

CHILD INJURY IN ASIA – TIME FOR ACTION

An Issue Paper by
The Alliance for Safe Children (TASC) and
United Nations Children’s Fund (UNICEF) East Asia and Pacific Regional Office



CHILD INJURY IN ASIA – TIME FOR ACTION

An Issue Paper by
**The Alliance for Safe Children (TASC) and
United Nations Children’s Fund (UNICEF) East Asia and Pacific Regional Office**



This paper was prepared by UNICEF EAPRO and Dr. Michael Linnan and Ambassador Pete Peterson of TASC for the UNICEF/TASC Conference on Child Injury: Towards a World Safe for Children, 21-22 April 2004, Bangkok, Thailand.

Cover photograph courtesy of TASC.

Copyright The Alliance for Safe Children (TASC) and UNICEF East Asia and Pacific Regional Office, 2004

Any part of *Child Injury – Time for Action* may be freely reproduced with the appropriate acknowledgement.

The Alliance for Safe Children (TASC)
4/1 Sukhumvit Soi 1 Klongtoey Nua,
Vadhana District Bangkok 10110, Thailand
Tel: (66 2) 655-4811
Fax: (66 2) 655-4814
www.tasc-gcipf.org

UNICEF East Asia and Pacific Regional Office
19 Phra Atit Road
Bangkok 10200, Thailand
Tel: (66 2) 356-9499
Fax: (66 2) 280-3563
www.unicef.org

CONTENTS

1. BACKGROUND	4
1.1 Why be concerned about injury?	4
1.2 Why focus on children?	6
1.3 Filling the information gap – the need for population-based surveys	7
2. INJURY SURVEYS	8
2.1 Survey methodology	8
2.2 Capacity building	10
2.3 Common themes across the region	10
3. RECOMMENDATIONS	12
3.1 Preventing child injury to reach the Millennium Development Goal	12
3.2 Child injury is preventable with effective strategies	13
3.3 Integrate injury into programme priorities	14
3.4 Prevention requirements	15

1.1. Why be concerned about injury?

Magnitude of the problem

There is a slow yet growing consensus in the international public health community that injury is a leading cause of death and disability throughout the world, for children as well as adults. Despite large gaps in reporting, it has been shown to account for almost 6 million deaths each year and is one of the leading contributors to the global burden of diseaseⁱ.

Injury has been neglected as a public health issue

Historically, child injury is only associated with industrialized countriesⁱⁱ. A landmark UNICEF study from the Innocenti Research Center in 2001 showed that over 98 per cent of all child death from injury occurs in developing countriesⁱⁱⁱ. These countries are where most of the world's children live. In these countries children are all exposed to higher levels of risk from unfenced ponds, open ditches, uncovered wells, open fires, exposed kerosene heaters, unprotected stairways and heights, flimsy construction, lack of safe storage space for chemicals and poisons, piles of debris, heavy traffic and a scarcity of safe play space^{iv,v}.

The Innocenti Report found that rates of child death from injury in low- and middle-income countries were five times higher than among high-income nations. There clearly is a large health inequity evident in the rates of death and disability from injury in children who live in the lower-income countries as compared to children who live in high-income countries^{vi}.

Unintentional injuries are perceived to be accidental and thus not preventable

Injuries are commonly termed "accidents", suggesting that these events are unpredictable and thus cannot be prevented. In Asia, especially among countries with religious traditions that involve reincarnation, unintentional injuries are often perceived as appropriate punishment due to a person because of sins in past lives.

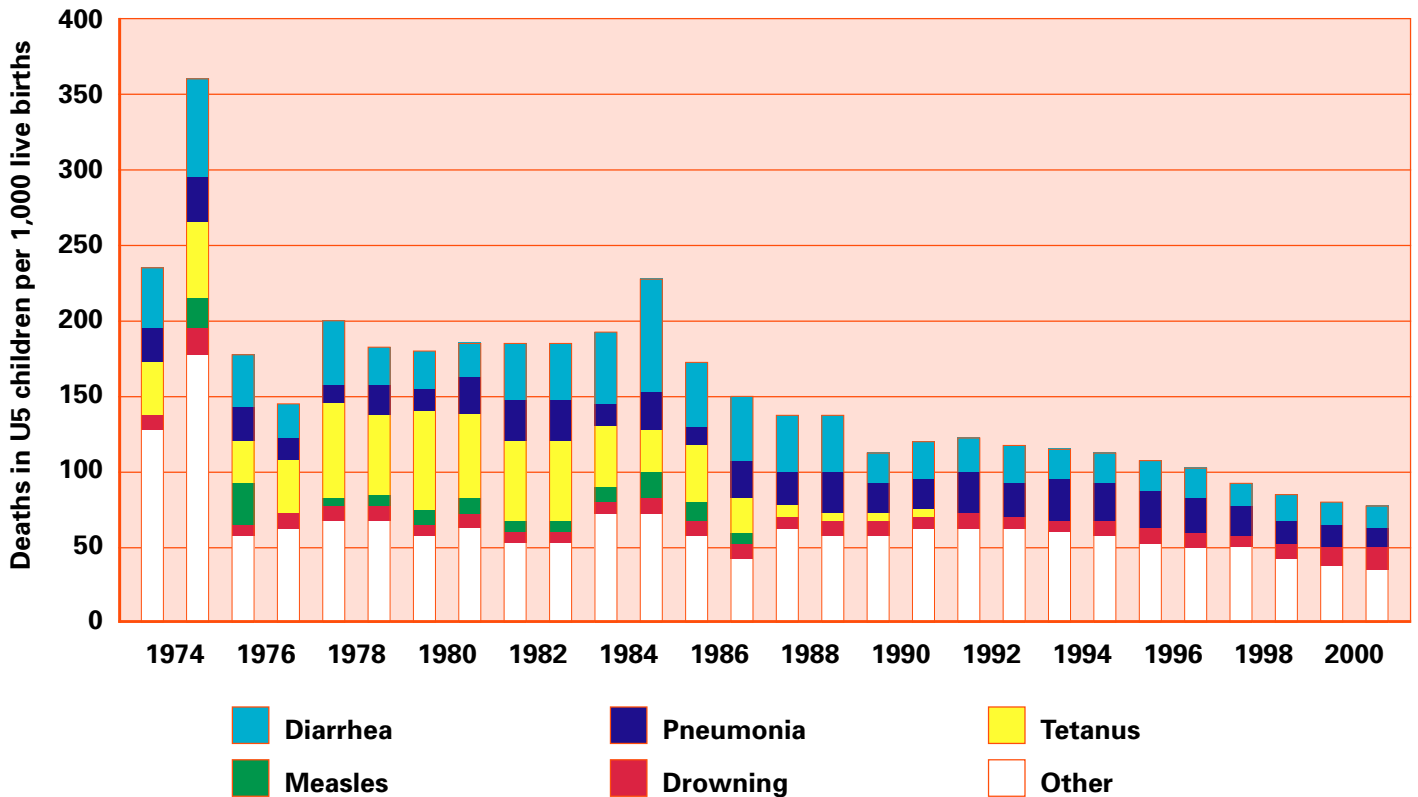
Other traditions in the region also place great importance on fate and the occurrence of injury as the will of a higher spiritual being. Thus, child (and adult) sufferers of road traffic accidents, drowning, falls, burns/scalding, electrocutions, animal bites or suffocation are often perceived not as victims but people receiving an appropriate punishment for sinning. These attitudes, particularly those surrounding the concept of fatalism, are prevalent in cultures in the region and make injury a difficult issue to address with an appropriate public health response.

