Injury Prevention and Safety Promotion

Technical Discussions

WHO-SEARO, New Delhi, 25-26 May 2010

World Health Organization
Regional Office for South-East Asia

SEA-Injuries-17
Distribution: General

Injury Prevention and Safety Promotion

Technical Discussions

WHO-SEARO, New Delhi, 25-26 May 2010

World Health Organization
Regional Office for South-East Asia

The report and recommendations of the Technical Discussions on Injury Prevention and Safety Promotion, held in WHO/SEARO, New Delhi, 25-26 May 2010 were presented to the Sixty-third Session of the Regional Committee for South-East Asia. The Regional Committee noted the report and endorsed the recommendations. The Committee also adopted the resolution on the subject (SEA/RC63/R2).

Printed in India

Contents

Page

Annexes

PART I – Background to the preparation for the Technical Discussions to be held prior to the Sixty-third Session of the Regional Committee

Background

1. Agenda item 3 of the High-Level Preparatory (HLP) meeting for the Regional Committee, held from 29 June to 02 July 2009, was to provide a forum for an in-depth and wide-ranging review of various issues relating to a subject of regional interest (SEA RC5/R3). The discussions on the subject provided an opportunity for determining strengths, weaknesses and usefulness of the related WHO collaborative programmes, which could therefore be reinforced and further strengthened as necessary.

2. The working paper enumerated the subjects that had been selected for Technical Discussions. The Secretariat put forward three subjects for consideration, based on discussions held at previous sessions of the Regional Committee and of high-level policy meetings such as Health Ministers' meetings. The contemporary importance and relevance of the subjects to the Region were also taken into account. The subjects that were considered by the HLP were:

(1) Injury prevention and safety promotion;

(2) Tobacco control – meting the obligations of the WHO Framework Convention on Tobacco Control (FCTC); and

(3) Innovative approaches to child and adolescent health in the SEA Region.

3. A criteria matrix was proposed for prioritizing subjects, based on the burden of diseases, including the economic impact, effective available interventions, gaps in implementation in SEA Member States that need to be addressed and the MDG-related issues. After careful consideration of the criteria proposed by Thailand, representatives of the Member States attending the HLP meeting prioritized the three subjects.

4. After careful consideration of the criteria, the representatives prioritized the three subjects and recommended that the Sixty-second Session of the Regional Committee endorse "Injury prevention and safety promotion" as the subject for Technical Discussions to be held prior to the Sixty-third Session of the Regional Committee in 2010.

5. The Sixty-second Session of the Regional Committee for South-East Asia, held from 07 to 10 September 2010, discussed the Agenda item 8.2 (document SEA/RC62/7). The Committee noted that the HLP meeting had discussed the item as part of an in-depth and wide-ranging review of various issues relating to a subject of regional interest. Taking cognizance of the endorsement made by most Member States, the Committee recommended that these subjects be considered for inclusion in the Agenda for the Sixty-third Session of the Regional Committee.

6. Accordingly, considering its importance, the Committee endorsed the subject of “Injury Prevention and Safety Promotion” selected by the HLP meeting, and decided to hold Technical Discussions on it prior to the Sixty-third Session of the Regional Committee in 2010.

Role of Technical Unit

7. The Disability, Injury Prevention and Rehabilitation (DPR) unit drafted the working paper on the subject and submitted the first draft to the senior management for their guidance. As per guidance received from the Senior Management, an in-house working group was formed comprising various technical experts. The technical paper was presented during the in-house working group meeting for in-depth discussion. The group members reviewed the working paper thoroughly. As per the changes suggested by the working group, the working paper was revised and the final version was again submitted to the Senior Management for their approval. Experts from Member States of the SEA Region were identified and invited for the Technical Discussions.

PART II – Proceedings*

* Originally issued as document SEA/RC63/6 Inf. Doc. 1 dated 26 July 2010

Introduction

1. The Acting Director, Department of Noncommunicable Diseases and Social Determinants of Health (NDS), WHO Regional Office for South-East Asia (SEARO), convened the Technical Discussion meeting on “Injury Prevention and Safety Promotion” on behalf of Dr Samlee Plianbangchang, Regional Director, WHO South-East Asia Region. The Technical Discussions were organized from 25 to 26 May 2010 at WHO-SEARO, New Delhi, India, as per decision of the Sixty-second Session of WHO Regional Committee for South-East Asia. The recommendations arising out of the Technical Discussions will be submitted to the Sixty-third Session of the Regional Committee, to be held in Thailand in September 2010.

2. Dr Khalilur Rahman, Acting Director, NDS, WHO-SEARO, delivered the inaugural message of Dr Samlee Plianbangchang.

3. In his inaugural message, the Regional Director said that the burden of injuries in the South-East Asia (SEA) Region was high in comparison with other regions of WHO. He pointed out that more than half the Member States of the Region were in the uppermost quartile of charts featuring deaths due to injury. He stressed that without appropriate and timely action in Member States, there would be more victims of injuries and violence, who would crowd many emergency and operation rooms as well as hospital beds, thereby overwhelming medical personnel. He also highlighted the role of the health sector in injury prevention and safety promotion and urged Member States to develop and implement appropriate policy, strategies and programmes to save millions of lives from injuries and also to promote safety from injuries in the Region. He expressed the hope that participants would work in coordination and with commitment so as to ensure achievement of the proposed objectives of the Technical Discussions.

4. A total of nine representatives from eight Member States of the SEA Region and five staff from WHO-SEARO attended the Technical Discussions. The Director, Violence and Injury Prevention, WHO Headquarters, Geneva, also joined the meeting.

5. Dr Ashok Bajracharya, Chief and Head of the Department, Orthopaedic Department, NAMS Bir Hospital, Nepal was elected as Chairman. Dr Witaya Chadbunchachai, Senior Deputy Director, Khon Kaen Regional Hospital and Director of Trauma and Critical Care Centre (WHO Collaborating Centre), Khon Kaen, Thailand was elected as Co-Chairman. Ms Karma Doma, Programme Officer, DPR Programme, Department of Public Health, Ministry of Health, Bhutan was elected as Rapporteur.

Technical presentation

6. Dr Chamaiparn Santikarn, Regional Adviser, Disability, Injury Prevention and Rehabilitation, WHO-SEARO, made a brief presentation on injury prevention and safety promotion. She pointed out that injury, including violence, is a bodily lesion at the organic level, resulting from acute exposure to energy (mechanical, thermal, electrical, chemical or radiant) in amounts that exceed the threshold of physiological tolerance. In some cases (e.g. drowning, strangulation, freezing), the injury results from an insufficiency of a vital element such as oxygen or heat. Hence, the possible agent of injuries includes all types of energy, while the vectors/vehicles are motorcycles, cars, guns, etc. Injuries are the leading contributor of deaths, hospitalizations and disabilities all over the world, more so in the SEA Region, and have a very significant impact on the health sector with regard to treatment and rehabilitation of victims. Safety promotion is a process for developing and sustaining safety; it includes all efforts agreed upon to modify structures, environment (physical, social, technological, political, economic and organizational), as well as attitudes and behaviours related to safety. The presentation provided a sequential listing of factors dealing with the magnitude of the injury burden; existing global and regional primary injury prevention efforts; acute trauma care; the health sector's response; existing challenges; WHO's response; Member States' response; and the key issues under consideration.

Discussions

7. The Agenda and Annotated Agenda (SEA/DPR/Meet.7/01 and SEA/DPR/Meet.7/02) and the working paper for the Technical Discussions (SEA/DPR/Meet.7/06) served as background material for the discussions. The meeting noted that injury prevention and safety promotion was a critical public health issue in most Member States. Though patterns of injuries are similar among subgroups of countries in the Region, i.e. Association of Southeast Asian Nations (ASEAN) or South-Asian countries, the challenges for injury prevention and safety promotion differ. All Member States recognized that the rapid increase in registered and unregistered motorcycles has connected to the increasing trend of motorcycle-related injuries, and that this had become a major policy and programme concern in most Member States.

8. All participants agreed that there was a need for establishing an injury unit in ministries of health and allocating appropriate budget to address the problem in the Member States. Several good practices for injury prevention have been documented in various global and regional reports on injuries, especially on road traffic injuries. However, only some of them were applicable for low- and middle-income countries. Thus, more research needed to be conducted in the Region to document injury prevention and safety promotion practices and programmes.

9. The following were the key points that emerged from the presentations and the subsequent discussions:

- Countries shared information on the prevailing situation regarding injuries, as well as their experiences in prevention and care. It was agreed that regional issues, especially motorcycle-related injuries, needed more studies/research.
- Road traffic injuries are the major cause of injury, health and socioeconomic burden among all Member States of the SEA Region. Motorcycle-related injuries are the major concern among all road traffic injuries (RTI). This is due to the rapid growth in the number of vehicles and the lack of safety standards. Safety measures, such as using headlights and wearing helmets, were recommended. More policy and operational research needed to be undertaken to solve the problem of injuries.
- Suicide is a major cause of injury-related mortality, especially in India and Sri Lanka. The incidence of interpersonal violence, e.g. assault, child maltreatment and gender-based violence, is significant in most countries. Injuries due to political violence are increasing in the Region.
- Child injury, especially drowning, is a major public health problem in Bangladesh and Myanmar. For Thailand, drowning and road traffic injuries are equally serious problems in terms of mortality. Burns are overall a common child health problem in South Asian countries.
- The economic loss due to injuries in the Region is huge. Road traffic injuries alone cost about 1-3% of the Gross Domestic Product (GDP) of Member States.
- Policy and programmes for injury prevention have not yet been institutionalized in most countries of the Region. Similarly, many countries do not have a specific unit responsible for prevention and control of injury and safety promotion within their ministries of health.
- National-level policies have been formulated for all injuries or specific types of injuries (especially road traffic injuries) in Bangladesh, India, Indonesia, Maldives, Myanmar, Sri Lanka and Thailand; these countries have launched national multisectoral injury prevention programmes.
- The funding for injury prevention activities is inadequate in most countries. Thailand has introduced a new method of injury prevention and safety promotion through establishment of a national promotion fund that is replenished through dedicated taxation on tobacco and alcohol. Thailand has also reduced the impact of road traffic injuries by providing a wide coverage of social health insurance and third-party vehicle insurance. The experience of Thailand over the last decade with such measures should be shared with other countries.

