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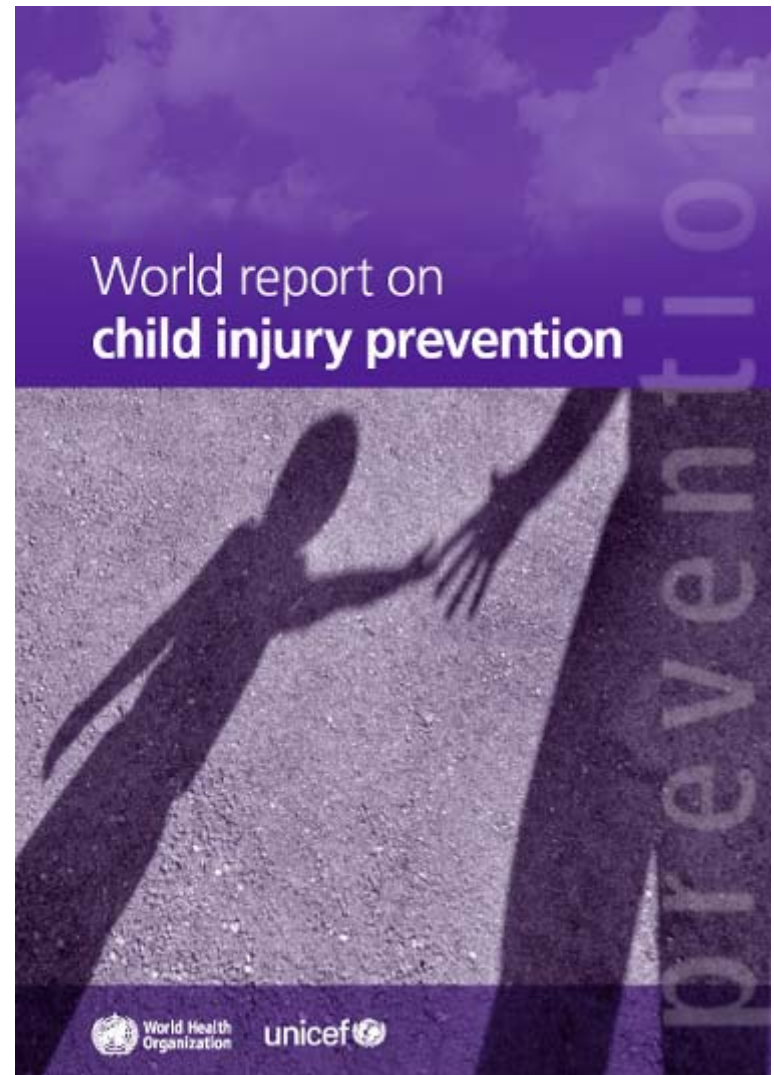
# **World report on child injury prevention**

An overview

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# Goal of the report

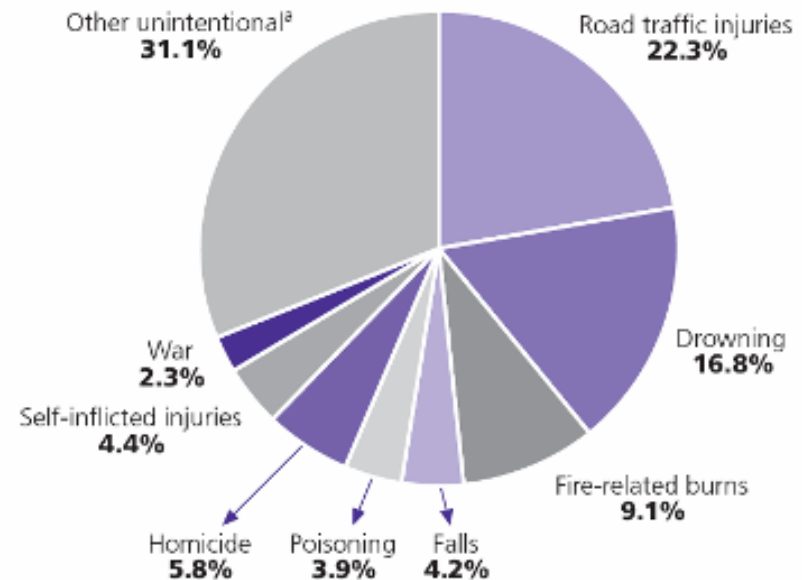
- Raise awareness
- Present what is known about effectiveness of interventions
- Make recommendations



# Scope of the report

- Children under 18 years old
- Leading causes of unintentional injuries
  - Road traffic injuries
  - Drowning
  - Burns
  - Falls
  - Poisoning
- Companion to SG's study on violence against children

Distribution of global child injury deaths by cause, 0–17 years, World, 2004



<sup>a</sup> "Other unintentional" includes categories such as smothering, asphyxiation, choking, animal and venomous bites, hypothermia and hyperthermia as well as natural disasters.

Source: WHO (2008), Global Burden of Disease: 2004 update.

