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Injuries and violence are among the leading causes of death throughout the world; in fact, they constitute a silent pandemic. Every day, as many as 16 000 people die from injuries and violence. And for every injury death, several thousand more people suffer impairments, frequently with disabling consequences. Injuries affect the productive workforce, youth and school-going children, as well as the growing elderly population. Almost 50% of injury-related mortality is borne by the age group of 15 to 44 years.

Injuries constitute one of the priority health problems in the South-East Asia (SEA) Region and require urgent action. The Region bore 31% of the world’s burden of injuries and 27% of the world’s injury-related mortality in 2000. Thousands of children in the Region, though successfully protected from infectious and nutritional diseases, are killed or crippled by injury, demonstrating that injury is also a major public health challenge. Road traffic injury (RTI) is the biggest offender in most countries, the total regional share in the global burden of RTI being 34% in 2000. Drowning and burns are other major causes of injury.

During the last couple of years, the WHO Regional Office for South-East Asia provided technical and financial support to Member States of the Region for injury prevention and safety promotion programmes. Several initiatives have been taken to address the toll of injuries, particularly the initiative on RTI prevention with financial support from Bloomberg Philanthropies.

I am very happy to mention that injury prevention and safety promotion was selected by the Sixty-second Session of the WHO Regional Committee for South-East Asia as the topic for the Technical Discussions, which were held in May 2010 in the Regional Office. The recommendations emanating from the technical discussions will be submitted to the Sixty-third Session of the Regional Committee for its consideration. We do hope that the Regional Committee will pass a resolution on “Injury prevention and safety promotion” during its Sixty-third Session, in order to further guide Member States to develop their respective national injury prevention strategies and thereby save more lives in our Region.

This issue also features the topic of “Urbanization and Health”, which was chosen as the theme for World Health Day 2010 in recognition of the effect urbanization has on our collective health, globally and on every individual. Its goal is to draw worldwide attention to the theme of urbanization and health and to involve governments, international organizations, business and civil society in a shared effort to put health at the heart of urban policy. Health and social services that promote social cohesion, irrespective of socioeconomic status, can promote Health for All.

Dr Samlee Plianbangchang
Regional Director
Globally, around 950 000 children and young people under the age of 18 years die every year due to injury and violence. Millions of children require hospitalization for non-fatal injuries and many are left with different degrees of disability, often with lifelong consequences. More than 95% of all injury deaths in children occur in low- and middle-income countries.

In 2004, the South-East Asia (SEA) Region had the second highest rate of unintentional child injuries (49/100 000 children per year) globally, following the African Region. Road traffic injuries, drowning, accidental falls and burns were found to be the major causes of severe injuries/deaths in most SEA Member States. Motorcycle crashes are important causes of road traffic injuries in many countries. Mortality rates of major causes of unintentional child injury in the Region are illustrated in Table 1.

<table>
<thead>
<tr>
<th>Type of injury</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road traffic injuries</td>
<td>9.6</td>
<td>5.1</td>
<td>7.4</td>
</tr>
<tr>
<td>Drowning</td>
<td>7.1</td>
<td>5.2</td>
<td>6.2</td>
</tr>
<tr>
<td>Burns</td>
<td>3.3</td>
<td>9.1</td>
<td>6.2</td>
</tr>
<tr>
<td>Falls</td>
<td>3.0</td>
<td>2.4</td>
<td>2.7</td>
</tr>
</tbody>
</table>


In the Region, Bangladesh has the highest child injury deaths – causing 38% of all classifiable deaths in children aged 1–17 years in 2003. Drowning, road traffic injuries, falls and burns are the leading causes of injury deaths and disability in children over one year of age. Child injury accounts for 26.9% of all causes of hospitalization in Myanmar, and falls were the leading cause of hospitalization (66%) due to injury. 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. Injuries among children under 5 years in Sri Lanka accounted for 72.9% of all causes of mortality. Landmine injuries and injuries due to conflict are major causes of child injuries in Sri Lanka. According to death certificates, drowning and transport injuries are the leading causes of injury deaths (25.2/100 000 children) in Thai children under 15 years. Another study from Thailand revealed that injuries accounted for 34.4% of all deaths among 1-14-year-old Thai children in 1999. Thailand’s national injury surveillance system reported transport injuries...
as the leading cause of severe injury in children 0–15 years. Motorcycle-related injuries are increasing significantly in several countries of the Region due to the high proportion of motorcycles among registered vehicles and inadequate public education on the risks involved. However, there is insufficient data from other Member States on child injuries.

