Injury includes both physical harm to a person’s body and non-physical harm, including grief, loss and suffering [1], but in public health practice attention is almost entirely confined to physical harm [2]. Even restricted to physical harm, assessing the total impact of injury is difficult because the vast majority of injuries do not result in hospitalisation or death and there are few systematic data other than those collected as part of population surveys, such as the ABS National Health Surveys [3]. As a result, many injuries are not brought to the attention of health policy-makers and program managers.

The classification of injury has generally followed the WHO’s ICD, which includes particular attention to the external cause and intention of the injury [4]. This system is followed in this section, but it has its limitations (for more details, see [5]).
Extent of injury among Indigenous people

PREVALENCE

According to the 2004-2005 NATSIHS, health conditions ‘as a result of an injury or accident’ were reported more frequently by Indigenous people than by non-Indigenous people across all age-groups (except for the 0-14 years age-group) [6]. Reporting of injury-caused health conditions increased substantially among Indigenous adults over the age of 25 years, and was highest in the 35-44 and 45-54 years age-groups. Within these age-groups, 24% of Indigenous people reported a health condition as a result of an injury or accident. After age adjustment, a long-term condition as a result of an injury or accident was 1.4 times more common for Indigenous people than for non-Indigenous people, with the ratio for males (1.5) being slightly higher than that for females (1.3).

In view of the higher levels of health conditions reported as a result of an injury or accident among Indigenous than non-Indigenous people, it is somewhat surprising that the proportion of Indigenous people who reported having had an injury in the four weeks prior to the 2004-2005 NATSIHS was slightly less than for non-Indigenous people (15% compared with 19%) [7]. Indigenous people were 2.8 times as likely as non-Indigenous people to report a recent injury that was the result of an attack by another person and 4.5 times as likely to report being under the influence of alcohol or other substances at the time of injury.

According to the 2008 NATSISS, almost one-quarter (23%) of Indigenous people reported that they had been a victim of physical or threatened violence in the previous 12 months, a level similar to that reported for the 2002 NATSISS (24%) [8, 9]. Victimisation was higher among younger Indigenous people, with males and females aged 15-24 years having the highest reported proportions (29% and 31%, respectively) [10]. Victimisation levels were highest among Indigenous people in the 15-24 years age-group across all levels of remoteness. For Indigenous males, victimisation was highest in major cities and remote/very remote areas (both 31%), followed by non-remote areas (28%) and regional areas (26%). Over 30% of Indigenous females experienced victimisation in all levels of remoteness.

According to the 2008 NATSISS, 74% of Indigenous people aged 15 years or over reported problems in their neighbourhood or community, with around one-quarter reporting family violence (25%) or assault (23%) [11]. WA had the highest proportion of Indigenous people reporting family violence as a problem (34%), followed by the NT (32%). For assault, the NT had the highest proportion with 31%, followed by WA (30%). Indigenous people living in remote areas reported family violence (38%) and assault (37%) more frequently than those living in non-remote areas (22% and 19%, respectively).

HOSPITALISATION

In 2010-11, injuries were responsible for 24,365 hospital separations for Indigenous people living in NSW, Vic, Qld, WA, SA and the NT, accounting for 14% of all Indigenous separations (excluding those for dialysis) [12]. The age-standardised separation rate of 51 per 1,000 for Indigenous people was 2.0 times that for other Australians [13].

The leading causes of injury-related hospitalisations in NSW, Vic, Qld, WA, SA and the NT in 2010-11 were ICD ‘Complications of medical and surgical care’ (24%), assault (19%), falls (17%), and exposure to mechanical forces (14%) [12].

Detailed information on Indigenous injury-related hospitalisation is not available for 2010-11, but in 2008-10 age-standardised hospitalisation rates for injury for Indigenous males (52 per 1,000) and females (42 per 1,000) living in NSW, Vic, Qld, WA, SA and the NT, were two times the rate for non-Indigenous males and females [14].

In terms of remoteness, hospitalisation rates for injury for Indigenous people in NSW, Vic, Qld, WA, SA and the NT increased with remoteness in 2008-09 [15]. The rate increased from 32 per 1,000 in major cities to 71 per 1,000 in remote areas. Hospitalisation rates were higher in remote areas than major cities for a number of principal diagnoses:

- for assaults, the rate was 4.5 times higher in remote areas than in major cities
- for falls, the rate was 1.8 times higher in remote areas than in major cities
- for complications of medical and surgery care, the rate was 1.9 times higher in remote areas than in major cities
- for transport accidents, the rate was 1.7 times higher in remote areas than in major cities

Hospitalisation rates for injury increased by 14% for Indigenous people and by 9% for non-Indigenous people between 2004-05 and 2009-10 [14].

