

**EDITORIAL**

# **Prevention and control of injuries arising from road traffic accidents in Malaysia**

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## **Government & Non-Government Agencies in Accident Prevention**

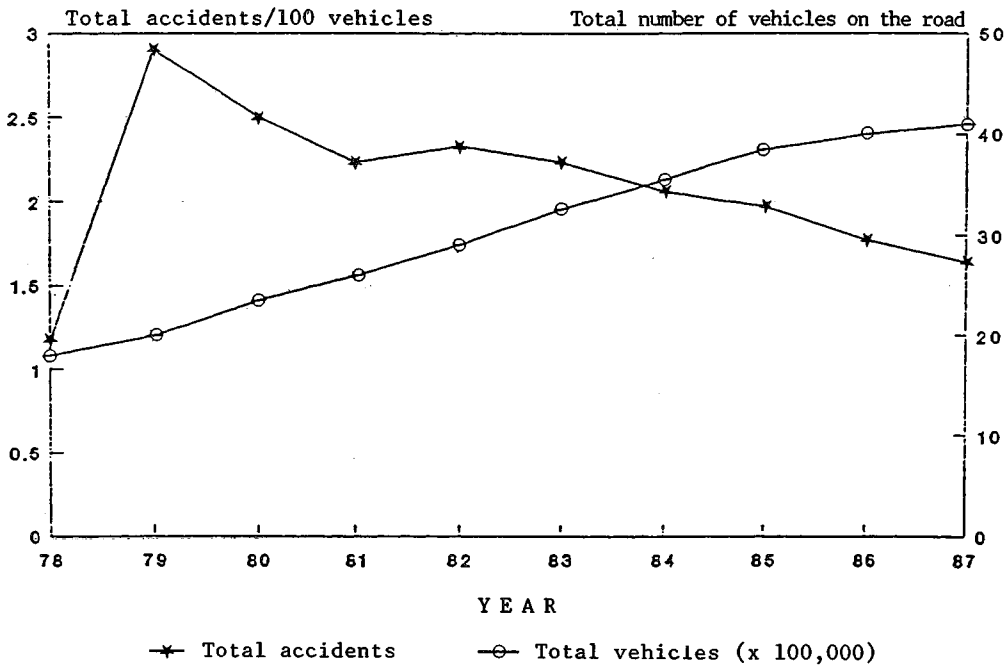
Road traffic accidents continue to be a major public health problem in Malaysia. They account for a high proportion of serious injuries, admissions and deaths in government hospitals. Recognising an urgent need to reduce deaths, injuries and economic losses due to road traffic accidents in Malaysia, the First National Workshop on Prevention and Control of Road Traffic Accidents was held in September 1985 at General Hospital, Kuala Lumpur. It was jointly sponsored by Ministry of Health and the World Health Organization. This was followed in 1987, by a second workshop, organised by the Ministry of Health, on the Reorganisation of Accident/Emergency Services in Government Hospitals. These two major events reflect the awareness of the Ministry of Health to the major responsibilities that require to be shouldered by the medical profession in the area of road traffic accidents.

Following up on the recommendation of the first workshop, the Malaysian Road Safety Council was reconstituted, and is now active in co-ordinating numerous government and non-government agencies in an effort to promote road safety. Another event of some importance is the setting up of a Committee on Accidents Prevention by the Malaysian Medical Association in 1988. The Chairman of this Committee sits on the Malaysian Road Safety Council. Annually, the Malaysian Road Safety Council meets, in each state by rotation and deliberates on the implementation of proposed action by various agencies for road safety. It also makes new proposals for further improving road safety. Scientific papers are presented, workshop sessions held, and definite recommendations are made. It can thus be seen that finally, road safety in Malaysia is handled in an organised and concerted manner.

## **Accident Prevention – Current Situation**

Road traffic accidents are a global public health problem and afflicts all 'motorised' countries. Malaysia is no exception. The WHO has tacitly recognised that road trauma cannot be completely eradicated, even though a high level of road safety can be achieved in terms of transportation.<sup>1</sup>

Many countries, notably Australia, have been able to show impressive reduction in the rate of occurrence of road accidents. This trend is also observed in Malaysia (Fig. 1). This undoubtedly is due to continued improvement in road and vehicle engineering and perhaps some amount of public education.



