ABSTRACT

The study was conducted in the Kandy Police Area (KPA), which is the administrative area of the Kandy Police (KP), from 1st October 1998 to 30th September 1999 and included all the Road Traffic Accidents (RTAs) which were reported to the KP during the period of study.

The general objective of the study was to study the reported RTAs in the Kandy Police Area (KPA) and its economic impact.

There were 949 RTAs, which included 1817 road users and 61 non-vehicular road structures such as lampposts, walls, culverts etc. Of these RTAs, 9 (0.9%) were fatal, 64 (6.7%) were grievous and 208 (22.0%) were non-grievous accidents while the rest were damage to vehicle/property only accidents.

1520 vehicles were involved in these 949 accidents. The commonest vehicle to be involved was the van (26.1%) while the motor car was second. The public transport vehicles, which comprised the private (PVT) bus, Sri Lanka Transport Board (SLTB) bus and the three wheeler (TW) accounted for 35.3 per cent of all the vehicles. Only 4.5 per cent motorcycles (MCs) and 0.7 per cent pedal cycles being involved in these accidents may reflect their low use in the study area.

These accidents killed or injured 353 road users. The commonest road user to be injured was the pedestrian (53.6%) followed by the passenger (27.2%). These accidents killed ten (2.8%) road users and grievously injured 75 (21.2%) road users.

PVT bus was the commonest vehicle responsible, involved in injury causing accidents (23.2%) followed by the van. Again nearly in half of these injury causing accidents, a public transport vehicle being responsible was important.

Drivers responsible for these RTAs being older and having had the license for longer periods than the non-responsible drivers (apart from the TW drivers and MC riders) was surprising.

The majority of these accidents occurred during daytime (81.0%) and in good weather conditions (93.3%). At the time of the accident only a small percentage of road users were detected to be under the influence of alcohol (2.5%) while only 77 (5.4%) vehicles were found to have mechanical defects.

The mean duration of the hospital stay of the injured was 3.6 days and the mean Injury Severity Score (ISS) was 5.6. The commonest part of the body to be injured was the lower limb with the commonest type of single injury being abrasions.

Due to RTAs, the estimated total cost of vehicle damage was Rs 68,10,000.00 (mean – Rs 4735.64) while the property damage was estimated at Rs 200,000.00 (mean – Rs 6060.61).

The total estimated cost of hospital stay was Rs 10,21,248.00 with a mean cost of Rs 3415.55 per patient. The mean cost according to the type of road user was highest for the MC rider. A patient day cost of Rs 441.64 for the 'Surgical Unit' in the General

Hospital. Kandy (GHK) and Rs 384.21 for the Teaching Hospital, Peradeniya (THP) was estimated in this study. The patient day cost of the Orthopaedic unit in the GHK was estimated at Rs 721.79 and for the Neurosurgical unit it was Rs 868.60 in the GHK. A day in the Intensive Care Unit (ICU) in the THP was estimated to cost Rs 3728.21 while an Operation Theatre hour was estimated to cost Rs 2872.96 in the THP. The cost of the following investigations were estimated to be as follows: ECG – 86.77, X'Ray – 179.51, Hb% – 19.19, WBC/DC – 23.96, Serum electrolytes – 18.45, Blood Urea – 17.69, Blood sugar – 15.60, ESR – 20.24, UFR – 30.63).

Due to RTAs a huge cost due to loss in output (Rs 192,58,581.90) of the victims was estimated in this study with a mean loss in output of Rs 11,132.13 per road user. Therefore a total resource loss amounting to Rs 272,89,829.00 was estimated with a daily loss in the area amounting to Rs 74,766.65 as a result of RTAs.

The total estimated cost of the 949 accidents was Rs 359,87,336.61 with the fatal accidents being most costly (Rs 181,55,250.82).

As road user error was identified as the main cause of these RTAs, in the prevention of them this has to be addressed. One important, practical and affordable measure in this aspect is the prevention of the pedestrian coming into contact with the motor vehicle. Therefore, keeping the pedestrians away from the road areas reserved for motor vehicles as far as possible and insisting that buses have closed doors when they are in motion are some of the recommendations made based on this study.