Assaults account for a higher proportion of injury-related hospitalisations among Indigenous people than they do among non-Indigenous people; in NSW, Vic, Qld, WA and the NT in 2010-11, 19% of injury-related hospitalisations among Indigenous people were for assaults compared with 2% among other people [12]. The most recent detailed information is available for the two-year period from July 2006 to June 2008, when assault was responsible for around 2% of all hospitalisations for Indigenous people living in NSW, Vic, Qld, WA, SA and the NT [11]. The hospitalisation rate for assault for Indigenous people was 11.6 times higher than the...
rate for other Australians. The highest rates for Indigenous people were among those aged 25-34 years (23 per 1,000, rate ratio of 13.0) and 35-44 years (22 per 1,000, rate ratio of 18.4). Indigenous males aged 35-44 years were hospitalised at 11.1 times the rate of other males. The hospitalisation rate for assault was 36 times higher for Indigenous women than for other women; Indigenous females aged 25-34, 35-44, and 45-54 years were hospitalised at over 40 times the rate of other females. Hospitalisation rates for assault were highest for Indigenous people living in the NT (23 per 1,000), followed by WA (18 per 1,000), and SA (17 per 1,000). Rates of hospitalisation for assault were highest for Indigenous people living in remote areas (26 per 1,000), followed by very remote areas (23 per 1,000), and outer regional areas (10 per 1,000).

There were more hospitalisations from family violence-related assaults among Indigenous people living in NSW, Qld, WA, SA and the NT in 2008-09 than among their non-Indigenous counterparts [15]. After age adjustment, Indigenous people were hospitalised for assaults relating to family violence at 23 times the rate of non-Indigenous people. The hospitalisation rates from family violence-related assaults were highest for Indigenous males aged 35-44 years (5.5 per 1,000) and for Indigenous females aged 25-34 years (15.1 per 1,000). The hospitalisation rates for Indigenous people increased with remoteness, from 2.1 per 1,000 in major cities to 10.4 per 1,000 in remote areas (compared with 0.1 and 0.3 per 1,000, respectively, for other Australians).

**Mortality**

Injury was the third most common cause of death among Indigenous people living in NSW, Qld, WA, SA and the NT in 2010 (14% of all deaths), after CVD (26%) and cancer (19%) [16].

Intentional self-harm (suicide) was the leading cause of death from injury for Indigenous people living in NSW, Qld, WA, SA and the NT in 2010, responsible for 31% of Indigenous deaths from injury [16]. After age-adjustment, the Indigenous death rate was 2.4 times higher than that of non-Indigenous people. Transport accidents were responsible for 23% of Indigenous deaths from injury; the standardised death rate was 2.9 times higher for Indigenous people than for non-Indigenous people.

In the five-year period 2004-2008, there were 139 Indigenous deaths from assault in NSW, Qld, WA, SA and the NT, representing about 1.3% of all Indigenous deaths [11]. Indigenous people in these jurisdictions died from assault at 8.6 times the rate of non-Indigenous people. Rates were highest for Indigenous males aged 35-44 years (16 per 100,000, rate ratio of 10.6), and for Indigenous females aged 25-34 years (14 per 100,000, rate ratio of 17.4). Death rates of Indigenous people from assault were highest in the NT (17 per 100,000) and WA (12 per 100,000).

**References**

The Australian Indigenous HealthInfoNet is an innovative Internet resource that contributes to ‘closing the gap’ in health between Indigenous and other Australians by informing practice and policy in Indigenous health.

Two concepts underpin the HealthInfoNet’s work. The first is evidence-informed decision-making, whereby practitioners and policy-makers have access to the best available research and other information. This concept is linked with that of translational research (TR), which involves making research and other information available in a form that has immediate, practical utility. Implementation of these two concepts involves synthesis, exchange and ethical application of knowledge through ongoing interaction with key stakeholders.

The HealthInfoNet’s work in TR at a population-health level, in which it is at the forefront internationally, addresses the knowledge needs of a wide range of potential users, including policy-makers, health service providers, program managers, clinicians, Indigenous health workers, and other health professionals. The HealthInfoNet also provides easy-to-read and summarised material for students and the general community.

The HealthInfoNet encourages and supports information-sharing among practitioners, policy-makers and others working to improve Indigenous health – its free on line yarning places enable people across the country to share information, knowledge and experience. The HealthInfoNet is funded mainly by the Australian Department of Health and Ageing. Its award-winning web resource (www.healthinfonet.ecu.edu.au) is free and available to everyone.