# Report development

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- Joint WHO and UNICEF report
- 180 contributors from 56 countries around the world
- Regional consultations and peer reviewed
- Various versions developed:
  - full report,
  - summary,
  - child-friendly version
- Translated into multiple languages

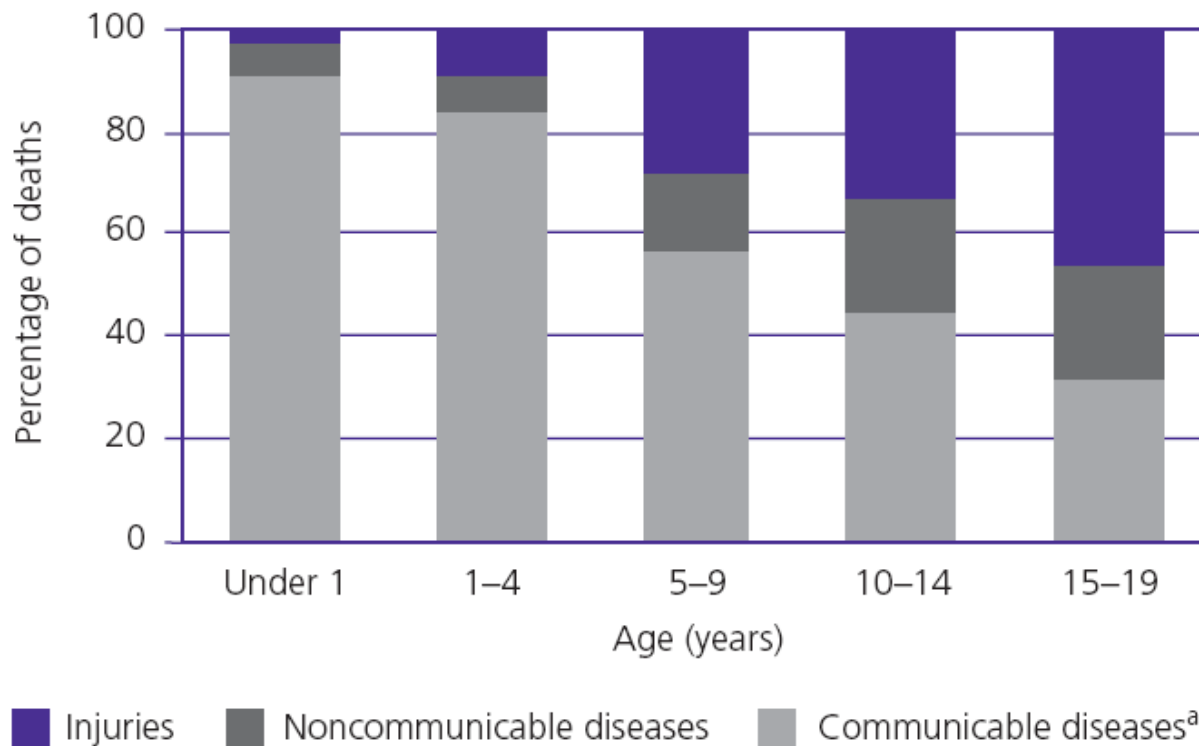
# The facts

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- Approximately 830 000 children under 18 years die every year as a result of an unintentional injury.
- Unintentional injuries are the leading cause of death for children over 9 years.
- Tens of millions of children require hospital care every year for non-fatal injuries.
- 95% of child injuries occur in low-income and middle-income countries.
- In high-income countries, child injuries account for 40% of all child deaths.

# Injuries represent a large proportion of child deaths, in particular for older children

## Main causes of death among children, World, 2004



<sup>a</sup> Includes communicable, maternal, perinatal and nutritional conditions.

Source: WHO (2008), Global Burden of Disease: 2004 update.