Challenges for child injury prevention

Most Member States in the South-East Asia Region have national injury prevention plans. However, addressing the burden of child injuries is a major challenge for the following reasons:

- Injuries are still thought to be due to fate;
- In most Member States there is no injury prevention unit under the ministry of health to coordinate injury prevention activities;
- Political understanding and commitment are inadequate;
- Lack of skilled human resources, including insufficient budgetary allocation for injury prevention activities;
- Lack of injury surveillance and an inefficient injury-related information system to provide injury-related information;
- Unavailability of evidence-based, effective child injury prevention approaches in the context of the Region;
- Growing number of motorcycle-related injuries among children and lack of motorcycle safety standards and legislation for children (i.e. use of child motorcycle helmets);
- Inadequate, unorganized and inaccessible acute trauma care for injured victims; and
- Poor collaboration between agencies to address child injuries in a coherent manner at the national and subnational levels.

Tips for child injury prevention

Injuries are directly related to the different developmental stages of children and the caretakers’ knowledge and practices on specific types of injuries. Injury prevention tips for different age groups are shown in Table 2.
### Table 2: Child injury prevention tips by types of injury and age groups of children (0-14 years)

<table>
<thead>
<tr>
<th>Age groups and common injuries in each age group</th>
<th>Tips for prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>&lt; 3 years</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **Drowning**                                    | • Separate children from water sources by putting a barrier, fencing all sides of water bodies, covering water sources etc.  
• Provide close supervision, or keep children in playpens during working time. |
| **Road Traffic Injury**                         | • Avoid travelling on motorcycles.  
• Use standard helmets while travelling on motorcycle (2 years and above).  
• Use child restraints while travelling in a car. If there is no restraint, put children in the back part of the occupant space. |
| **Falls**                                       | • Put a barrier at the top and bottom of stairs and balcony.  
• Remove furniture and toys with sharp edges or corners.  
• Don’t leave children unattended on a high or climbable place. |
| **Burns**                                       | • Don’t carry children when holding hot objects.  
• Put barriers around cooker/burner.  
• Ban open lamps and use hurricane (closed) lamps. |
| **Poisoning**                                   | • Keep dangerous substances that may cause toxicity away from child’s reach, or locked in a cabinet.  
• Close supervision or keep children in playpens during working time. |
| **Assault**                                     | • Children must not be left alone with any stranger.  
• Guardians must protect a child from being touched inappropriately. |
| **3-5 years**                                   |                     |
| **Drowning**                                    | • Separate children from water sources by putting a barrier, fencing all sides of water bodies, covering water sources etc.  
• Provide close supervision, or keep children in day care during working time.  
• Guardians should be trained in resuscitation. |
| **Road Traffic Injury**                         | • Use standard helmets while travelling on motorcycles.  
• Use child restraints while travelling in a car. If there is no restraint, put children in the back of the occupant space.  
• Don’t leave a child alone in an unattended car. |
| **Falls**                                       | • Put a barrier at the top and bottom of stairs and balcony.  
• Remove furniture and toys with sharp edges or corners.  
• Don’t leave children unattended on a high or climbable place. |
| **Burns**                                       | • Put barriers around cooker/burner.  
• Ban open lamps and use hurricane (closed) lamps.  
• Don’t allow children to play in the kitchen while someone is cooking.  
• Don’t put hot objects/liquids on the floor. |
| **Poisoning**                                   | • Keep dangerous substances that may cause toxicity away from child’s reach, or locked in a cabinet.  
• Don’t put toxic substances in any food containers or place in the food and beverage area. |
| **Assault**                                     | • Children must not be left alone with any stranger.  
• Guardians must protect a child from being touched inappropriately. |
<table>
<thead>
<tr>
<th>6-8 years</th>
</tr>
</thead>
</table>
| **Drowning** | • Separate children from water sources by putting a barrier, fencing all sides of water bodies, covering water sources etc.  
• Children should learn swimming and use personal flotation devices.  
• Guardians should be trained in resuscitation.  
• Separate playgrounds from water sources in the community. |
| **Road Traffic Injury** | • Use standard helmets while travelling on motorcycles.  
• Don’t leave a child alone in an unattended car.  
• Use special car seats for children. If there is no restraint, put children in the back of the occupant space.  
• Safety management of school buses should be established. |
| **Falls** | • Safe sports and playgrounds must be provided by the community.  
• Put barriers at the top and bottom of stairs and balcony.  
• Remove furniture and toys with sharp edges or corners.  
• Don’t leave children unattended on a high or climbable place. |
| **Burns** | • Don’t allow children to play in the kitchen while someone is cooking.  
• Put barriers around cooker/burner.  
• Don’t put hot objects/liquids on the floor.  
• Ban open lamps and use hurricane (closed) lamps. |
| **Poisoning** | • Keep dangerous substances that may cause toxicity away from a child’s reach, or locked in a cabinet.  
• Don’t put toxic substances in any food containers or place in the food and beverage area. |
| **Assault** | • Children must not be left alone with any stranger.  
• Guardians must protect children from being touched inappropriately.  
• Guardians must not allow children to fight. |