- Injury surveillance systems have been introduced as pilot programmes or as an integrated part of national health information systems. However, the evidence-based information emerging from the surveillance systems is still inadequate. Moreover, such information is not being utilized for raising public awareness, nor for developing policy and strategy, or for monitoring and evaluating injury prevention programmes.
- Most Member States in the Region have set up hospital-based sentinel injury surveillance systems that provide adequate individual-case data on injuries for planning and local intervention. Such hospital-based injury surveillance systems should be supplemented with mortality causes from death registration that provide causes of injury. Nationally representative sentinel injury surveillance systems, augmented by national vital registration systems and national hospital admission records/reporting systems, should be improved so that countries get a complete picture regarding the injury situation.
- The health sector plays an important role in preventing and controlling injury and in promoting safety. The major role of the ministry of health is to lead and coordinate injury prevention activities keeping in view the causes of injury morbidity and mortality in the specific country context. The suggested roles already stipulated in the WHO publication "Preventing injuries and violence: A guide for ministries of health" are a guide for policy-makers and programme managers of national injury prevention programmes. These proposed roles include policy-making, data collection, advocacy, acute care service to victims, prevention and capacity-building.
- The legislation on injury prevention should be comprehensive, and should be enforced through appropriate multisectoral measures.
- Many countries still have inadequate programmes on raising the awareness of the public and concerned authorities including the mass media, on the burden, economic loss, major causes of injuries, risk factors and the need for social action for injury prevention and safety promotion. There is a need to advocate to injury prevention and safety promotion. Support is also required for enforcement of laws and regulations by communities, schools, employers and civil society.
- There is a need to integrate injury prevention activities into general public health programmes and policies, including those related to primary health care. There is also a need to include scientific knowledge in injury prevention and safety promotion including knowledge of first aid, and a standard curriculum for formal primary education.
- Injury prevention should address local priorities through policy and research on injuries, risk factors and protection such as motorcycle-related injuries, drowning in natural water bodies, unintentional falls, female-predominated burns in children and adults, suicides, and interpersonal and war violence.

- Acute trauma care that includes pre-hospital referral and a hospital care system is provided nationwide, and is now a part of universal coverage in Thailand. A pre-hospital care system has already been initiated in India, Indonesia, Myanmar and Sri Lanka. Trauma care and injury prevention are complementary to each other and should not be separated.
- Intervention efforts should be prioritized based on cost-effectiveness and seriousness of the problem.
- Technical and financial support are required to develop young researchers for injury research and to create a mass of technical expertise in the Region.
- Safety at the workplace must be ensured to prevent occupational injury.
- Partnerships with stakeholders across sectors should be developed and strengthened to promote safety in different settings and at all levels.
- It was also acknowledged that Member States needed to prepare for planning and implementation of the United Nations Action Plan for Decade on Road Safety (2011-2020), in partnership with development agencies, civil society and concerned UN agencies.

Conclusions and recommendations

Conclusions

10. The SEA Region accounted for the largest proportion of global injury-related mortality and disability-adjusted life years (DALYs); injuries affect all age-groups irrespective of sex, geographic distribution, religion or profession. However, the enormous issues and challenges of prevention and control of injury and safety promotion in the Region are largely unaddressed. Even information on the number of deaths and hospital admissions at the national level are not available in many Member States of the Region.

11. Road traffic injuries are the major cause of injury mortality, damage to health and socioeconomic burden among all Member States in the SEA Region. Motorcycle-related injuries, both in adults and children, are the major concern in all countries except Bhutan. There are other injury issues as well, such as suicides and interpersonal and political violence. Drowning and road traffic crashes, unintentional falls and burns are major problems among children. Burns are a common child health problem in the Region. The acute trauma care system is inadequate, unorganized and inaccessible in most Member States.

12. National capacity is inadequate to cope with the rapidly growing injury problem. Moreover, injury prevention activities have not been institutionalized in most Member States. Legislation on injury prevention should be comprehensive, and should be better enforced. Seven Member States of the Region have national

policies focusing either on all injuries or specific types of injuries, along with national multisectoral prevention programmes.

13. Due to the multidimensional aspect of injuries, injury prevention and safety promotion demand effective collaboration among all relevant sectors. The role of the ministry of health is to lead or collaborate in prevention activities, depending on the country context as well as the types of injuries.

14. Each Member State should review these documents and prioritize these recommendations in the context of the epidemiological situation of injury prevention and safety promotion in the country, and the availability of funding.

Recommendations for Member States

15. It was recommended that Member States should:

(1) establish or strengthen the existing injury unit within the ministry of health to plan, implement and coordinate injury prevention and safety promotion with appropriate budget and staff;

(2) strengthen injury surveillance and other injury-related data systems for generating evidence-based information for policies and programme development, and monitoring and evaluation of injury prevention and safety promotion;

(3) support and foster the full involvement of communities, civil society, the private sector, nongovernmental organizations, public health institutions and the mass media in establishing national policies, strategies and multisectoral programmes on injury prevention and safety promotion, including legislative measures;

(4) advocate for the establishment of a national mechanism or highest authority to direct, coordinate, monitor and evaluate, and to continue dialogue with all sectors including the private sector such as industries, corporate and insurance agencies, and civil organizations to enhance the national action plan and establish a healthy public policy;

(5) address local priorities through policy, research and intervention emphasizing road traffic injuries (in particular, motorcycle-related injuries), suicide, childhood drowning in natural bodies of water, female-predominant burns and interpersonal violence;

(6) integrate injury prevention and safety promotion activities into public health programmes and policies, including strengthening them as part of the primary health care package;

(7) continue strengthening the basic and professional acute trauma care and services system at national and local levels, for providing effective care and services and rehabilitation for injured persons (in pre-hospital, referral and hospital settings); and

(8) create a network of national institutions, academia and individuals who practice injury prevention, care and safety promotion, and organize an annual national workshop.

Recommendations for WHO

16. It was recommended that WHO should:

(1) support the institutionalization and strengthening of national capacity for injury prevention and safety promotion within the ministries of health, especially strengthening national injury-related data system development including injury surveillance, health information systems, and vital registration, as well as health research;

(2) encourage operational research on evidence-based initiatives for injury prevention such as considering the adoption of alternative, innovative and sustainable sources of financing for injury prevention and safety promotion, similar to dedicated taxes on tobacco or alcohol products or taxation on vehicles, or from accident insurance;

(3) coordinate the planning and implementation of plans for a Decade of Action in Road Safety (2011-2020) as requested by United Nations General Assembly resolution A/Res/64/255, in partnership with Member States and other concerned agencies;

(4) organize a biennial meeting of the international and national networks of institutions and individuals from the Region to exchange policies and experience; and

(5) report on the progress made in injury prevention and safety promotion in the Region to the Sixty-seventh Session of the Regional Committee in 2014.

Closing

17. Dr Khalilur Rahman, in his closing remarks, thanked all participants for their valuable inputs to update the working paper that will be submitted to the Regional Committee as an information document, and reiterated that through the Regional Director, the recommendations arising out of the Technical Discussions would be submitted to the Sixty-third Session of the Regional Committee for South-East Asia for its consideration. He also said that WHO was committed to strengthening injury prevention and safety promotion in Member States.

18. Dr Ashok Bajracharya, Chairman, Technical Discussions, in his conclusion, thanked WHO for organizing the discussions on the subject of “Injury Prevention and Safety Promotion” as it is a priority public health programme for all countries of the Region. He said that all countries acknowledged the challenges of ministries of health in policy and programme development on injury prevention and control as a

multisectoral programme, and of keeping the major role of the health sector effective, including establishment of a dedicated injury prevention and control unit and coordinating injury prevention activities. He assured participants that the recommendations arising out of the Technical Discussions would serve as valuable inputs for the Sixty-third Session of the Regional Committee for its consideration for policy and programme direction. Dr Bajracharya then closed the meeting.

PART III – Resolution, Agenda and Working Paper

Resolution [†]

The Regional Committee,

Recalling World Health Assembly resolutions WHA56.24 on implementing the recommendations of the World Report on Violence and Health, WHA57.10 on Road Safety and Health, WHA58.23 on Disability, including Prevention, Management and Rehabilitation, and WHA60.22 on Health Systems: Emergency-Care System, and its own resolution SEA/RC47/R3 on Accident Prevention and Trauma Care Management, which recommends that Member States integrate prevention of traffic injuries into public health programmes and strengthen emergency and rehabilitation services,

Recognizing that countries in the Region suffer from a tremendous burden of injuries resulting in millions of deaths and disabilities, with considerable social and economic costs to health services, victims, families and the country,

Concerned that those who use motorized two- and three-wheelers, pedestrians and cyclists are the most vulnerable to road traffic injuries, and that the other major causes of injury in the Region are intentional self-harm, drowning, burns, unintentional falls, and interpersonal and political violence,

Noting that children are the most likely to be injured as a result of drowning, road traffic accidents, unintentional falls and burns, which are preventable through health and safety promotion, legislative and other measures,

Acknowledging the concerted efforts of Member States to implement national policies and multisectoral actions to reduce injuries including disability, through safety promotion, advocacy and support for appropriate legislation, enforcement of laws and regulations and providing acute trauma care for the injured,

Having considered the report and recommendations of the Technical Discussions on “Injury Prevention and Safety Promotion” (SEA/RC63/6),

1. ENDORSES the recommendations contained in the report; and

2. URGES Member States:

   (1) to advocate for the establishment of a national mechanism or authority at the highest level, and to declare injury prevention and safety promotion a national agenda and to direct, coordinate, monitor and evaluate, and to continue dialogue with all sectors including the private sector (such as industries, corporations and insurance agencies) and civil society organizations to enhance national action plans, strategies and multisectoral programmes to establish a national healthy public policy;

[†] Originally issued as SEA/RC63/R2.

