

1.03 Hospitalisation for injury and poisoning

The number of hospital separations with a principal diagnosis of injury and poisoning for Aboriginal and Torres Strait Islander people expressed as a rate by age group, age-standardised rate and rate ratio.

Data sources

Data for this measure come from the AIHW National Hospital Morbidity Database and the National Aboriginal and Torres Strait Islander Health Survey.

National Hospital Morbidity Database

The National Hospital Morbidity Database is a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is provided annually to the AIHW by state and territory health departments.

Data are presented for the six jurisdictions that have been assessed by the AIHW as having adequate identification of Indigenous hospitalisations in 2006–08 – New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory. These six jurisdictions represent approximately 96% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

In the period 2007–08, there were 276,000 hospital separations (episodes of care for admitted patients) for Aboriginal and Torres Strait Islander patients, around 3.5% of all separations. The proportion of separations of Aboriginal and Torres Strait Islander persons was higher in public hospitals (5.4% or 256,425 separations) compared with private hospitals (0.6% or 20,015 separations). Of all Aboriginal and Torres Strait Islander separations, nearly 93% occurred in public hospitals (AIHW 2009).

Hospitalisations for which the Indigenous status of the patient was not reported have been included with hospitalisations data for non-Indigenous people under the 'other' category. This is to enable consistency across jurisdictions, because public hospitals in some states and territories do not have a category for the reporting of 'not stated' or inadequately recorded/reported Indigenous status.

Hospitalisation data are presented for the 2-year period from July 2006 to June 2008. An aggregate of 2 years of data has been used, because the number of hospitalisations for some conditions is likely to be small for a single year.

The principal diagnosis is the diagnosis established to be the problem that was chiefly responsible for the patient's episode of care in hospital. The additional diagnosis is a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. The term 'hospitalisation' has been used to refer to a separation, which is the episode of admitted patient care. This can include a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending in a change in the type of care (for example, from acute to rehabilitation). 'Separation' also means the process by which

an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians. This included information on health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. The survey provides comparisons over time in the health of Indigenous Australians. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Analyses

Age-standardised rates and ratios have been used as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians, taking into account differences in age distributions.

Hospitalisations

- In the 2-year period July 2006 to June 2008, there were 979,020 hospitalisations for injury and poisoning in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, 39,574 (4.0%) of which were hospitalisations of Aboriginal and Torres Strait Islander people (Table 1.03.2).
- Hospitalisations for injury and poisoning were the second most common principal diagnosis at the ICD-10-AM chapter level (first is the chapter which includes 'care involving dialysis') among Aboriginal and Torres Strait Islander Australians, representing 8% of all hospital separations.

Hospitalisations by age and sex

- For the 2-year period July 2006 to June 2008, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males and females had higher hospitalisation rates for injury and poisoning than other males and females across all age groups, except among those aged 65 years and over (Figure 1.03.1).
- The greatest difference in hospitalisation rates for injury and poisoning occurred in the 25–34, 35–44 and 45–54 year age groups for males and females. The rate of hospitalisations for Indigenous males aged 25–34 or 45–54 years was just over two times the rate of other males and for Indigenous males aged 35–44 years, the rate of hospitalisations was almost three times the rate of other males. Indigenous females in these age groups were hospitalised at around 3 to 4 times the rate of other females.
- For Indigenous males and females, hospitalisation rates were highest among those aged 35–44 years, and for other males and females, rates were highest among those aged 65 years and over.

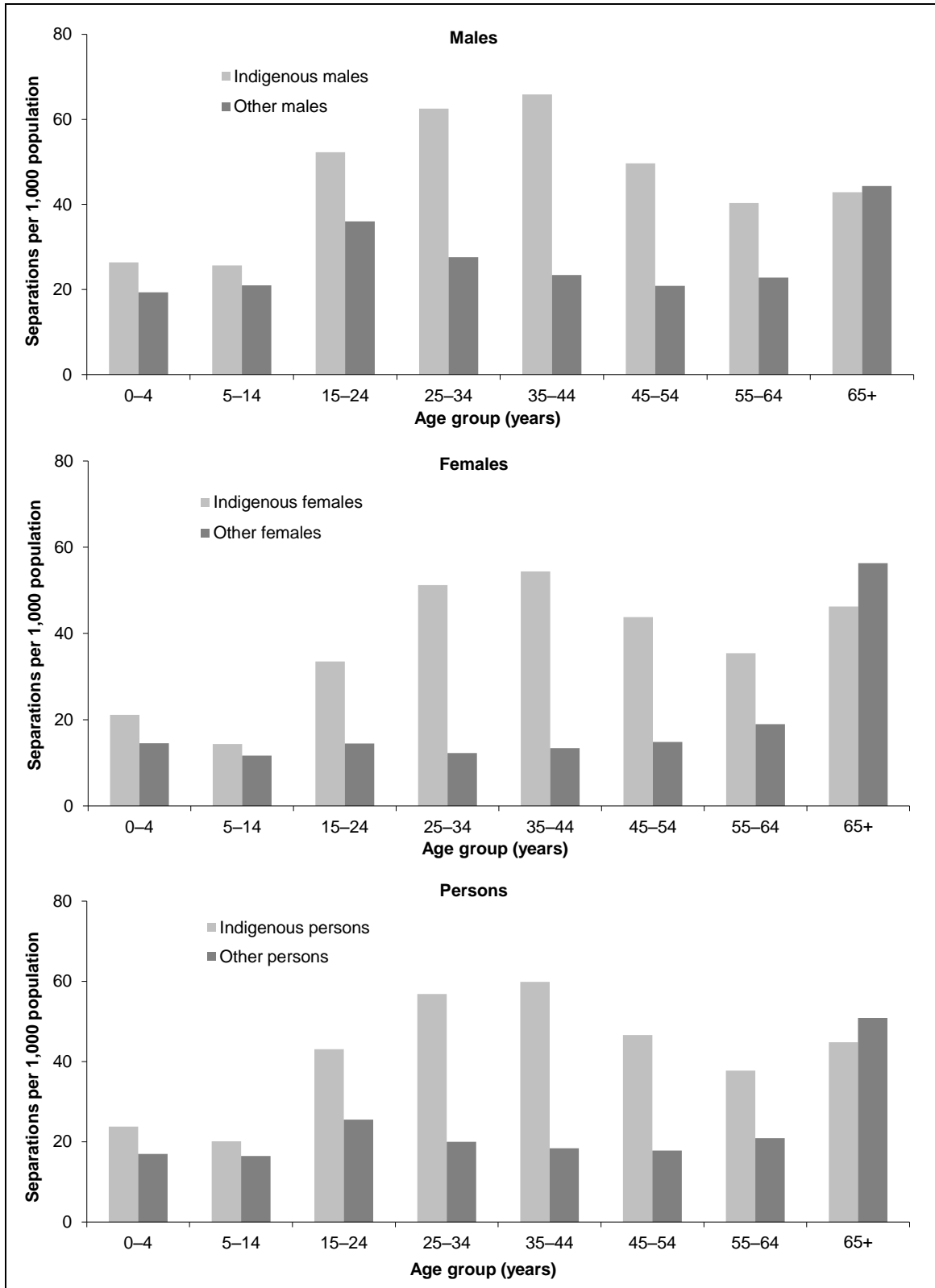
- Approximately 56% of Indigenous Australians hospitalised for injury and poisoning were males (22,263) and 44% were females (17,311).

Table 1.03.1: Age-specific hospitalisation rates (per 1,000 population) for a principal diagnosis of injury and poisoning, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008

	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+
Males								
Indigenous	26.4	25.6	52.3	62.6	65.9	49.7	40.3	42.9
Other	19.3	21.0	36.0	27.6	23.4	20.9	22.8	44.3
Females								
Indigenous	21.1	14.4	33.5	51.2	54.4	43.8	35.4	46.3
Other	14.5	11.7	14.5	12.3	13.4	14.8	18.9	56.3
Persons								
Indigenous	23.8	20.1	43.1	56.8	59.9	46.6	37.7	44.9
Other	17.0	16.5	25.5	20.0	18.4	17.8	20.9	50.9

Note: Rates for Indigenous people are calculated using population estimates based on the 2006 Census (SERIES B).

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.03.1: Age-specific hospitalisation rates for a principal diagnosis of injury and poisoning, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008

Hospitalisations by state/territory

Table 1.03.2 presents hospitalisations for a principal diagnosis of injury and poisoning for the 2-year period July 2006 to June 2008 in New South Wales, Victoria, Queensland, Western Australia, South Australia, the Northern Territory, Tasmania and the Australian Capital Territory.

- Over the period July 2006 to June 2008, Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined were hospitalised for injury and poisoning at 1.9 times the rate of other Australians in these jurisdictions.
- When hospital rates are adjusted at the national level for Indigenous under-identification, Indigenous Australians were hospitalised for injury and poisoning at twice the rate of other Australians.
- In Tasmania, Victoria, New South Wales, the Australian Capital Territory and Queensland, Indigenous people were hospitalised between 0.8 and 1.6 times the rate of other Australians. In South Australia, the Northern Territory and Western Australia, Indigenous Australians were hospitalised between 2.4 and 2.9 times the rate of other Australians.