This fatalistic attitude has also been pervasive among health policymakers, in academia and in clinical medicine. It has been especially challenging for clinicians, as noted in a landmark publication on injury in 1998: "Childhood injury remains one of the biggest challenges to paediatricians in the 1990s. The challenge remains one not only of the quantitative allocation of effort and resources, but an attitudinal one - even within the health professions - whether child injury and traumatic death is truly in the province of paediatrics and child health."^{vii}

Epidemiologic transition from infectious diseases to injuries

The Alma Ata Declaration of 1978 began the effort to bring primary care, and its principal components, maternal and child health, to all countries at the community level, regardless of level of development. Since then, the development community has focused primarily on infectious and non-communicable causes of infant, child and maternal mortality. Beginning with GOBI (growth monitoring, oral rehydration, breast-feeding and immunizations) and later introducing programs targeting acute respiratory infections (ARI), reduction of maternal deaths through safe motherhood interventions, HIV/AIDS and finally the combination of all into integrated management of childhood illness (IMCI) the development community has been enormously successful in developing effective and sustainable interventions against these killers.

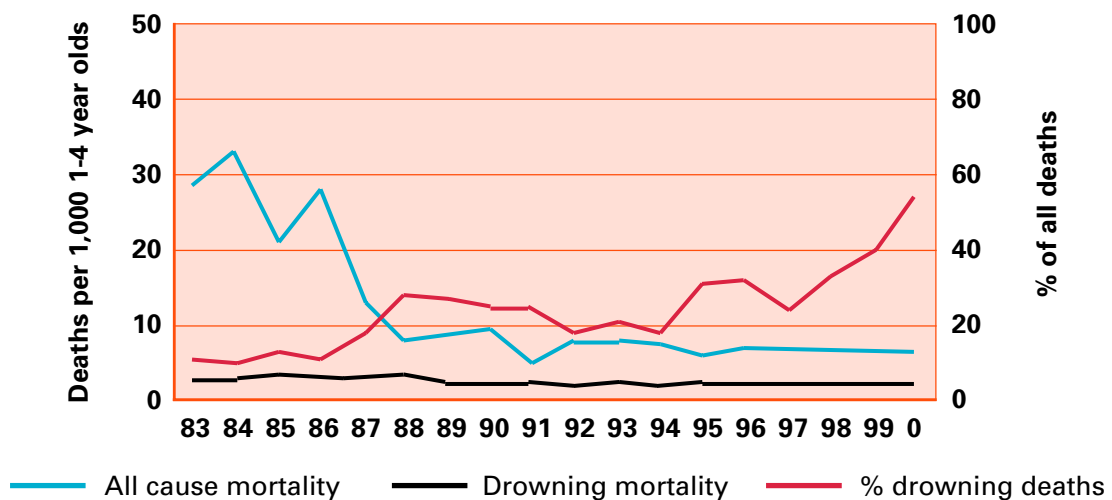
FIGURE 1: Child death rates in Matlab, Bangladesh 1974-2000



This process can clearly be seen in Figure 1, which shows the child death rates in Matlab, Bangladesh over the last quarter of a century. The impact of interventions like immunizations can be seen with the virtual disappearance of measles and tetanus as child killers in the 1980s. The impact of the interventions targeting infectious diseases and malnutrition has resulted in a three-fold reduction in child death over the last three decades.

As a result, the global average infant mortality rate for low- and middle-income countries has been reduced by half from 150 per 1,000 live births in the 1970s to its current level of approximately 75 per 1,000 live births^{viii}. With this dramatic reduction of child deaths due to infectious and non-communicable diseases (NCD), the proportional contribution of injury has increased, similar to what is seen in Figure 2, and it has become more visible.

FIGURE 2: Drowning deaths in 1-4 year olds, Matlab, Bangladesh 1983-2000



The rising proportion of injury deaths among all child deaths is very visible in data from Matlab, Bangladesh (Figure 2, on previous page). As the infectious causes have been reduced, drowning deaths, which were not being prevented have now become the leading cause of death for children 1 to 4 years old there.

It is important to note that child deaths due to injury are not “secondary deaths” or “replacement mortality”, which result from falling levels of child death from infectious and non-communicable causes. They are separate from these and exist independently before the “traditional” causes decline. They become more visible as the deaths from the “traditional” causes of diarrhoea, ARI and vaccine-preventable diseases are reduced. They become more visible because they remain at the same levels. They remain at the same levels because they are not being targeted like the other causes.

