

**GUEST EDITORIAL**

## **The Emergent Burden of Injury**

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A pandemic of Road Traffic Injury (RTI) has caught us unaware in the presence of a cluster of hazardous risk factors, an easygoing host and an inhospitable environment. An array of risk correlates including the aberration of vehicle plan, road maintenance, supervision on the expertise, behavior and/or impairment of the driver, defective traffic control atmosphere, and many more confounders of manners and momentum of civilian life in differential combinations result in a huge downstream of morbidity, disability and mortality. After spectacular advancement in health, unfortunately we are losing lives on road due to preventable causes. The problem of RTI has grown to the top 10 killers of humanity; millions are killed on roads and 50 million injured every year. RTI have become a significant public health problem, more so in the low and middle income countries sharing up to 85 percent of fatal RTIs; 28 percent attributable to violence and negligence. In South-East Asia three lacs of deaths occur yearly. WHO has estimated 12-15 percent of Disability Adjusted Life Years (DALY) loss due to injury; out of which 20 percent would be due to RTI alone. From existing ninth foremost global cause of DALY loss, RTI is going to be the third by 2020 [1, 2, 3, 4, 5].

WHO declared 2011-2020 as the decade of action for road safety with the motto 'WEAR, BELIEVE, ACT'. Last half of century has witnessed quadrupled accidents with nearly six

fold increases in injuries and nearly tenfold increase in fatalities. During the period of 2004 to 2009, road accident rate, injury rate and casualty rate per lac population have increased by 8.5, 4.7 and 29.8 percent respectively. India contributes one-tenth of road injury fatalities worldwide involving most productive age group of 15 to 40 years with huge economic implications. RTIs amount to 37 percent of deaths due to un-natural causes and 94.5 percent of reported injuries; In 2008, 118239 deaths on roads were registered (nearly 325 daily). RTI leads to economic loss of 3 percent of gross domestic product (GDP) and 10 to 30 percent of hospital registrations in India. Human deaths, due to its complexity, cannot be neglected and gets registered. But underreporting of RTI is a serious problem not only in India but world over. An estimate of the planning commission noted that for each registered death due to RTI, there occur 15 serious injuries and 70 minor injuries. Yet we have inadequate representative national data to address the enigma [6-8]. Studies have reported that in India a great majority of injury victims are chronic alcoholic males. Two wheeler drivers are more (31%) involved among the motorized vehicles. Alcohol increases the risk of injury further. An illegal/unsafe behaviour like drunken driving, speeding, jumping red light and mobile usage, while driving adds difficulty in diagnosis and prognosis. In injury mechanism, a good num-

ber die on the spot with traumatic brain injury as the main outcome of risk with injuries of lower limb the next [7, 9-12].

In the demographic transition from predominantly rural to an industrial country, trauma care in our country has reached the global quality with many adequately equipped units distributed in different corners, though based in and around the urban zones. We have only handful of dedicated trauma care centres out of plenty tertiary care centers in India (335 Medical Colleges teaching MBBS); pre-hospital care is largely unknown to the bulk of Indian citizens and health care delivery personnel. We lack a uniformity of conventional four pillars of trauma care model: organization of pre-hospital care facilities, hospital networking, communication system and organization of in-hospital care. Outside the urban territory we are not competent enough to provide minimum basic trauma care facilities with the challenges of injury prevention, pre-hospital care, and rehabilitation of residual disabilities [9, 13, 14].

On the spot death occurs following serious injuries to cardio vascular or central nervous system that medical intervention cannot help; half of them die in the first fifteen minutes. Primordial and primary prevention through safety campaign can only minimize these. Most of the deaths and injuries are amenable to medical interventions and thus potentially preventable as the "Second Peak" happens between 1-4 hours post-injury; 15 % late deaths occurs over the next 30 days, which are due to sepsis and organ failure.

The Ministry of Health & Family Welfare, Government of India has taken up a project to

establish trauma care centers along the national highways to provide immediate medical care, transportation to a better equipped health facility to save the lives of the accident victims and prevent disability wherever it is possible. Based on the observations, during the 11<sup>th</sup> Five Year Plan, these trauma care centers have been further divided into different levels of facilities. The health facilities have been identified accordingly and classified as level I, II, III & IV. A memorandum of Understanding has been signed with the Central and State Governments for implementation and sustainability of this vision. The strategy is to identify health care facilities along the golden quadrilateral and north-south, east-west corridors, upgrade the identified centres and designate them as level I, II & III, establish a life support ambulance system, plug gaps in human resource availability, devise curriculum for training emergency medical care for nursing staff and paramedics, establish communication linkages, assist the States to develop appropriate trauma referral system; develop, implement and maintain State wise and National Trauma Registry, monitor and evaluate the efficiency of the Trauma Care System. The injury and its downstream consequences are considered as medico-legal problems and the management of injury victims is left with surgical disciplines that have to share this burden in addition to their routine work. But in recent times we have accepted injury as a public health problem and a separate identity as 'trauma care'. In India we need a holistic approach for the development of the injury science with a national programme linking multidisciplinary trauma care system towards

a preplanned, comprehensive, and coordinated injury response system with a vision and mission to reach the injury spectrum.

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