(2) to establish or strengthen the existing injury management unit within ministries of health to plan, implement and coordinate injury prevention and safety promotion programmes, with appropriate budget and staff;

(3) to play a more active role in advocacy for active participation of the non-health sector, lawmakers and politicians in injury prevention and safety promotion to ensure that due consideration is given to public health in their policies and decision-making;

(4) to support and foster the full involvement of communities, civil society, the private sector, nongovernmental organizations, public health institutions and the mass media when framing national policies, strategies and multisectoral programmes on injury prevention and safety promotion, including legislative measures;

(5) to strengthen national injury surveillance and other injury-related data systems for generating evidence-based information for policies and programme development, and monitoring and evaluation of injury prevention and safety promotion programmes;

(6) to address local priorities through policy, research and interventions emphasizing risk management and effective prevention of road traffic injuries, in particular motorcycle-related injuries; suicides; drowning burns predominantly affecting females and children; and interpersonal violence;

(7) to integrate injury prevention and safety promotion activities into public health programmes and policies, including strengthening them as part of the primary health care package;

(8) to continue strengthening qualified pre-hospital emergency medical services, basic and professional acute trauma services in national and local hospital settings, and rehabilitation services for injured persons;

(9) to create a network of national institutions, academia and individuals who practise injury prevention, care and safety promotion, and organize regular national conferences to share experiences and advance the agenda of injury prevention and safety promotion; and

3. REQUESTS the Regional Director:

(1) to support the institutionalizing and strengthening of national capacity for injury prevention and safety promotion within ministries of health, especially the strengthening of national injury-related data system development including injury surveillance, health information systems and vital registration, as well as health research;

(2) to encourage operational research on evidence-based initiatives for injury prevention, such as considering the adoption of alternative, innovative and sustainable sources of financing for injury prevention and safety promotion similar to dedicated taxes on tobacco or alcohol products, or taxation on vehicles or from accident insurance;

(3) to coordinate the planning and implementation of plans for the Decade of Action in Road Safety (2011-2020) as requested by United Nations General Assembly resolution A/Res/64/255 in partnership with Member States and other concerned agencies;

(4) to organize a biennial meeting of international and national networks of institutions and individuals from Member States in the Region to review policies and exchange experiences in order to advance this agenda, and

(5) to report on the progress made by injury prevention and safety promotion programmes in the Region to the Sixty-seventh Session of the Regional Committee in 2014.

Agenda‡

1. Introduction
2. Overview of injury prevention and safety promotion situation
3. Injury prevention and safety promotion: response of the health sectors
4. Challenges of injury prevention and safety promotion activities
5. The way forward for World Health Organization and its Member States
6. Points for consideration
7. Conclusions and recommendations

‡ Originally issued as SEA/DPR/Meet.7/01 - Agenda for the meeting held in SEARO from 25 to 26 May 2010.

Annotated Agenda[§]

1. Introduction

- What is injury
- Why injury causes must be known
- What is safety promotion
- Why injury prevention and safety promotion are an issue in the South-East Asia (SEA) Region

2. Overview of injury prevention and safety promotion situation in the SEA Region

- Magnitude of injuries and major causes
- Trend analysis of injuries
- Socioeconomic burden of injury
- Existing injury prevention good practices
- Acute trauma care
- Injury prevention in the SEA Region

3. Injury prevention and safety promotion: response of the health sector

- Why the health sector has to respond to injury
- Role of the health sector in injury prevention and safety promotion

4. Challenges of injury prevention and safety promotion activities

- Inadequate capacity institutionalized at national level to cope with the growing injury problem
- Lack of injury surveillance and inefficient injury-related information system
- Inadequate, unorganized and inaccessible acute trauma care system for injuries cases
- Inadequate investment in injury prevention and safety promotion
- Inappropriate injury prevention campaigns
- Lack of resources for research specific to the regional context
- Lack of motorcycle safety standards, legislation and enforcement
- Need for mechanisms to coordinate across sectors and among countries

[§] Originally issued as SEA/DPR/Meet.7/02 – Annotated Agenda for the meeting held in SEARO from 25 to 26 May 2010.

5. The way forward for World Health Organization and its Member States

- Policy development and mechanisms for injury prevention and safety promotion
- Role of WHO
- Role of Member States

6. Points for consideration

- National policy and strategy on injury prevention and safety promotion
- Establishing and strengthening injury units
- Plans for capacity building
- Establishing and improving injury surveillance/information systems
- Improving emergency trauma care systems
- Advocate for safe public transportation motorcycle safety

7. Conclusions and recommendations

Working Paper[**]

Introduction

1. Injury, including violence, is a bodily lesion at the organic level, resulting from acute exposure to energy (mechanical, thermal, electrical, chemical or radiant) in amounts that exceed the threshold of physiological tolerance. In some cases (e.g. drowning, strangulation, freezing), the injury results from an insufficiency of a vital element such as oxygen or heat[1]. Hence, the agent of injuries is all types of energy while the vectors/vehicles are motorcycles, cars and guns, etc.

2. In order to prevent injuries, their causes must be known. The causes should comprise intention (intentional or unintentional) and mechanisms (e.g. crash, falls and burns, etc.). The causes of injuries are classified in the International Statistical Classification of Diseases Tenth Revision (ICD 10), first by intent and then mechanism i.e. unintentional falls, intentional self-harm by jumping from a height, etc. Additional information on place of occurrence like home, school or activity while injured at the time of working for income, is also useful information for planning any intervention. Such information is categorized as a subdivision in the classification[2].

3. Safety promotion is the process of developing and sustaining safety that includes all efforts agreed upon to modify structures, environment (physical, social, technological, political, economic and organizational), as well as attitudes and behaviours related to safety. Safety promotion programmes need to be adapted to the context of each community[3].

4. Injuries are a leading contributor to deaths, hospitalizations and disabilities all over the world, and have a very significant impact on the health sector with regard to treatment and rehabilitation of victims. Almost 16 000 people die from injuries every day around the world. Injuries accounted for 9.8% of the world's deaths and 12.3% of the world's burden of diseases in 2004[4]. They also accounted for 17% of the disease burden in adults aged 15-59 years in 2004[5]. Road traffic injuries, intentional self-harm, interpersonal violence, war injuries, drowning, poisoning and injuries resulting from exposure to fire are all among the 10 leading causes of death for persons aged 15-29 years[6].

5. Injuries can be prevented and their consequences can be mitigated. The health sector can play an important role not only in providing care and support services for the victims, but also in primary prevention, including advocating evidence-based strategies. Within this context, injury prevention and safety promotion will be planned and implemented using the primary health care (PHC) approach that encompasses universal coverage or equity, community participation, intersectoral collaboration and the use of appropriate technology.

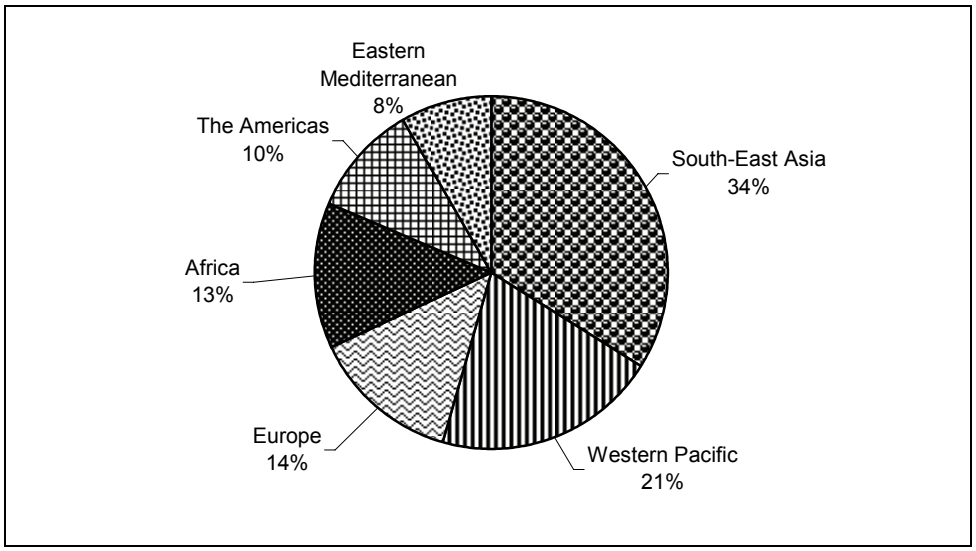
[**] Originally issued as Working Paper for the meeting held in SEARO from 25 to 26 May 2010.