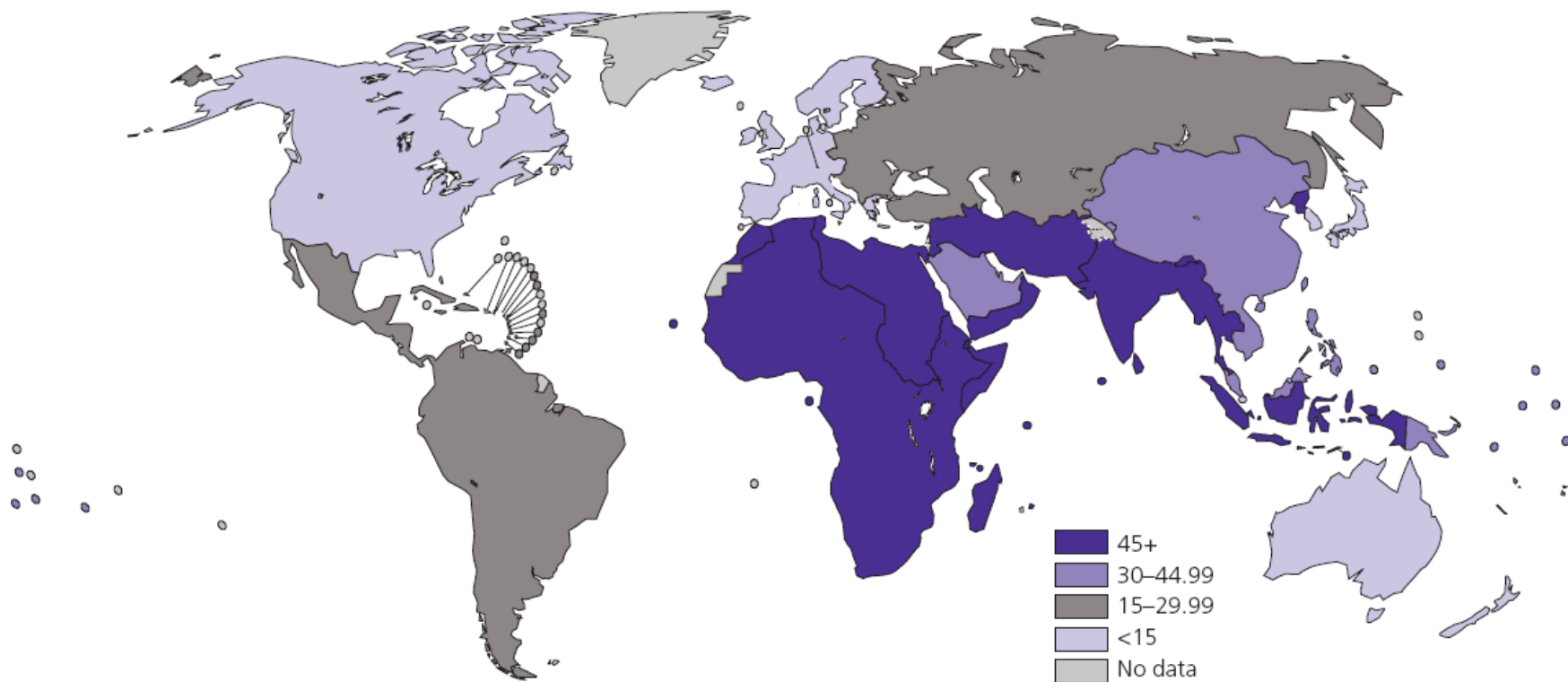
## Leading causes of death in children, both sexes, World, 2004

Rank	Under 1 year	1–4 years	5–9 years	10–14 years	15–19 years	Under 20
1	Perinatal causes	Lower respiratory infections	Lower respiratory infections	Lower respiratory infections	Road traffic injuries	Perinatal causes
2	Diarrhoeal diseases	Diarrhoeal diseases	Road traffic injuries	Road traffic injuries	Self-inflicted injuries	Lower respiratory infections
3	Lower respiratory infections	Measles	Malaria	Drowning	Violence	Diarrhoeal diseases
4	Malaria	Malaria	Diarrhoeal diseases	Malaria	Lower respiratory infections	Malaria
5	Congenital anomalies	HIV/AIDS	Meningitis	Meningitis	Drowning	Measles
6	Pertussis	Congenital anomalies	Drowning	HIV/AIDS	Tuberculosis	Congenital anomalies
7	HIV/AIDS	Protein–energy malnutrition	Protein–energy malnutrition	Tuberculosis	Fire-related burns	HIV/AIDS
8	Tetanus	Drowning	Measles	Diarrhoeal diseases	HIV/AIDS	Road traffic injuries
9	Meningitis	Road traffic injuries	Tuberculosis	Protein–energy malnutrition	Leukaemia	Pertussis
10	Measles	Meningitis	HIV/AIDS	Self-inflicted injuries	Meningitis	Meningitis
11	Protein–energy malnutrition	Fire-related burns	Fire-related burns	Leukaemia	Maternal haemorrhage	Drowning
12	Syphilis	Pertussis	Falls	Fire-related burns	Falls	Protein–energy malnutrition
13	Endocrine disorders	Tuberculosis	Congenital anomalies	War	Poisonings	Tetanus
14	Tuberculosis	Upper respiratory infections	Epilepsy	Violence	Abortion	Tuberculosis
15	Upper respiratory infections	Syphilis	Leukaemia	Trypanosomiasis	Epilepsy	Fire-related burns

Source: WHO (2008), Global Burden of Disease: 2004 update.