<table>
<thead>
<tr>
<th>9-14 years</th>
</tr>
</thead>
</table>
| **Drowning** | • Separate children from water sources by fencing all sides of water bodies, covering water sources etc.  
• Children should learn swimming and use personal flotation devices.  
• Guardians should be trained in resuscitation.  
• Separate playgrounds from water sources in the community. |
| **Road Traffic Injury** | • Use standard helmets while travelling on motorcycles.  
• Don’t leave a child alone in an unattended car.  
• Use special car seats for children.  
• Safety management of school buses should be established.  
• Don’t encourage children to ride motorcycles or any other vehicles. |
| **Falls** | • Safe sports and playgrounds must be provided by the community.  
• Put barriers at the top and bottom of stairs and balcony.  
• Remove furniture and toys with sharp edges or corners.  
• Don’t leave children unattended on a high or climbable place. |
| **Burns** | • Don’t allow children to play in the kitchen while someone is cooking.  
• Put barriers around the cooker/burner.  
• Don’t put hot objects/liquids on the floor.  
• Ban open lamps and use hurricane (closed) lamps.  
• Children should be trained to know how to give first aid for burns. |
| **Poisoning** | • Don’t put toxic substances in any food containers or place in the food and beverage area. |
| **Suicide** | • Develop life skills in children. |
| **Assault** | • Children’s living areas must have secure doors and windows barring any intrusion.  
• Media of pornography and violence must be controlled.  
• Children must not be left alone with any stranger.  
• Guardians must protect children from being touched inappropriately.  
• Guardians must not allow children to fight. |
Acknowledgement

We have cited various safety management approaches from the publication of Dr Adisak Plitpolkarnpim, Associate Professor, Child Safety Promotion and Injury Prevention Research Centre, Paediatric Department, Faculty of Medicine, Ramathibodi Hospital, Thailand. Data on child injuries have been provided by the Centre for Injury Prevention and Research, Bangladesh.

References

Childhood drowning prevention in Bangladesh

AKM Fazlur Rahman, Aminur Rahman
Centre for Injury Prevention and Research, Bangladesh

Magnitude of the problem
Drowning is a leading killer of children across the globe. The vast majority (97 per cent) of fatal drowning occurs in LMICs. Over half of global fatal drownings occur among children less than 15 years of age, and children 1-4 years appear to be at the greatest risk. Due to daily exposure to hazards, drowning is very common especially in young children in Bangladesh. According to the Bangladesh Health and Injury Survey (BHIS), drowning is the leading cause of death of children following the period of infancy. The fatal drowning rate for children was 28.1/100 000. Drowning peaked in the 1-4 age group, and then rapidly declined as age increased. It has been estimated that more than 17 000 children die every year due to drowning in Bangladesh.

Childhood drowning prevention efforts in Bangladesh
The Centre for Injury Prevention and Research, Bangladesh (CIPRB), with technical assistance from the Director General for Health Services (DGHS), UNICEF and The Alliance for Safe Children (TASC), has developed and initiated a community-based child injury intervention project entitled “Prevention of Child Injuries through Social Intervention and Education” (PRECISE). This project is currently the largest community-based injury intervention project ever carried out in a developing country. PRECISE has been implemented in one urban and three rural communities comprising 800 000 population, in order to develop and implement injury prevention packages applicable to homes, schools and throughout communities, as well as to evaluate the effectiveness of these interventions in terms of cost and large-scale application. While PRECISE deals with prevention of all childhood unintentional injuries, drowning prevention is the main focus of its efforts.

The drowning prevention activities were launched in February 2006, with the following strategies:
Strategies adopted for drowning prevention

<table>
<thead>
<tr>
<th>Issues</th>
<th>Preventive measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common place of drowning: ponds and ditches situated close to home</td>
<td>Environmental modification through Home Safety Programme</td>
</tr>
<tr>
<td>Person accompanying the child before drowning: half of child drowning incidents occurred when the child was accompanied by an adult</td>
<td>Awareness development through Community Mobilization Programme</td>
</tr>
<tr>
<td>Time of drowning: half of the drowning events in 1–4 year-old children occur between 0900 and 1300 hours</td>
<td>Institutional supervision of under-five children through Anchal (Community Crèche) Programme</td>
</tr>
<tr>
<td>Swimming ability: only 7% of children over 4 years of age who drowned knew how to swim</td>
<td>Survival swimming SwimSafe teaching programme</td>
</tr>
<tr>
<td>Lack of rescue and CPR skills</td>
<td>Teaching students rescue and CPR skills through School Safety Programme</td>
</tr>
<tr>
<td></td>
<td>Community Volunteer development through First Responders training programme</td>
</tr>
</tbody>
</table>

1. **Home Safety Programme**: To make a home a safe haven for children, every month a community volunteer counsels the household occupants, especially mothers, for removal of drowning hazards in and near the home, and stresses the importance of constant supervision of children by a responsible adult in the household.

2. **Anchal (Community Crèche) Programme**: The principles of developing a crèche are to provide institutional supervision to the children under direct supervision of a trained supervisor, and also to provide early childhood development (ECD) stimulation for social, emotional, cognitive, and physical growth of the young children. In each crèche, 25 under-five children are supervised for four hours a day (9 a.m. to 1 p.m.).

