

## 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's 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 four jurisdictions which have been assessed as having adequate identification of Indigenous hospitalisations in 2003–04 – Queensland, Western Australia, South Australia and the Northern Territory (AIHW 2005). These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence of the patient.

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 as 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 two-year period July 2002 to June 2004. An aggregate of two years of data has been used as 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, which can be a total hospital stay (from admission to discharge, transfer or death) or a change in a type of care (for example, from acute to rehabilitation).

### Analyses

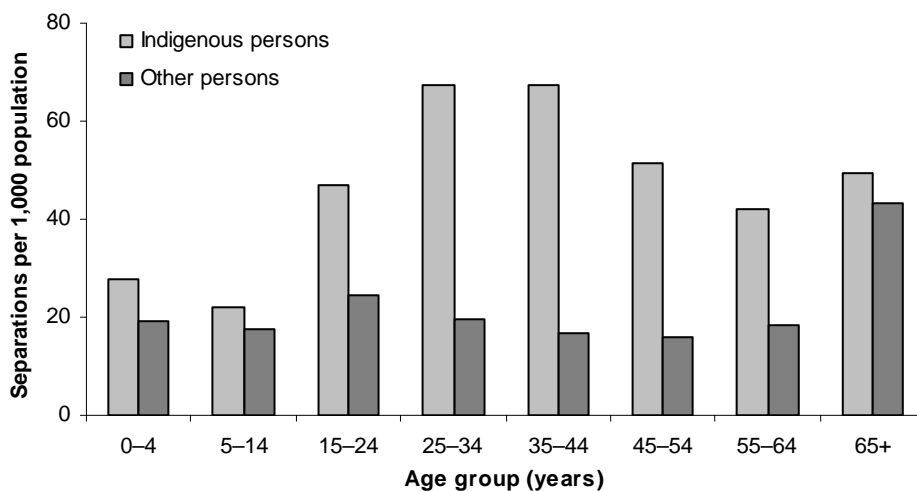
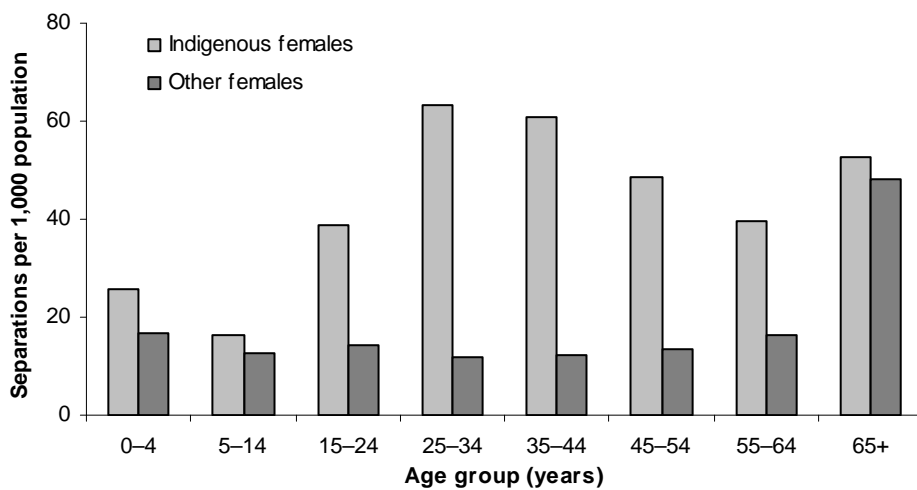
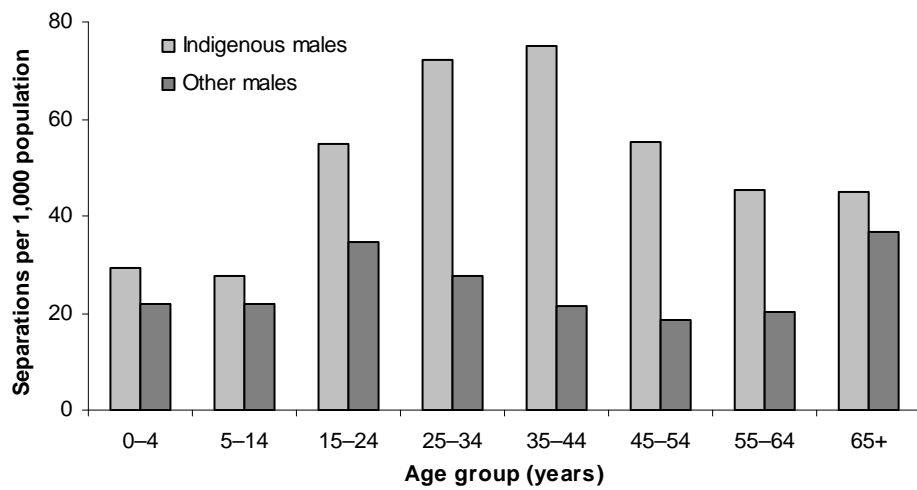
Age-standardised rates and ratios have been used for this indicator as a measure of hospitalisations in the Indigenous population relative to other Australians. Ratios of this type illustrate differences between the rates of hospital admissions among Indigenous people and those of other Australians,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