# Child injuries are strongly related to social determinants

Rate of unintentional injuries per 100 000 children<sup>a</sup>, by WHO region and country income level, World, 2004



Africa		Americas		South-East Asia	Europe		Eastern Mediterranean		Western Pacific	
LMIC	HIC	LMIC	LMIC	LMIC	HIC	LMIC	HIC	LMIC	HIC	LMIC
53.1	14.4	21.8	49.0	7.9	25.4	41.6	45.7	7.8	33.8	

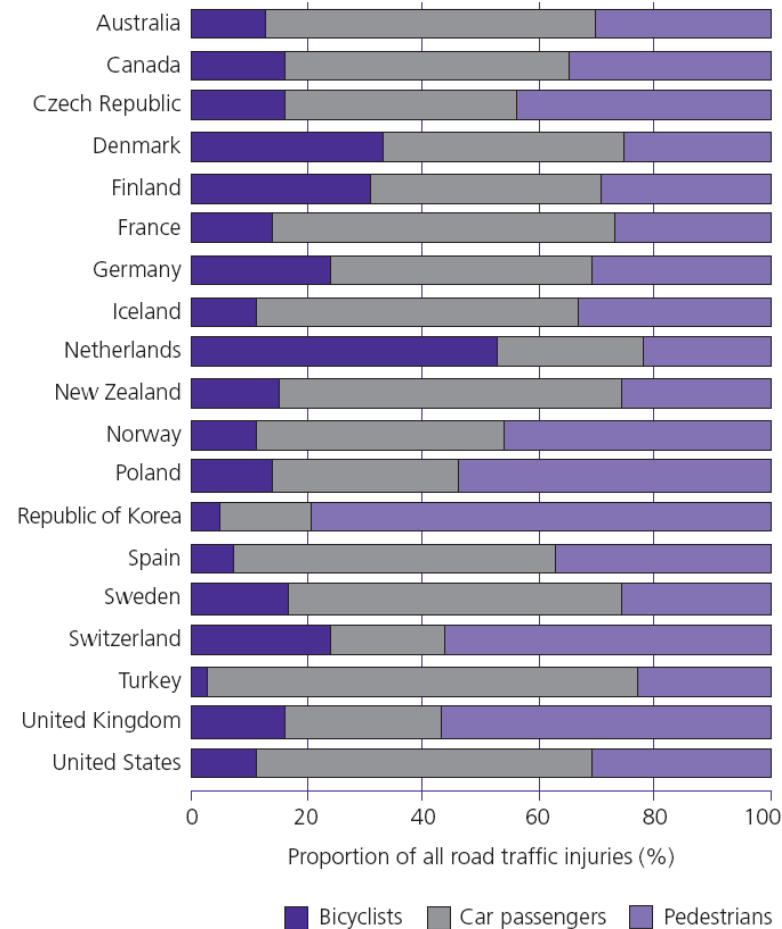
<sup>a</sup> These data refer to those under the age of 20 years.  
HIC = High-income countries; LMIC = low-income and middle-income countries.

Source: WHO (2008), Global Burden of Disease: 2004 update.

# Road traffic injuries are the leading cause of death among 10 to 19 year olds

- More than 260 000 children and teenagers die from a road traffic injury each year.
- Approximately 10 million more are non-fatally injured.
- In HICs most children killed are occupants of vehicles
- In LMICs they are usually pedestrians or cyclists.

Proportion of fatal road traffic deaths among children<sup>a</sup> by type of road user in selected OECD countries

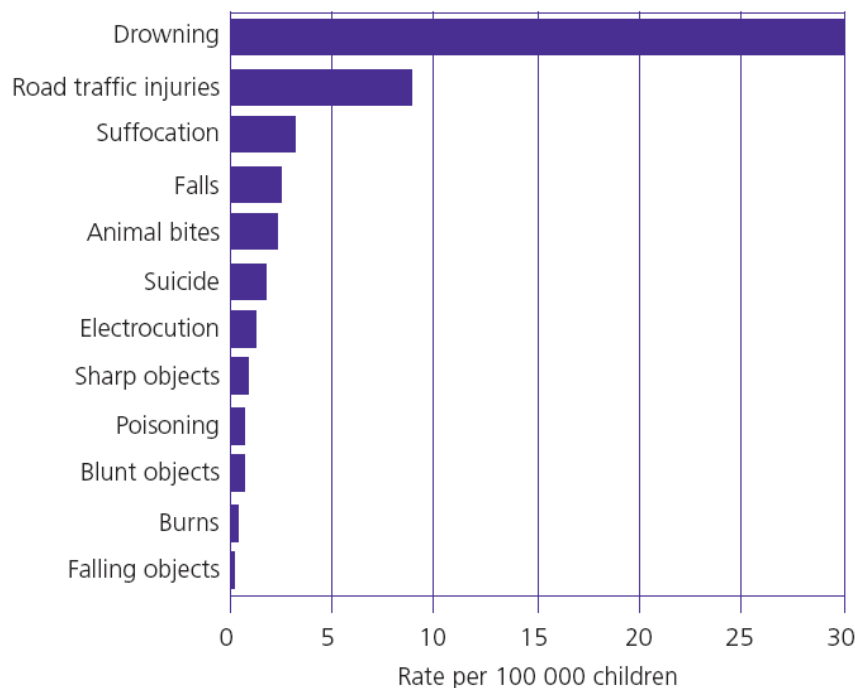


<sup>a</sup> These data refer to children under the age of 15 years.