3. **Community Mobilization Programme**: To raise community awareness of drowning prevention, the following activities have been undertaken:

   - Formation of village injury prevention committees
   - Arranging courtyard and social autopsy meetings that facilitated community review of fatal drowning
   - Organizing video documentary drama and interactive popular theatre
   - Distributing posters and booklets
   - Organizing annual community mobilizing events such as rallies, art, an essay competition, and swimming competition.

4. **Swim-Safe Programme**: This programme, for children 4-10 years, teaches life-saving swimming skills. The principles of the Swim-Safe programme are to utilize low-cost, locally available resources and to involve the community in the process. Local ponds are modified with bamboo fencing to create safe swimming training sites, and the local volunteers are trained as community swimming instructors.

5. **School Safety Programme**: The strategy of the School Safety Programme is to impart knowledge and skills on rescue
techniques and CPR to prevent death from drowning.

6. **First Responders Training**: This programme has been designed to provide hands-on training on rescue techniques and CPR to the community volunteers for prevention of fatal drowning among children.

**Conclusions**

PRECISE was formally evaluated at the end of 2008, which revealed that considering all injuries in the intervention areas, the mortality rate decreased from 48.7 to 34.8 per 100,000 children. This was a reduction of 28.4 percent. The largest reduction in mortality was due to the prevention of drowning. We can conclude from the success of this programme that the combination of increased supervision and hazard isolation in under-fives and survival swimming training at five years of age appears to be effective interventions for drowning.

**References**

Safe lamps in Sri Lanka

Dr. Godakumbura, Safe Lamp Project

Burns account for 300,000 deaths globally every year, and over 90% of them occur in low- and middle-income countries. Burns are frequently caused by unsafe kerosene stoves and lamps used in houses lacking electricity.

Burns are considered to be one of the most devastating forms of injury that one can sustain and survive. They cause unimaginable misery such as severe pain and stench from infected wounds lasting weeks or months, and extensive scarring. When the face is disfigured, those affected shun people. “Doctor, why didn't you let me die”? some patients ask. “What is the use of living like this”? Sometimes there is blindness and loss of all the fingers. When the affected person happens to be the bread winner, the family is devastated. Those with extensive burns often die after much suffering.

In Sri Lanka, burns from makeshift kerosene lamps made from medicine bottles and burnt-out bulbs have been occurring for over a century; being tall, narrow and light, these lamps tip over easily. As the wick-holders are not of the “screw-on” type, the flammable kerosene can leak out, causing fire and extensive burns to those who try to extinguish the fire. Similar makeshift lamps are also used in some other countries. As early as 1965, WHO stated in the book, Domestic Accidents that “The bottle lamp is a simple kerosene burner that ignites the saris of women working near it. There is a campaign in Sri Lanka to introduce a safe lamp”. The author, a surgeon, launched a campaign in 1992 to make simple, inexpensive and safe lamps and to distribute them to people.

At a course held in the United States in 1983, WHO and Johns Hopkins University introduced a “stable” kerosene lamp. “The highly dangerous home-made ‘bottle lamp’ can be made stable. An open tin can is attached to a small piece of wood, and the bottle is placed inside the can”. No organization had made these lamps for the people; the idea was for them to make their own lamps.

Sri Lanka’s safe bottle lamp project

There were two options to find a safe alternative to unsafe lamps.

1. Same lamp, but a “non-flammable” fuel

2. Same fuel, but a “safe” lamp

The author noted that vegetable oils were ineffective as they failed to ascend in the cotton
wick like kerosene. So he designed a lamp called “Sudeepa”, that would be safe even with kerosene. WHO, UNICEF, the International Society for Burn Injuries, two Sri Lankan medical associations and the Sri Lankan Health Ministry have approved it. Its features are:

It is squat and heavy, so that it does not tip over easily. It has a near-globular shape and thick glass, so that it does not crack if it falls. With two flat sides, it does not roll if it does tip over. It has a screw-on metal lid, to prevent an oil spill if it does tip over. This lamp is capable of mass production at low cost and is long lasting, as there are no delicate or moving parts.

Rationale for the use of our lamps

There would be no malaria if there were no mosquitoes, and less drug usage if there were no cannabis and poppy plants. Similarly, there would be no kerosene lamp burns if people discarded their unsafe lamps.

Our activities

Besides replacing unsafe lamps with safe ones, we advise people on the safe use of kerosene. We tell them not to pour kerosene on burning lamps, not to let small children handle lamps, and not to hang lamps on the wall. They are taught how to extinguish flames when clothes catch fire (“stop, fall and roll”) and how to give first aid for burns (“water therapy”). This is done through flyers, posters and through TV and radio programmes. We have replaced 800,000 unsafe lamps with our safe lamps.