Regional overview

Magnitude of injuries and their major causes in the Region

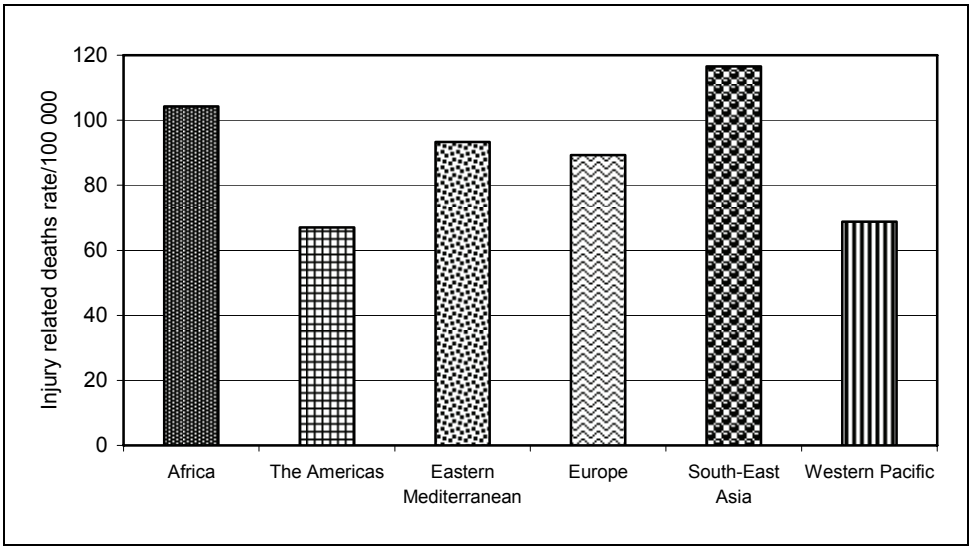
6. In 2004, there were an estimated 5.78 million deaths from both intentional and unintentional injuries in the world constituting 9.8% of all deaths. The South-East Asia (SEA) Region has the highest proportion and rate of injury-related deaths (116.6/100 000 population) in the world (Figures 1 and 2)[5].

Figure 1: ***Regional distribution of global injury mortality, 2004***



(Source: Global burden of disease: 2004 update)

Figure 2: ***Rate of injury-related deaths per 100 000 population in all regions of WHO, 2004***

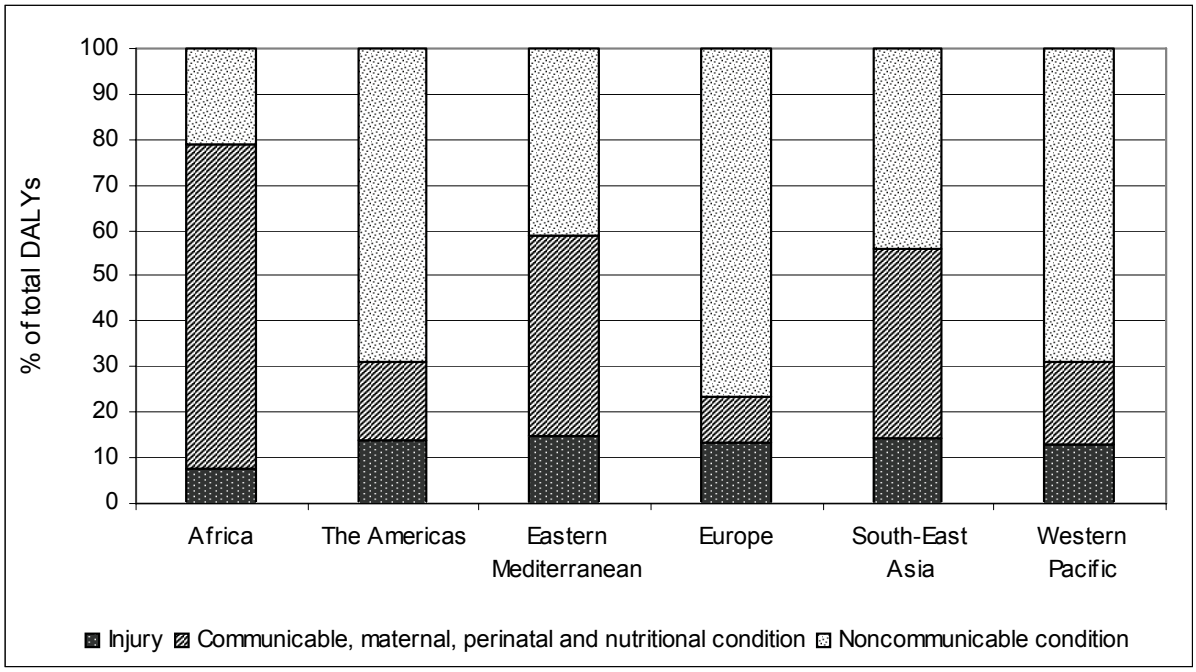


(Source: Global burden of disease: 2004 update)

7. In the context of the total burden of disease, injuries accounted for 14.2% of the total burden of disability-adjusted life years (DALYs) in the SEA Region, which is the second highest among all regions of the World Health Organization (Figure 3). Among the 1.9 million deaths in the SEA Region, injury and violence are among the top five leading causes of deaths and hospitalizations in the Region. They are also a leading contributor to socioeconomic losses in Member States[7].

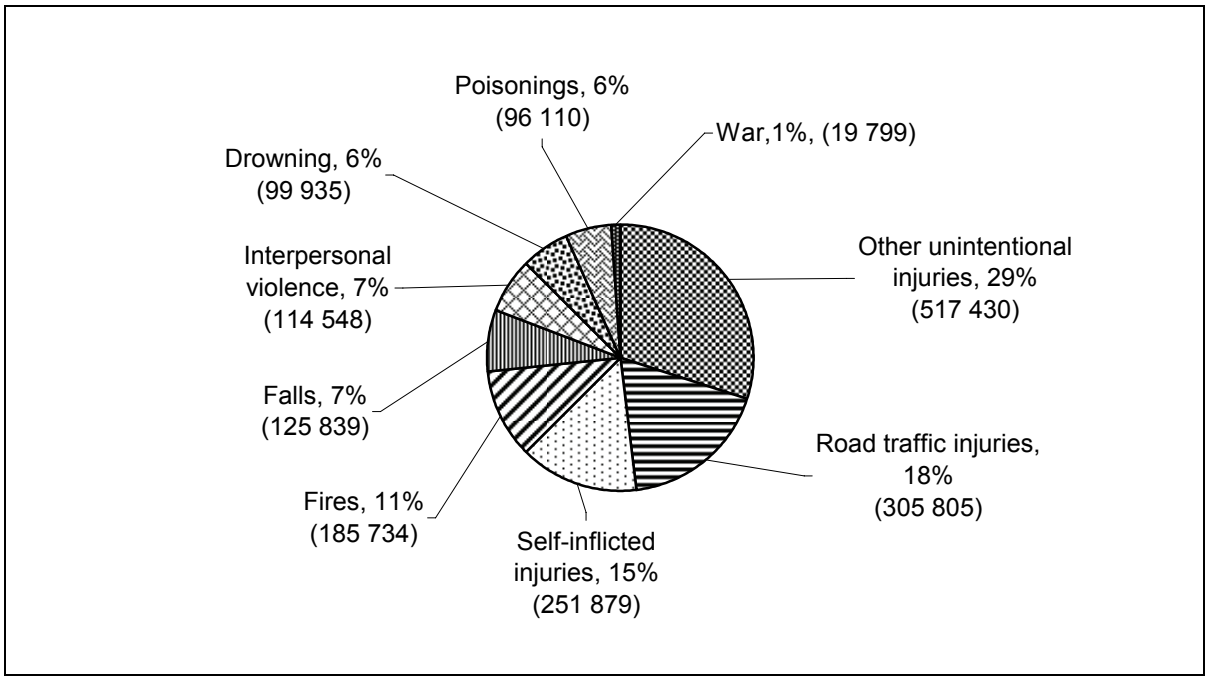
8. Road traffic injury was the tenth leading cause of death in the SEA Region in 2004 and was the leading cause of injury-related mortality (18%) (Figure 4). The highest mortality rate per 100 000 population was observed in Thailand (25.4), followed by Myanmar (23.4) and Maldives (18.3) in 2008[8]. All these countries have motorcycles as the main mode of transportation for families; the percentages of registered motorcycles among all vehicles are 65, 64 and 79% respectively. This is the prevailing phenomenon in most Member States in our Region which is much different from high-income countries having motorcycles that are around 1-3% of registered vehicles.

Figure 3: ***Proportion of injury-related DALYs (% of total DALYs) among all regions of WHO, 2004***



(Source: Global burden of disease: 2004 update)

Figure 4: ***Injury-related mortality in the SEA Region, 2004***



Source: WHO, Geneva, Global Burden of Disease Study (2004 update)

9. Violence (intentional injury), kills more than 1.6 million people every year, one-fifth of whom live in the SEA Region, leaving millions of people suffering from physical, mental, reproductive, sexual and social health problems. For every death due to violence, another 20 to 40 people require medical treatment[9], resulting in a huge burden on the health system. The Region has a paucity of reliable information from within the public health system. However, from the available data it is evident that interpersonal violence in the Region accounted for 19% of the global burden of mortality due to interpersonal violence. Injury due to self-harm (15%) is the second leading cause of injury-related mortality in the Region, while suicides in the Region make up for 29% of the global burden of mortality due to self-inflicted violence[5]. A WHO multi-country study on women's health and domestic violence against women (2006) found that the lifetime prevalence rates for physical or sexual violence (or both) were 62% in rural Bangladesh and 47% in rural Thailand[10].

10. Suicides and burns are the other major causes of injury. In the SEA Region, the highest rate of suicides has been observed in Sri Lanka[11]. The Region has a pattern opposite to the global scenario for suicides that is it has a female predominance. The same scenario has been observed for burns among children. Children especially girls were found to be the main victims of burns in South Asia. Even though males are predominantly affected by injuries, females figure higher in deaths reported from burns and self-harm. A disproportionately large burden is inflicted on young people under the age of 40 years, making injuries the leading cause for loss of productive life and high medical care costs. Injuries are also

associated with significant degrees of disability (Please see Annex 1 for country-specific injury-related information).