Injury is a primary killer of children. Regardless of the overall level of child mortality, whether high or low, injury has always been a significant component. This has been demonstrated clearly for drowning^{ix}.

Child deaths due to injury have largely been invisible to the health information systems in developing countries, since their health reporting and recording systems are normally hospital based and overlook

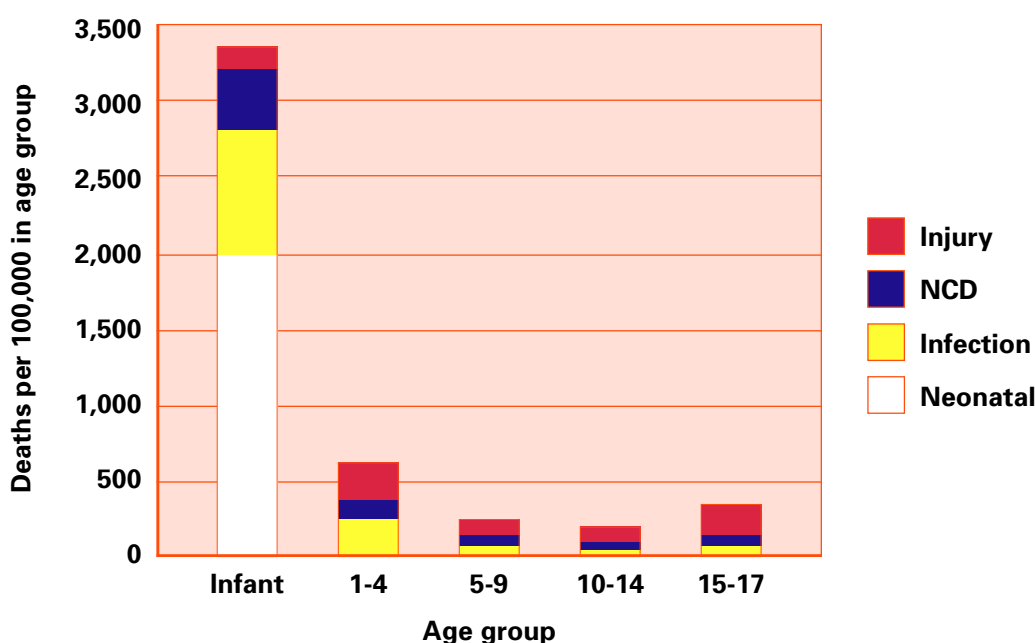
most fatal injury at the community level, where it most often occurs. Children who die from injury, especially drowning, die very quickly. Since they are dead, they are not taken to the hospital, and are buried. Thus deaths from injury go unreported. As a result, child injury has not been a focus for prevention in lower- and middle-income countries, while it has in high-income countries.

1.2 Why focus on children?

In 2001 in the East Asia and Pacific Region, 1.4 million children died before reaching their fifth birthday^x. As we move ahead in reducing deaths from the traditional child killers such as measles, dehydration and respiratory disease, injury comes into focus as a major challenge.

Figure 3 shows that the single largest number of under-five deaths now is neonatal, and these present a major prevention challenge. In order to make serious inroads on these deaths, we will have to learn how to provide rapid, direct, hospital-based emergency obstetric care in rural areas, where the majority of these deaths occur. This presents many problems but no doubt the development community will rise to the challenge given the time and money.

FIGURE 3: Deaths by cause and age group in six countries surveyed in Asia



Countries surveyed were Bangladesh, China, Indonesia, Philippines, Thailand and Viet Nam.

While we are learning how to intervene in the neonatal deaths in a cost-effective manner that does not compromise the already strained health resources, we must address another neglected cause of death among the under-fives. This is injury, largely drowning, which is either **the** leading cause of death or **one of the** leading causes of death in children aged one to four in most countries in the region. This is especially important as we move further into the second half of the time available to achieve the Millennium Development Goal of a two-thirds reduction in under-five mortality by 2015.

Children are known to be especially vulnerable to infectious causes of death. Numerous studies document specific vulnerabilities, such as a larger body surface area to body mass ratio compared to adults, which places them at higher risk of death through dehydration.

Similarly, children are more vulnerable than adults to injury for many similar anatomical reasons: young children often drown in water depths that adults easily wade through; and children are much more susceptible to neck and brain injury due to the fact that their heads are larger in proportion to their necks and bodies. These developmentally related vulnerabilities are similar to those for infectious and non-communicable causes of death.



One very important cause of child death relates to the propensity of children to explore and experiment before they develop the necessary mental capacity to understand or respond to danger. Also, children have an innate drive to play, that often overrides the supervisory capacity of adults who are trying to ensure a safe environment for the child.

This innate drive to explore their environments and to play, leads to a health inequity due to injury, since children in poverty are disproportionately exposed to hazardous environments, absence of adult supervision and lack of safe play areas.

1.3 Filling the information gap – the need for population-based surveys

The World Health Organization (WHO) has found through a series of studies known collectively as the Global Burden of Disease^{xi} that injuries, intentional and unintentional, are a large and neglected health problem in all regions of the world, and accounted for 16 per cent of the global burden of disease in 1998. They accounted for almost 16,000 deaths worldwide each day in 1998, and for each person dying of injury, several thousand survived, many of them with permanent disabilities. In the report, WHO constantly noted the lack of representative data, and the unfortunate need to rely on potentially biased and unrepresentative data for injury in most countries outside the developed world.

Data on injury are often difficult to obtain even for developed nations. For developing countries representative data are usually unavailable^{xii}. Data that are available are usually unreliable. Most available data in developing countries come from hospital-based reporting, which is disconnected from deaths at the community level. For example, a recent child injury assessment in China noted that the most common cause of child deaths counted at the household level in a four-county area was drowning. It accounted for over 700 child deaths during a three-year period. The four hospitals that served the counties reported no deaths from drowning over the entire three-year reporting period^{xiii}.

