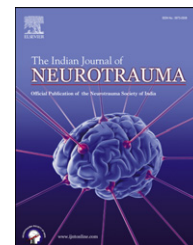


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## Editorial

# Prevention – The Dark Horse in trauma management

Worldwide, an estimated 1.2 million people are killed in road crashes each year and as many as 50 million are injured. Projections indicate that these figures will increase by about 65% over the next 20 years unless there is a new commitment to prevention.<sup>1</sup>

Trauma is one of the leading causes of mortality and morbidity in India. Currently death from injury in India is a leading cause of productive life lost and cause of death for those under 35 years old. The national injury burden is growing and the ongoing rise in the trauma burden is mostly in the form of road traffic accidents. India has 1% of the total vehicles in the world, yet it accounts for 6% of the total road accidents globally. There are approximately 400,000 road traffic accidents in India each year, resulting in about 100,000 deaths and 1.2 million individuals are seriously injured.<sup>2</sup>

The WHO figures for 2000 indicate that India has a disproportionately high death rate due to road traffic injuries – 29 per 100,000 people – more than twice the rate of developed nations. This high mortality rate is directly proportional to India's rate of road crashes. The accident rate of 35 per thousand vehicles in India is one of the highest in the world. There is an associated annual fatality rate of 25.3 per 10,000 motor vehicles. This translates to a serious Indian road crash every few minutes.<sup>3–5</sup>

Every day more than 2000 children die from an injury which could have been prevented. Five most important causes of unintentional injury are – road traffic injuries, drowning, burns, falls and poisoning.<sup>6</sup>

Distracted driving is a serious and growing threat to road safety. With more and more people owning mobile phones, and the rapid introduction of new “in-vehicle” communication systems, this problem is likely to escalate globally in the coming years. By using a mobile phone while driving you are approximately four times more likely to be involved in a crash than a driver who is not using a phone. This risk appears to be similar for both hand-held and hands-free phones, because it is the cognitive distraction that is an issue, not only the physical distraction associated with holding the phone. Text messaging appears to have an even more severe impact on driving behavior and crash risk.<sup>7</sup>

Children, pedestrians, cyclists and the elderly are among the most vulnerable of road users. Road traffic injuries are a major but neglected public health challenge that requires concerted efforts for effective and sustainable prevention. Injuries and their prevention have been largely neglected. As

a result, in India, where public health training does not address injury related issues, medical training includes treatment of trauma but overlooks prevention.

The prevention strategies can contribute up to two-thirds reduction in road trauma mortality. The state of Victoria in Australia has an exemplary record in preventive strategies and their effect in reduction of road trauma. Primary prevention including mandatory seat-belt use, compulsory bicycle helmets, random alcohol breath testing, speed cameras and mandatory blood tests for hospitalized trauma patients substantially reduced the road toll. Between 1970 and 1994 the fatality rate decreased from 8.1 to 1.4 per 10,000 registered vehicles and from 30.8 to 8.4 per 100,000 population.<sup>8</sup>

The prevention efforts require multidisciplinary approaches and a variety of trained professionals, World Health Organization (WHO) training curriculum on injury and violence prevention called TEACH-VIP, an acronym for Training, Education, and Advancing Collaboration in Health on Violence and Injury Prevention, is one important effort undertaken by WHO and global injury partners to build work force. Training is one of the key elements of work force building. WHO has coordinated the development of TEACH-VIP, a comprehensive injury prevention and control curriculum. The course material is designed around a classroom instruction model, with power point slide presentations, supporting lecture notes, and learning exercises that address a full range of topics relevant to injury prevention and control. TEACH-VIP curriculum is a modular programme available on CD-ROM along with users' manual. Wide range of topics, including: application of key injury prevention and control principles; design of effective surveillance systems; collection and assessment of injury data; development of preventive programmes and policies; and evaluation of intervention measures. TEACH-VIP details are available on [www.who.int/violence\\_injury\\_prevention/](http://www.who.int/violence_injury_prevention/).

The Think First National Injury Prevention Foundation, formerly known as the National Head and Spinal Cord Injury Prevention Program, was first implemented nationally in US in 1986. The American Association of Neurological Surgeons (AANS) and the Congress of Neurological Surgeons (CNS) initiated the development of the national program. They shared the belief that prevention is the only cure, and that neurosurgeons have a duty to try to prevent these traumatic injuries. It is a public education effort targeting this high-risk

age group. The program educates young people about personal vulnerability and risk taking. It includes spreading awareness in schools, reinforcement activities, general public education, and public policy initiatives. The goal of the program is to increase knowledge and awareness among children, young adults and teachers, of the causes and risk factors of brain and spinal cord injury, injury prevention measures, and the use of safety habits. Teachings directed to this age group will likely increase safety behaviors that are maintained through the high-risk adolescent years and will become life-long habits.

We all need to play a proactive part to control this silent epidemic. Max Institute of Neurosciences Dehradun-MIND has taken one such initiative to launch Think First India from Dehradun, Uttarakhand with the hope to take it to the rest of India. Two of its neurosurgery faculty members have undergone through the formal training from Think First US.

#### REFERENCES

1. Peden M, Scurfield R, Sleet D, et al., eds. *World Report on Road Traffic Injury Prevention*. WHO; 2004.
2. Fitzgerald Mark, Jamieson Jennifer, Jin Win Tee, Dewan Yashbir. Trauma systems development challenges conventional medical hierarchy. *Indian J Neurotrauma*. 2011;8(2):67–70.
3. *World Health Organisation (WHO) on Road Traffic Injury Prevention*. WHO/World Bank; 2004.
4. World Health Organization (WHO). *The World Health Report 2003: Shaping the Future*. Geneva: WHO; 2003:95–100.
5. Fitzgerald M, Dewan Y, O'Reilly G, Matthew J, Carmel M. India management road crashes: towards a national trauma system. *Ind J Surg*. 2006;68(4):237–250.
6. Peden M, Oyegbite K, Ozanne-Smith J, et al., eds. *World Report on Child Injury Prevention*. WHO; 2008.
7. Mobile phone use: a growing problem of driver distraction. [http://www.who.int/violence\\_injury\\_prevention/publications/road\\_traffic/distracted\\_driving/en/index.html](http://www.who.int/violence_injury_prevention/publications/road_traffic/distracted_driving/en/index.html).
8. McDermott FT, Corder SM, Tremayne AB. Evaluation of the medical management and preventability of death in 137 road traffic fatalities in Victoria, Australia: an overview. Consultative committee on road traffic fatalities in Victoria. *J Trauma*. 1996;40:520–533.

Yashbir Dewan\*

Senior Consultant, Max Institute of Neurosciences Dehradun-MIND,  
Max Superspeciality Hospital, Mussorie Diversion, Malsi, Dehradun  
248001, India

Joseph Mathew

Emergency & Trauma Consultant, The Alfred Hospital,  
55 Commercial Road, Prahran, Melbourne, Australia  
E-mail addresses: [moncysneha@gmail.com](mailto:moncysneha@gmail.com),  
[j.mathew@alfred.org.au](mailto:j.mathew@alfred.org.au)

\*Corresponding author. Tel.: +91 8171648648, +91 11 29830008.  
E-mail address: [editorijnt@gmail.com](mailto:editorijnt@gmail.com)

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