11. Child injuries: Injury is the major cause of death in children over one year of age in the SEA Region. In 2004, the Region had the second highest rate of unintentional child injuries (49/100 000 children per year) globally. Data presented in the "Bi-regional Workshop on Injury Surveillance" held in Chiang Mai, Thailand from 18 to 21 December 2006 revealed that road traffic injuries, drowning, unintentional falls and burns were the major causes of severe injuries/deaths in most countries. Motorcycle crashes are an important cause of road traffic injuries in many countries in the SEA Region[12]. It is estimated that each year in the SEA Region, at least 15 000 children less than 15 years old sustain severe head injuries and 1 500 die from driving or pillion-riding on motorcycles.

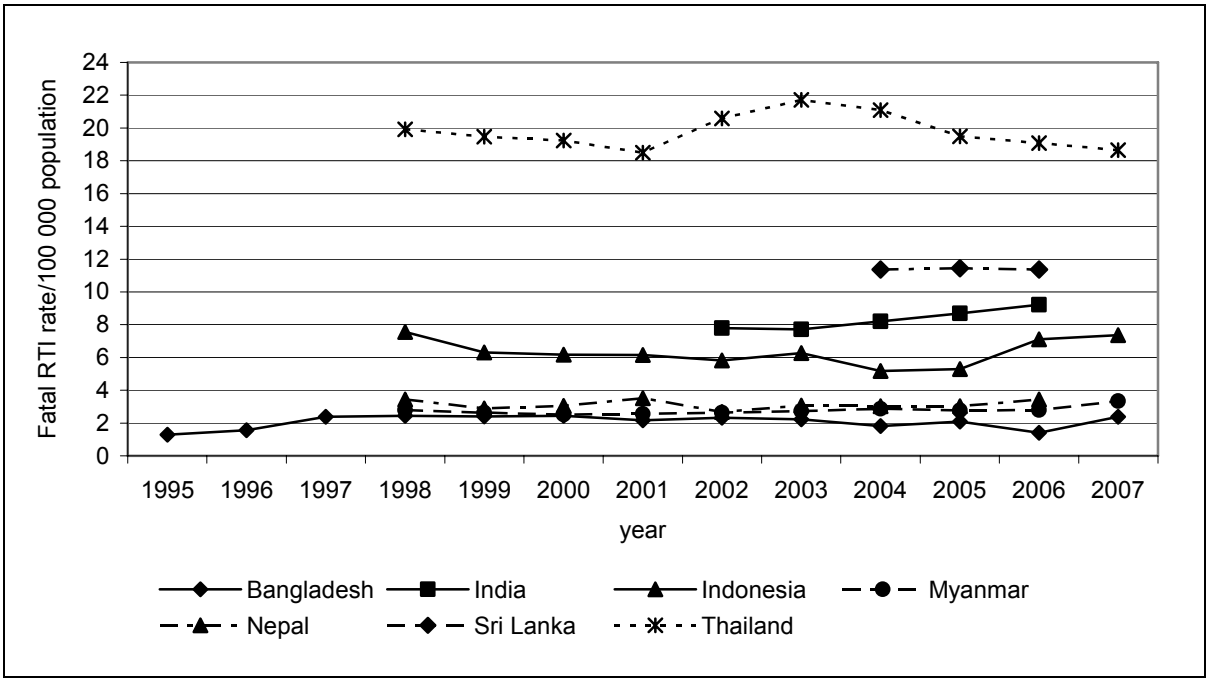
12. In Bangladesh, injuries constituted 38% of all classifiable deaths in children from ages 1-17 years in 2003. Drowning was the leading cause of deaths (28.6/100 000 children per year)[13]. In Thailand, injuries accounted for 34.4% of all deaths among 1-14 year-old children in 1999 and were the leading cause of child mortality in 2003[14]. Injury mortality rate in children compiled from Thailand death certificates was 25.2/100 000 children (less than 15 years) per year in 2006[15]. Injuries were the second leading cause of death in 5-14 year-old children and the fourth leading cause of death in children under 15 years in India[16]. In Sri Lanka, injuries among children under 5 years of age accounted for 72.9% of all causes of mortality[17].

Trend analysis of injuries in the Region

13. Published information related to injury trends in the SEA Region is lacking in most Member States. However, the available data on trend of road traffic mortality show a perceptible rise in Bangladesh, India, Indonesia and Myanmar. However, a slight downward trend in road traffic injury (RTI) deaths has been observed in Thailand in the past few years (Figure 5).

14. The upward trend of road traffic injuries is due to a variety of factors, including motorization, frequent travelling and motorized vehicles, especially motorcycles, urbanization, unplanned land use, and increase in road length. The number of motorcycles in the Region has increased to 72.5 million in recent years, and the percentage of registered motorcycles among all registered vehicles in each country ranges from 19% in Bhutan, 50% in Bangladesh to 79.9% in Maldives[8]. The liberalization of alcohol availability and poor regulatory and law enforcement mechanisms have a significant impact on the situation.

Figure 5: ***Fatal road traffic injuries rate (per 100 000 population) trends in the SEA Region (using actual data updated from countries), 1998-2007***



(Source: Regional Report on Status of Road Safety: the South-East Asia Region, WHO-SEARO, 2009)

Socioeconomic burden of injury in the Region

15. The huge economic costs of unintentional injuries and violence need to be communicated to policy-makers. However, they have only begun to be mapped out in the SEA Region. A few Member States have information on road traffic injury-related costs that are between 1% and 3% of the gross domestic product (GDP) of countries.

16. In each country, the costs of road traffic injury in a year are several billions in local currency though the economic impact of road traffic injuries on families has not been quantified in any study. This tally includes both direct costs such as police, judicial system and health service costs, and indirect costs including foregone output and physical costs. The most recent report on economic loss reported during 2003-2007 revealed that the loss ranged from US$ 10.1 million in Nepal to US$ 11 550 million in India, and that the highest economic loss per person was observed in Thailand (US$ 123.9) and Myanmar (US$ 30.3) (See details in Annex 1).

Existing global and regional injury prevention programmes

17. The World Health Assembly and the United Nations General Assembly's resolutions on violence and road traffic injuries, as well as world reports on both

issues called on governments to greatly step up national efforts to prevent injuries and violence, and to coordinate these efforts through their ministries of health (Annex 2).

18. In the area of road traffic injuries, effective preventive strategies have been documented in the World Report on Road Traffic Injury Prevention[18]. These include establishing a lead agency at national level; speed control; provision of safer road conditions for vulnerable road users; safer road infrastructures; compulsory use of motorcycle helmets; and seat belts and child restraints in cars, including setting and enforcing legal blood alcohol concentration limits. The same are also documented in the Regional Report on Status of Road Safety: the South-East Asia Region[8].

19. Promotion of alternative modes of transport such as cycling, walking and public transport are also very promising measures for road traffic injury prevention. However, more research is needed to develop effective policy interventions in addressing motorcycle injuries as there are millions of motorcycles in the SEA Region ranging from 50% to 80% (except Bhutan) of all registered vehicles, and are markedly higher than in high-income countries where motorcycles range from 1-3% of all registered vehicles. A few interventions/strategies have been documented in the World Report on Road Traffic Injury Prevention [18].

20. For prevention of drowning, effective, promising and comprehensive programme that includes close supervision, day-care centre, playpen and teaching of survival swimming, are being piloting in several Member States in the SEA Region. Other effective interventions/strategies documented in the World Report on Child Injury Prevention include: removal of water hazards or covering/fencing all sides of waterbodies, and availability and wearing of personal floatation devices.

21. For prevention of burns, a number of promising interventions are being piloted in the Region, i.e. the use of a safe burner for cooking, banning open lamps and using hurricanes (close lamps) etc. though these interventions have not yet been evaluated. Besides, a number of effective interventions/strategies documented in the World Report on Child Injury Prevention[19] are not very much relevant to our regional context.

22. Several effective interventions for violence prevention have been documented in the World Report on Violence and Health[20] and Violence Prevention: the Evidence (overview)[21]. Both documents have outlined the broad strategies for prevention of violence, which includes suicide prevention. These strategies are:

- Developing safe, stable and nurturing relationships between children and their parents and caregivers;
- Developing lifeskills in children and adolescents;
- Reducing the availability and harmful use of alcohol;
- Reducing access to guns, knives and pesticides;
- Promoting gender equality to prevent violence against women;

- Changing cultural and social norms that support violence; and
- Victim identification, care and support programmes, such as adequate prevention and treatment of depression and alcohol and substance abuse, which can reduce suicide rates, as well as follow-up contact with those who have attempted suicide.

Acute trauma care

23. The consequences of serious injuries and violence – including death, disability and long-term morbidity – can often be prevented by prompt and efficient acute trauma care that includes pre-hospital trauma care, care during referral period and emergency care at definite hospital. Pre-hospital care or primary/community care covers services provided on the site where the injury occurred and transport of victims to an appropriate health-care facility. Appropriate first-aid care needs to be provided at the scene of injury and during the time that patients are referred from one health-care facility to another.

24. Life-threatening injuries can be appropriately treated promptly and in accordance with priorities, once the victims arrive at the emergency room. Potentially disabling injuries or complications can be detected and treated early to prevent and minimize impairment. The role of the physician in the Emergency Department (ED), and of nurses in trauma care includes primary responsibility for acute care of injuries. However, many health personnel have extended their role to a preventative role that encompasses education, research and advocacy outside the hospital especially in the community. This has great potential for success.