Table 1.03.2: Hospitalisations for principal diagnosis of injury and poisoning, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, Tas and ACT, July 2006 to June 2008^{(a)(b)(c)(d)(e)}

	Indigenous				Other ^(f)				Ratio ^(j)
	Number	No. per 1,000 ^(g)	LCL 95% ^(h)	UCL 95% ⁽ⁱ⁾	Number	No. per 1,000 ^(g)	LCL 95% ^(h)	UCL 95% ⁽ⁱ⁾	
NSW									
Males	5,649	38.7	37.5	40.0	179,433	26.9	26.8	27.0	1.4*
Females	3,677	27.1	26.1	28.2	135,793	18.2	18.1	18.3	1.5*
Persons	9,326	33.0	32.2	33.8	315,235	22.7	22.6	22.8	1.5*
Vic									
Males	1,036	31.8	29.5	34.2	140,274	27.4	27.2	27.5	1.2*
Females	650	22.6	20.6	24.6	114,176	20.2	20.1	20.3	1.1*
Persons	1,686	27.3	25.7	28.8	254,451	23.9	23.8	24.0	1.1*
Qld									
Males	6,076	43.9	42.5	45.3	119,200	29.8	29.6	30.0	1.5*
Females	4,168	32.8	31.6	34.0	80,601	19.3	19.2	19.4	1.7*
Persons	10,244	38.4	37.5	39.3	199,802	24.7	24.6	24.8	1.6*
WA									
Males	4,245	64.1	61.7	66.5	50,906	25.0	24.8	25.2	2.6*
Females	3,687	58.9	56.8	61.1	36,413	17.5	17.3	17.6	3.4*
Persons	7,932	61.6	60.0	63.2	87,319	21.4	21.3	21.6	2.9*
SA									
Males	1,468	59.1	55.4	62.9	42,351	27.3	27.0	27.6	2.2*
Females	1,376	53.7	50.5	56.9	34,102	19.3	19.1	19.5	2.8*
Persons	2,844	56.2	53.8	58.6	76,453	23.5	23.3	23.6	2.4*
NT									
Males	3,789	63.5	61.0	65.9	4,207	28.4	27.5	29.4	2.2*
Females	3,753	61.9	59.7	64.2	1,979	16.8	16.0	17.6	3.7*
Persons	7,542	62.8	61.2	64.5	6,186	23.0	22.3	23.6	2.7*
NSW, Vic, Qld, WA, SA and NT^(k)									
Males	22,263	47.9	47.1	48.7	536,371	27.5	27.4	27.5	1.7*
Females	17,311	39.3	38.6	40.0	403,064	19.0	18.9	19.0	2.1*
Persons	39,574	43.6	43.1	44.2	939,446	23.4	23.3	23.4	1.9*
Tasmania									
Males	276	15.2	13.1	17.4	10,015	21.8	21.3	22.2	0.7*
Females	224	13.7	11.6	15.9	7,132	14.0	13.7	14.3	1.0
Persons	500	14.6	13.1	16.1	17,147	17.9	17.6	18.2	0.8*
ACT									
Males	113	28.6	20.1	37.1	6,174	18.9	18.4	19.4	1.5*
Females	83	24.8	17.1	32.4	4,772	14.6	14.2	15.0	1.7*
Persons	196	26.9	21.2	32.7	10,946	16.8	16.5	17.2	1.6*

(continued)

Table 1.03.2 (continued): Hospitalisations for principal diagnosis of injury and poisoning, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, Tas and ACT, July 2006 to June 2008^{(a)(b)(c)(d)(e)}

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

- (a) Data are from public and most private hospitals. Jurisdictional data excludes private hospitals in the Northern Territory, Tasmania and the Australian Capital Territory.
- (b) Categories are based on the ICD-10-AM 5th edition (National Centre for Classification in Health 2006).
- (c) Financial year reporting.
- (d) Data are reported by state/territory of usual residence of the patient hospitalised.
- (e) Age-standardised rates for New South Wales, Victoria, Queensland, Western Australia, South Australia, the Northern Territory and Australia have been calculated using the direct method, age-standardised by 5-year age group to 75+. Age-standardised rates for Tasmania and the Australian Capital Territory have been calculated using the direct method, age-standardised by 5-year age group to 65+.
- (f) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
- (g) Directly age-standardised using the Australian 2001 standard population.
- (h) LCL = lower confidence limit.
- (i) UCL = upper confidence limit.
- (j) Rate ratio Indigenous: other.
- (k) New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

Notes

1. Rates for Indigenous are calculated using population estimates based on the 2006 Census (SERIES B).
2. Care types 7.3, 9 and 10 (Newborn – unqualified days only; organ procurement; hospital boarder) excluded from analysis.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by principal diagnosis

Type of injury

Table 1.03.3 presents hospitalisations for a principal diagnosis of injury and poisoning and certain other consequences of external causes by type of injury for the 2-year period July 2006 to June 2008 for the six jurisdictions.

- For the period 2006–07 to 2007–08 in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, of all hospitalisations with a principal diagnosis of injury and poisoning, injuries were the most common reason for hospitalisation among Aboriginal and Torres Strait Islander people (77%) followed by complications of medical and surgical care not elsewhere classified (10%).
- Indigenous males and females were hospitalised at three times the rate of other males and females for burns and frostbite, and at around twice the rate of other males and females for 'other and unspecified effects of external causes (such as radiation, hypothermia, maltreatment syndromes)'; 'certain early complications of trauma' and 'toxic effects of substances chiefly non-medicinal'.

Table 1.03.3: Hospitalisations of Indigenous persons for principal diagnosis of injury and poisoning and certain other consequences of external causes, by type of injury and sex, NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008^{(a)(b)(c)(d)}

Principal diagnosis	Males						Females						Persons ^(e)					
	Number	Per cent ^(f)	No. per 1,000 ^(g)	LCL 95% ^(h)	UCL 95% ⁽ⁱ⁾	Ratio ^(j)	Number	Per cent ^(f)	No. per 1,000 ^(g)	LCL 95% ^(h)	UCL 95% ⁽ⁱ⁾	Ratio ^(j)	Number	Per cent ^(f)	No. per 1,000 ^(g)	LCL 95% ^(h)	UCL 95% ⁽ⁱ⁾	Ratio ^(j)
Injuries (S00–T19)	17,799	79.9	36.8	36.1	37.4	1.8	12,608	72.8	27.8	27.3	28.4	2.2	30,407	76.8	32.4	31.9	32.8	1.9*
Complications of surgical & medical care n.e.c. (T80–T89)	1,918	8.6	6.0	5.7	6.4	1.5	2,158	12.5	6.4	6.1	6.7	1.8	4,076	10.3	6.2	6.0	6.4	1.6*
Poisoning (T36–T50)	891	4.0	1.9	1.8	2.1	1.8	1,378	8.0	2.9	2.7	3.0	1.6	2,269	5.7	2.4	2.3	2.5	1.7*
Other and unspecified effects of external causes/ Certain early complications of trauma (T66–T79)	486	2.2	1.0	0.9	1.1	1.9	476	2.7	1.0	0.9	1.1	2.3	962	2.4	1.0	0.9	1.1	2.1
Burns and frostbite (T20–T35)	811	3.6	1.5	1.4	1.6	3.0	434	2.5	0.8	0.7	0.9	3.2	1,245	3.1	1.1	1.0	1.2	3.0*
Toxic effects of substances chiefly non-medicinal (T51–T65)	357	1.6	0.7	0.6	0.8	1.9	256	1.5	0.5	0.4	0.5	2.0	613	1.5	0.6	0.5	0.6	1.9
Total^(k)	22,263	100.0	47.9	47.1	48.7	1.7	17,311	100.0	39.3	38.6	40.0	2.1	39,574	100.0	43.6	43.1	44.2	1.9*

(continued)

Table 1.03.3 (continued): Hospitalisations of Indigenous persons for principal diagnosis of injury and poisoning and certain other consequences of external causes, by type of injury and sex, NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008^{(a)(b)(c)(d)}

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

- (a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.
- (b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); Cause of injury is based on the first reported external causes where the principle diagnosis was 'injury, poisoning and certain other consequences of external causes'; ICD-10-AM codes S00–T98.
- (c) Financial year reporting.
- (d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have the highest level of accuracy of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.
- (e) Includes hospitalisations for which sex was indeterminate or not stated.
- (f) Proportion of male, female and total hospitalisations of Indigenous persons in the period 2006–07 to 2007–08.
- (g) Directly age-standardised using the Australian 2001 standard population.
- (h) LCL = lower confidence limit.
- (i) UCL = upper confidence limit.
- (j) Rate ratio Indigenous: other.
- (k) Total includes sequelae of injuries, poisoning, external causes (T90–T98).

Notes

1. Rates for Indigenous are calculated using population estimates based on the 2006 Census (SERIES B).
2. Care types 7.3, 9 and 10 (Newborn – unqualified days only; organ procurement; hospital boarder) excluded from analysis.

Source: AIHW analysis of National Hospital Morbidity Database.

External cause of injury and poisoning

Table 1.03.4 presents external causes of injury and poisoning for Aboriginal and Torres Strait Islander people in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory with a principal diagnosis of injury, poisoning and other consequences of external causes.

- In the 2-year period July 2006 to June 2008, assault was the most common cause for hospitalisation for Indigenous males and females hospitalised with a principal diagnosis of injury and poisoning (23% and 31% respectively) in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined.
- Aboriginal and Torres Strait Islander males and females were 7 and 36 times as likely to be hospitalised for injuries due to assault as other males and females respectively.
- Indigenous males were hospitalised for intentional self-harm at almost three times the rate of other males.
- Indigenous males and females were hospitalised for exposure to electrical currents, smoke, fire, animals or nature at 2.5 times the rate of other males and females.

Table 1.03.4: External causes for hospitalisations of Indigenous persons with a principal diagnosis of injury and poisoning and other consequences of external causes, by sex, NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008^{(a)(b)(c)(d)}

External cause	Males						Females						Persons ^(e)					
	No.	% ^(f)	No. per 1,000 ^(g)	LCL 95% ^(h)	UCL 95% ⁽ⁱ⁾	Ratio ^(j)	No.	% ^(f)	No. per 1,000 ^(g)	LCL 95% ^(h)	UCL 95% ⁽ⁱ⁾	Ratio ^(j)	No.	% ^(f)	No. per 1,000 ^(g)	LCL 95% ^(h)	UCL 95% ⁽ⁱ⁾	Ratio ^(j)
Assault (X85–Y09)	5,003	22.5	10.8	10.5	11.2	7.0*	5,309	30.7	10.9	10.6	11.2	35.5*	10,312	26.1	10.9	10.6	11.1	11.6*
Falls (W00–W19)	3,936	17.7	9.2	8.8	9.6	1.4*	3,130	18.1	8.7	8.3	9.1	1.2*	7,066	17.9	9.1	8.8	9.3	1.3*
Exposure to inanimate mechanical forces (W20–W49)	3,285	14.8	6.0	5.8	6.2	1.4*	1,405	8.1	2.5	2.4	2.7	1.9*	4,690	11.9	4.2	4.1	4.4	1.5*
Complications of medical and surgical care (Y40–Y84)	1,939	8.7	6.1	5.8	6.5	1.4*	2,208	12.8	6.6	6.3	6.9	1.8*	4,147	10.5	6.4	6.1	6.6	1.6*
Transport accidents (V01–V99)	2,569	11.5	4.8	4.6	5.0	1.2*	1,154	6.7	2.2	2.1	2.4	1.4*	3,723	9.4	3.5	3.4	3.6	1.3*
Other accidental exposures ^(k)	1,627	7.3	3.4	3.2	3.6	1.0	969	5.6	2.2	2.0	2.3	1.3*	2,596	6.6	2.8	2.6	2.9	1.1*
Intentional self-harm (X60–X84)	1,077	4.8	2.4	2.2	2.5	2.7*	1,408	8.1	2.8	2.7	3.0	2.0*	2,485	6.3	2.6	2.5	2.7	2.3*
Exposure to animate mechanical forces (W50–W64)	1,106	5.0	2.0	1.9	2.1	2.0*	529	3.1	1.0	0.9	1.1	2.6*	1,635	4.1	1.5	1.4	1.6	2.2*
Exposure to electric current/smoke/fire/venomous animals and plants/forces of nature (W85–W99, X00–X39) ^(l)	940	4.2	1.8	1.6	1.9	2.5*	491	2.8	0.9	0.8	1.0	2.5*	1,431	3.6	1.3	1.2	1.4	2.5*
Accidental poisoning by and exposure to noxious substances (X40–X49)	410	1.8	0.7	0.7	0.8	1.6*	382	2.2	0.8	0.7	0.9	1.6*	792	2.0	0.8	0.7	0.8	1.6*
Other external causes ^(m)	334	1.5	0.7	0.6	0.7	2.5*	309	1.8	0.6	0.6	0.7	2.5*	643	1.6	0.7	0.6	0.7	2.5*
Total⁽ⁿ⁾	22,263	100.0	47.9	47.1	48.7	1.7*	17,311	100.0	39.3	38.6	40.0	2.1*	39,574	100.0	43.6	43.1	44.2	1.9*