Another reason that injury has gone unnoticed in developing countries is that the hospital-based reporting system, which is usually the core of the national health information system, is supplemented with only small-scale surveys. Even the largest of these, known as Demographic and Health Surveys (DHS) have sample sizes far below the level needed to show the complete epidemiology of child death in these countries. As a result, injury does not appear in the survey results and policymakers interpret this lack of appearance as a lack of injury.

Perhaps the single largest reason for the visibility of injury in rich countries is the presence of the insurance industry as a major economic sector. To remain in business, insurance companies must have reliable, population-based statistics in order to provide actuarially sound insurance instruments. This is arguably the largest driver of good statistics in the rich nations, as without these, this multi-trillion dollar industry would not be able to conduct business. This industry remains nascent in most low- and middle-income countries and provides one major opportunity for collaboration for better health statistics that include injury.

2 INJURY SURVEYS

One of the maxims of management is that a problem cannot be solved until it is defined. Another is that one can't change something until one can measure it. UNICEF and TASC thus initiated the current set of national injury surveys to define the magnitude and scope of child injury within various countries in the East and South Asian regions, and to provide measurements to monitor the impact and effectiveness of interventions when they are developed.

Prior to the recent country-level injury surveys, UNICEF and TASC conducted desk reviews in several countries in the region to assess their situations on child injury. These reviews all noted a lack of representative community-based data and pointed out the need to conduct population-based surveys to assess the true magnitude of the problem and its risk factors. Following these desk reviews, it was decided to conduct a series of national injury surveys to fill the information gap.

2.1 Survey methodology

The survey methodology devised by TASC, with the technical assistance of CDC and partners such as the Hanoi School of Public Health and the Institute of Child and Mother Health, Bangladesh is designed to provide information on all causes of mortality and morbidity for all ages (infants, children and adults).

The surveys have been designed to define the scale of injury and its composition by age, sex and location (urban/rural) compared to other causes of death and morbidity (infectious, maternal and non-communicable causes). The quantitative data provide a nationally representative, statistically reliable picture of the epidemiology of injury in all age groups, and in relation to other causes of death and illness. As such, it provides a baseline at the national level to measure reductions brought about by intervention programming.

The survey methodology has been an evolving process of development, first piloted in Viet Nam by the Hanoi School of Public Health and eight partner institutions in the Viet Nam Public Health Research Network. The lessons learned were incorporated into the second survey, undertaken in Bangladesh with the UNICEF Country Office and the Institute of Child and Mother Health as the collaborating partners.

Further lessons learned were incorporated into the third round of surveys, undertaken in the Philippines with UNICEF Philippines and the Field Epidemiology Training Program; in Thailand with UNICEF Thailand and the Institute for Health Research, Chulalongkorn University; and in Beijing with UNICEF China and the Field Epidemiology Training Program at the China Center for Disease Control. An abbreviated sentinel injury survey with drowning only as a sentinel event was piloted in Indonesia as a component of a Helen Keller International nutritional study of Vitamin A prevalence.

The current methodology has a standardized questionnaire on all health events administered at the household level. The questionnaire includes information on all deaths and illnesses including injury in all members of the household, and has a detailed, verbal autopsy to assign causality to all deaths with a detailed circumstances audit conducted for all injury-related deaths. Similar information is compiled for all causes of illness that are serious enough to require visiting a healthcare provider, or that lead to missing school or work. Additional information is gathered on the economic impact of the death, or the costs and burden of disability for non-fatal injury. Information on environment hazards and behavioural risk factors are also collected.



Case-control studies are nested within the larger survey to provide quantitative information on risk factors, and qualitative research is included that examines knowledge, attitudes and practices related to injury, and explores concepts of vulnerability and constructs related to risk awareness.

The surveys use a standard sampling fraction to ensure adequate sample sizes that provide sufficient information on all significant causes of death and illness. In countries with capitals that qualify as UN “mega-cities”(populations greater than 10 million), the surveys are designed to provide both national estimates on a rural/urban basis and, additionally, estimates specific to the mega-city, as it appears that these cities have unique environments that may increase child injury rates. The six surveys are summarized in Table 1 below.

2.2 Capacity building

As child injury is a relatively new area for UNICEF and its counterparts in the region, these surveys have also served the purpose of capacity building. With technical assistance from TASC, UNICEF Country Offices have identified appropriate local research institutions, and through them, translated and adapted the standard instrument to the local situation, trained the field interviewers, supervised the fieldwork and assisted in the data analysis and reporting. By focusing on building local capacity in injury research

and programming, it provides the UNICEF Country Office with a trained local institution that has the technical capacity to implement interventions as follow-up activities to the survey.