Response of the health sector

Injury prevention and safety promotion programmes

25. The evidence from the SEA Region (mainly from Thailand) shows that appropriate use of injury surveillance information has led to policy development and facilitated injury prevention actions. Most Member States of the Region have established or piloted injury surveillance programmes. However, reports of such programmes that should be very important for multi-sectoral collaboration have not been disseminated to relevant sectors in most Member States except in Thailand. Thailand is regularly disseminating injury surveillance information to all sectors.

26. Bangladesh, India, Maldives, Sri Lanka and Thailand have established national programmes for injury prevention and control (Table 1). In the Region, India, Sri Lanka and Thailand have taken very good initiatives for the first tier of the pre-hospital trauma care system. Training of selected first responders, paramedics, medical technicians and nurses on pre-hospital trauma care, including primary and emergency trauma care, has been initiated in these countries. The emergency trauma care system in Thailand enjoys universal coverage.

27. The health sector's mandate includes preventing and responding to all major causes of morbidity and mortality. The health sector bears the most burden of injuries in the system. This is because injury is the major cause of mortality and disability. The health sector absorbs a substantial portion of direct costs arising from an injury. Injuries account for a very large proportion of health services, burden and costs – including emergency department services, Intensive Care Unit (ICU), surgery and psychological care.

28. The ministry of health is uniquely positioned to collect data, analyse risk factors, disseminate information for advocacy, provide emergency and long-term care, coordinate multisectoral prevention efforts across a range of sectors, and campaign for political and legislative change. In many cases, if the ministry of health of Member States does not undertake injury prevention efforts, it is unlikely that any other body will do so. Health is often well placed to advocate, coordinate or facilitate such multisectoral interventions. Depending on the specific prevention issue, the role of the health sector with regard to other sectors will vary. As for example for poisoning, fires, drowning and prevention of falls, the health sector is likely to have a lead role in coordinating, implementing and monitoring the response. For violence and road traffic injuries, by contrast, the role of health can range from a leading role (in the case of preventing suicides) to advocacy and evaluation role (through injury surveillance or in the case of laws on blood alcohol content), with the ministries of justice and transport often taking a more central role in implementation.

29. Given the complex causality of violence and injuries, their prevention cannot be undertaken by a single department or institution working in isolation. For successful prevention of injuries, it requires action across a range of sectors at local, regional and national levels. The health sector must play a vital role in these efforts, not only in providing care and support for victims but also in applying the unique public health models to address the problem. Though individual departments of ministries of health are likely to be at different stages developing the injury prevention infrastructure, all must ultimately address the following areas:

- Policy-making
- data collection
- advocacy
- services for victims
- prevention
- capacity-building

30. The Emergency Medical Service personnel frequently encounter injuries and spend at least a brief period of time talking directly with the injured person to gather history of the injury. Besides acute care given to patients, the specific needs of victims of violence (especially women and children who need psychosocial support) and coordination with social workers (for temporary shelter) and other concerned authorities can be provided in the ED since the patient is first seen there.

31. In addition, the grassroots level health-care providers can play an important role in registering causes of deaths, removing injury risks and hazards within homes and their surroundings while visiting households for safety promotion activities. The ministry of health has the privilege to provide such support to women and children who are victims of violence (this is sometimes called a “One-Stop Crisis Centre”) (see Annex 3).

Challenges of injury prevention and safety promotion activities in the SEA Region

32. Due to the multidimensional aspect of injuries, injury prevention and safety promotion need effective collaboration among all relevant sectors (i.e. health, law-enforcing authorities, engineering and civil societies, etc.). Ministries of health in some Member States are reluctant to take ownership and leadership in injury prevention. However, there are important reasons for health to take the leading role in injury prevention, such as:

- Duty – health sector’s mandate is to respond to all major causes of morbidity and mortality;
- Direct burden – the health sector bears a direct burden from injuries in terms of the workload and the health expenditure for treating the injured.
- A value to add – public health is a discipline that adds value in terms of scientific expertise, knowledge and skills in data collection and analysis etc., epidemiology, statistics and research, and public health personnel are accepted by the public as experts in “health”.
- Uniqueness of the nature of work of the health sector–being exposed daily to cases of injury and aware of the salient risks and outcomes, providing emergency and long-term care, coordinating across sectors in disease prevention, and campaigning for political and legislative changes.

33. Challenges in the area of injury prevention that need strategic decisions by governments are:

(1) Inadequate national capacity to cope with the growing injury problem.
   - Staffing and deployment of manpower is lacking at all level.
   - Difficulties in mobilizing resources from the “sunset areas” to the new area of injury.
   - Training is also urgently required.
   - Few Member States have a national injury prevention policy and plan.

- Injuries are not yet institutionalized. Most countries only have focal persons who keep changing very often. Thus, there is no continuation of injury-prevention activities. Infrastructure should be developed by the ministry of health to initiate, implement and coordinate injury prevention and safety promotion with continuity. Professional health staff and budget are equally challenging.

(2) Injury surveillance

- Injury data are not available or are underreported, especially at national level in many Member States. The basic health information system (i.e. death registry, hospital admission data and police report, etc.) is lacking in some countries. As such, it does not generate information to prioritize the area of injuries with respect to other diseases. Also it does not help to identify the major causes of injury;
- Community surveys can also be used to define the magnitude of the injury problem and risk factors as well as to identify the real magnitude of injuries especially on account of drowning (which is not well captured in hospital data), and domestic violence (which has a huge burden but is not severe enough to be captured by the hospital system is not classified correctly). Only a few Member States have conducted nationwide surveys to supplement activities of the injury surveillance system.

(3) Acute trauma care system for injury cases

- Reduction of injury mortality and consequences of injury require prompt, accessible and quality acute care. A team approach and continuum of care are needed such as: first-aid care at the injury scene; appropriate transfer to primary care at the hospital; quality referral care at the appropriate trauma centre, and quality services of the Emergency Room (ER) and wards concerned in the hospital receiving the patients referred to it.
- Communication and collaboration between pre-hospital and emergency trauma care at definite health-care level, and between the primary care hospital and hospital that is a centre of referral are not systematically organized.
- Cost-effective acute trauma care, pre-hospital trauma care, referral system (patients of one centre to another centre) and hospital care are required in most Member States.
- Inadequate attention is paid to improve the quality of service:
  - in the emergency room;
  - while investigations are being conducted (X-ray room and laboratory); and
  - in the ICU and rehabilitation centre.

- Secure long-term plans for human resource development and related legislation are also required.

(4) Resources for injury prevention and safety promotion

- Most Member States do not have budgets for injury prevention in their respective ministries of health.
- Resources for acute care in large urban cities are not used to develop cost-effective, evidence-based approaches or improve referral care of the referring hospital.
- Campaigning for only injury awareness, without following law and its enforcement, is inappropriate.
- Lack of resources for research is a challenge that is specific in the regional context.
- More resources are required for intervention and evaluative research that are relevant to the regional context.
- The undesirable practice of using a motorcycle as a family vehicle is growing rapidly in the Region. There is no standard motorcycle helmet for children (2-6 years old) in any of the Member States of the SEA Region. There is no protection for less-than-two-year-old children riding on motorcycles.
- Appropriate research and review, and inputs and recommendations of experts to Member States are required, followed by appropriate law enforcement regarding children riding motorcycles.

(5) Multisectoral collaboration

- Most Member States in the Region do not have motorcycle safety standards for both drivers and pillion riders. Also safety standards for children are lacking. In addition, there is no mechanical safety standard for motorcycles in the Region. It is therefore essential that motorcycle safety standards are developed.
- At national and subnational levels, collaboration, involvement and linking with governmental, private and professional organizations, as well as with nongovernmental organizations (NGOs) and community-based organizations (CBOs) are crucial.

The way forward for WHO and Member States

Member States

34. Each country must plan and create an enabling policy to accelerate injury prevention and safety promotion as part of its national policies and strategies to reduce the growing morbidity, mortality and disabilities. This will require:

- Assessing the national situation concerning the burden of injury and ensuring that the resources available are commensurate with the extent of the problem.
- Establishing and improving injury surveillance and data systems to be able to regularly report information for planning, monitoring and evaluation of national injury prevention programme to all sectors.
- Preparing and implementing a national policy and strategy on injury prevention and safety promotion with appropriate actionplans and budget.
- The ministry of health should play an important role in national injury prevention and safety promotion programmes in the following areas:
  - Policy-making and planning for injury prevention in the health sector;
  - Data and information;
  - Advocacy;
  - Prevention, research and evaluation;
- Capacity building, that should include institutional capacity building and human resource development;
- Establishing an injury unit in ministries of health to implement and coordinate injury prevention programmes with appropriate budget, staff and the career ladder for staff.
- Raising awareness of the public and concerned authorities including the mass media, about the burden, economic loss, major causes of injuries, risk factors and need for social action for injury prevention and safety promotion. Advocating injury prevention and safety promotion, and supporting enforcement of laws and regulations in communities, schools, and with employers and other segments of the civil society.
- Integrating injury prevention activities into public health programme and policies including those related to primary health care. Including scientific knowledge in injury prevention and safety promotion including first aid in the standard curriculum of formal primary education.
- Addressing local priorities through policy and research on injuries, risk factors and protection specific to the regional context, such as motorcycle-related injuries, drowning in natural waterbodies, unintentional falls, female-predominated burns in children and adults, suicides, and interpersonal and war violence.
- Advocating for developing a healthy public policy i.e. a policy of the transport sector on safety standards for motorcycles, urban speed limits, and policy of the educational sector on lifeskills training for children, etc.
- Improving emergency trauma care systems including pre-hospital care, referral care, care in the emergency room and in all other units concerned with trauma care. Rehabilitation services should also be

established and strengthened at all levels. Member States should conduct basic and advanced training on life-support systems following a trauma for developing capacities of health personnel involved in injury prevention and care programmes.