(continued)

Table 1.03.4 (continued): External causes for hospitalisations of Indigenous persons with a principal diagnosis of injury and poisoning and other consequences of external causes, by sex, NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008^{(a)(b)(c)(d)}

* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

- (a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.
- (b) Categories are based on the ICD-10-AM fifth edition (National Centre for Classification in Health 2006); cause of injury is based on the first reported external causes where the principle diagnosis was 'injury, poisoning and certain other consequences of external causes'; ICD-10-AM codes V01–Y98.
- (c) Financial year reporting.
- (d) Data are reported by state/territory of usual residence of the patient hospitalised and are for New South Wales, Victoria, Western Australia, South Australia, the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.
- (e) Includes hospitalisations for which sex was indeterminate or not stated.
- (f) Proportion of male, female and total hospitalisations for injury and poisoning of Indigenous persons in the period 2006–07 to 2007–08.
- (g) Directly age-standardised using the Australian 2001 standard population.
- (h) LCL = lower confidence limit.
- (i) UCL = upper confidence limit.
- (j) Rate ratio Indigenous: other.
- (k) Accidental drowning and submersion (W65–W74), accidental threats to breathing (W75–W84), overexertion, travel and privation (X50–X57), accidental exposure to other and unspecified factors (X58–X59),
- (l) Includes exposure to electrical current, radiation and extreme ambient air temperature and pressure (W85–W99), smoke, fire and flames (X00–X09), contact with heat and hot substances (X10–X19), contact with venomous animals and plants (X20–X29), exposure to forces of nature (X30–X39).
- (m) Includes event of undetermined intent (Y10–Y34), legal intervention and operation of war (Y35–Y36), sequelae of external causes of morbidity and mortality (Y85–Y89), supplementary factors classified elsewhere (Y90–Y98).
- (n) Includes injuries where no external cause was reported.

Notes

1. Rates for Indigenous are calculated using population estimates based on the 2006 Census (SERIES B).
2. Care types 7.3, 9 and 10 (Newborn – unqualified days only; organ procurement; hospital boarder) excluded from analysis.

Source: AIHW analysis of National Hospital Morbidity Database.

Injury due to transport

Mode of transport

Tables 1.03.5 and 1.03.6 present data on mode of transport for fatal and serious injury for the six jurisdictions assessed as having adequate identification of Indigenous deaths for the period 2003–04 to 2006–07 and hospitalisations for 2003–04 to 2007–08 – New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory.

- During the period 2003–04 to 2006–07, 56% of Indigenous persons fatally injured in a transport accident were occupants of a car, 29% were pedestrians, 3.8% were motorcyclists and 1.5% were occupants of a pick-up truck or van. Of other Australians fatally injured in a transport accident, 51% were occupants of a car, 15% were pedestrians, 14% were motorcyclists, and 2.9% were occupants of pick-up truck or van (Table 1.03.5).
- Of the Indigenous persons seriously injured in a transport accident in the period 2003–04 to 2007–08, 42% were occupants of a car, 17% were pedal cyclists, 15% were motorcyclists and 14% were pedestrians. Of other Australians seriously injured in a transport accident, 35% were occupants of a car, 25% were motorcyclists, 17% were pedal cyclists, 7% were pedestrians and 6% were animal riders or an occupant of an animal-drawn vehicle (Table 1.03.6).

Table 1.03.5: Mode of transport^(a) for fatal injury, NSW, Vic, Qld, WA, SA and NT, 2003–04 to 2006–07

Fatally injured person	Indigenous			Other			Rate ratio ^(c)
	Number	Per cent	Rate ^(b)	Number	Per cent	Rate ^(b)	
Car occupant	191	55.7	11.1	3,025	51.2	3.9	2.9
traffic ^(d)	179	52.2	10.5	2,937	49.7	3.8	2.8
non-traffic ^(e)	10	2.9	0.5	79	1.3	0.1	4.5
Motorcyclist	13	3.8	0.7	813	13.8	1.1	0.7
traffic ^(d)	12	3.5	0.6	747	12.7	1.0	0.7
non-traffic ^(e)	n.p.	n.p.	n.p.	65	1.1	0.1	n.p.
Pedal cyclist	n.p.	n.p.	n.p.	128	2.2	0.2	n.p.
traffic ^(d)	n.p.	n.p.	n.p.	122	2.1	0.2	n.p.
non-traffic ^(e)	0	0.0	0.0	6	0.1	0.0	0.0
Pedestrian	100	29.2	6.0	861	14.6	1.1	5.5
traffic ^(d)	81	23.6	4.9	703	11.9	0.9	5.5
non-traffic ^(e)	13	3.8	0.8	105	1.8	0.1	6.2
Occupant of pick-up truck or van	5	1.5	0.3	169	2.9	0.2	1.3
Occupant of heavy transport vehicle	n.p.	n.p.	n.p.	137	2.3	0.2	n.p.
Bus occupant	n.p.	n.p.	n.p.	14	0.2	0.0	n.p.
Animal rider or occupant of animal-drawn vehicle	0	0.0	0.0	25	0.4	0.0	0.0
Occupant of special all-terrain or off-road vehicle	n.p.	n.p.	n.p.	44	0.7	0.1	n.p.
Occupant of three-wheeled motor vehicle	0	0.0	0.0	11	0.2	0.0	1.0
Occupant of a tram	0	0.0	0.0	n.p.	n.p.	n.p.	n.p.
Occupant of a train	0	0.0	0.0	19	0.3	0.0	0.0
Occupant of a special industrial vehicle	0	0.0	0.0	24	0.4	0.0	0.0
Occupant of a special agricultural vehicle	0	0.0	0.0	53	0.9	0.1	0.0
Occupant of a special construction vehicle	0	0.0	0.0	19	0.3	0.0	0.0
Occupant of watercraft	n.p.	n.p.	n.p.	118	2.0	0.1	n.p.
Occupant of aircraft	n.p.	n.p.	n.p.	155	2.6	0.2	n.p.
Other and unspecified	16	4.7	0.7	288	4.9	0.4	1.8
Total	343	100.0	19.7	5,905	100.0	7.5	2.6

(a) 'Mode of transport' here means the vehicle the person was travelling in at the time of being injured in a transport accident. 'Other and unspecified' includes V87, V88, V89, V98, and V99 for ICD-10 (deaths).

(b) Per 100,000 population, adjusted by direct standardisation to the Australian population in June 2001.

(c) Ratio of age-standardised rate for persons specified as Indigenous to the equivalent rate for all other persons (i.e. non-Indigenous or not stated).

(d) A traffic accident is any vehicle accident occurring on a public road (i.e. originating on, terminating on, or involving a vehicle partially on the road).

(e) A non-traffic accident is any vehicle accident that occurs entirely on any place other than a public road. For a certain proportion of cases, whether an accident was traffic or non-traffic was unknown. These cases are included in the totals for each mode of transport and this is the reason the sum of traffic and non-traffic cases is sometimes less than the total for each mode.

Source: Henley & Harrison 2010.

Table 1.03.6 Mode of transport^(a) for serious injury, NSW, Vic, Qld, WA, SA and NT, 2003–04 to 2007–08

Seriously injured person	Indigenous			Other			Rate Ratio ^(e)
	Number	Per cent	Rate ^(b)	Number	Per cent	Rate ^(b)	
Car occupant	3,167	41.7	134.5	83,321	34.7	84.5	1.6
traffic ^(d)	2,691	35.5	114.4	72,944	30.8	74.9	1.5
non-traffic ^(e)	368	4.8	15.3	6,971	2.9	7.2	2.1
Motorcyclist	1,135	15.0	38.0	58,927	24.9	61.8	0.6
traffic ^(d)	527	6.9	18.7	30,601	12.9	31.9	0.6
non-traffic ^(e)	576	7.6	18.4	26,182	11.0	27.7	0.7
Pedal cyclist	1,265	16.7	35.7	40,164	16.9	42.7	0.8
traffic ^(d)	582	7.7	17.6	19,982	8.4	21.1	0.8
non-traffic ^(e)	635	8.4	16.8	18,844	7.9	20.2	0.8
Pedestrian	1,064	14.0	44.4	16,938	7.1	17.4	2.5
traffic ^(d)	774	10.2	33.5	11,930	5.0	12.3	2.7
non-traffic ^(e)	153	2.0	5.3	3,261	1.4	3.4	1.6
Occupant of pick-up truck or van	119	1.6	5.2	2,334	1.0	2.4	2.2
Occupant of heavy transport vehicle	46	0.6	2.4	3,676	1.6	3.8	0.6
Bus occupant	45	0.6	2.4	2,007	0.8	2.0	1.2
Animal rider or occupant of animal-drawn vehicle	331	4.4	12.2	14,792	6.2	15.5	0.8
Occupant of special all-terrain or off-road vehicle	96	1.3	3.0	3,371	1.4	3.5	0.8
Occupant of three-wheeled motor vehicle	9	0.1	0.4	339	0.1	0.3	1.1
Occupant of a tram	14	0.2	0.7	347	0.1	0.3	2.0
Occupant of a train	18	0.2	0.6	544	0.2	0.5	1.1
Occupant of a special industrial vehicle	16	0.2	0.9	704	0.3	0.7	1.2
Occupant of a special agricultural vehicle	10	0.1	0.3	935	0.4	0.9	0.3
Occupant of a special construction vehicle	n.p.	n.p.	n.p.	308	0.1	0.3	0.9
Occupant of watercraft	59	0.8	2.6	3,643	1.5	3.8	0.7
Occupant of aircraft	n.p.	n.p.	n.p.	658	0.3	0.7	n.p.
Other and unspecified	189	2.5	7.2	5,112	2.2	5.3	1.4
Total	7,590	100.0	290.0	237,120	100.0	246.6	1.2

(a) 'Mode of transport' here means the vehicle the person was travelling in at the time of being injured in a transport accident. 'Other and unspecified' includes V87, V88, V89, V98, and V99 for ICD-10 (deaths).