SOURCE : ROYAL MALAYSIAN POLICE

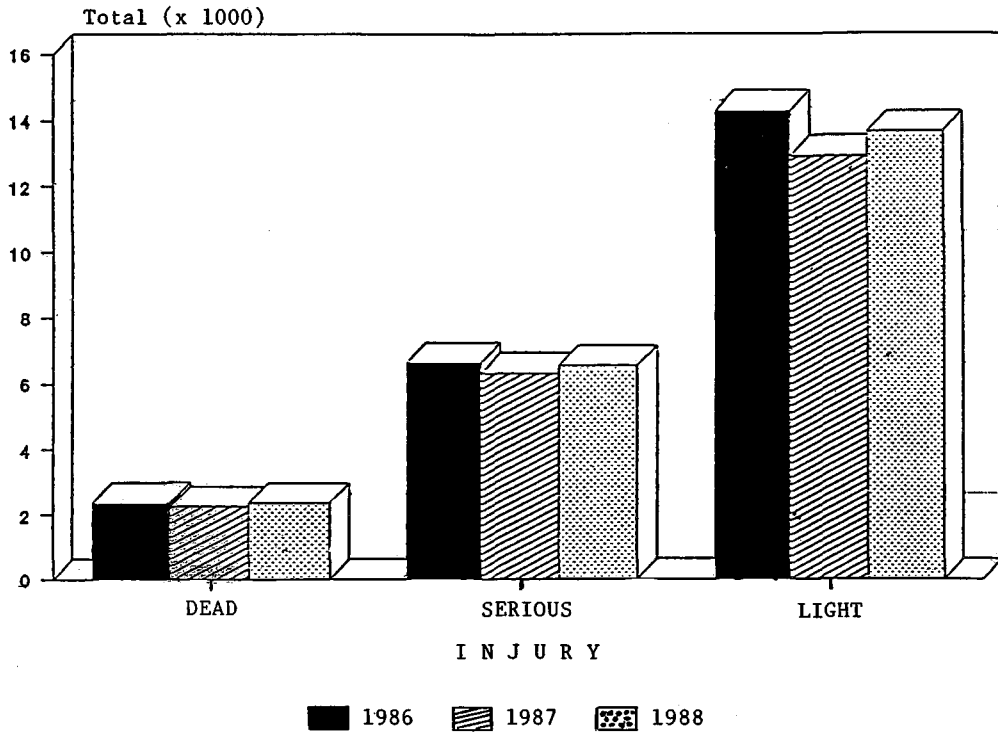
Fig. 1 Road accident statistics 1978–1987 (Peninsular Malaysia)

### Injury Control – Recent Trends

Unfortunately, reduction in accident rates is not matched by reduction of fatalities and injuries arising out of road accidents. The road trauma figures for 1988 listed 22,538 persons involved, out of which 2,354 died; 6,529 sustained serious injuries and 13,655 had minor injuries. These figures are very similar to the preceding two years (Fig. 2). Malaysia ranks fourth after Australia, Brunei and New Zealand, in terms of accident fatalities per 10,000 population (Fig. 3), and ninth in terms of accidents per 10,000 vehicles after Sri Lanka, India, Pakistan, Indonesia, Philippines, Hong Kong, Thailand and Singapore (Fig. 4). Factors that are of importance in injury control in road accidents, relate to the road-user, the vehicle and road and traffic conditions. Safety-belt usage by car occupants and crash-helmets by motor-cyclists are two of the most successful injury control measures.<sup>2</sup> It must, however, be recognised that seat-belt compliance is still not 100%, as has been observed in some fatal injuries. Furthermore, seat-belts have been noted to have altered the pattern of injuries in car occupants.<sup>3</sup> There is a marked reduction in brain and facial injuries, intra-abdominal solid organ injuries and long bone fractures. On the debit side there has been an increase in whip-lash neck injuries, thoracic injuries, and intra-abdominal hollow-viscus injuries. These injuries caused by deceleration, contusion, shear or crushing in seat-belt wearers, contribute the “seat-belt syndrome.”<sup>3</sup>