Acclaim

We have won four International awards: the Rolex, Lindbergh, Reader’s Digest and World Challenge awards. Two issues of BURNS and the World Report on Child Injury Prevention have made favourable references to our project, while several magazines (Newsweek, Science and Nature and Panorama) have featured our work. BBC and CNN have also aired programs about us. After recent articles in some foreign magazines requests for our lamps have come from some foreign NGOs.

Introducing the “Sudeepa” safe lamp to villagers
Injury, especially traffic injury, is a very important public health problem, causing a very high incidence of mortality and morbidity. According to WHO, health personnel need to play major roles in tackling this problem. Actions needed are to:

1. Develop an effective emergency medical service system;
2. Develop an injury information system, analysis, and synthesis, and have active involvement of the public;
3. Play a role in advocacy for safety in public policy;
4. Lead or participate in policy development;
5. Promote road safety activities in the hospital; and
6. Promote multisectoral action and strengthening networking.

In the past, the injury prevention and control programme was usually handled by public health personnel. Hospital physicians, or
specialists such as surgeons and orthopaedists who had a major responsibility in trauma management rarely showed an interest in injury prevention and control programmes. In fact, these personnel have to deal with numerous trauma patients and carry a heavy workload. They have high social standing and capital, and if they get involved in the injury prevention and control, they will bring high recognition and acceptability by the public to the programme, which should result in high success and sustainability.

By this rationale, every trauma centre in Thailand has a designated role in injury prevention and control. This is to:

1. Develop a standard, effective trauma care system which includes pre-hospital care, hospital care, rehabilitation and mass casualty preparedness. The system should have universal coverage, accessible by all.
2. Develop an effective patient referral system.
3. Develop a good injury surveillance system and encourage effective data utilization to monitor and modify trauma care and injury prevention.
4. Develop a capacity-building programme for personnel responsible for injury prevention and control.
5. Integrate injury prevention and safety promotion as a mission of the trauma centre at every level and targeted to:
   - All health personnel and their families, including hospital students
   - All visited patients and their relatives
   - Communities in the area of primary care units
   - Civil society and community networks.

This programme is part of national policy and is strongly supported financially by several national agencies such as the Ministry of Public Health, the National Health Security Office, the Emergency Medical Institute of Thailand, the Thai Health Promotion Foundation and the Institute for Hospital Accreditation.

Thus, all trauma centres at every level in Thailand have not only a role only in trauma care but also in integrating their role in injury prevention and safety promotion as a major responsibility of the centres.
Promoting Healthy Workplaces

Dr. Salma Burton
Regional Adviser, Occupational Health, WHO-SEARO

Urbanization is defined by the United Nations as the movement of people from rural to urban areas. People move into cities to seek economic and social opportunities. Living in rural areas, often on small family farms, it is difficult to improve one's standard of living beyond basic sustenance. By contrast, cities are known to be places where money, services and wealth are concentrated. Cities are where fortunes are made and where social mobility is possible. Businesses that generate jobs and capital are usually located in urban areas. As a result, most of the people who move to cities and stay in cities are workers.

Cities are built, managed, maintained, served and serviced by workers. Therefore, the health and well-being of workers are of paramount importance. For workers and their families, health and safety are important because they have to be healthy to work and earn incomes. Ill health depletes income and savings for accessing health or businesses. Healthy workers increase productivity, competitiveness and sustainability of enterprises.

About 34% of the total population of the South-East Asia Region is urban, and a large proportion of the urban inhabitants are workers. Cities themselves are built by workers, but in most cases city authorities do not provide the infrastructure and services for the workers to live decent, healthy lives. Currently an estimated two million people die each year as a result of occupational accidents and work related illnesses.

In 2007 the World Health Assembly endorsed the workers’ health global plan of action (GPA), which sets out five objectives:

1. To devise and implement policy instruments on workers’ health;
2. To protect and promote health at the workplace;
3. To promote the performance of and access to occupational health services;
4. To provide and communicate evidence for action and practices;
5. To incorporate workers’ health into other policies.
Currently an estimated two million people die each year as a result of occupational accidents and work related illnesses.

In order to meet the five objectives of the GPA, WHO in 2010 developed a model for action. The reasons for developing a healthy workplace initiative is that it is the right thing to do, it is the smart thing to do and it is the legal thing to do. It is the right thing to do because one of the most basic of universally accepted ethical principles is to “do no harm” to others. In the workplace this means ensuring employees’ health and safety. It is the smart thing to do because companies that promote and protect health of workers increase productivity. It is the legal thing to do because by making workplaces healthy employers are abiding by laws and legislation that safeguard health of workers.

A healthy workplace is one in which workers and managers collaborate in a continual process of improvement to protect and promote the health, safety and well-being of all workers and the sustainability of the workplace. This definition enables a move away from the traditional occupational health view of the physical workplace to a conception of it as a “setting for health promotion and preventive health activities”. In using a settings approach, a healthy workplace initiative can incorporate the physical work environment, the psychosocial environment, personal health resources and enterprise involvement in the community.