(b) Per 100,000 population, adjusted by direct standardisation to the Australian population in June 2001.

(c) Ratio of age-standardised rate for persons specified as Indigenous to the equivalent rate for all other persons (i.e. non-Indigenous or not stated).

(d) A traffic accident is any vehicle accident occurring on a public road (i.e. originating on, terminating on, or involving a vehicle partially on the road).

(e) A non-traffic accident is any vehicle accident that occurs entirely on any place other than a public road. For a certain proportion of cases, whether an accident was traffic or non-traffic was unknown. These cases are included in the totals for each mode of transport and this is the reason the sum of traffic and non-traffic cases is sometimes less than the total for each mode.

Source: Henley and Harrison, 2010.

Land transport injury

- Most Indigenous transport deaths (98%) and serious injury cases (99%) were known to have involved land transport; 95% of other Australian transport deaths and 97% of serious injury cases were known to have involved land transport (Henley and Harrison, 2010).
- During the period 2003–04 to 2006–07, land transport accidents accounted for 20% of fatal injury cases for Indigenous people. From 2003–04 to 2007–08, land transport accidents accounted for 8% of all injury hospitalisations for Indigenous people. The age-standardised rate of land transport injury was 19 deaths per 100,000 Indigenous persons and 287 admissions to hospital per 100,000 Indigenous persons (Henley and Harrison, 2010).

Land transport injury by age and sex

- Fatal injury rates for Indigenous males were higher than those for other males across all ages. For females, fatal injury rates were similar for Indigenous and other women in the 10–14 and 15–19 year age groups, but Indigenous females had a higher death rate than other females in all other age groups (Table 1.03.7; Figure 1.03.2).
- Age-specific fatal injury rates for other males and females were highest for the 15–19 and 20–24 year age groups. For Indigenous males and females, fatal injury rates rose in the older teenage years and early adulthood then remained elevated through middle age, although age-specific rates were variable due to small numbers in each age group (Table 1.03.7; Figure 1.03.2).
- For Indigenous males and females, serious injury rates rose in the older teenage years and early adulthood then remained elevated throughout middle age. However, for other males and females, serious injury rates were highest for the 15–19 and 20–24 year age groups, declining thereafter until the 65 years and over age group (Table 1.03.7; Figure 1.03.3).

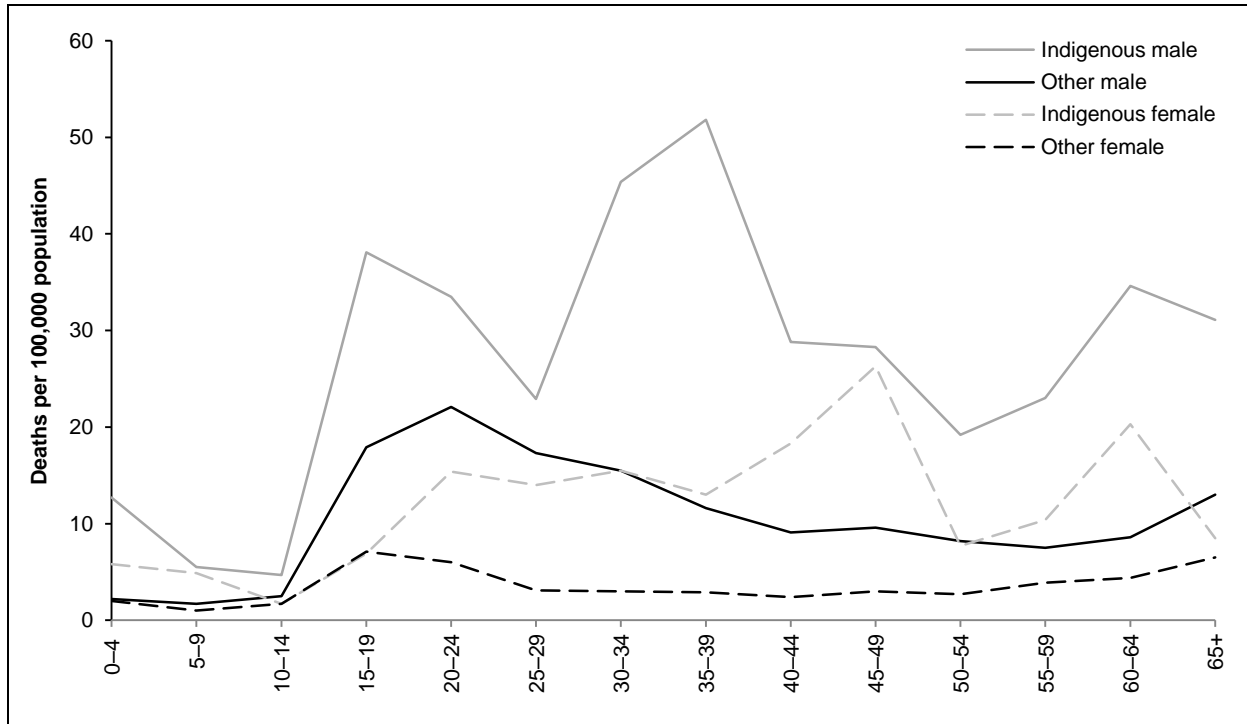
Table 1.03.7: Age-specific serious injury rates (per 100,000 population)^(a) for land transport injury by sex, Indigenous and other persons, NSW, Vic, Qld, WA, SA and NT 2003–04 to 2007–08

	0–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65+	All ages (crude rate)	Age Std. ^(b)
Fatal injury (2003–04 to 2006–07)																
Indigenous male	12.7	5.5	4.7	38.1	33.5	22.9	45.4	51.8	28.8	28.3	19.2	23.0	34.6	31.1	23.9	27.5
Other male	2.2	1.7	2.5	17.9	22.1	17.3	15.5	11.6	9.1	9.6	8.2	7.5	8.6	13.0	10.8	10.8
Indigenous female	5.8	4.9	1.7	6.9	15.4	14.0	15.5	13.0	18.3	26.3	7.7	10.4	20.3	8.5	10.3	11.8
Other female	2.0	1.0	1.7	7.1	6.0	3.1	3.0	2.9	2.4	3.0	2.7	3.9	4.4	6.5	3.8	3.7
Serious injury (2003–04 to 2007–08)																
Indigenous male	156.7	254.5	492.0	650.0	554.8	545.5	532.1	465.0	440.4	398.2	311.6	255.0	166.1	186.4	412.0	386.3
Other male	78.8	215.0	490.1	681.3	603.0	466.8	412.2	351.0	303.9	258.3	220.6	186.5	163.9	176.5	328.4	329.0
Indigenous female	116.1	158.2	150.0	272.9	261.0	262.2	248.4	262.4	193.2	171.5	172.0	133.1	166.8	108.8	194.7	189.5
Other female	47.5	130.3	182.5	284.6	227.8	175.2	142.2	131.8	123.6	121.4	119.2	113.0	109.1	151.0	148.5	148.9

(a) Rates are averages of annual rates over the four years 2003–04 to 2006–07 for fatally injured persons and over the five years 2003–04 to 2007–08 for seriously injured persons.

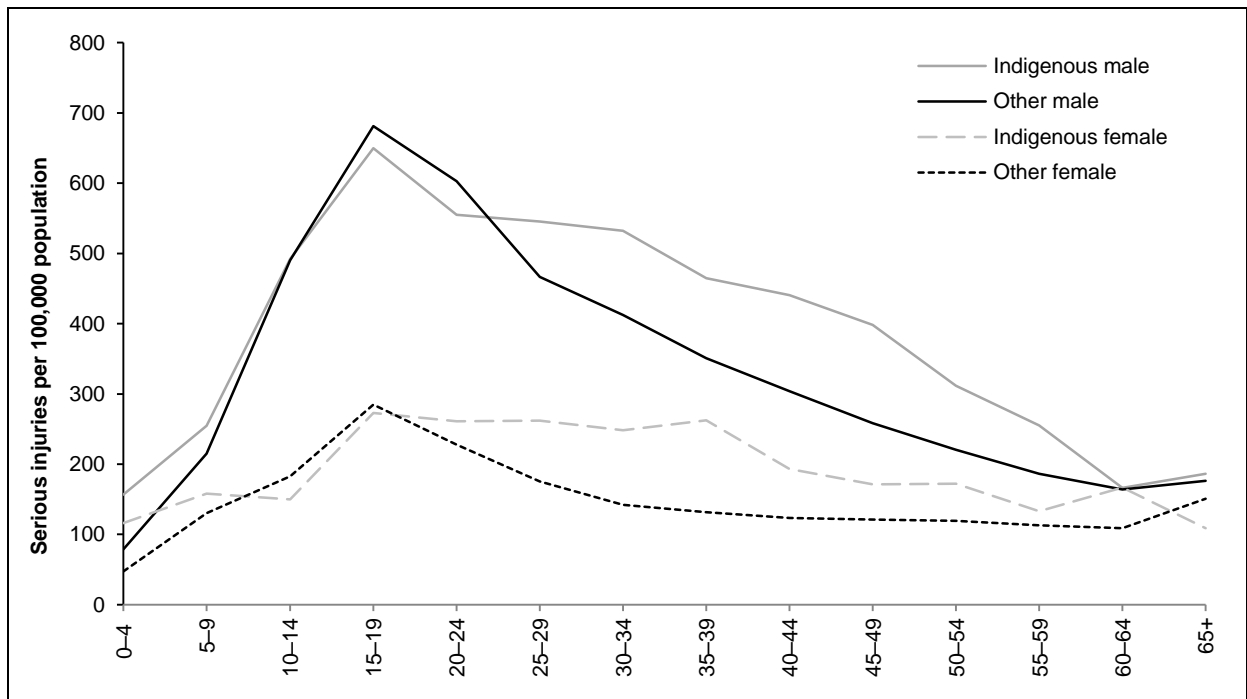
(b) Adjusted by direct standardisation to the Australian population in June 2001.

Source: Henley and Harrison, 2010.



Source: Henley and Harrison, 2010.

Figure 1.03.2: Age-specific fatal injury rates for land transport injury by sex, Indigenous and other persons, NSW, Vic, Qld, WA, SA and NT, 2003-04 to 2007-08



Source: Henley and Harrison, 2010.