OECD = Organisation for Economic Co-operation and Development.

# Drowning is the leading cause of child death in many countries in the Western Pacific

Fatal injury rates per 100 000 children aged 0–17 years in five<sup>a</sup> Asian countries

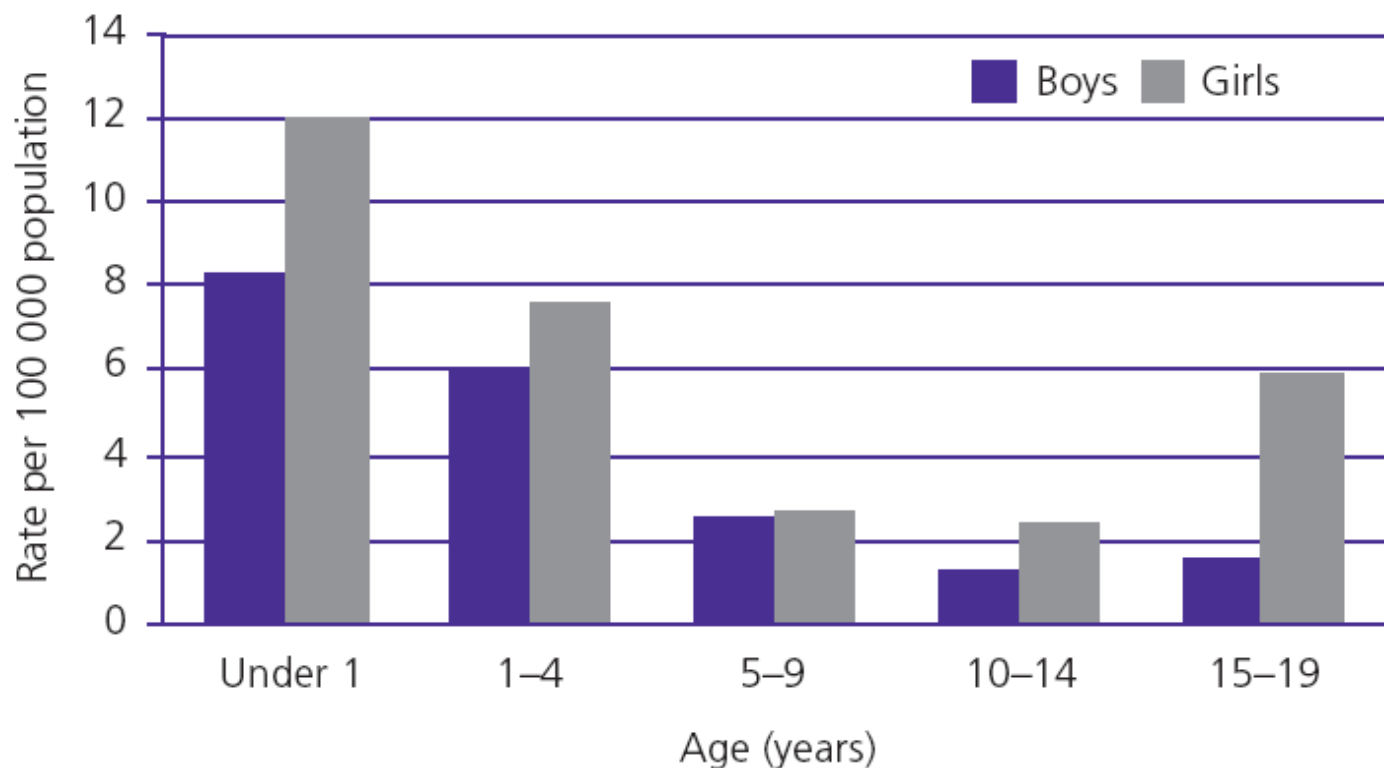


<sup>a</sup> Bangladesh, China (Beijing, Jiangxi), Philippines, Thailand, Viet Nam

- More than 175 000 children and teenagers die from drowning each year.
- Children under the age of 5 years are most at risk.
- Most child drowning events happen in and around the home.
- In LMICs most drowning occurs in open bodies of water while in HICs it is in swimming pools.