- Establish an appropriate national mechanism or a lead agency to coordinate and facilitate multisectoral collaboration between different ministries and sectors, including private transportation, corporates, consumer protection agencies, communities and the civil society. Monitoring and evaluation of activities and programmes of such agencies is very important for achieving progress in this area.
- Developing and strengthening partnership with stakeholders across sectors and promoting safety in different settings and at all levels.
- Each Member State should organize an annual national meeting on injury prevention and safety promotion.

WHO

35. It is recommended that WHO should:

- Support governments to establish or strengthen an injury unit in their respective ministry of health.
- Collaborate with Member States to establish evidence-based scientific public health policies and programmes for preventing injuries and mitigating their consequences.
- Facilitate the research and development of effective measures to prevent injuries and mitigate their consequences; such measures should be capable of being applied at national, subnational and local community levels. WHO should also coordinate and support activities related to the Decade of Action for Road Safety (2011-2020) as requested by the United Nations General Assembly resolution (A/Res/64/255) of March 2010.
- Provide technical support to strengthen or establish injury surveillance and other injury-related information systems including death registration, emergency room-based injury surveillance, trauma registries, and reporting of causes of injuries at the time of hospital admission.
- Support capacity building of countries in injury prevention through training, organizing workshops, and conducting intervention research on the major causes of injury relevant to the regional context.
- Provide technical support to establish and strengthen emergency trauma care systems that include emergency hospital care, referral care of patients and pre-hospital care.
- Increase the WHO budget for injury prevention and safety promotion programmes at national and regional levels.

- Monitor progress in the area of injury prevention and safety promotion.
- Organize regional meetings of programme managers in ministries of health on injury prevention biannually, and initiate the establishment of a network of ministry of health programme managers on injury prevention.

References

1. Baker SP, O'Neill B, Karpf RS. The injury fact book. Lexington, MA: Lexington Books, 1984.
2. World *Health* Organization. *International classification of diseases-10*. Vol. 1. 2nd ed. Geneva: WHO, 2004.
3. Svanström, L. *What is a safe community and how can we plan a community safety programme?* Background paper for the fourth travelling seminar on safe communities: how to create supportive environments for safety. Karolinska Institutet. KI VIT Rapport 298, 1993.
4. World Health Organization. *Injuries in South- East Asia Region: priorities for policy and action*. Document no. SEA/INJURIES/A1. New Delhi, WHO-SEARO, 2002.
5. World Health Organization. *The global burden of disease: 2004 update*. Geneva: WHO, 2008.
6. Peden M, McGee K, Krug E. eds. *Injury: a leading cause of the global burden of disease*. Geneva: World Health Organization, 2002.
7. Mohan D, Tiwari G, Khayesi M and Nafukho FM. *Road traffic injury prevention training manual*. New Delhi: World Health Organization / Indian Institute of Technology, 2006.
8. World Health Organization, Regional Office for South-East Asia. *Regional report on status of road safety: the South-East Asia Region*. New Delhi, WHO-SEARO, 2009.
9. World Health Organization, Regional Office for South-East Asia. Key facts on violence and health. In: *Violence prevention in South-East Asia: A challenge for public health*. Document no. SEA/Injuries/2. New Delhi: WHO SEARO, 2003: p1.
10. World Health Organization. *WHO Multi-country study on women's health and domestic violence against women.* Geneva: WHO, 2006. http://www.who.int/gender/violence/who_multicountry_study/en/ - accessed 23 July 2010.
11. World Health Organization. *Suicide rates*. Geneva: WHO, 2007. http://www.who.int/ mental_health/prevention/suicide/suiciderates/en/ - assessed on 23 July 2010.
12. World Health Organization, Regional Office for South-East Asia. Report of Bi-regional workshop on injury surveillance, Chiang Mai, Thailand, 18-21 December 2006. New Delhi. WHO-SEARO, 2009. http://www.searo.who.int/LinkFiles/Publications_Report_Bi-regional_Workshop.pdf - accessed 23 July 2010.
13. Ministry of Health and Family Welfare, Directorate General of Health Services, Bangladesh. *Bangladesh health and injury survey: report on children*. Dhaka, 2005.
14. Plitponkarnpim A. Injury: emerging health problem in Thai children. *Asian-Oceanian J Pediatr Child Health.* 2003; 2:14-21.
15. Ministry of Public Health, Thailand. *Death certificate.* Bangkok, 2006.
16. Gururaj G. *Injuries in India: a national perspective.* NCMH background papers – burden of disease in India. New Delhi: National Commission on Macroeconomics and Health, Ministry of Health & Family Welfare, 2005.

17. World Health Organization. *World Health Statistics 2009*. Geneva: WHO, 2009. Available at: http://www.who.int/whosis/whostat/2009/en/ - assessed 22 July 2010.
18. Peden M, Scurfield, Sleet D, Mohan D, Hyder AA, Jarawan E, Mathers C. eds. *World report on road traffic injury prevention*. Geneva: World Heath Organization, 2004. http://whqlibdoc.who.int/publications/2004/9241562609.pdf - accessed 23 July 2010.
19. World Health Organization. *World report on child injury prevention*. Geneva: WHO, 2008. http://whqlibdoc.who.int/publications/2008/9789241563574_eng.pdf - accessed 23 July 2010.
20. World Health Organization. *The World report on violence and health.* Geneva: WHO, 2002. http://www.who.int/violence_injury_prevention/violence/world_report/en/index.html - accessed 23 July 2010.
21. World Health Organization. *Violence prevention: the evidence (overview)*. Geneva: WHO, 2009. http://www.who.int/violence_injury_prevention/violence/4th_milestones_meeting/publications/en/index.html - assessed 18 May 2010.

Table: ***Injury information and existing preventive efforts in the Member States of the South-East Asia Region (reporting year in between 2001-2008)***

National data and capacity	Bangladesh	Bhutan	DPR Korea	India	Indonesia	Maldives	Myanmar	Nepal	Sri Lanka	Thailand	Timor-Leste
Injury mortality rate*	100	99	62	116	233	165	96	119	458**	92	83
Injuries (Years of life lost by broader cause %)	12	10	11	13	15	9	11	11	20	17	11
Leading cause of injury deaths	Poisoning and RTI	Injuries and poisoning	–	Unintentional injuries: Other	Intracranial haemorrhage	–	– ***	Road traffic injuries, poisoning and snakebites	Traumatic injuries	Accident and poisonings	–
Leading cause of injury hospitalization and rank among 10 leading causes of admission	Injury and Poisoning first rank 2003	Injuries & poisoning Fourth rank 2006	–	–	Intracranial injury fifth rank 2005	Not in the first 10 ranks 2005	Injuries of specified or unspecified first rank 2005	Trauma third rank 2004	Traumatic Injuries first rank 2007	– Not in the first 10 ranks	Diseases of the muscles and Soft tissues first rank 2006
National policy for injury prevention & control	Yes	No	–	Yes	Yes	Yes	Yes	No	Yes	Yes	No
National coordinating agency for injury prevention & control	Yes	No	–	No	Yes	Yes		Yes	No	Yes	No
National coordinating agency/unit within Ministries of Health	No	No	–	No	Yes	Yes	No	No	Yes-	Yes	No
National health Information agency for injury information	No	Yes	–	No	Yes	No	Yes	Yes	No	Yes	No
National/regional surveillance programme for injury prevention and control	Yes	Pilot	–	Pilot	Pilot	Pilot	Yes	Pilot	Yes	Yes	No
National level Multisectoral injury prevention programme	Yes	No	–	Yes	Yes	Yes	Yes	No	No	Yes	No
Country-specific special initiatives	Community-based comprehensive child injury prevention project (PRECISE–) is being implemented through GO-NGO collaboration.	–	–	Burn prevention and treatment centre at government level and road safety programme is being piloted in two districts. Pre-hospital care system throughout the country is being established.	–	Legislation on road safety (resolution on drink-driving, helmet use, speed limit) has recently passed.	–	–	Trauma Secretariat has been established under the Ministry of Health and Nutrition.	• National Multisectoral Committee for Road Safety with own budget. Standardized child motorcycle helmet for children two years and older are produced. • National Childhood Drowning Prevention Programme	–

Source: Strategic approach for injury prevention and control in the South-East Asia Region and updated information from the Ministry of Health Focal Points
* Mortality per 100 000 population per year in 2004 provided by WHO/HQ (World Health Statistics 2009)
** Country is validating the data
*** Data on specific type of injury is not available. However injury is the third leading cause of all causes of mortality
– Data not available

Annex 1

Annual costing of road traffic injuries in seven countries of the South-East Asia Region (most recent year reported between 2000 and 2007)

Country	Method of analysis	Costing for	Annual cost		Source	Year
			In local currency	In US$*		
Bangladesh	Gross-output method	Both injuries and deaths	45 billion Takas	654 069 738	Transport Research Laboratory Project R7780	2003
India	Gross-output method	Both injuries and deaths	550 million Indian Rupees	11 550 187 180	Dinesh Mohan, Social Cost of Road Traffic Crashes in India, First Safe Community Conference Report, October 2001, Page 33-38	2000
Indonesia	Gross-output method	Only for deaths	41.4 trillion Rupiahs	4 190 284 541	Asian Development Bank	2002
Myanmar	Gross-output method	Both injuries and deaths	9.4 billion Kyat	1 443 404 720	University of Economics	2003
Nepal	Gross-output method	Both injuries and deaths	771 863 874 Nepali Rupees	10 130 772	Road Accident Costing in Nepal, 1996	1996
Sri Lanka	Gross-output method	Both injuries and deaths	9.34 billion Sri Lankan Rupees	81 323 468	Assessing Public Investment in the Transport sector, University of Moratuwa	2007
Thailand	Human capital method	Both injuries and deaths	282 355 million Bahts	8 301 237 100	Department of Highways. The Study of Traffic Accident Cost in Thailand 2007	2007