Figure 1.03.3: Age-specific serious injury rates for land transport injury by sex, Indigenous and other persons, NSW, Vic, Qld, WA, SA and NT, 2003-2004 to 2007-2008

Time series analysis

Time series data from 2001–02 to 2007–08 are presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations over this period – Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population.

Additional trend analysis has also been presented for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined from 2004–05 to 2007–08 for Indigenous and other Australians. New South Wales and Victoria have been assessed as having adequate identification of Indigenous hospitalisations from 2004–05. These six jurisdictions represent approximately 96% of the Indigenous population of Australia.

Note that changes in the level of accuracy of Indigenous identification in hospital records will result in changes in the level of reported hospital separations for Indigenous Australians, as will changes in access, hospital policies and practices over time. Caution should be used in interpreting changes over time, as it is not possible to ascertain whether a change in reported hospitalisation is due to changes in the accuracy of Indigenous identification or real changes in the rates at which Indigenous people are hospitalised. An increase in hospitalisation rates may also reflect increased use of admitted patient hospital services rather than a worsening of health.

Injury and poisoning – 2001–02 to 2007–08

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for injury and poisoning over the seven-year period 2001–02 to 2007–08 for Queensland, Western Australia, South Australia and the Northern Territory are presented in Table 1.03.8 and Figure 1.03.4.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were increases in hospitalisation rates for injury and poisoning among Indigenous males and females during the period 2001–02 to 2007–08, but these increases were not significant.
- There were significant increases in hospitalisation rates for injury and poisoning among other Australian males, females, and persons overall during the same period, with an average yearly increase in the rate of around 0.2 overall, per 1,000 population. This was equivalent to a 7% increase in the rate for persons overall, over the period.
- There were changes in the hospitalisation rate ratios or rate differences between Indigenous males and other males, and Indigenous persons and other persons for the period 2001–02 to 2007–08. There was a significant decline in the rate ratio of 0.02 per 1,000 persons (a 5% decline) for the period.

Table 1.03.8: Age-standardised hospitalisation rates, rate ratios and rate differences for injury and poisoning, Qld, WA, SA and NT, 2001–02 to 2007–08^(a)

	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	Annual change ^(b)	Per cent change over period ^(c)
Indigenous separations									
Males	7,207	6,867	6,909	7,145	7,548	7,634	7,944	157*	13.0*
Females	5,736	5,659	5,820	5,883	6,169	6,522	6,462	152*	15.9*
Persons	12,944	12,526	12,729	13,028	13,717	14,156	14,406	308*	14.3*
Other Australian separations									
Males	91,595	89,838	93,116	96,857	99,700	105,639	111,025	3,446*	22.6*
Females	64,541	64,725	66,158	68,001	70,137	73,099	75,813	1,948*	18.1*
Persons	156,138	154,568	159,274	164,858	169,837	178,738	186,839	5,393*	20.7*
Indigenous rate (separations per 1,000)									
Males	56.8	51.9	52.8	53.7	56.1	53.8	54.9	0.1	0.5
Females	46.6	44.6	45.7	45.1	45.9	47.3	46.8	0.2	2.9
Persons	51.6	48.3	49.3	49.4	50.8	50.6	50.8	0.1	1.6
Other Australian^(d) rate (separations per 1,000)									
Males	26.5	25.6	26.0	26.5	26.7	27.7	28.3	0.4*	8.3*
Females	17.8	17.5	17.5	17.7	17.8	18.2	18.4	0.1*	4.2*
Persons	22.3	21.7	21.9	22.2	22.4	23.1	23.5	0.2*	6.6*
Rate ratio^(e)									
Males	2.1	2.0	2.0	2.0	2.1	1.9	1.9	-0.03*	-7.1*
Females	2.6	2.5	2.6	2.6	2.6	2.6	2.5	0.0	-1.2
Persons	2.3	2.2	2.2	2.2	2.3	2.2	2.2	-0.02*	-4.6*

(continued)

Table 1.03.8 (continued): Age-standardised hospitalisation rates, rate ratios and rate differences for injury and poisoning, Qld, WA, SA and NT, 2001–02 to 2007–08^(a)

	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	Annual change ^(b)	Per cent change over period ^(c)
Rate difference^(f)									
Males	30.2	26.3	26.8	27.2	29.4	26.1	26.5	–0.3	–6.3
Females	28.8	27.1	28.1	27.5	28.1	29.2	28.4	0.1	2.1
Persons	29.3	26.6	27.3	27.2	28.4	27.6	27.3	–0.1	–2.2

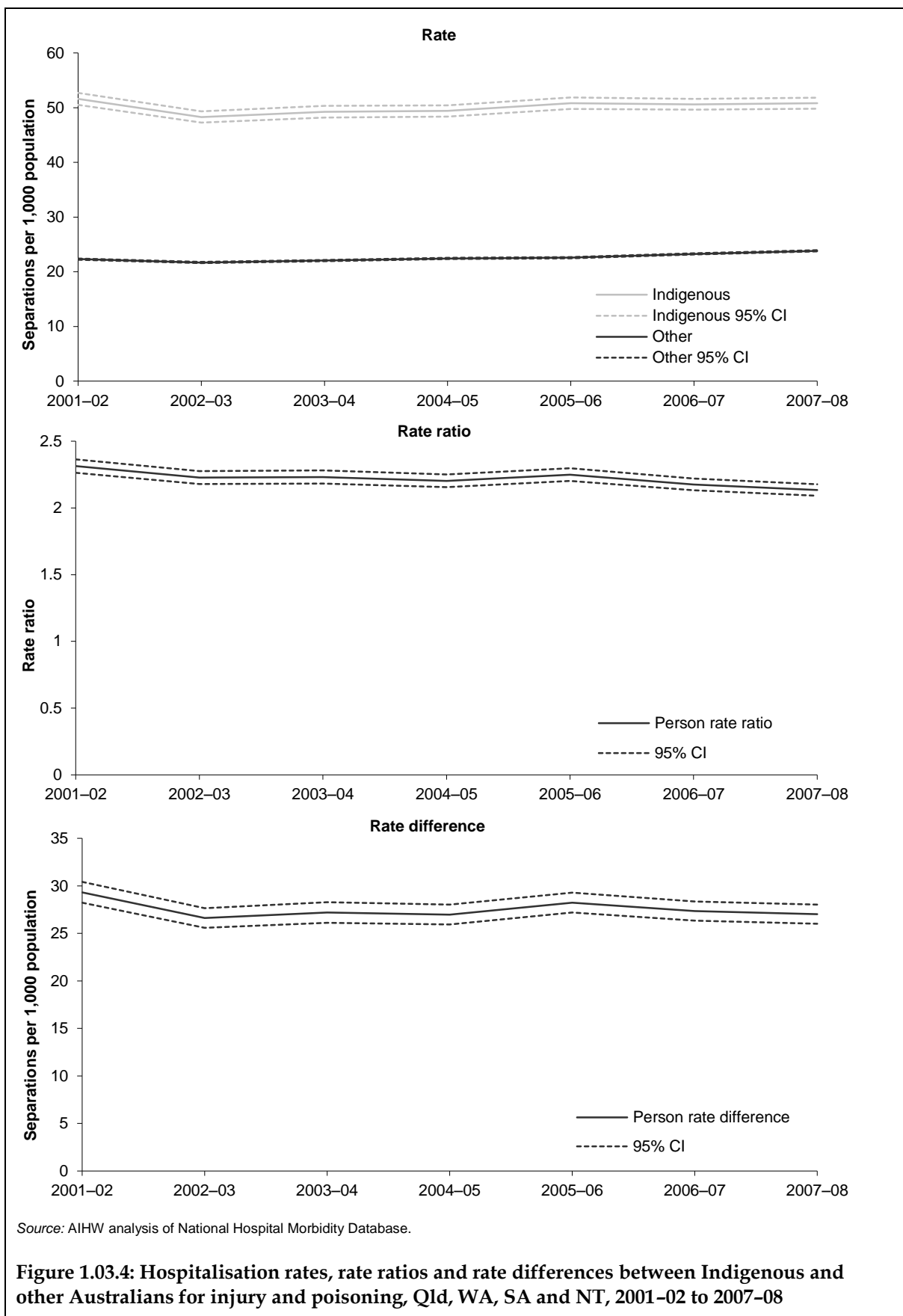
* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 2001–02 to 2007–08.

- (a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.
- (b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
- (c) Per cent change between 2001–02 and 2007–08 based on the average annual change over the period.
- (d) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
- (e) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.
- (f) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

Notes

1. Rates have been directly age-standardised using the 2001 Australian standard population.
2. Population estimates are based on 2006 Census.
3. Care types 7.3, 9 and 10 excluded in analysis.

Source: AIHW analysis of National Hospital Morbidity Database.



Injury and poisoning—2004–05 to 2007–08

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for injury and poisoning over the four-year period 2004–05 to 2007–08 for New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory are presented in Table 1.03.9 and Figure 1.03.5.

- In New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined, there were increases in hospitalisation rates for injury and poisoning among Indigenous males, females and persons overall during the period 2004–05 to 2007–08, but these increases were significant only for females and persons overall.
- There were significant increases in hospitalisation rates for injury and poisoning among other Australian males, females, and persons overall during the same period, with an average yearly increase in the rate of around 0.4 overall, per 1,000 population. This was equivalent to a 6% increase in the rate for persons overall, over the period.
- There were no significant changes in the hospitalisation rate ratios or rate differences between Indigenous males and other males, Indigenous females and other females and Indigenous persons, and other persons for the period 2004–05 to 2007–08.