2.3 Common themes across the region

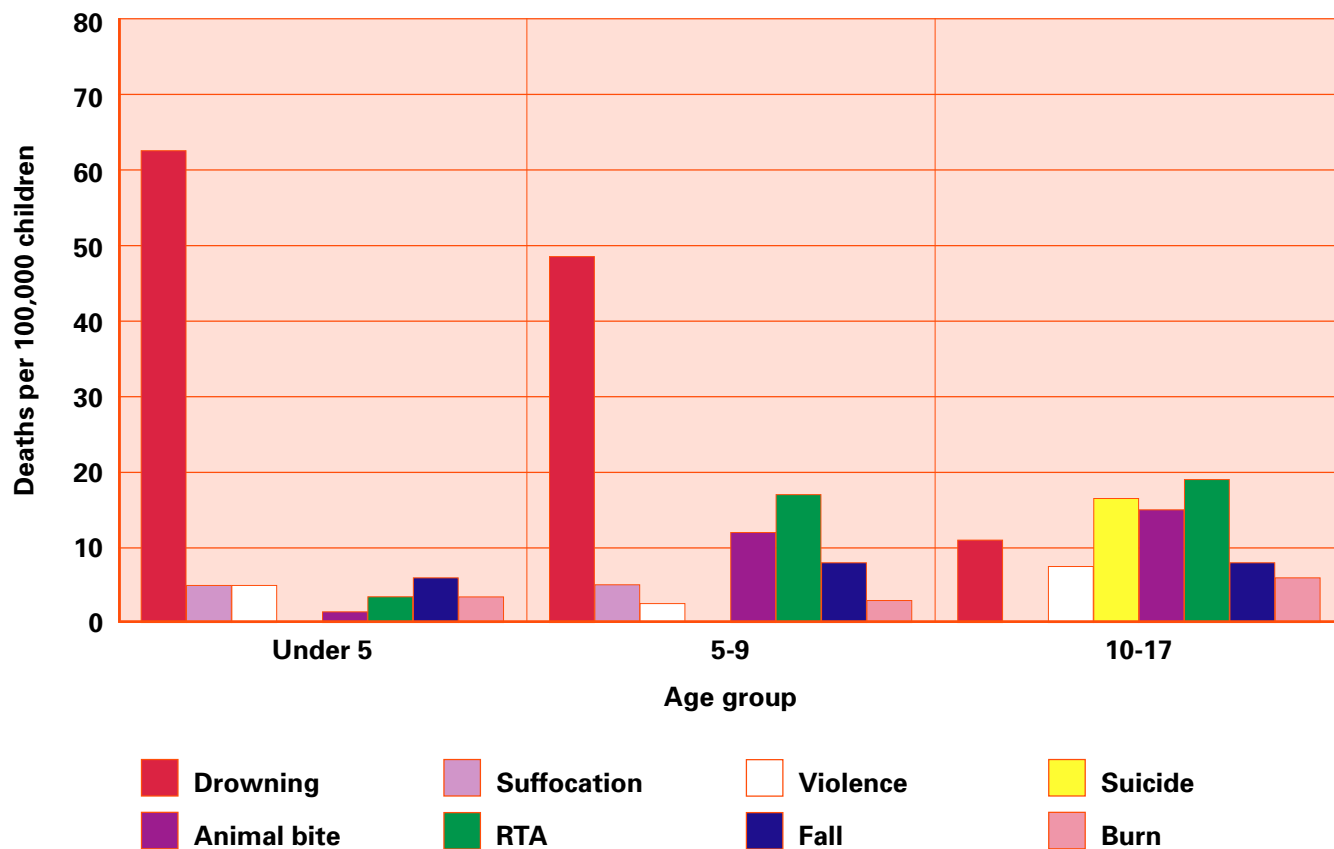
While each country surveyed thus far is unique, there are also similarities that appear to be sufficiently constant that they define a quasi-standard epidemiologic profile for child injury in the region.

The leading causes of injury differ by age group. As seen in on the next page in Figure 4, overall, drowning is the leading cause of child death in most countries, but rates depend greatly on the age group in question. Drowning incidence is highest in late infancy and early childhood and then gradually decreases as children grow older. Transport-related injury, mainly road traffic accidents (RTA), becomes a leading cause of death in late childhood and early adolescence and continues to increase into adulthood.

TABLE 1: Summary of countries surveyed

Country and date	Scope of sample	Sample size (household/residents)	Institution partner
Viet Nam 2001	National	27,000/128,000	Hanoi School of Public Health and VPHRN
Bangladesh Sept-Dec 2003	National/Dhaka	175,000/698,000	Institute of Child and Mother Health ¹
Philippines Oct-Dec 2003	National/Manila	95,000/450,000	Field Epidemiology Training Program DOH
Thailand Oct 2003-Jan 2004 search	National/Bangkok	92,000/470,000	Chulalongkorn University Institute of Health Re-
Beijing/China Oct-Nov 2003	Metro Beijing (16 counties)	28,000/87,000	Field Epidemiology Training Program, CCDC
Indonesia May-July 2003	Eight provinces selected for national coverage	29,400/104,000	Ministry of Health/ Helen Keller International

FIGURE 4: Types of injury by age, regional composite 2004



Transport-related injury has a distinct pattern in most countries. For younger children, deaths occur as pedestrians; in middle childhood, deaths are largely as bicyclists, and only in late childhood and adolescence do deaths occur with children as vehicle occupants or drivers.

Unintentional injury predominates in early and middle childhood, but as children pass through the 10-14 age group and into adolescence, intentional injury becomes a significant cause of death and in many countries is a leading cause of adolescent deaths. Suicide and assault are the two major causes.

As seen on the next page in Figure 5, injury has a significant impact in infancy, mainly through suffocation in young infants and drowning in older infants. While a significant cause of death in infants, injury is far outstripped by infectious and non-communicable causes. Neonatal causes are by far the single largest cause of death in the infant age group.

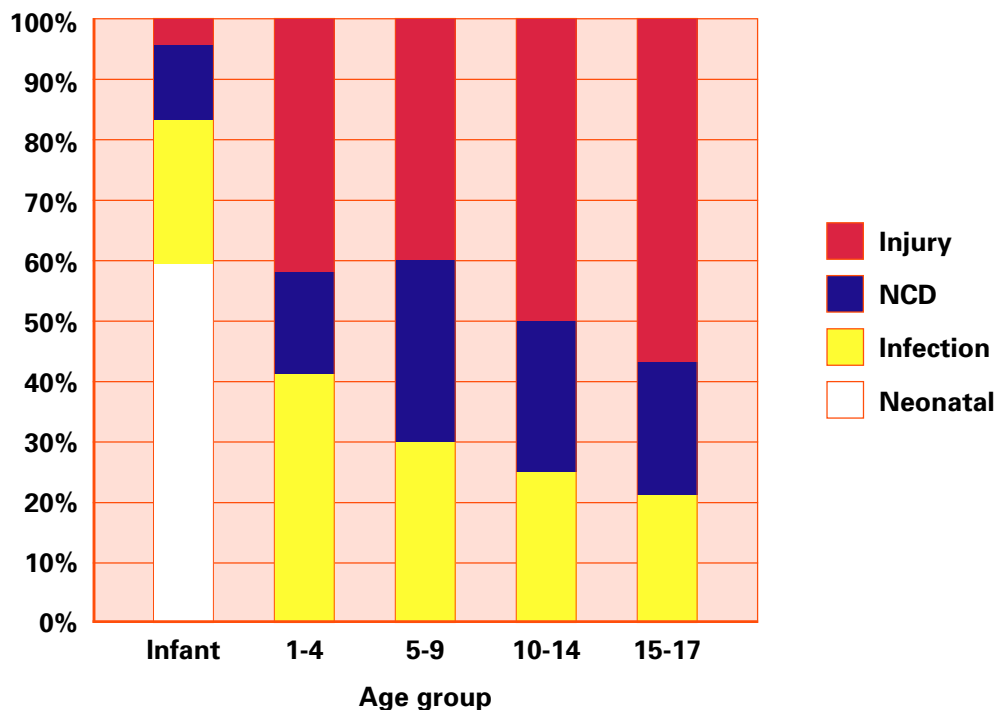
There appear to be distinct gender differences, with females having higher rates of burns and other injuries associated with household domestic duties, and males having higher rates of injuries associated with machines and occupational injury.