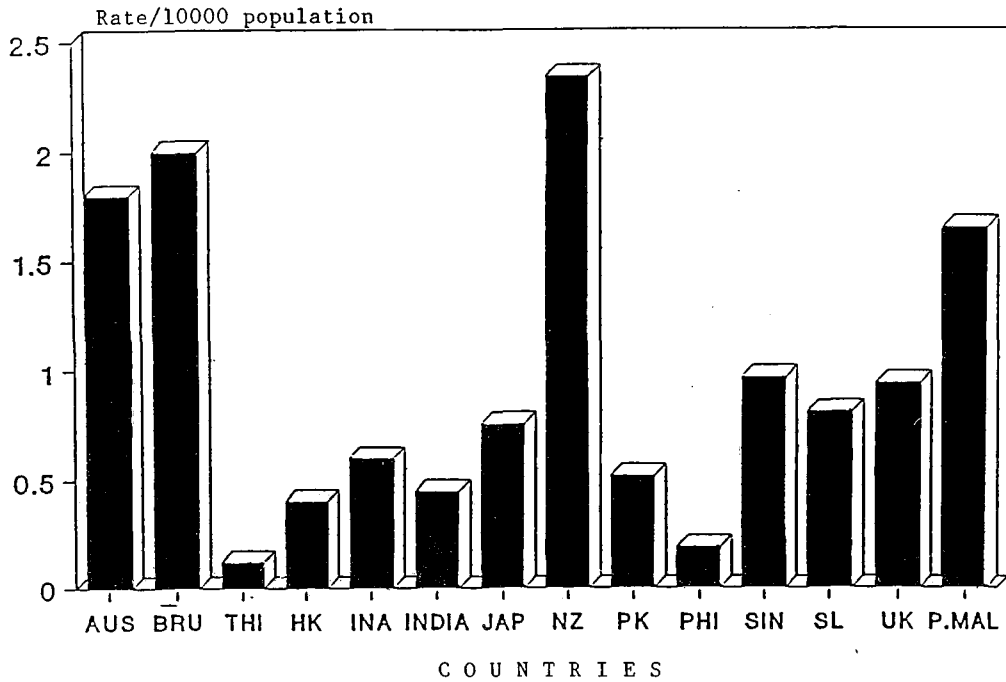
### Optimal Care of the Injured

The Committee on Trauma of the American College of Surgeons, identified four major components for the optimal care of the injured – access to care, pre-hospital care, hospital care and rehabilitation.<sup>4</sup> Access to care is by the telephone call (999 in Malaysia), pre-hospital is by ambulance services, hospital-care is by regionalised trauma centres and rehabilitation by