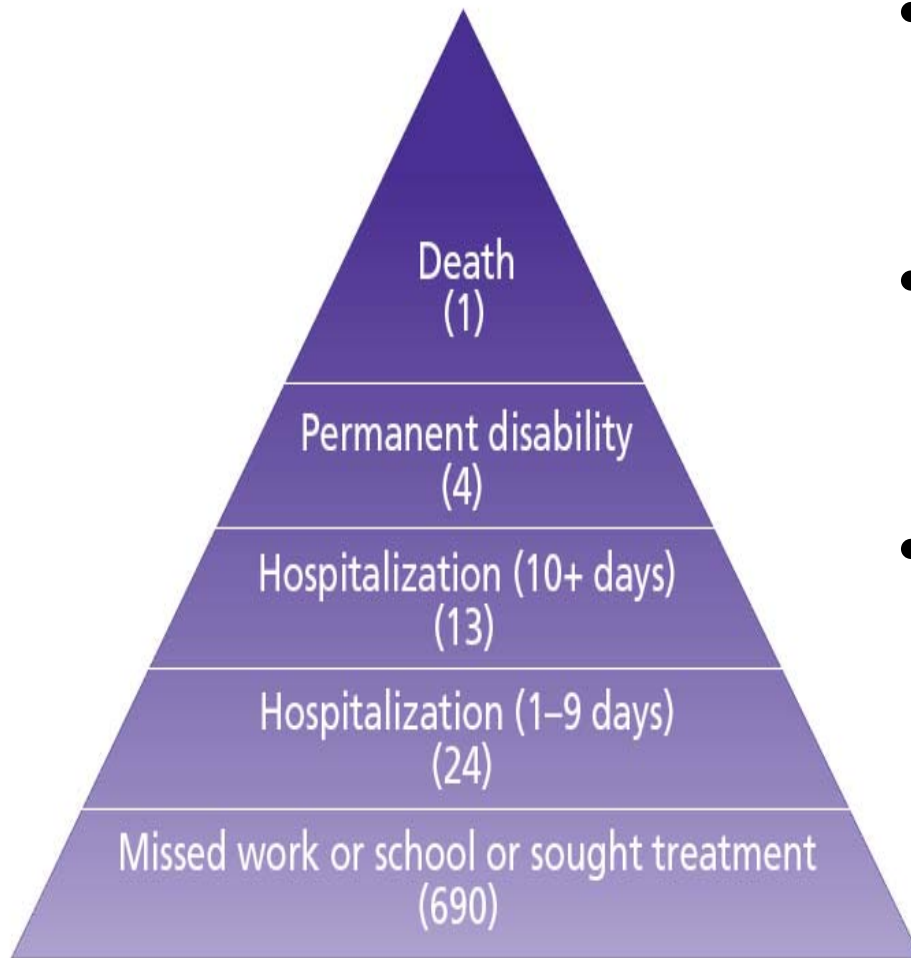
# Burns are the only child injury which occur more commonly in girls than boys

## Fatal fire-related burn rates per 100 000 children by age and sex, World, 2004



Source: WHO (2008), Global Burden of Disease: 2004 update.

## Falls among children are the leading cause of presentation to an emergency department



- Nearly 47 000 children and teenagers die from falls each year.
- For every fatal fall there are about 690 children who miss school.
- Falls are the leading cause of long term disability.

# Substances found in and around the home are most commonly involved in childhood poisoning

## Most common agents involved in childhood poisoning:

- Over-the-counter preparations such as paracetamol, cough/cold remedies, vitamins and iron tablets, antihistamines and anti-inflammatory drugs.
  - Prescription medications such as antidepressants, narcotics, analgesics and illicit drugs.
  - Household products such as bleach, disinfectants, detergents, cleaning agents, cosmetics, vinegar.
  - Paraffin/kerosene.
  - Pesticides, including insecticides, rodenticides and herbicides.
  - Poisonous plants.
  - Animal or insect bites.
- Over 45 000 children and teenagers die from poisoning each year.
  - Many millions of calls are made to poison control centres, most of which are resolved over the phone.
  - Children under the age of one are at greatest risk of fatal poisoning.

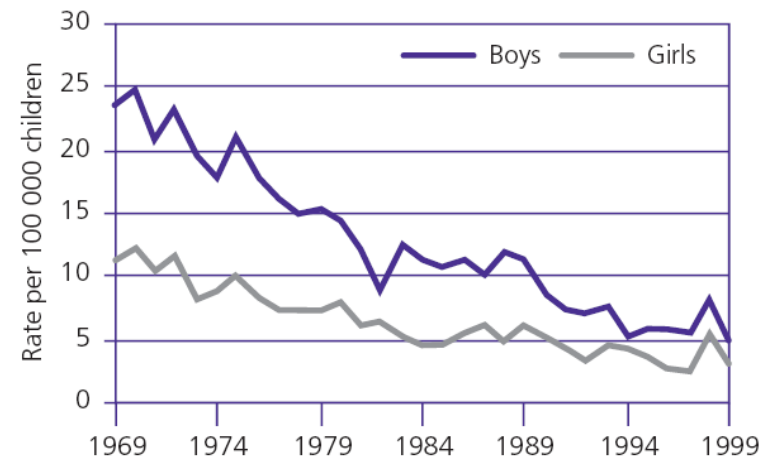
# Real stories

- Losing a child unexpectedly has a huge impact on parents, siblings, families and communities.
- Non-fatally injured children may need to live with a disability that affect their social development, education, ability to work, etc.
- Child injuries place significant strain on overstretched health care systems.
- Injury prevention is a very cost-effective public health strategy.



# Child injuries are preventable

- Implementing interventions could save more than 1000 children's lives a day.
- Report describes 24 proven interventions.
- Many high-income countries have been able to reduce their child injury deaths by up to 50% over the past three decades by implementing multisectoral, multi-pronged approaches to child injury prevention.