An unforeseen finding is the importance of animal injury (often as bites and trampling) as a major contributor to child injury in all the countries surveyed. The leading cause of bites were dogs, snakes and farm animals. The bites and trappings were occasionally fatal and when non-fatal, often were severe with permanent disability resulting.

Injury was a leading cause of disability in all child and adolescent age groups. The rates of permanent disability for injury appear to be much higher than those associated with infectious and other causes.

FIGURE 5: Cause of deaths by type and age group for six countries surveyed in Asia



Countries surveyed were Bangladesh, China, Indonesia, Philippines, Thailand and Viet Nam.

This is not surprising due to the high proportion of injury events that involve physical trauma, which by its very nature leads to high rates of temporary as well as permanent disability.

This high rate of disability makes it likely that injury generates the leading economic and social burden among child illness. Non-fatal injury had higher economic costs than fatal injury, and the more severe the injury, the higher the economic costs and the social burden. A child seriously injured usually required both parents to provide care, resulting in lost schooling for the child, and lost wages for the parents. Injury also had major indirect affects on children, raising their risk of bad health outcomes when they suffered the loss of a father (primary economic earner) or the loss of a mother (primary caregiver). Injury was the leading cause of parental death and disability in all the adult age groups that had children younger than 17 years of age.



TASC/Viet Nam

3 RECOMMENDATIONS

3.1 Preventing child injury to reach the Millennium Development Goal

While the region as a whole has made great strides in reducing child mortality, much remains to be done. As we move ahead in reducing deaths from the traditional child killers such as measles, dehydration and respiratory disease, injury comes into focus as a major challenge as well as a major opportunity. In order to further reduce child mortality, many countries in the region will have to address this issue as they have already realized the largest part of the achievable reductions in infectious disease mortality.

In many countries of the region, over 75 per cent of deaths in children under five caused by respiratory and diarrhoeal diseases have already been prevented through effective, sustained interventions. The majority of as-yet unaddressed deaths in children under five are neonatal deaths in the early infant period, and a smaller number are due to injury (mainly asphyxiation in infants and drowning in children aged one to four). The national survey in Viet Nam showed that if these injuries were prevented in infants and children, the under-five mortality rate (U5MR) in Viet Nam would fall by almost 40 percent – from 49 to 29 per 100,000 births.

In 1960, the regional U5MR was 207 per 1,000 live births. In 2002, it stood at 43 per 1,000 live births, a nearly five-fold reduction. In the same year, the infant mortality rate (IMR) in the region was 33 per thousand and the life-expectancy at birth was 69 years.

Clearly, the region has passed through the epidemiologic transition. As a result, the pattern of child death now closely approximates that of industrialized countries, with injury a leading cause of death in children. Prevention programs need to recognize this changed epidemiology and address this unmet challenge.

For other regions nearby, such as South Asia, or for lagging countries in the East Asia and Pacific Region, where U5MRs are still relatively high at 97 per 1,000 live births, we need to recognize that even at these levels of child death, injury is a leading cause in many age groups.



Along with a commitment to continue the effort to prevent child deaths due to infectious and non-communicable causes, we must recognize that injury also makes up a large fraction of the preventable deaths in the under-five age group, and makes up the largest proportion of child deaths in the older age groups. Prevention programming needs to reflect this new realization.

We need to recognize that just as the pattern of child deaths is not static, neither is political will and policy complexity at the country level. In order to make programming relevant to the changing reality of each country, we must address these newly recognized causes of child death and disability, and injury is the leading area for this.

We also need to recognize that injury doesn't only affect children directly. We know that children orphaned by HIV/AIDS are at great risk of adverse health outcomes. This holds true for the "injury orphans". Today across the Asian regions, injury is by far the largest killer of fathers, the primary economic earners in families; and mothers, the primary caregivers in families. This provides another rationale for prevention programming.

3.2 Child injury is preventable with effective strategies

Child injuries do not happen by accident. They are predictable and preventable in much the same way as infectious diseases. Over the past 50 years, child injury death has been decreased substantially in industrialized countries. It started with the recognition of the problem, followed by political commitment and policy change. A long process of research, lobbying, legislation, environmental modifications, public education and improvement in emergency services have saved millions of child lives. Experience from industrialized countries has shown that injuries are largely preventable with effective and simple interventions. The UNICEF Innocenti Report documented that child injury death rates decreased by half in rich countries over a period of two decades. Today in these countries, education, environment modification, regulation and enforcement are widely recognized as effective strategies.

One other major contributor is that parents and caregivers in high-income countries have been educated to make their houses “child-proof”, and take other preventive measures to provide safe home and play environments for their children.

Finally, because of the efforts of the well-funded public health and educational systems in industrialized countries, the fatalistic attitude that “accidents are accidents and can’t be prevented” has for the most part been overcome.

