pay the direct costs (e.g. medical bills) as well as the indirect costs (e.g. lost wages) related to injuries.

# Injuries and violence are unevenly distributed between males and females

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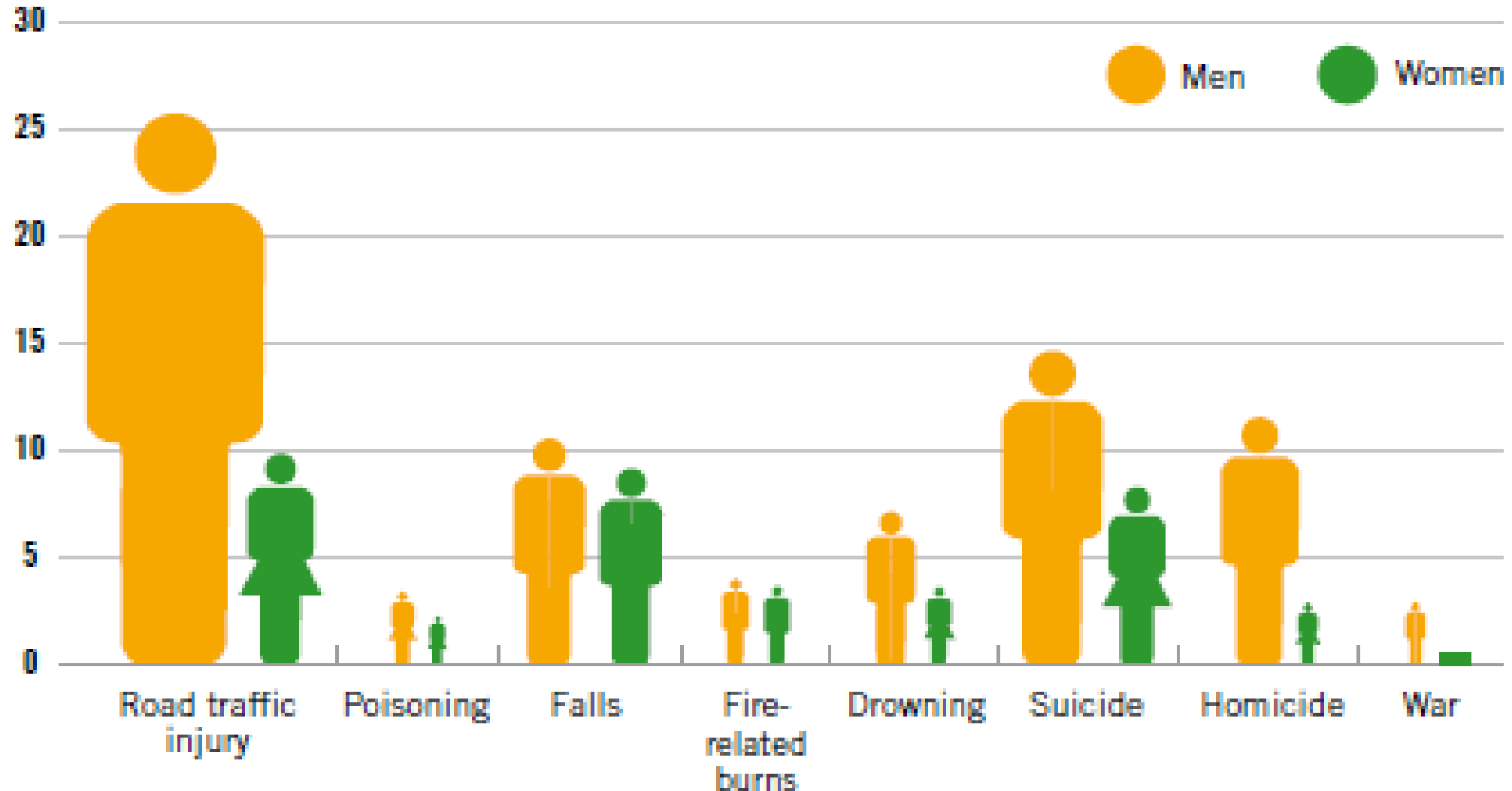
More males than females are killed by injuries and violence— almost **twice** as many each year.

- ✓ The three leading causes of death from injuries for **males** are: road traffic injuries, suicide and homicide
- ✓ The three leading causes of injury-related death for **females** are: road traffic injuries, falls and suicide.

Figure 7:

## Men are more at risk of death from injuries and violence

Death rates per 100 000 population, by cause of injury and sex, world, 2012.



Source: WHO Global Health Estimates, 2014

# Injuries and violence are unevenly distributed between males and females

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It is important to look beyond the mortality statistics and note that some types of injuries and violence predominantly affect women.

More than 1 in 3 women (35%) have experienced intimate partner violence (domestic violence), or sexual violence (rape) perpetrated by someone who was not an intimate partner.

# Injuries and violence impose heavy costs on individuals and on society

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As well as the huge emotional toll that injuries and violence impose on those affected, they also cause considerable economic losses to victims, their families, and nations as a whole.

These losses arise from the cost of treatment, including rehabilitation, and incident investigation as well as reduced or lost productivity in the form of wages for those killed or disabled by their injuries, and for family members who need to take time off work to care for the injured.

# Road Traffic Accidents (RTA's) in Jordan

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In Jordan, as a result of RTA's: a car accident happens every 5 minutes, one person is injured every 29 minutes, and a person dies every 9 hours .

