

14.0 DISCUSSION

Injuries in man have been occurring since prehistoric times. Many millions of years later, injuries are still occurring, the result of an even greater variety of external causes. Today, injury is one of the leading causes of morbidity and mortality in New South Wales, and, unlike other leading causes of morbidity and mortality, injury has a serious impact on both young and old. Each year, an estimated 2,500 New South Wales residents die as the result of an injury and more than 178,000 are hospitalised. In 1999, injury and poisonings were the sixth leading cause of death and the fourth leading cause of hospitalisation in NSW. Injury was also the leading cause of death among people aged 1-44 years.

The term 'injury' encompasses many different types of injuries (e.g., head injuries, fractures, burns), all of which have an external causal factor, known as the injury mechanism. This profile has analyzed death and hospitalisation cases for eight of the most common injury mechanisms- drowning, falls, fire/burns, interpersonal violence, motor vehicle transport, poisoning, suicide and complications of care. The analysis includes trends in annual death and hospitalisation rates over time, age-specific death and hospitalisation rates and information regarding subcategories for each injury mechanism (e.g., method of suicide).

This profile shows that priorities for injury prevention, control and policy in New South Wales will need to focus on different injury mechanisms, depending on whether death or hospitalisation data is used. If only focusing on deaths due to injury, suicide is clearly the major injury-related cause of death. Motor vehicle-related injury and falls are the second and third most common causes of injury-related death, respectively, but the rates and numbers of deaths are considerably lower than found for suicide. If focussing on injuries requiring hospitalisation, complications of care and fall-related injury are clearly the two most important injury-related causes of hospitalisation. Motor vehicle-related injury is ranked third, but has hospitalisation numbers and rates that are substantially lower than those for complications of care and falls.

Useful information is also available through a comparison of the rates for deaths and hospitalisations for various injury mechanisms. As would be expected, hospitalisation rates were much higher than death rates for all injury mechanisms. The ratio of hospitalisation to death rates varies greatly across different injury mechanisms, however, from more than 2,600 times for complications of care to only 1.6 times for drowning. It seems that complications of care are more likely to produce an injury that is survivable, whereas drowning-related injury is more likely to result in death.

Other information presented in this profile can be also be used to set priorities. If priorities to reduce injury were based on injury mechanisms with steadily increasing trends, then suicide and poisoning deaths would be targeted, as well as hospitalisations for falls, fire/burns, interpersonal violence, motor vehicle transport, attempted suicide and complications of care.

The analyses in the profile also provide different pictures of the at-risk age and gender groups. The at-risk age and gender groups for injury deaths and hospitalisations are similar when all injury mechanisms are considered together, but change significantly when each injury mechanism is analysed separately. Children under the age of five years were at significant risk of death due to drowning and hospitalisation due to near-drowning compared to other age groups. Hospitalisation rates for poisoning and fire/burn-related injury in

children under five were also significantly higher than corresponding rates for all other age groups. Other vulnerable age groups included the following: (i) the 15 to 24 age group who had the highest death and hospitalisation rates for motor vehicle transport injury; (ii) the 20-29 age group who had the highest death and hospitalisation rates for suicide and attempted suicide and the highest hospitalisation rates for interpersonal violence; and (iii) the 70+ age group who had the highest death and hospitalisation rates for falls, motor vehicle transport and complications of care injury.

The involvement of males and females also differs for both deaths and hospitalised injury. Males accounted for nearly three-quarters of all injury-related deaths and had markedly higher numbers and rates for all types of injury-related deaths. Males also show higher hospitalisation numbers and rates for complication of care injury, motor vehicle injury, interpersonal violence, poisoning, fire/burn-related injury and drowning. In contrast, females were hospitalised more often than males for falls and attempted suicides.

It should be pointed out that there are a number of data-related issues associated with this profile that need to be taken into account when interpreting the results and setting priorities. First, the hospitalisations included all cases that were admitted to hospital from 1992 to 1999. This means that the severity of hospitalised injury cannot be accounted for and is likely to be different for different injuries and for different age groups. For example, near-drowning is probably less likely to appear in hospital records than other injury types. Also, it was not possible to account for multiple admissions for the same injury in the hospitalisation data set. While this is likely to be a small factor, its impact is unknown.

In addition, the estimates of risk may not be as good for some injury mechanisms as for others. For example, the opportunity to fall or trip is available almost at any time, so conventional calculation of rates of injury should be as accurate as possible, whereas the opportunity for drowning-related injury occurs mainly when the person has some access to a medium in which a drowning could occur. As this is likely to be an infrequent occurrence for most people, the rates of drowning presented in this profile may significantly underestimate the real risk of drowning. Also, complications of care occur mainly in hospital and show higher rates because this analysis included cases where the principal diagnosis was for a disease or illness and not an injury were also included.

Lastly, the quality of the data available for understanding the circumstances of the injury was limited for many injury mechanisms. For some injury types, such as poisoning, the type of substance involved was unspecified for more than half of the cases. This also limited the usefulness of some of the data reported. Further work is needed to attempt to overcome this problem.