Education and behaviour change

An effective communication program can raise people’s awareness of risk, make them personally responsible for their own safety, and persuade them to take action to reduce the risk of injury to themselves and others.

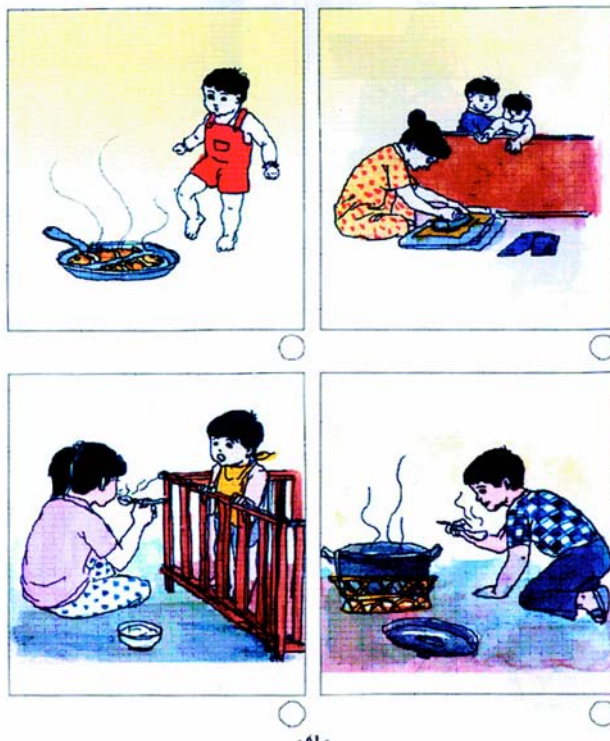
Mass media plays an essential role in increasing public awareness of certain issues due to their wide reach in society. “Edutainment”, using entertainment as a vehicle to deliver educational messages, has proven effective in reaching large-scale audiences.

Interpersonal communication is another method designed to link knowledge to behavioural change. In many of the Asian countries, there is a tradition of using community volunteers to conduct home visits and counselling on maternal and child health, nutrition and other health issues. Safety education can be easily integrated into existing interpersonal communication vehicles such as “Facts for Life”^{xiv} study groups and integrated early childhood education.

Bài 3

PHÒNG TRÁNH TAI NẠN DO BÓNG

1. Hãy tô màu đỏ vào hình tròn ở góc bức tranh vẽ cảnh có thể xảy ra bỏng. Các bức tranh còn lại tô màu xanh vào hình tròn.



UNICEF/Viet Nam

Educating children to practice safe behaviours will not only reduce their current injury rate but also bring about cognitive changes on injury prevention for the next generation. Children are more likely than adults to grow up as a generation that is safety conscious and be personally responsible for their own and their children’s safety. Children can also bring newly acquired injury prevention knowledge and skills to their parents and siblings.

Environment modification and engineering solutions

Experience in the industrialized countries shows that changes in the environment and the modification of consumer products have also dramatically reduced the incidence of childhood injuries. Technology and engineering contribute to injury reduction by removing hazards from products or removing injury risk from the environment.



There are many examples: fences that enclose swimming pools; stair gates in multi-storey dwellings; household smoke detectors; fuses, circuit breakers and grounding devices on electrical systems in homes are only a few of the available measures. “Traffic calming” efforts to reduce or slow the speed of traffic in neighbourhoods have successfully reduced the risk of pedestrian injuries in Europe and in some American cities. Child-size bicycle helmets, child-resistant caps on pesticide bottles and drug containers, and child size floating device are examples of safety devices that separate children from hazard and reduce harm to save their lives.

These environmental modifications can be adapted to developing countries to reduce children’s risk of injury. Simple examples of adaptation would be raising cooking fires to a cement counter from floors, building shelves at least a meter in height above the floor for chemical storage, placing covers over wells and putting fences around ponds and other bodies of water near the home.

Once implemented, these “passive” measures do not require repeated behaviour change from the individual or family. Therefore, they are particularly effective for children for whom active behaviour change may be unrealistic.

National policy, legislation and law enforcement

National policy, legislation and law enforcement are among the most powerful tools to protect children from being injured. Collectively, they mandate changes in individual behaviour, product design and improving hazardous environments, and establish national priorities for addressing injury prevention. As such, most of the environmental modification and product design changes described above require legislation or regulation. These legal actions have substantially reduced the risk of injury to children.

For example, US and European laws require that infants and young children be adequately restrained in car seats. As a result, car seat use for infants and toddlers increased to 85 per cent and 60 per cent respectively and today in the US, an estimated 71 per cent of motor vehicle occupant deaths of young children have been prevented. Similar reductions in child injury can be realized in developing countries, provided the statistical realities discovered during the UNICEF/TASC national surveys are promptly converted into national policy and effective injury-prevention programs are implemented.

Decision makers and the political leadership of governments in the region need to be encouraged to use legal action, regulatory frameworks and enforcement to improve safety for children.

3.3 Integrate injury into programme priorities

Traditional child survival programs do not address injury. However, the infrastructure created by these programs is well suited for the same preventive approach to injury. After decades of applying the child survival intervention package (growth monitoring, breastfeeding, ORS, immunization, nutrition and maternal and child health care), these interventions are so well established that they have become the fundamental components of child health programs in most developing countries.

Injuries have a smaller impact in infancy but a major effect on children from one to four years old, and the contribution to child death and disability grows as children grow older. In many Asian countries, injury is a leading cause of death for toddlers, and often becomes the leading cause of death for school-age children and adolescents.

Many international conferences, including the Millennium Summit, have chosen U5MR as a primary measure to monitor child mortality. It was chosen in part due to its sensitivity for child deaths of all ages. It is a direct indicator of mortality in this actual age-group, and an indirect measure of potential for deaths of older children.