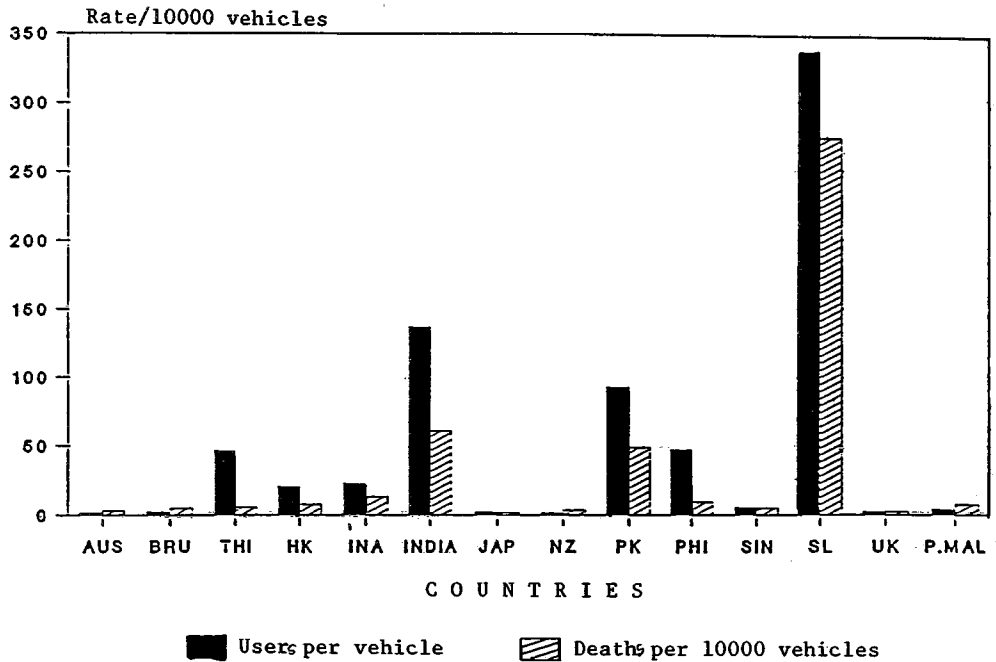
SOURCE : ROYAL MALAYSIAN POLICE

Fig. 2 Injury level in road accidents in Malaysia (1986-1988)



SOURCE : ROYAL MALAYSIAN POLICE

Fig. 3 Road accident deaths - comparison between countries (1986)



SOURCE: ROYAL MALAYSIAN POLICE

Fig. 4 Road accident deaths – comparison between countries (1986)

in-hospital resources. Pre-hospital care arose out of the recognition of the “golden hour” of 60 minutes following injury, when resuscitation and stabilisation is most critical in the successful management of the injured. This is composed of efficient ambulance services and paramedics who can provide basic life support (BLS) to the injured. The ambulance service as they exist in Malaysia, – provide only “scoop and run” service. An exception to this is the excellent ambulance services in Sabah, run by the Sabah Foundation, where paramedics provide first-aid and basic life support (BLS).

In-hospital care is perhaps the most critical in the management of the accident victim. The setting up of regional trauma centres is perhaps an ideal solution to developed countries, but controversies surround the issue, even in those countries.<sup>5</sup> Requirements for efficient management would be an adequately equipped hospital and trained and knowledgeable emergency room staff. Priority in care of the polytraumatised shocked patient is the provision of respiratory and cardiac life support. Seemingly simple procedures like putting an airway tube and maintaining cardiac function by external cardiac massage have to be learnt repeatedly, if they are to be effective.

When confronted with a terribly injured patient, it is very useful to utilise the Abbreviated Injury Severity Score (AISS) – a method for describing patients with multiple injury and evaluating emergency care.<sup>6</sup> It would appear that this is not being utilised at present in our hospitals. Newer concepts in the management of the acutely injured include the ‘Trauma Team’ and ‘Resuscitation Team’ – concepts that have been successfully implemented in metropolitan hospitals in developed countries. A continuation of in-hospital care is further management by

relevant surgical specialities and rehabilitation units. This is at present possible only in major hospitals of Kuala Lumpur and in some regional general hospitals in Malaysia.

## Conclusion

While a favourable trend has been observed in accident prevention in Malaysia, a concomitant programme of injury control is not in evidence. Provision of on-site resuscitative care by our ambulance services is not possible in Peninsular Malaysia. And even in-hospital care of the required standard, is available only in some major hospitals. Research on trauma management is very sporadic and uncoordinated. Teaching institutions in the country have a primary responsibility in this respect.

Trauma centres are an ideal concept but not yet applicable to Malaysia. "Optimal staffing" patterns to trauma centres are unrealistic in cost and personal needs to all but a few of the urban teaching hospitals.<sup>5</sup> An essential feature of a trauma centre is "commitment" to provide 24 hour in-house coverage by surgeons, anaesthesiologists and supporting staff to care for trauma patients.<sup>5</sup>

"Commitment" is the crux of the matter and to this end, this is the most fervent recommendation made to all those involved in road safety and injury control in Malaysia – namely, the ambulance services, the Ministry of Health, accident & emergency services, Hospital Administrations, the surgical specialists and rehabilitation services.

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