# Children are at greater risk

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- Children are not just little adults.
- They live in a world built for adults.
- Strong association between injuries and
  - A child's age
  - Developmental stage
  - How he/she interacts with the world
  - Activities undertaken
- Simply reproducing injury prevention strategies for adults.
- Quality, availability and access to child-friendly medical care is an important factor that influences outcome.

# Child injury prevention is cost effective

## Financial savings from selected injury prevention interventions

Expenditure of US\$ 1 each on:	Savings (US\$)
Smoke alarms	65
Child restraints	29
Bicycle helmets	29
Prevention counselling by paediatricians	10
Poison control services	7
Road safety improvements	3

# The evidence base

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- Simply reproducing safe strategies that are relevant to adults will not protect children sufficiently.
- Prevention programmes that take into account the vulnerability of children.
- Prevention programmes should be multi-disciplinary.
- The most successful have been those that combine:
  - Legislation, regulation and enforcement;
  - Product modification;
  - Environmental modification;
  - Education and skill development; and
  - Appropriate emergency medical care.
- The World Report grades interventions as: effective, promising, insufficient evidence, ineffective or harmful.

# Road traffic injuries: Facts

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- 720 children die from road traffic crashes every day.
- Globally, road traffic injuries are the leading cause of death among 10-19 year olds.
- In low-income and middle-income countries most traffic deaths are among pedestrians, passengers in vehicles or on two-wheelers.
- In high-income countries most traffic deaths are novice drivers.
- The most common non-fatal injuries sustained by children are head injuries and fractured limbs.
- Road traffic injuries are a leading cause of disability for children.

# RTI: What works?

- Minimum drinking-age laws.
- Lower BAC limits for novice drivers and zero tolerance.
- Graduated driver licensing systems.
- Helmets.
- Seat-belts, child-restraints.
- Speed reduction.
- Separating road users.
- Daytime running lights.



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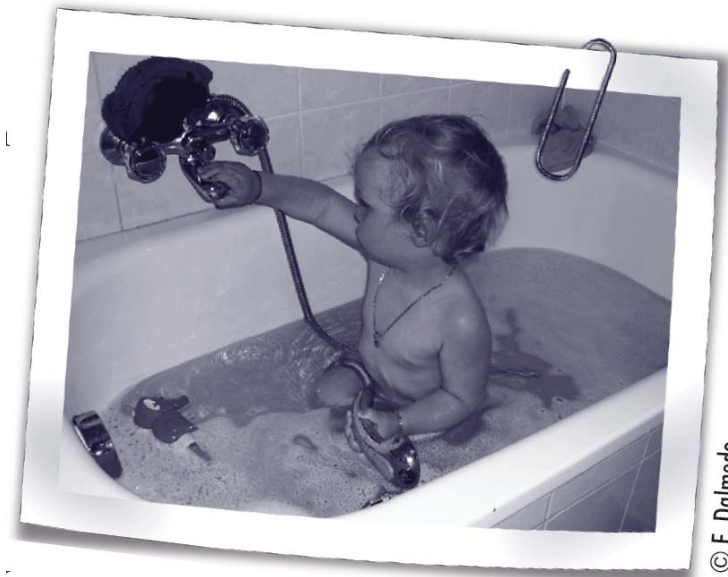
# Drowning: Facts

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- 480 children die from drowning every day.
- Each year 2-3 million children and teenagers get into trouble in water and come close to drowning.
- Globally children under the age of 5 years are at greatest risk of drowning – infants can drown in a few centimetres of water.
- Over 98% of child deaths from drowning occur in low-income or middle-income countries, usually in open bodies of water like lakes, streams, etc.
- In high-income countries, most drowning events happen in swimming pools.

# Drowning: What works?

- Removing (or covering) water hazards.
- Requiring isolation fencing (four-sided) around swimming pools.
- Wearing personal flotation devices.
- Ensuring immediate resuscitation.



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# Burns: Facts

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- 260 children die from a fire-related burn every day.
- The death rate from burns is 11 times higher in low-income and middle-income countries than in high-income countries.
- Infants are at highest risk of death from burns.
- Burns is the only type of injury which is more common among girls than boys (particularly in adolescence).
- Smoke inhalation from fire-burns can be deadly.
- Nearly 75% of non-fatal burns are from hot liquids, hot tap water or steam.
- Many children are disfigured for life from burns.

# Burns: What works?

- Setting (and enforcing) laws on smoke alarms.
- Developing and implementing a standard for child-resistant lighters.
- Setting (and enforcing) laws on hot tap water temperature, and educating the public.
- Treating patients at a dedicated burns centre.



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# Falls: Facts

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- 130 children die from a fall every day.
- 60% of these fatal falls are from a height.
- In some countries, nearly half of the children taken to emergency clinics are from falling.
- Non-fatal falls result in significant Disability Adjusted Life Years lost.
- Falls most commonly occur from:
  - Prams, baby walkers, changing tables,
  - Cots, beds, bunk beds;
  - Rooftops, windows, stairs;
  - Playground equipment;
  - Trees; and
  - Sports.

