

## I . SUMMARY

This study was designed to determine the Socio-Medical aspects of patients with traumatic injuries treated at the Accident Service, General Hospital, Colombo. The necessary data regarding patients were collected by means of an interviewer administered questionnaire, record form, the Bed Head Ticket, For this study a 20% sample of ward patients and a 10% sample of Out Patient Department (O.P.D.) patients were selected with the use of systematic sampling techniques. This study was carried out for three months (15th January to 14th April'84). During this period 20,250 Out Patients and 3,365 In-patients were treated at this unit, and for our study 675 Out Patients and 673 In-patients were interviewed to obtain the necessary data.

The data reveal that the main cause of traumatic injuries among In-patients is accidents through transport (32.3%). Domestic Accidents (29.4%) and Violence (21.3%) came next. In males, the main cause is transport Accident (30.5%) and in females, the main cause is Domestic Accidents (44.6%). According to the Out Patients data, the main cause of traumatic injuries is Domestic Accidents (32.1%). Occupational Accidents (27.3%) and Transport Accidents (21.9%) are next in order.

The sex distribution shows that there is considerable male preponderance. The sex ratio for In-patients is Male/Female 3.8:1 and for Out-patients 5.5;1. The peak for traumatic injuries is reached in the 20 - 24 years age group for both In-patients and Out-patients. The ethnic distribution in the study shows that there were about 88% Sinhalese, 6 - 7% Tamils and 4 - 5% Moors. The distribution, occupational wise shows that (the largest number of cases) 27.8% of In-patients and 32.8% of Out-patients were production and transport workers and (2nd largest number of cases) 25.6% of In-patients and 20.9% of Out-patients were students/housewives. Only 5.5% of the In-patients and 5.7% of the Out-patients were in the Professional, Technical, Administrative and Managerial groups, 47.2% of the In-patients and 46.1% of the Out-patients had an educational level of Middle Grade. The patients with sports injuries were common among the Middle Grade Group and "had passed G.C.E. (O/L) Group" (86% of the In-patients and 71% of the Out-Patients). In this study about 45.3% of In-patients and 57.8% of Out-patients were not married at all. The data on family income referring to the period under review indicated that the majority of patients (78.8%) had a family income below Rs.1,500.00 per month.

The results of the survey shows that there are two peak hours for road accidents. For In Patients it was between 6 -10 a.m. and 2 - 6 p.m. These two peaks coincide with the time when a maximum number of vehicles and other road users enter and leave the City of Colombo. Domestic accidents also show similar peak hours and coincide with the time when housewives and children are very active. 'Occupational' accidents are common in the morning between 8 - 10 a.m. and as expected injuries from violence are rampant late in the evening between 6 - 8 p.m. and at night, time when much of the crime takes place.

#### Road Accidents

In road accidents, the largest number of casualties among the In Patients are the pedestrians (41.0%). The percentage of pedestrians among Out Patients is only 17.6%. In this category 'Human-error-pedestrian' is the contributory factor in 21.7% of the cases of In Patients and 8.8% of the Out Patients. The pedal and the motor cyclists are the other two types of road users involved in accidents. The buses & coaches contributed to 51 (23.5%) In Patients and 12 (8.1%) Out Patient accident due to ' human drivers error'. Speeding, driving in wrong path and negligence ('lack of care') are drivers errors which contribute to these accidents. Proper training of drivers, adequate examination before issuing

driving licences and the strict enforcement of traffic laws are some of the main remedies that can be suggested to prevent and control these accidents. Defective brakes, tyres and lights cause about 10.6% of road accidents while bad roads and the environment contribute to another 8%. 35 (16%) In Patients and 37 (25%) Out Patients were treated in this unit for injuries caused by motor cycle accidents. 87% of the In Patients and 92% of the Out Patients in this category were wearing helmets at the time of injury. The site of injuries varies with the types of road user. With pedestrians the commonest form of injuries are to the lower limb. (sixty two In Patients and twenty two Out Patients).

#### Domestic Accidents

A fall from a non-height is the commonest cause of Domestic Accidents [96 (48.5%) In Patients and 71 (32.9%) Out Patients]. The chief contributory factors being slipping on a wet, muddy or soapy floor in the bathroom, kitchen or well. But twenty old people (In Patient) fell in the bed-room and fourteen of them had fracture of the neck or the femur. Of the other common causes, a fall or slipping from a tree or a branch come next [52 (26.1%) In Patients and 12 (5.6%) Out Patients]. Falls from heights had caused severe injuries, like multiple fractures of bones, spinal injuries and extensive

laceration and contusions of internal organs. Active health education, and passive measures like the construction of a safe home environment are important ways of controlling these accidents.

#### Occupational Accidents

The commonest cause of occupational accidents was the machine, and it had caused crush injuries to the hand and the forearm in 27(32.5%) In Patients and 37 (20%) Out Patients. 20 In Patients and 24 Out Patients of them were workers of saw mills, fibre mills, lathe machines and printing presses. Other causes of injuries are falls from heights and falling objects, usually at building sites. The four basic remedies for prevention of occupational accidents recommended by the Labour Department are:-

1. Engineering revision
2. Instruction, persuasion and appeal
3. Personal adjustment
4. Discipline

#### Sports Injuries

The commonest cause of injuries while at sport is slipping or tripping while running, playing football or rugby [11 (50%) In Patients and 18 (40.9%) Out Patients]. The most frequent injury of this type recorded in In Patient is the fracture of the forearm bones (eight) and rupture of the ligaments and cartilages in the knee joint

(six). Properly supervised training, wearing of personal protective devices and the strict enforcement of the rules of the game are important methods of prevention of this type of injuries.

#### Selfinflicted Injuries

Five In Patients and two Out Patients have taken treatment from this unit due to selfinflicted injuries caused by burns and cuts. The identification of risk groups more especially the psychologically maladjusted people and the tendering of proper treatment early are useful methods of prevention.

#### Violence

In 63% (90) of In Patients and 75% (47) of Out Patients the injuries are caused by blunt weapons or by stabs with sharp weapons. Disputes over property, money, alcohol and love affairs contribute to these mishaps. A detailed study by the legal profession on the nature of cause and the strict enforcement of the law by the authorities for this type of injury are necessary to suggest any control and preventive measures for this grave problem.

#### Treatment and Investigations

37.8% of the In Patients and 19.7% of the Out Patients were treated with minor surgery and 38.9% of the In Patients with major surgery. X-Rays were

done in the case of 91.1% of the In Patients and 13.5% of the Out Patients.

It is observed that further detailed community study in different types of traumatic injuries and deaths is needed before further recommendations in the control and prevention of this grave problem are made.