This indicator not only measures the increasing contribution of injury in children under five, but serves too as a proxy for the increasing burden of injury in children over five. It also helps us understand that if we do not begin programming to include older children who are most affected by injury, we will lose the enormous investment we have made in the younger children in immunization, nutrition and maternal and child health care if they were to die or be disabled by injury in their late childhood.

Therefore, addressing child injury provides an opportunity to integrate resources and activities into safe motherhood, early childhood care, girls' education, HIV/AIDS and other adolescent programs. It provides an opportunity to implement inter-sectoral interventions that target children of all age groups. By increasing the usage of the current child health infrastructure and preventing additional deaths from injury, we will fully amortize the cost of the infrastructure, and in doing so, we will increase the cost-effectiveness of our infrastructure investments.

The mother who is learning the importance of immunizations for her child's health can easily comprehend the importance of removing poisons from the household area where infants and children are. The father who is being taught about the need to dig a fishpond to provide high quality protein for the nutrition of his children can easily understand the need to fence the pond to prevent drowning. Injury prevention activities can be easily and efficiently combined with successful ongoing programs, extending and reinforcing them, to the benefit of our children.

Depending upon the results of the survey, each country can prioritize specific types of injury activities in early childhood, among school-age children and in adolescence and develop feasible and affordable interventions. Using models that coordinate inter-sectoral interventions targeting children across all age groups, these interventions will not compete for resources, but extend and increase efficiencies of existing programs.



3.4 Prevention requirements

UNICEF and TASC recognize that child injury is an urgent and seriously neglected problem in this region. The first step that must be taken is to increase its visibility through advocacy with policymakers, donors, healthcare professionals, partners and the public at large.

As was the case when the international effort began to control infectious diseases, policymakers, donors and the public must collectively make injury prevention an international priority. Following the Alma Ata Declaration, the development community made huge investments to control infectious diseases. The impact of those investments has been extraordinary. The development community must now invest in injury prevention research, injury prevention program development and implementation, and public awareness campaigns, which will certainly bring similar results. Without a serious universal effort orchestrated internationally by the development community to prevent injury, the unacceptably high rates of child death and disability due to preventable injury will continue indefinitely.

Advocacy starts from within our organizations. The UNICEF/TASC Conference on Child Injury is one initial step towards bringing about the increased visibility of the issue and further recognition that injury is a leading killer of children in the Asian regions. Armed with knowledge from this conference, participants will be able to recognize that injury is a serious issue in each country.

For those countries preparing to undertake an injury survey, as a first step, a desk review of the available information will provide additional qualitative and quantitative information, and help to structure efforts to conduct a national injury survey. As each country has learned in conducting their national surveys thus far, they provide a wealth of previously unavailable information regarding all causes of death, and are major inputs to inform and reform policy and prevention programming. The cost, when using the TASC model, which utilizes and builds national institutional capacity, is relatively small compared to the value of the information gained. The survey itself

also serves as an advocacy tool and generates a great deal of interest among government agencies, NGOs, injury researchers and other international organizations.

Policy change is key to reducing child injury. UNICEF and TASC call for donors and the international development community to forge partnerships with governments, research institutions and NGOs, and to begin to address this previously neglected major cause of child death and disability.

Accidents don't just happen, and we can act together to prevent them. Now is the time for action.

Endnotes

- ⁱ Centers for Disease Control and Prevention (CDC). Injury Surveillance in Developing Countries, CDC Surveillance Summaries, *MMWR*; 41 (No. SS-1):15-20, March 1992.
- ⁱⁱ WHO. *Injury: A leading cause of the global burden of disease*, Geneva, Switzerland, 2000.
- ⁱⁱⁱ UNICEF. A League Table of Child Deaths by injury in rich nations, *Innocenti Report Card No 2*, UNICEF Innocenti Research Center, Florence Italy, February 2001.
- ^{iv} The problem of children's injuries in low-income countries: a review, *Health Policy and Planning*, 17(1): 1-13, 2003.
- ^v WHO. *Facts about injuries – Drowning*, WHO Violence and Injury Prevention Program, 2003. www.who.int/violence_injury_prevention/
- ^{vi} The Global Burden of Injuries, *American Journal of Public Health*, 90(4): 523-526, 1990.
- ^{vii} Foreword to: Barss, Smith, Baker, Mohan; *Injury prevention: An international perspective – epidemiology, surveillance and policy*, New York, Oxford University Press, p vii, 1998.
- ^{viii} UNICEF. *The State of the World's Children 2004*.
- ^{ix} Linnan, M., *Report of the assessment of child injury in Bangladesh*, US Centers for Disease Control and Prevention, Office of Global Health, National Center for Injury Prevention and Control, October 2002.
- ^x UNICEF. *The State of the World's Children 2004*.
- ^{xi} C. J. L. Murray and A. D. Lopez, *The Global Burden of Disease*, Cambridge, Mass., U.S.A.; Harvard University Press for the World Bank, World Health Organization, and the Harvard School of Public Health, 1992.
- ^{xii} Barss, Smith, Baker, Mohan; *Injury prevention: An international perspective – epidemiology, surveillance and policy*, New York, Oxford University Press, 1998.
- ^{xiii} Linnan, M., *Report of the assessment of child Injury in China*, US Centers for Disease Control and Prevention, Office of Global Health, National Center for Injury Prevention and Control, July 2003.
- ^{xiv} UNICEF, WHO, UNESCO, UNFPA, UNDP, UNAIDS, WFP and the World Bank: "Facts for Life", A booklet on life-saving knowledge for care-givers and communicators, Third Edition, 2002.

The Alliance for Safe Children (TASC)

4/1 Sukhumvit Soi 1 Klongtoey Nua,
Vadhana District Bangkok 10110, Thailand
Tel: (66 2) 655-4811
Fax: (66 2) 655-4814
www.tasc-gcipf.org

UNICEF East Asia and Pacific Regional Office

19 Phra Atit Road
Bangkok 10200, Thailand
Tel: (66 2) 356-9499
Fax: (66 2) 280-3563
www.unicef.org