Table 1.03.9: Age-standardised hospitalisation rates, rate ratios and rate differences for injury and poisoning, NSW, Vic, Qld, WA, SA and NT, 2004–05 to 2007–08^(a)

	2004–05	2005–06	2006–07	2007–08	Annual change ^(b)	Per cent change over period ^(c)
Indigenous rate separations						
Males	9,849	10,658	11,012	11,251	456*	13.9*
Females	7,813	8,185	8,672	8,639	297*	11.4*
Persons	17,662	18,843	19,684	19,890	753*	12.6*
Other Australian separations						
Males	242,881	252,296	264,086	272,285	10,000*	12.4*
Females	183,480	191,293	198,610	204,454	7,024*	11.5*
Persons	426,366	443,594	462,701	476,745	17,024*	12.0*
Indigenous rate (separations per 1,000)						
Males	45.6	48.5	47.7	48.1	0.7	4.5
Females	37.4	38.0	39.6	39.0	0.6*	5.0*
Persons	41.5	43.2	43.7	43.5	0.7*	4.9*
Other Australian^(d) rate (separations per 1,000)						
Males	26.0	26.6	27.3	27.6	0.5*	6.3*
Females	18.1	18.6	18.9	19.1	0.3*	5.4*
Persons	22.2	22.7	23.3	23.5	0.4*	5.9*
Rate ratio^(e)						
Males	1.8	1.8	1.7	1.7	0.0	–1.8
Females	2.1	2.0	2.1	2.0	0.0	–0.3
Persons	1.9	1.9	1.9	1.9	0.0	–1.0
Rate difference^(f)						
Males	19.6	21.9	20.4	20.5	0.1	2.0
Females	19.3	19.5	20.7	19.9	0.3	4.7
Persons	19.3	20.4	20.5	20.0	0.2	3.7

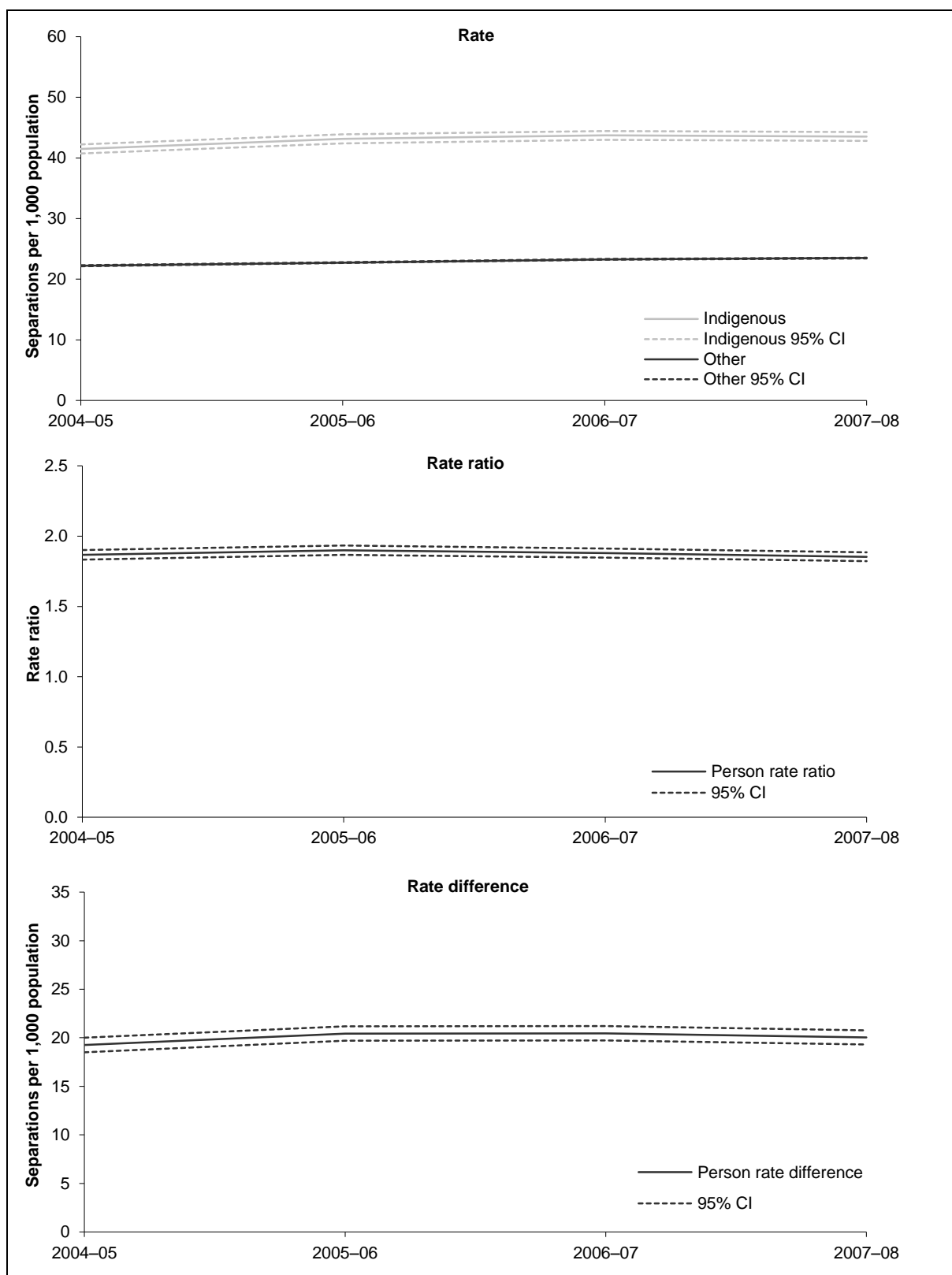
* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 2004–05 to 2007–08.

- (a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.
- (b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
- (c) Per cent change between 2004–05 and 2007–08 based on the average annual change over the period.
- (d) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
- (e) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.
- (f) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

Notes

1. Rates have been directly age-standardised using the 2006 Australian standard population.
2. Population estimates are based on 2006 census.
3. Care types 7.3, 9 and 10 (Newborn – unqualified days only; organ procurement; hospital boarder) excluded from analysis.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 1.03.5: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for injury and poisoning, Qld, WA, SA and NT, 2004-05 to 2007-08

Assault

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for assault over the seven-year period 2001–02 to 2007–08 are presented in Table 1.03.10 and Figure 1.03.6.

- Over the period 2001–02 to 2007–08, there were significant declines in the hospitalisation rate for assault among Indigenous males and persons overall. The fitted trend implies an average yearly decline in the rate of around 0.3 per 1,000 for Indigenous males and 0.2 per 1,000 for Indigenous persons overall, which is equivalent to a 11% and 7% reduction in the rate for males and persons overall over the period.
- Over the same period there were significant increases in the hospitalisation rate for assault for other Australians. The fitted trend implies an average yearly increase in the rate of around 0.04 per 1,000 for other males and 0.02 per 1,000 for other persons overall, which is equivalent to a 16% and 14% increase in the rate for males and persons overall over the period.
- There were significant declines in both the hospitalisation rate ratios and rate differences between Indigenous and other Australians for assault over the period 2001–02 to 2007–08. This reflects both a relative and absolute decline in the gap between Indigenous and other Australian hospitalisation rates for assault. While these declines were observed for Indigenous people as a whole and for Indigenous males, there was no significant decline in hospitalisation rates for Indigenous females over this period.

Table 1.03.10: Age-standardised hospitalisation rates, rate ratios and rate differences for assault, Qld, WA, SA and NT, 2001–02 to 2007–08

	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	Annual change ^(a)	Per cent change over period ^(b)
Indigenous separations									
Males	1,960	1,835	1,764	1,803	1,868	1,881	1,994	11	3.3
Females	2,180	2,132	2,127	2,181	2,255	2,363	2,232	27*	7.3*
Persons	4,140	3,967	3,891	3,984	4,123	4,244	4,226	37	5.4
Other Australian separations									
Males	5,176	4,996	4,891	5,255	5,720	6,145	6,511	–102	–11.8
Females	1,164	1,102	1,118	1,080	1,221	1,208	1,301	–53	–27.2
Persons	6,340	6,099	6,009	6,335	6,941	7,353	7,812	–155	–14.7
Indigenous rate (separations per 1,000)									
Males	15.7	14.4	13.3	13.3	13.5	13.2	13.8	–0.3*	–10.7*
Females	15.7	15.2	14.7	15.1	15.2	15.5	14.4	–0.1	–3.8
Persons	15.7	14.7	14.0	14.2	14.3	14.4	14.1	–0.2*	–7.1*
Other Australian^(c) rate (separations per 1,000)									
Males	1.5	1.4	1.3	1.4	1.5	1.6	1.6	0.04*	16.2*
Females	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	3.2
Persons	0.9	0.9	0.8	0.9	0.9	1.0	1.0	0.02*	14.3*
Rate ratio^(d)									
Males	10.7	10.3	9.9	9.4	8.9	8.3	8.4	–0.4*	–24.0*
Females	47.2	48.9	47.3	50.9	46.0	48.5	42.7	–0.6	–7.0
Persons	17.3	17.2	16.8	16.4	15.4	14.9	14.0	–0.6*	–19.6*

(continued)

Table 1.03.10 (continued): Age-standardised hospitalisation rates, rate ratios and rate differences for assault, Qld, WA, SA and NT, 2001–02 to 2007–08

	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	Annual change ^(a)	Per cent change over period ^(b)
Rate difference^(e)									
Males	14.2	13.0	12.0	11.9	12.0	11.6	12.1	–0.3*	–13.5*
Females	15.4	14.9	14.4	14.8	14.9	15.2	14.1	–0.1	–4.0
Persons	14.7	13.9	13.2	13.4	13.4	13.4	13.0	–0.2*	–8.5*

