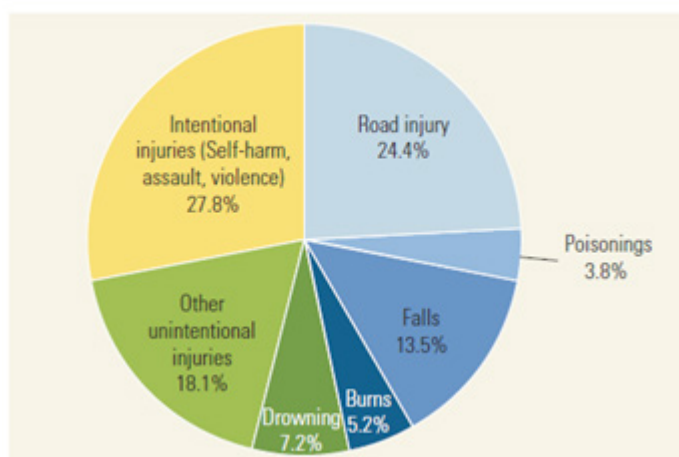


Preventing Road Traffic Injury

Each day, more than 3,400 people die on the world's roads, amounting to 1.25 million people each year and making road traffic injuries (RTIs) the ninth leading cause of death globally. Latest estimates show that road traffic crashes were responsible for 24 percent of all injury-related deaths globally (figure 3.1)—and a total of 78.7 million disability-adjusted life years (DALYs) lost in 2012, up from 69.1 million in 2000. Current trends suggest that RTIs will become the fifth leading cause of death by 2030 unless action is taken.

Figure 3.1 Global Mortality from All Injuries, 2012



Low- and middle-income countries (LMICs) bear a disproportionately high burden of RTIs, with just over 50 percent of the world's vehicles but more than 90 percent of the road traffic deaths. More than twice as many individuals per 100,000 population die from RTIs in LMICs compared to high-income countries (HICs).

In addition to the health burden, RTIs account for profound economic costs to individuals, families, and societies.

- Studies show that RTIs cost approximately US\$65 billion a year in LMICs, or 1 to 2 percent of gross national product.

Principles for road safety interventions

- Reducing exposure to risk by providing alternative modes of travel and improving land-use planning practices
- Reducing risk factors directly related to crashes, such as speeding, drinking and driving, using unsafe vehicles on unsafe roads, and failing to effectively enforce road safety laws
- Reducing severity of injuries by mandating and enforcing the use of seat belts, child restraints, and helmets, as well as by improving road infrastructure and vehicle design
- Improving post-crash outcomes, from appropriate and life-saving measures at the scene of the crash through rehabilitation services (see handout on Emergency Trauma Care)

Examples of Proven and Promising Road Safety Interventions implemented in Low- and Middle-Income Countries

Intervention	Location	Results
Providing and encouraging use of alternative forms of mass transportation	Guadalajara, Mexico	46 percent reduction in crashes after Macrobus was implemented
Increasing the visibility of pedestrians and cyclists	Seremban and Shah Alam, Malaysia	29 percent reduction in visibility-related motorcycle crashes
Supervising children walking to school	Kuala Terengganu, Malaysia	Risk of injury was reduced by 57 percent among supervised children
Separating different types of road users	Selangor, Malaysia	39 percent reduction in motorcycle crashes, and 600 percent decrease in fatalities
Reducing average speeds through traffic calming measures	China	Average speed dropped by 9 percent in three of four intervention sites; overall number of casualties dropped by 60 percent
Setting and enforcing speed limits appropriate to the function of roads	Londrina, Brazil	Reduction in mortality to 27.2 per 100,000 population after one year of implementing a new traffic code
Setting and enforcing blood alcohol concentration limits	Kampala, Uganda	17 percent reduction in traffic fatalities after intervention
Setting and enforcing the use of seat belts for all motor vehicle occupants	Islamic Republic of Iran	Death rates reduced from 38.2 per 100,000 population in 2004 to 31.8 in 2007; death rate per 10,000 vehicles reduced from 24.2 to 13.4.
Setting and enforcing motorcycle helmet use	Cali, Colombia	52 percent reduction in motorcyclist deaths
Encouraging helmet use among child bicycle riders	Czech Republic	100 percent increase in helmet use, and 75 percent reduction in head injury admission rates

The Safe Systems Approach

To work effectively, the safe systems concept needs to be part of an integrated policy framework and a national road safety plan that define goals and objectives based on burden of RTIs at the population level. Some components of the integrated strategic approach for road safety include the following:

- Developing a sound road safety management system
- Building institutional capabilities and mechanisms for interaction
- Developing sustainable policies
- Strengthening human and financial resources and capabilities
- Providing advocacy approaches
- Developing epidemiologically sound and robust information systems on road crashes, injuries, and fatalities
- Promoting intersectoral approaches
- Developing a suitable choice of evidence-based scientific interventions in conjunction with integrated monitoring and evaluation.

The safe systems approach builds on the unique strength of each sector (ministries, other governmental agencies, private organizations, NGOs) to systematically integrate road safety into different policies, both vertically within each sector and horizontally across sectors.