- ✓ In Jordan, 368 deaths from road traffic accidents were reported between January and August 2015 (12 out of the 368 were ran over by the vehicle parking at their home).
- ✓ In 2014, RTA's caused 688 deaths and 14,790 injured (102,400 accidents)
- ✓ In 2013, RTA's caused 768 deaths and 15,954 injured (107,800 accidents)
- ✓ 1/3 of these deaths is caused by a run over accident (for pedestrians).

# Measures to Prevent Violence and Injuries

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As more governments around the world come to recognize that **injuries and violence can and must be prevented**, many are trying to get a better understanding of the problem in their countries as a basis for designing effective prevention strategies (see Figure 10).

- For example, a study in the United States found that every dollar spent on smoke detectors saves US\$ 28 in health-related expenditure.

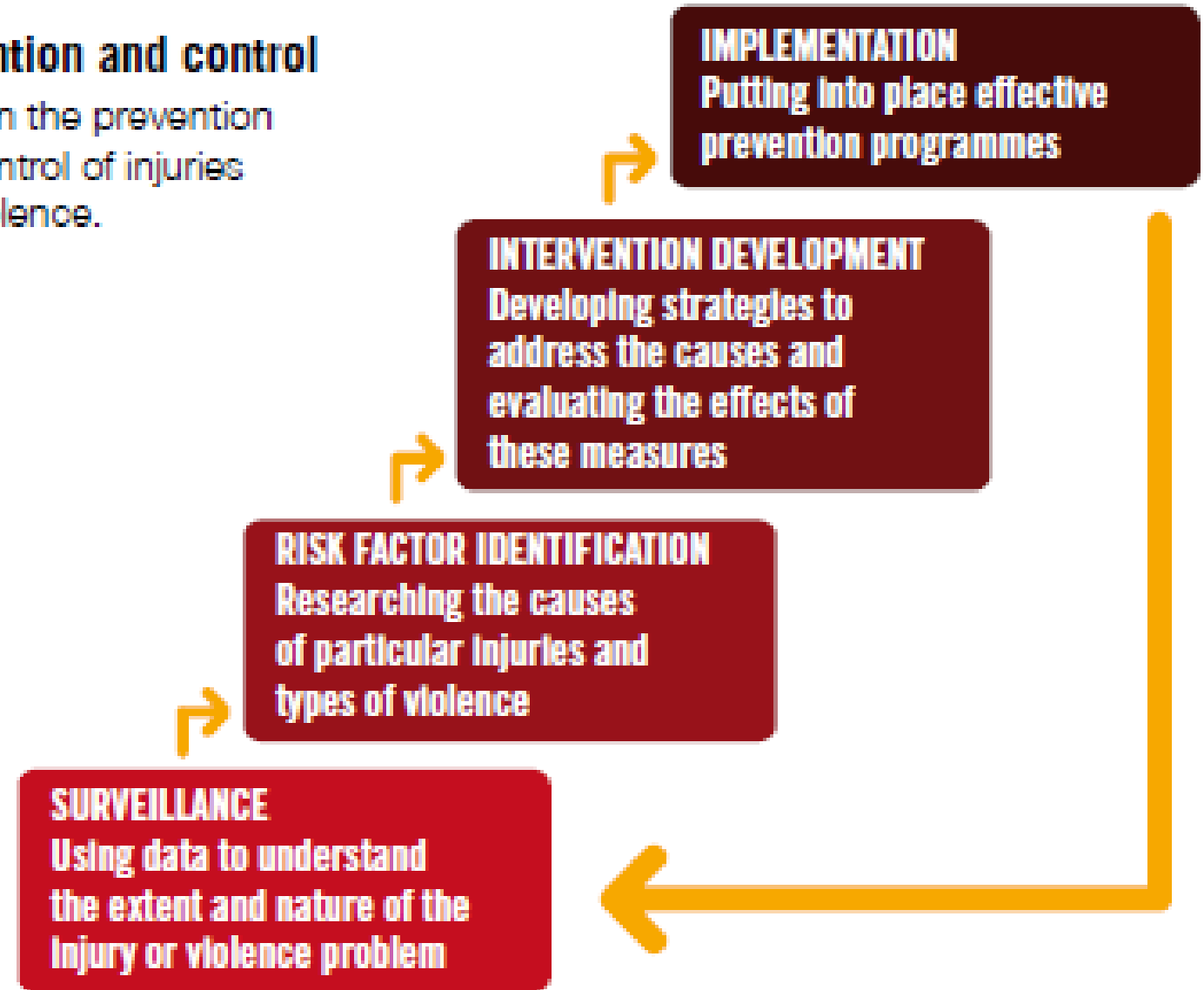


# Measures to Prevent Violence and Injuries

Figure 10:

## Prevention and control

Steps in the prevention and control of injuries and violence.



# Evidence-based measures to reduce key causes of injury-related deaths include the following:

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## Road traffic crashes

- Setting and enforcing laws on speeding, on seat belts, and on drinking and driving
  - Setting and enforcing laws on motorcycle helmets
  - Setting and enforcing laws on child restraints
  - Developing safer roadway infrastructure
  - Implementing vehicle and safety equipment standards
  - Introducing a graduated driver licensing system for new young drivers

# **Evidence-based measures to reduce key causes of injury-related deaths include the following:**

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## **Interpersonal violence**

- **Developing safe, stable and nurturing relationships between children and their parents or caregivers**
- **Developing life skills in children and adolescents**
- **Reducing the availability and harmful use of alcohol**
- **Reducing access to guns and knives**
- **Promoting gender equality to prevent violence against women**
- **Changing cultural and social norms that support violence**
- **Reducing violence through victim identification, care and support programs**