* Money conversion was done as of 6 August 2009.
(Source: Regional Report on Status of Road Safety: the South-East Asia Region, WHO/SEARO, 2009)

Annex 2

Existing global and regional political commitments

To address the huge toll of injuries a number of resolutions at global and regional levels were made by WHO and other UN agencies, as well as by WHO's partner organizations during the previous decades. In these resolutions injury prevention policies have been placed firmly on the public health agenda. These resolutions are:

- Decade of Action for Road Safety 2011-2020 by UN General Assembly;
- Declaration of the First Global Ministerial Conference on Road Safety, Moscow in 2009;
- The United Nations General Assembly resolution A/64/266 on improving global road safety;
- The United Nations Economic and Social Council resolution E/ESCAP/CTR/7 on strategic framework and the proposed programme of work for 2010-2011 on road safety;
- The United Nations General Assembly resolution A/62/244 on improving global road safety;
- The United Nations General Assembly resolution A/62/257 on improving global road safety;
- The United Nations General Assembly resolution A/RES/60/5 on improving global road safety by recalling its resolutions 57/309 of 22 May 2003, 58/9 of 5 November 2003 and 58/289 of 14 April 2004;
- The United Nations General Assembly resolution A/58/289 on improving global road safety;
- The World Health Assembly resolution WHA57.10 on road traffic safety and health;
- The World Health Assembly resolution WHA56.24 on implementing the recommendations of the World Report on Violence and Health;
- The World Health Assembly resolution WHA49.25 on prevention of violence: a public health priority;
- Resolution of the Executive Board of the World Health Organization EB57.R30 on prevention of road traffic accidents;
- The World Health Assembly resolution WHA27.59 on prevention of traffic accidents;
- Resolution of the Executive Board of the World Health Organization EB43.R22 on prevention of traffic accidents;

- The World Health Assembly resolution WHA19.36 on prevention of traffic accidents; and
- The Regional Committee for South-East Asia resolution SEA/RC47/R3 on accident prevention and trauma care management; it was adopted in 1989.

Annex 3

Injury situation in Member States of the SEA Region

As per the Bangladesh Health and Injury Survey (BHIS), the annual injury death rate in children was 52/100 000 population, with injuries accounting for 9.7% of the total deaths. However, reports (2005) of the Director-General of Health Services (DGHS) in Bangladesh revealed that poisoning and RTIs were the leading causes of deaths and hospitalizations, contributing to 11.3% of all deaths and 20% of all hospitalizations. The community-based child injury prevention programme has been piloted in three districts since 2005. However, the report of the pilot document is not yet available. At tertiary level, government hospitals have a “One Stop Crisis Centre” to support victims of violence especially women and children.

In Bhutan, injuries and poisoning are the tenth leading cause of deaths and the fourth leading cause of hospitalizations (The Royal Government of Bhutan: Annual Health Bulletin, 2007). The preliminary report of the pilot injury information system revealed in 2009 that road traffic injury was the leading cause of injury deaths. However, the report is not yet available.

Data on injuries in DPR Korea are not available.

In India, RTIs and other injuries result in deaths of 850 000 people and hospitalizations of 20 million persons every year (Gururaj G, 2006). However, as per National Crime Records Bureau, a total of 574 850 episodes of unnatural injuries were reported, with 470 923 injuries and 271 760 deaths. Injuries and deaths were most common in the 15-44 years age group. Injury surveillance has been piloted in two cities, Pune and Bangalore. The Bangalore site is still providing surveillance information in 2010. Moreover, the report relating to Bangalore is available.

According to the National Household Health Survey of Indonesia, conducted in 2001, the injury death rates among men and women were estimated as 71 and 18 per 100 000 population respectively. Also, RTIs emerged as the most common problem. Drowning and violence were also found to be the major causes of injury. In 2004 a hospital integrated surveillance system was established. In 2006 a web-based hospital integrated injury surveillance system was established. However, the report document is not yet available.

Though data on injuries from the sentinel hospital in Maldives are available, they have not yet been analysed. The hospital-based injury surveillance system is being piloted at three major hospitals since 2007 (Indira Gandhi Memorial Hospital, Seenu Regional Hospital and Gnaviyani Atoll Hospital). The report is not yet available.

In Myanmar, injury and poisoning were the third leading cause of morbidity (14% of all illnesses) and fourth leading cause of deaths (9% of all deaths) in 2005. According to the Country Report on Injury Surveillance, through its Sentinel Injury

Survey conducted in 25 townships across Myanmar, persons most affected were those between the age of 21 to 30 years, with males being the predominant category at 65%. The national survey conducted in 2007 revealed that road traffic injuries were the leading cause of injury morbidity responsible for 28% of the burden of all causes of injury morbidity. Although, as per hospital data, drowning is not a major cause of mortality, the national survey reported drowning as the leading cause of injury mortality (34%) followed by road traffic injury (25%).

In Nepal, in 2004, injuries were the leading cause of deaths and the third leading cause of hospitalizations. The total mortality burden due to injuries was estimated to be more than 270 000 years of life lost. The burden in males was twice the burden in females. Road traffic injuries, poisonings and snakebites are the top three specific events under Group III, which constitute 56% of total years of life lost (YLL). It has been estimated that injuries contributed to 7% of all deaths and were responsible for 9% of DALYs. Furthermore, 50% of all disabilities were due to injuries. Information from the health sector revealed that 1 316 persons died, 3 447 were hospitalized and 19 347 were treated in emergency rooms (ER) with a ratio of 1:3:15 during 2001 (Annual report 2000/2001). A national injury surveillance system format has been developed and adopted by the Ministry of Health and Population. The Ministry of Health and Population has advised major hospitals/health institutions in selected districts to use the injury surveillance form. The report is available.

In Sri Lanka, 14.5% admissions and 3.6% deaths in government hospitals were due to traumatic injuries, while poisoning led to 4% deaths during 2007. Injury and poisoning were the leading causes of death in all ages except in infancy and above 50 yrs of age. In 2005, injuries accounted for 23.1% of all registered deaths in Sri Lanka (Annual Health Bulletin, 2007; Gururaj G et al, 2004; Registrar General, 2005). However, as per World Health Statistics, 2009, injuries accounted for 62% YLL due to broader causes. Sri Lanka is now piloting the injury surveillance system in five major hospitals in three districts. Surveillance data reported that road traffic injuries were the leading cause of injury during January-March 2009. The report is not yet official.

In Thailand 2006, injuries including poisonings were the second leading cause of deaths (57/100 000). RTIs (10 421 – 17%), drowning (4666 – 7.5%), suicides (3612 – 5.6%) and assaults (3359 – 5.4%) were the leading injury causes for death (data based on country death statistics). Injury surveillance has been established since 1995, and has led to formulation of several important injury prevention and care policies and strategies, i.e. health policy in improving acute trauma care, helmet law enforced countrywide, national road safety directing centre strategies in 2003-2004, standardized child motorcycle helmet project, etc. Thailand was the first country in the SEA Region to set up an injury surveillance system. The report documents are regularly disseminated. The Cabinet agreed in 1999 to set up a “One-stop Service Crisis Centre (OSCC)” for women and children in crisis in every hospital, both governmental and private. The total number of centres around the country is 104. These OSCCs are equipped with a health team trained to give proper

care for violence victims and are open 24 hours a day. The objectives are: (i) Giving care to violence victims who are assaulted physically, mentally or sexually; (ii) Acting as notification centres for violence against women and children, to collect information and coordinate with concerned agencies; (iii) Building up a network and arranging for resources to assist victims of violence. These centres provide medical and psychosocial care to victims of violence on a 24-hour basis. A team of doctors, nurses, psychologists and social welfare workers is available at the centres. They work in collaboration with police, prosecutors, lawyers and NGOs to provide further assistance. There is a five-year strategic plan for violence victim assistance, which covers (i) setting up OSCCs in all provincial and community hospitals; (ii) setting up a fund for short-term economic support before referral of victims to a multidisciplinary assistance team; (iii) assisting the legal process for the victim; (iv) motivating and helping the community to take participation in violence prevention and set up a pilot project in each village.

In Timor-Leste, injuries do not figure in the top 10 diseases in terms of mortality and morbidity. However, data from the Ministry of Health show that there were 1590 hospitalizations due to RTIs in 2007.

The High-Level Preparatory meeting held in 2009 recommended that the Sixty-second Session of the Regional Committe endorse “Injury Prevention and Safety Promotion” as the subject for Technical Discussions to be held prior to the Sixty-third Session of the Regional Committee in 2010. The Sixty-third Session of the Regional Committee endorsed the subject and the Technical Discussions on “Injury Prevention and Safety Promotion” were held in May 2010. In September 2010, the Sixty-third Session of the Regional Committee noted the report of the Technical Discussions and adopted a resolution on the subject (SEA/RC/63/R2). The resolution urges Member States to advocate for establishement of a national mechanism or authority at the highest level and declare injury prevention as a national agenda; establish or strengthen injury unit in the ministry of health; strengthen national injury surveillance; address local priorities; integrate injury prevention into the public health programmes and policies; strengthen emergency medical services and rehabilitation, and create a network of those who practise injury prevention.

World Health Organization
Regional Office for South-East Asia
World Health House
Indraprastha Estate,
Mahatma Gandhi Marg,
New Delhi-110002, India

SEA-Injuries-17