According to WHO’s “Healthy workplace: a model for action”, the process of developing a healthy workplace has a number of critical steps. They include:

- Mobilizing workers and employers.
- Assessing the workplace to develop baseline of both the workplace and the health of the workers.
- Prioritizing the principles of “quick wins first”, responsibilities.

Experience with implementing healthy workplace initiatives has shown that the initiatives are more successful and sustainable when leadership is engaged in the process, workers and their representatives are involved, and the health of the workers is integrated within the work practices and approach to promoting health of workers.
Genesis of Sulabh Sanitation Movement
Dr. Bindeshwar Pathak

In the sixties in India, no house in rural areas had a toilet. Women suffered the most because of lack of privacy and dignity. Girls did not attend schools because of absence of toilets.

In the 1950s, only 15% of houses had sewerage in about 150 cities/towns out of about 3000 cities/towns, that too partially. 85% houses in the urban areas had bucket toilets, cleaned by ‘human scavengers’ who were humiliated and socially discriminated.

The subject of sanitation - safe and hygienic disposal of human waste - is gaining ground because of the ever increasing population, unplanned urbanization, industrialization and the growth of slums in most towns and cities.

Lack of sanitation is directly related to diseases like diarrhoea, cholera, typhoid, worm infections, etc. Improper disposal of human waste pollutes water bodies, groundwater and land surfaces, causing great risks to health and impacting the productivity and national economy.

Sulabh public toilet complex, Shirdi, India
With the implementation of Sulabh’s on-site technologies, scavengers have been liberated from their degrading occupation, rehabilitated in other occupations with educational and vocational training and brought into the mainstream of society. Their human dignity has been restored. Of the one million scavengers, about 40,000 remain to be relieved. Now, 63% of urban population has toilet facilities. Most cities have been made scavenging-free. Sulabh has been able to change the attitudes and behaviour of the Indian people towards toilets and “untouchable” scavengers who now intermingle with people of higher castes.

In the early seventies, public places like railway stations, bus-stops, markets, religious and tourist places, had no public toilets. Apart from inconvenience to Indians, foreign visitors were also reluctant to come to India. Usually Indians did not pay for use of toilets, but Sulabh, with the help of Patna Municipal Corporation, in 1974, introduced the system of maintaining public toilets on “pay and use” basis. Initially economy. It adversely affects the overall quality of life of those living in the vicinity and increases health risks during natural disasters like floods, earthquakes, etc.

To overcome the problem of safe disposal of human waste, on the basis of research findings, published in a WHO publication, ‘Excreta Disposal for Rural Areas and Small Communities’ by Edmund G. Wagner and J.N. Lanoix, I invented, innovated and developed the technology for individual households—a two-pit, pour-flush, compost toilet, popularly known as Sulabh Shauchalaya. It is scientifically appropriate, economically affordable, culturally acceptable and conserves water. No scavengers are required to clean the pits.

Sulabh has converted 1.2 million bucket toilets into Sulabh two-pit toilets and shown the nation how bucket toilets can be converted, how hygienic it is, how scavengers can be relieved and how open defecation can be stopped.
there were skeptical views. Now Sulabh has constructed and is maintaining more than 7,000 public toilets with urinals, bathing cubicles, wash-basins, soap powder, lockers, health-centres, telephone booths, etc. Others have adopted the system of maintenance of public toilets on Sulabh pattern.

Sulabh has contributed significantly to improvement of urban health in India by providing household and public toilets, both of which are used by approximately ten million people daily. This has improved the living conditions of millions of people, particularly the poor and the underprivileged in urban slums. The infant mortality rate per thousand live births in the country has reduced from 129 in 1970s to 57 in 2006.

The other technology I developed was recycling of human waste from public toilets to produce biogas which can be used for lighting mantle lamps, cooking food, warming oneself, power generation, etc. One public toilet was set up in Bhutan and five public toilets linked with biogas digesters in Kabul, with aid from the Government of India, which functioned very well, even at -300C.

Today, Sulabh Community Toilets are internationally recognized as a financially, socially and ecologically sustainable model of urban sanitation. It has proved that even the poor are prepared to pay.

The water discharged from the biogas digester of public toilet is treated through Sulabh Effluent Treatment Technology, which reduces the Biochemical Oxygen Demand of the effluent to less than one milligram per litre. This pure water can be discharged into rivers/water bodies, preventing pollution from sewage.

The Sulabh sanitation technologies have been recognized and adopted by international agencies. It has upgraded the environment, helped reduce global warming because of less emission of gases into the atmosphere, saved billions of litres of water per day used for flushing and produced bio-fertilizer to raise agricultural productivity.

Sustainable and community based models of sanitation, developed by Sulabh could help meet challenges faced by the developing countries, for fulfilling the MDG target 7 on water and sanitation. The aspiration of millions of people cannot be achieved without looking beyond the conventional sewerage and septic tank systems. Technologies developed by Sulabh are potent instruments for achieving the vision of a world, free from environmental filth and social discrimination.
For the first time in history, more people are now living in urban settings than in rural areas. Cities concentrate people, opportunities and services, but also concentrate risks and hazards for health.