# Falls: What works?

- Redesigning nursery furniture and other products.
- Establishing playground standards for the depth of appropriate surface material, height of equipment and maintenance.
- Legislating for window guards.
- Implementing multifaceted community programmes such as 'Children can't fly'.



# Poisoning: Facts

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- 125 children die from poisoning every day.
- The rate of poisoning is highest for children under 1 year, but peaks again at 15 years and older as adolescents begin experimenting with substances.
- Fatal poisoning rates are 4 times higher in LMICs than HICs.
- The most common poisoning agents in LMICs are paraffin, household products and pharmaceuticals.
- In HICs the most common poisons are over-the-counter medications, household products, and prescription drugs.

# Poisoning: What works?

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- Removing the toxic agent.
- Legislating for (and enforcing) child-resistant packaging of medicines and poisons.
- Packaging drugs in non-lethal quantities.
- Establishing poison control centres.




# Overall recommendations

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1. Integrate child injury into a **comprehensive approach** to child health and development.
2. Develop and implement a **child injury prevention policy** and a plan of action.
3. Implement **specific actions** to prevent and control child injuries.
4. Strengthen **health systems** to address child injuries.
5. Enhance the quality and quantity of **data** for child injury prevention.
6. Define priorities for **research**.
7. Raise awareness of and target **investments** towards child injury prevention.

# Website


World Health Organization

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Home	<b>Violence and Injury Prevention and Disability (VIP)</b>	HIGHLIGHTS
About WHO	<a href="#">About VIP</a>   <a href="#">Media</a>   <a href="#">Publications and resources</a> <small>[Breadcrumb disabled for preview]</small>	 <a href="#">Facts on child injury prevention</a>
Countries	<b>World report on child injury prevention</b>	 <a href="#">Photo feature: children's stories</a>
Health topics	<div style="border: 1px solid #ccc; padding: 5px;">  <p>Every day more than 2000 children and teenagers die from an injury which could have been prevented. This joint WHO / UNICEF report is a plea to keep kids safe by promoting evidence-based injury prevention interventions and sustained investment by all sectors. The report presents the current knowledge about the five most important causes of unintentional injury – road traffic injuries, drowning, burns, falls and poisoning – and makes seven recommendations for action.</p> <p><a href="#">Download the full report [pdf 11.53Mb]</a>  <a href="#">Order a hard copy</a></p> </div>	 <a href="#">Successful country initiatives</a>
Publications	<b>QUICK LINKS TO PRESS MATERIALS</b> <a href="#">Fact sheets</a> <a href="#">Key figures from the report</a> <a href="#">High resolution pictures</a>	<b>CONTACTS</b> <a href="#">Contact for press</a> Ms Laura Sminkevicius Communications Officer <a href="mailto:sminkevicius@who.int">sminkevicius@who.int</a> Tel.: +41 22 791 45 47 Mob.: +41 79 249 35 20
Data and statistics	<b>TECHNICAL CONTENT</b> <div style="border: 1px solid #ccc; padding: 5px;">  <p><b>World Report</b> Full and summary report and chapters available in all languages. <a href="#">More information</a></p> </div>	<b>RELATED WORLD REPORTS</b>  <a href="#">World report on violence and health (2002)</a>   <a href="#">World report on road traffic injury prevention (2004)</a>
Programmes and projects	<b>MULTIMEDIA</b> <div style="border: 1px solid #ccc; padding: 5px;">  <p><b>Posters</b> Poster series "Keep Kids Safe" <i>(PDF format)</i> <a href="#">View all posters</a></p> </div>	<b>FEEDBACK</b> <a href="#">More information</a> <a href="#">Contact us</a> Your mail will be forwarded to the relevant person.
VIP home	<div style="border: 1px solid #ccc; padding: 5px;">  <p><b>Statements</b> WHO Director-General and child injury experts on the importance and impact of this report. <a href="#">All statements</a></p> </div>	<b>Child injury partners</b> <a href="#">All partners</a>
Violence	<div style="border: 1px solid #ccc; padding: 5px;">  <p><b>Pictures</b> High-resolution pictures from the report for public use. <a href="#">All pictures</a></p> </div>	<b>About VIP</b> <a href="#">Who's who in VIP</a>
Road traffic injuries	<b>Child-friendly version</b> This report aims to inform children about various types of injuries and possible responses. <a href="#">More information</a>	
Child injuries and violence	<b>Facts</b> Tables, figures, fact sheets and maps on child injury and its determinants. <a href="#">All data</a>	
Other injury topics		
Data collection		
Care & services		
Disability & rehabilitation		
Policies		
Capacity building		

URL:

[http://www.who.int/violence\\_injury\\_prevention/child/en/](http://www.who.int/violence_injury_prevention/child/en/)