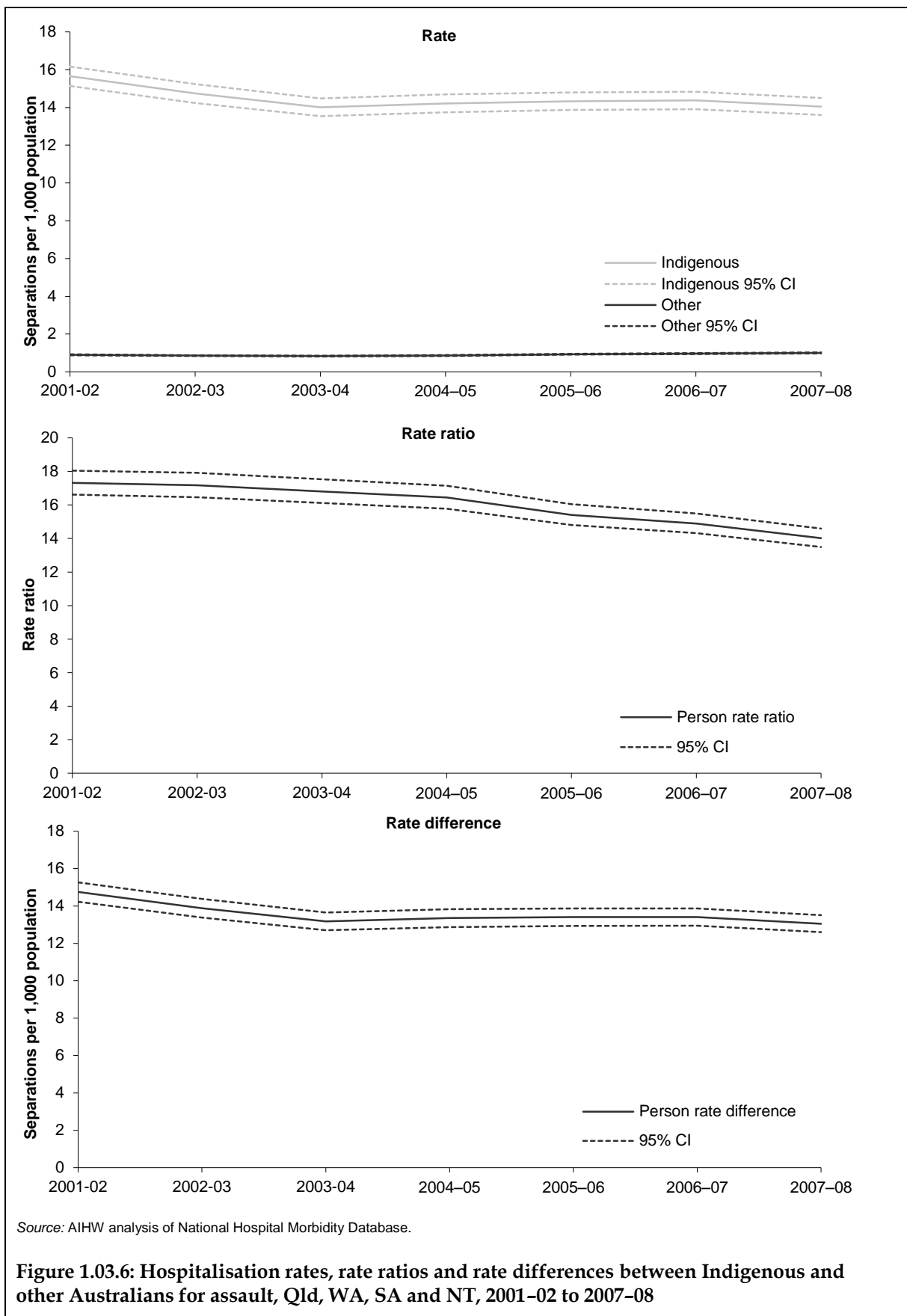
* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 2001–02 to 2007–08.

- (a) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.
- (b) Per cent change between 2001–02 and 2007–08 based on the average annual change over the period.
- (c) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
- (d) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.
- (e) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

Notes

1. Rates have been directly age-standardised using the 2006 Australian standard population.
2. Population estimates are based on 2006 census.
3. Care types 7.3, 9 and 10 (Newborn – unqualified days only; organ procurement; hospital boarder) excluded in analysis.

Source: AIHW analysis of National Hospital Morbidity Database.



Assault 2004–05 to 2007–08

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for assault over the period 2004–05 to 2007–08 for New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory are presented in Table 1.03.11 and Figure 1.03.7.

- Over the period 2004–05 to 2007–08, there was a significant increase in the hospitalisation rate for assault among Indigenous males; the fitted trend implies an average yearly increase in the rate of 0.2 per 1,000 (a 6% increase). There was no significant change in the rate for Indigenous females, or persons overall.
- Over the same period, there were significant increases in the hospitalisation rate for assault for other Australian males, and persons overall. The fitted trend implies an average yearly increase in the rate of around 0.1 per 1,000 for other males and 0.03 per 1,000 for other persons overall, which is equivalent to a 12% and 10% increase in the rate for males and persons overall during the period.
- There was a significant decline in the hospitalisation rate ratios, and a non-significant decline in the rate differences between Indigenous and other Australians for assault over the period 2004–05 to 2007–08. This reflects both a relative and absolute decline in the gap between Indigenous and other Australian hospitalisation rates for assault.

Table 1.03.11: Age-standardised hospitalisation rates, rate ratios and rate differences for assault, NSW, Vic, Qld, WA, SA and NT, 2004–05 to 2007–08^(a)

	2004–05	2005–06	2006–07	2007–08	Annual change ^(b)	Per cent change over period ^(c)
Indigenous rate separations						
Males	2,251	2,352	2,465	2,539	98*	13.0*
Females	2,502	2,572	2,750	2,559	35	4.2
Persons	4,753	4,924	5,215	5,098	133*	8.4*
Other Australian separations						
Males	13,054	14,288	15,164	15,420	797*	18.3*
Females	2,879	2,987	2,963	3,023	41*	4.3*
Persons	15,933	17,275	18,127	18,444	839*	15.8*
Indigenous rate (separations per 1,000)						
Males	10.4	10.6	10.7	11.0	0.2*	5.5*
Females	10.9	10.9	11.4	10.4	-0.1	-2.3
Persons	10.6	10.7	11.1	10.7	0.0	1.2
Other Australian^(d) rate (separations per 1,000)						
Males	1.4	1.5	1.6	1.6	0.1*	12.4*
Females	0.3	0.3	0.3	0.3	0.0	-0.1
Persons	0.8	0.9	0.9	0.9	0.03*	10.4*
Rate ratio^(e)						
Males	7.5	7.1	6.9	7.1	-0.2	-6.1
Females	35.5	34.8	37.2	33.8	-0.3	-2.2
Persons	12.5	11.8	11.8	11.4	-0.3*	-8.3*
Rate difference^(f)						
Males	9.0	9.1	9.2	9.4	0.1*	4.5*
Females	10.6	10.6	11.1	10.1	-0.1	-2.4
Persons	9.8	9.8	10.1	9.7	0.0	0.4

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 2004–05 to 2007–08.

(a) Data are from public and most private hospitals. Data exclude private hospitals in the Northern Territory.

(b) Average annual change in rates, rate ratios and rate differences determined using linear regression analysis.

(c) Per cent change between 2004–05 and 2007–08 based on the average annual change over the period.

(d) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

(e) Hospitalisation rates for Indigenous Australians divided by the hospitalisation rates for other Australians.

(f) Hospitalisation rates for Indigenous Australians minus the hospitalisation rates for other Australians.

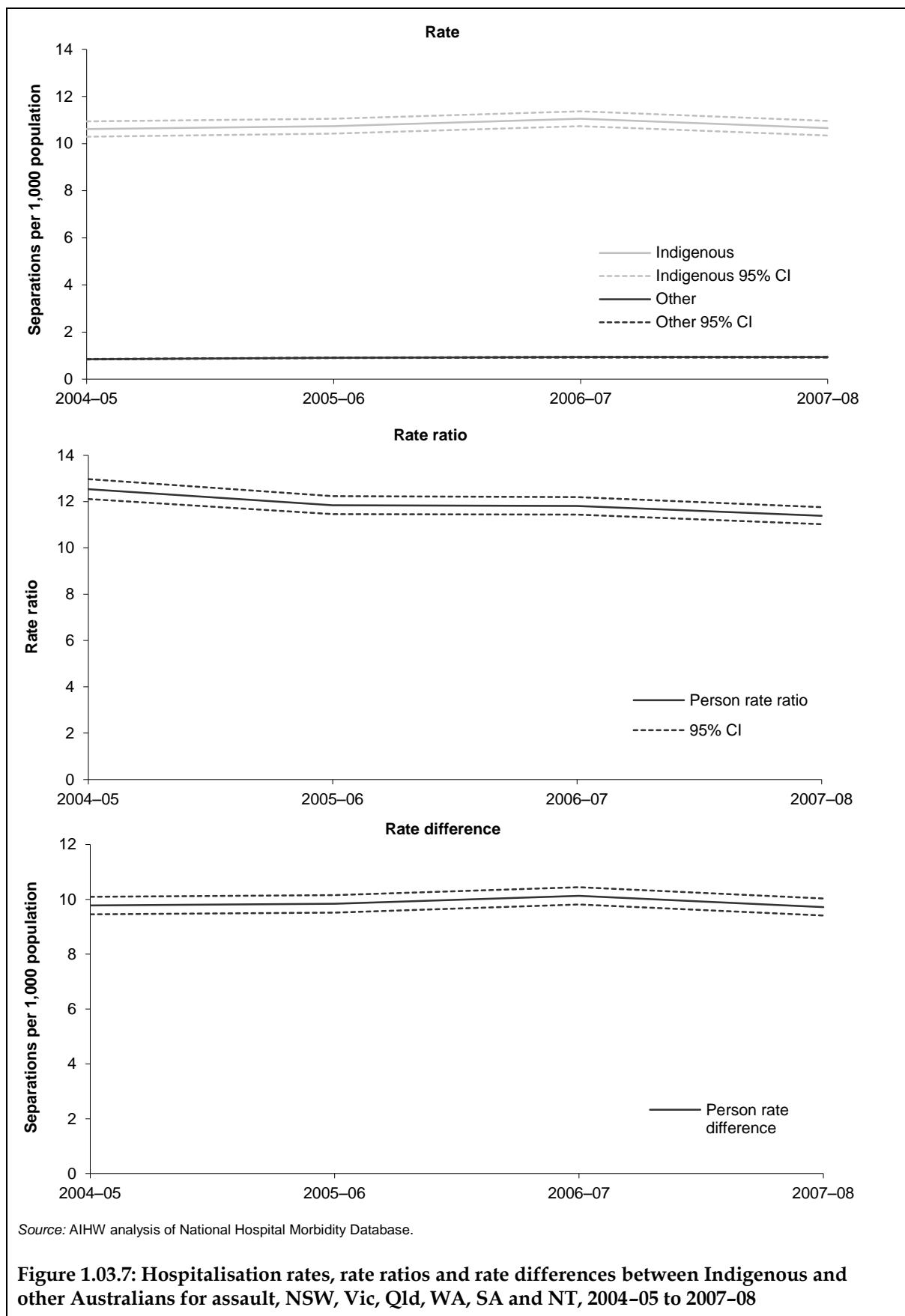
Notes

1. Rates have been directly age-standardised using the 2006 Australian standard population.

2. Population estimates are based on 2006 census.

3. Care types 7.3, 9 and 10 (Newborn – unqualified days only; organ procurement; hospital boarder) excluded from analysis.

Source: AIHW analysis of National Hospital Morbidity Database.



Additional information

This section presents information on injuries received in the 4 weeks before the interview from the 2004–05 ABS National Aboriginal and Torres Strait Islander Health Survey (NATSIHS). The NATSIHS collected information on the type of injury, the damage caused by the injury, the activity and location at the time of injury and the part of the body affected.

Note that the 2004–05 NATSIHS data relate only to persons in private dwellings. People in hospitals, nursing and convalescent homes, and hospices were excluded from the sample.

Prevalence

- After adjusting for differences in age distribution, Indigenous Australians had a slightly lower rate of reported recent injury (in the previous 4 weeks) than non-Indigenous Australians (15.4 per 100 compared with 18.6 per 100).

