Preamble

Serious injuries in road collisions are a public health problem with consequences equal to those of major diseases such as cancer and cardiovascular diseases. In some nations such injuries are one of the major causes of death among youth. At the present time, about half a million road deaths occur annually throughout the world and the major causes of death among youth. At the present time, about half a million road deaths occur annually throughout the world and about 15 million are injured.

Motor vehicle collisions are the result of sudden, unexpected, sometimes disastrous encounters between people, vehicles and the road. As with diseases, an understanding of the etiology of trauma is an important step towards its prevention and control. The preventive and protective approaches have an enormous potential for effective prevention. Traffic crashes and their consequences can be reduced by the systematic and widespread application of current knowledge in the fields of vehicle design, road design and traffic management, supported by appropriate regulatory controls. Without doubt public education also has a significant place.

Unfortunately, while transportation issues are of major concern to the population generally, traffic safety seems to be of marginal concern to the public, although concern may be increasing. In motorized countries, traffic injuries consume an estimated 10% of total hospital resources, excluding the cost of rehabilitation, the care of long term and permanent disability.

While it is certainly true that user behavior contributes greatly to traffic safety, the viewpoint in more recent times has been focussed on other components of the system - especially the vehicle and the road itself. Thus, it is also appropriate to address the practices and policies of those who have a central role in the construction and safe operation of the road-vehicle operation system. For instance, when a vehicle goes out of control and crashes, the
severity of the collision depends on the size, weight, rigidity, and other characteristics of the object struck. Therefore, barriers and obstacles such as abutments, large trees, and boulders should be kept far from the roadway.

The medical profession has the same obligation to confront road related injuries as it has to confront any other public health issue, and physicians should be involved in questions concerning control and prevention of this plague. National Medical Associations should be active among governments and policy-makers in order to give this issue first priority, and take appropriate measures at the human factor level, the vehicle and the road.

Recommendations

1) One should act for the prevention of road accidents mainly by improving road engineering; this includes road construction and road maintenance. The infrastructure should be constructed and maintained to accommodate the increase in the number of vehicles using the road. This requires the investment of adequate public resources. One should improve traffic management and whenever possible enlarge the number of multi-laned divided highways, grade-separated intersections and sealed shoulders to minimize the risk of head-on crashes. It is important to consider separating traffic where possible, with effective separation of motor-traffic and non-motor traffic, especially for pedestrian safety and prevention of pedestrian deaths which account for 25% of total motor-vehicle deaths.

2) One should act for modification of behavior especially by education, including non-smoking while driving, and concentrate upon efforts which show detectable benefits in reducing crashes in the context of an individual’s background and culture, a country’s level of motorization, demography and cultural differences. For example, education and strict enforcement of laws prohibiting driving while under the influence of alcohol. The properly used lap belt shoulder harness is highly protective: occupants should always use these, and laws requiring their use have been helpful.

3) One should protect pedestrian safety by all available means including engineering legislation, enforcement, maintenance, educational and zoning factors.

4) To assure injury control, the medical profession should act for the introduction of safety measures such as: restraints, crash helmets, safety-type glass windows and wind screens, safe door locks, telescope steering wheels, and car interiors that are less likely to injure.

5) Manufacturers should design cars that will provide optional protection of their occupants. The periodic inspection of vehicles for safety purposes should be implemented.

6) Post-injury management - in a large number of instances, survival and the extent of recovery will depend more on the initial care given at the roadside than at later stages of acute care. Emphasis should be given to developing communication systems that locate persons quickly, transport services that can rapidly evacuate the victims and emergency medical care systems that can provide effective first services.