On World Health Day 2010, WHO called on a wide range of groups, from municipal authorities and the private sector to concerned citizens, nongovernmental organizations and advocates for healthy living, to address the unfair differences in people’s health in cities and towns.

WHO launched the “1000 cities, 1000 lives” campaign for World Health Day 2010. This unique campaign called upon all cities worldwide to open up portions of streets to the people to promote health activities for one day during the week of 7-11 April 2010.

All Member States in WHO’s South-East Asia Region participated in this campaign. A total of 217 cities in the Region organized health-related activities. Following are some of the highlights of World Health Day celebrations in Member States in South-East Asia.

**Bangladesh**

Dhaka, Tangail, Bogra, Sayedpur and Barisal were among the 17 cities that signed up for the “1000 cities 1000 lives” campaign.

Activities were organized at the national, sub-national and community levels. Events such as round table discussions and rallies at the city corporation, municipality and district level were organized.

*A rally on WHD 2010 at Barisal City Corporation of Bangladesh*
Apart from these events, the Bangabandhu International Conference Centre in Dhaka was the venue for day-long events. Participants from the government, nongovernment, private and social sectors attended this event. An exhibition was also organized at the centre featuring 25 different health and environment-related organizations.

“Urban health is beyond the control of the health ministry and it needs better coordination and a joint action plan between the Ministry of Health and other relevant ministries to ensure urban health and environment”, said the Health and Family Welfare Minister of Bangladesh Dr A F M Ruhal Haque.

Bhutan

Clean-up campaigns were organized in the cities of Thimphu, Chumey, Bhumthang and Damphu. The city of Gelephu organized a solid waste management awareness event. A set of value stamps were released on Urbanization and Health. Souvenirs and brochures on growing Thimphu city were also launched. The stamps and souvenirs depicted “healthy lifestyles in cities and towns” in Bhutan.

DPR Korea

World Health Day was observed in Pyongyang, and in other cities in the Democratic People’s Republic of Korea. Events such as a photo exhibition, health education seminar on healthy cities, taekwondo and rhythmic dances, art performance and tree-planting were organized.

The People’s Palace of Culture was the venue for celebrations at the national level. The event was inaugurated by Dr Ri Pong Hun, Vice Health Minister and Vice Chairman of Pyongyang City People’s Committee. The Pyongyang City health workers demonstrated taekwondo at the event. Later at Pyongyang City, south Pyongan Province, trees were planted. A children’s art exhibition was also organized on the theme.
Indonesia

Ministers, mayors, entrepreneurs, bikers, club members, food sellers, NGO staff and thousands more joined public activities in South Tangerang City on the morning of 11 April 2010.

Adapting the theme into “Kota Sehat, Warga Sehat” or “Healthy City, Healthy People”, Minister of Health, H.E. Endang R Sedyaningsih, encouraged leaders and city residents to take action for a healthier urban environment. “Every sector must anticipate urbanization and its impact on people’s health. Urban population growth is rapid and we must respond to it in a timely manner,” said the minister.

Collaborating with WHO Indonesia, the Ministry of Health invited cities to launch innovative initiatives to make the cities healthier. In Tangerang Selatan, the national Healthy Food Market programme was launched. In Bekasi, a housing complex started a weekly community aerobics programme and initiated a public education activity to raise awareness on health matters. In Jakarta, a clean-up campaign was conducted at schools and neighbourhoods.

Five other cities signed on to the global campaign. Banda Aceh, Siak Sri Indrapura, and Tanjung Selor each held a seminar and public events. Bitung, a city in North Sulawesi, held activities for three weeks in a row, involving around 25,000 people. The mayor of Cimahi, West Java announced 11 April as a car-free day.

India

In India 87 cities registered for the “1000 cities, 1000 lives” campaign. Activities undertaken by NGOs and public and private organizations included clean-up campaigns, eye check-
ups, blood donation drives, walkathons and exhibitions.

In New Delhi, the Union Health and Family Welfare Minister, Mr Ghulam Nabi Azad, inaugurated an exhibition and panel discussion on “Urbanization and Health”. A number of rallies were organized by NGOs in slum areas of Delhi with messages promoting health, clean and green Delhi etc.

On April 11, a mass Awareness Run was flagged off by the Delhi Health Minister, Prof Kiran Walia, from the sprawling grounds of Rajghat, the memorial of Mahatma Gandhi. People from all walks of life and all age groups, including senior citizens, participated. A cycle rally, skating, karate, taekwondo, painting competition for children, performance by a school band and a colourful cultural programme was also organized on the occasion.