Type of injury

- The most common events which led to injury for Indigenous Australians were low falls (33%) and cuts (19%).
- Indigenous Australians were three times as likely as non-Indigenous Australians to report a recent injury which was the result of an attack by another person (rate ratio 2.8) or a high fall (rate ratio 3.1).

Nature of injury

- The most common forms of recent injury for Indigenous Australians were an open wound (41%) and bruising (30%).
- Nearly half (45%) of Indigenous Australians aged 0–14 years who experienced an injury had an open wound. Bruising was also a common injury in this age group (36%).
- Indigenous Australians were more than twice as likely as non-Indigenous Australians to report a fracture as a recent injury (rate ratio 2.4).

Activity at time of injury event

- Leisure activities were the most common activity being undertaken when Indigenous Australians were injured (37% of Indigenous persons recently injured were undertaking leisure activity at the time of injury).
- In the Indigenous 0–14 age group, 62% of injuries occurred during leisure activities, 14% occurred during sports activities and 7% of injuries received in this age group occurred while attending school. For non-Indigenous Australians in the 0–14 age group, 54% of injuries occurred during leisure activities, 15% of injuries occurred during sports activities and 12% of injuries were received while attending school.
- Indigenous Australians who were recently injured were slightly less likely than non-Indigenous Australians who were recently injured to be attending school/college/university or working for income or as a volunteer at the time of injury (rate ratios of 0.7 and 0.8 respectively) and slightly more likely to be resting, sleeping or engaged in other personal activities at the time of injury (rate ratio of 1.4).

Location at time of injury event

- Indigenous Australians who received recent injuries were most likely to experience them inside or outside their own or someone else's home (29% and 28% respectively).

- Indigenous Australians were less likely than non-Indigenous Australians to experience recent injuries at a commercial or industrial place (respective rate ratios of 0.5 and 0.7) and slightly more likely than non-Indigenous Australians to experience recent injuries at a street/highway (rate ratio of 1.3).

Influence of alcohol

- In 2004–05, 6% of Indigenous Australians aged 15 years and over reported being under the influence of alcohol or other substances at the time of injury.
- Indigenous Australians were almost five times as likely as non-Indigenous Australians to report being under the influence of alcohol or other substances at the time of injury (rate ratio of 4.5).

Data quality issues

National Hospital Morbidity data

Hospital separations data

Separations

Differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery can affect the number and pattern of hospitalisations.

In all states and territories, the proportion of Aboriginal and Torres Strait Islander separations in public hospitals increased over the 11-year period 1996–97 to 2007–08, from 3.7% to 5.4%. In private hospitals, it stayed around 0.2% to 0.3% until 2003–04, when there was a modest increase to 0.5%.

Indigenous status question

Some jurisdictions have slightly different approaches to the collection and storage of the standard Indigenous status question and categories in their hospital collections. The 'not stated' category is missing from several collections. It is recommended that the standard wording and categories be used in all jurisdictions (AIHW 2005).

'Not stated' responses to the Indigenous status question were around 1% in public hospitals and 4% in private hospitals in 2007–08. This is a reduction from 1998–99 when 2% of responses in public hospitals and 8% of responses in private hospitals had a 'not stated' Indigenous status (AIHW 2009).

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander people. Based on an analysis of a sample of data conducted in 2010, an estimated 89% of Indigenous patients were correctly identified in Australian public hospital admission records in 2007–08 (AIHW 2010). In other words, 11% of Indigenous patients were not identified, and the 'true' number of hospital admissions for Indigenous persons was about 12% higher than reported.

For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data were of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that all hospitals in New South Wales, Victoria, Queensland, Western Australia and South Australia and public hospitals in the Northern Territory have adequate Indigenous identification (80% or higher overall levels of Indigenous identification in public hospitals only) in their separations data. For Tasmania and the Australian Capital Territory, the levels of Indigenous identification were not considered acceptable for analysis purposes. It has therefore been recommended that reporting of Indigenous hospital separations data be limited to information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory, individually or in aggregate. The proportion of the Indigenous population that these six jurisdictions cover is 96%. The following caveats have also been recommended for analysis of hospitalisation data from selected jurisdictions (AIHW 2010):

- Interpretation of results should take into account the relative quality of the data from the jurisdictions included.

- Interpretation of time series analysis should take into account the possible contribution of changes over time in ascertainment of Indigenous status to changes in hospitalisation rates for Indigenous people.
- Bias may have been introduced due to the sampling method of hospitals used in the study. Hospitals with high proportions of Indigenous separations were used in the study to ensure sufficient numbers of Indigenous people were included in the study. Proportions of Indigenous separations should therefore not be taken to represent the NHMD overall.
- Hospitalisation data for these six jurisdictions are not necessarily representative of other jurisdictions.

From the AIHW study, it was possible to produce correction factors for the level of Indigenous under-identification in hospital data for each jurisdiction and at the national level.

Remoteness areas

There were acceptable levels of Indigenous identification for all remoteness areas, ranging from 80% in *Major cities* to 97% in *Remote* and *Very remote* areas. The quality of data supports analyses by remoteness areas, in aggregate, across states and territories. However, the sample size was insufficient to allow assessment of the quality of Indigenous identification by remoteness area within jurisdictions.

Numerator and denominator

Rate and ratio calculations rely on good numerator and denominator data. There are changes in the completeness of identification of Indigenous people in hospital records. These may take place at different rates from changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used in this analysis are sourced from *Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2021* (ABS 2009).

Data sources for injury emergency episodes

The National Non-admitted Patient Emergency Department Care Database is a national collection of de-identified data on emergency department episodes based on the Non-admitted Emergency Department Care National Minimum Data Set. This data set includes the standard Indigenous status question but does not include injury coding (for example, ICD-10). The Injury Surveillance National Minimum Data Set includes injury coding (components of ICD-10) but does not include demographic details such as Indigenous status. Therefore, there is currently no national minimum data set containing both Indigenous status and injury coding.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians. It therefore overcomes the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to identify the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The Australian Bureau of Statistics (ABS) makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, imperfect recall or individual interpretation of survey questions may affect some responses.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in *Major cities, Inner and outer regional areas* and *Remote and very remote areas*, but *Very remote areas* were excluded from the sample. Time series comparisons are available through the 1995 and 2001 NHS.

In *Remote and very remote communities* there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the NATSIHS 2004–05 publication (ABS 2006).

List of symbols used in tables

- n.a. not available
- rounded to zero (including null cells)
- 0 zero
- .. not applicable
- n.e.c. not elsewhere classified
- n.f.d. not further defined
- n.p. not available for publication but included in totals where applicable, unless otherwise indicated

References

- ABS (Australian Bureau of Statistics) 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. ABS cat. no. 4715.0. Canberra: ABS.
- ABS 2009. Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2021. ABS cat. no. 3238.0. Canberra: ABS.
- AIHW (Australian Institute of Health and Welfare) 2005. Improving the quality of Indigenous identification in hospital statistics. Health services series no. 25. Cat. no. HSE 101. Canberra: AIHW.
- AIHW 2007. Australian hospital statistics 2005–06. Health services series no. 30. Cat. no. HSE 50. Canberra: AIHW.
- AIHW 2009. Australian hospital statistics 2007–08. Health services series no. 33. Cat. no. HSE 71. Canberra: AIHW.
- AIHW 2010. Indigenous identification in hospital separations data – quality report. Health services series no. 35. Cat. no. HSE 85. Canberra: AIHW.
- Henley G & Harrison J 2010. Injury of Aboriginal and Torres Strait Islander people due to transport, 2003–04 to 2007–08. Injury Research and Statistics Series no. 58. Cat. no. INJCAT 134. Canberra: AIHW.

National Centre for Classification in Health 2006. International statistical classification of diseases and related health problems, 10th revision, Australian modification. 5th edition. National Centre for Classification in Health.

List of tables

Table 1.03.1: Age-specific hospitalisation rates (per 1,000 population) for a principal diagnosis of injury and poisoning, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008	64
Table 1.03.2: Hospitalisations for principal diagnosis of injury and poisoning, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, Tas and ACT, July 2006 to June 2008	67
Table 1.03.3: Hospitalisations of Indigenous persons for principal diagnosis of injury and poisoning and certain other consequences of external causes, by type of injury and sex, NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008	69
Table 1.03.4: External causes for hospitalisations of Indigenous persons with a principal diagnosis of injury and poisoning and other consequences of external causes, by sex, NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008	72
Table 1.03.5: Mode of transport for fatal injury, NSW, Vic, Qld, WA, SA and NT, 2003-04 to 2006-07	75
Table 1.03.6: Mode of transport for serious injury, NSW, Vic, Qld, WA, SA and NT, 2003-04 to 2007-08	76
Table 1.03.7: Age-specific serious injury rates (per 100,000 population) for land transport injury by sex, Indigenous and other persons, NSW, Vic, Qld, WA, SA and NT 2003-04 to 2007-08	78
Table 1.03.8: Age-standardised hospitalisation rates, rate ratios and rate differences for injury and poisoning, Qld, WA, SA and NT, 2001-02 to 2007-08	81
Table 1.03.9: Age-standardised hospitalisation rates, rate ratios and rate differences for injury and poisoning, NSW, Vic, Qld, WA, SA and NT, 2004-05 to 2007-08	85
Table 1.03.10: Age-standardised hospitalisation rates, rate ratios and rate differences for assault, Qld, WA, SA and NT, 2001-02 to 2007-08	88
Table 1.03.11: Age-standardised hospitalisation rates, rate ratios and rate differences for assault, NSW, Vic, Qld, WA, SA and NT, 2004-05 to 2007-08	92

List of figures

Figure 1.03.1: Age-specific hospitalisation rates for a principal diagnosis of injury and poisoning, by Indigenous status and sex, NSW, Vic, Qld, WA, SA and NT, July 2006 to June 200865

Figure 1.03.2: Age-specific fatal injury rates for land transport injury by sex, Indigenous and other persons, NSW, Vic, Qld, WA, SA and NT, 2003-04 to 2007-08.....79

Figure 1.03.3: Age-specific serious injury rates for land transport injury by sex, Indigenous and other persons, NSW, Vic, Qld, WA, SA and NT, 2003-2004 to 2007-2008.....79

Figure 1.03.4: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for injury and poisoning, Qld, WA, SA and NT, 2001-02 to 2007-0883

Figure 1.03.5: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for injury and poisoning, Qld, WA, SA and NT, 2004-05 to 2007-0886

Figure 1.03.6: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for assault, Qld, WA, SA and NT, 2001-02 to 2007-08.....90

Figure 1.03.7: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for assault, NSW, Vic, Qld, WA, SA and NT, 2004-05 to 2007-0893