**Maldives**

Citizens from three cities in the island nation of Maldives signed up to organize activities on 7 April, in addition to the celebrations throughout the country. These activities included yoga, children’s rallies, sports events, aerobics demonstrations, public awareness on food hygiene, swimming competition, skits on urbanization and health and the launching of a special song on the theme of the day. 7 April was declared a day for active movement. The use of motorized vehicles was discouraged and walking/bicycling was promoted throughout the country. WHO staff, senior health and other government officials and volunteers joined a bicycle rally and walk, carrying posters with health messages on the streets of Malé.

On 8 April a street fair with lively and participatory stalls was organized at the children’s park in Malé. The theme reflected different health issues. “Aiy-dhonnabe”, a fairy character, demonstrated the right method of hand-washing to children. Posters and advocacy material included themes such as mosquito control, injury prevention and noncommunicable diseases.
Visitors at WHO Myanmar exhibition booth at World Health Day 2010 ceremony in Nay Pyi Taw

Myanmar

The Ministry of Health in Nay Pyi Taw observed World Health Day by organizing an exhibition and a technical seminar on “Urbanization and Health”. In Taungyi, Shan State (South), the Command Commander opened the ceremony. Health education talks on environmental health, nutrition, child health and diabetes were given after the ceremony. Activities included giving nutritious food to the children at the orphanage, free testing for diabetes and keeping the environment clean by disposing plastic bags and waste.

Nepal

More than 17 cities registered to participate in the “1000 cities and 1000 lives” campaign. Events were organized by public and private sector agencies, national and international organizations and line ministries. These events included hand-washing drives in urban slums, schools, colleges and among factory workers; role plays on the impact of nutritious food vs. junk food; banning use of plastic bags in supermarkets/shopping centres; banning of use of presser horns in strategic locations of cities; distributing equipment to measure the noise level of horns; TB/HIV awareness in slums, restaurants etc; waste management; and health/reproductive health camps. WHD celebrations in Nepal were a model of collaboration between different stakeholders from the private and public sectors.

WHD 2010 event in Kathmandu, Nepal
Sri Lanka

Eight cities from Sri Lanka participated in the “1000 cities, 1000 lives” campaign.

A reawakening programme titled “Pubadamu Pulathisi” which included an advocacy seminar for political leaders, government officers and businessmen, an aerobic exercise session for the staff of health and administrative authorities, an awareness campaign for the general public through health committees (“Suwa Seva Kamitu”) and through public address systems was conducted in Thamankaduwa. The City of Chilaw organized aerobic sessions for volunteers from various institutions and an awareness programme for the general public on risk factors, primary prevention, early detection and treatment of noncommunicable diseases, together with a screening by medical professionals. In Colombo activities such as aerobic sessions for low-income city dwellers and a clean-up programme for prevention of dengue were organized.

Dengue prevention activities, “Towards Dengue-free Tangalle in 2010”, were conducted in Tangalle. This included clean-up campaigns, awareness building among the public and home visits for dengue control. The City of Ampara conducted a No Tobacco awareness campaign for businessmen and community leaders. In Baticaloa clean-up campaigns, repairs to drainage pipes, food safety and hygiene drives in restaurants and food stalls were organized.
An interactive drama titled “Ramya Nagaraya (Beautiful City)” on the theme of “Urbanization and Health” was staged at a reception for political leaders, government officials, UN officials, diplomats, WHO staff and guests.

**Thailand**

A total of 70 Thai cities and municipalities participated in the effort to bring attention to urbanization and health. The cities and municipalities organized “health enrichment” activities, opening up public spaces to host activities in parks, town hall meetings, clean-up campaigns, or closing off portions of streets to motorized vehicles. The Public Health Minister opened the main function and exhibition at the ministry compound on 7 April, which was well attended by representatives of all the participating cities. Thailand’s successful celebration of World Health Day was possible due to the close cooperation of partners like the National Municipal League of Thailand, the Ministry of Public Health, the Bangkok Metropolitan Administration, the Thai Health Foundation and UNHABITAT. Collaboration will continue to ensure that urbanization and health will get the attention it deserves in the years to come.

**Timor-Leste**

In Timor-Leste, World Health Day activities were conducted over the entire week of 7-11 April 2010. On 7 April, the President, Vice-Minister for Health and WHO Representative launched The Healthy Heart Club with more than 1500 participants. This initiative promotes “fun exercises” for a healthy heart in Timor-Leste. During this week members of the Healthy Heart Club undertook an exercise session including walking through Dili’s streets. A clean-up campaign was organized across the city on 9 April. H.E Dr Jose Ramos Horta supported the activities of the week and urged the Government to develop plans for Timor-Leste’s urban centres such as Dili.
This special song written by Mohammed Naseer & A.A. Maalhos for World Health Day 2010 talks about environmental health, poverty, noncommunicable diseases, water, sanitation, harmful effects of tobacco, TB, HIV and malaria. The song links these diseases with urbanization and overpopulation.

It celebrates a healthy life, good diet, sleep, safe and sanitary housing and healthy work habits, and wishes the Maldives a healthy future on a day when people across the globe celebrate the World Health Day.