## Hospitalisations

- In the two-year period July 2002 to June 2004, there were 340,251 hospitalisations for injury and poisoning in Queensland, Western Australia, South Australia and the Northern Territory combined, 25,255 (7.4%) of which were hospitalisations of Aboriginal and Torres Strait Islander peoples (Table 1.03.1).
- Hospitalisations for injury and poisoning were the second most common diagnosis among Aboriginal and Torres Strait Islander Australians, representing 8% of all hospital separations.

### Hospitalisations by age and sex

- For the two-year period July 2002 to June 2004, in Queensland, Western Australia, South Australia and the Northern Territory, Indigenous males and females had higher hospitalisation rates for injury and poisoning than other males and females across all age groups (Figure 1.03.1).
- The greatest difference in hospitalisation rates occurred in the 35–44 and 45–54 year age groups for males, and the 15–24 and 25–34 year age groups for females. Indigenous males were hospitalised at between three and four times the rate of other males in these age groups and Indigenous females were hospitalised at around five times the rate of other females in these age groups.
- For Indigenous males and females, hospitalisation rates were highest among those aged 25–34 years and 35–44 years, while for other males and females, rates were highest among those aged 65 years and over.
- Approximately 55% of Indigenous Australians hospitalised for injury and poisoning were males (13,776) and 45% were females (11,479).



Source: AIHW analysis of AIHW 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, Qld, WA, SA and NT, July 2002–June 2004**

## **Hospitalisations by state/territory**

Table 1.03.1 presents hospitalisations for a principal diagnosis of injury and poisoning for the two-year period July 2002 to June 2004 in Queensland, Western Australia, South Australia and the Northern Territory.

- In Queensland and South Australia, Indigenous people were hospitalised for injury and poisoning at around twice the rate of other Australians. In Western Australia and the Northern Territory, Indigenous people were hospitalised at three times the rate of other Australians.
- In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous Australians were hospitalised for injury at more than twice the rate of other Australians in these jurisdictions.

**Table 1.03.1: Hospitalisations for principal diagnosis of injury and poisoning, by Indigenous status and sex, Qld, WA, SA and NT, July 2002–June 2004<sup>(a)(b)(c)(d)</sup>**

	Indigenous				Other <sup>(e)</sup>				Ratio <sup>(i)</sup>
	Number	Rate per 1,000 <sup>(f)</sup>	LCL 95% <sup>(g)</sup>	UCL 95% <sup>(h)</sup>	Number	Rate per 1,000 <sup>(f)</sup>	LCL 95% <sup>(g)</sup>	UCL 95% <sup>(h)</sup>	
<b>Qld</b>									
Males	5,307	44.8	43.2	46.4	98,488	27.2	27.0	27.4	1.6*
Females	3,815	33.4	32.0	34.8	67,665	18.0	17.9	18.1	1.9*
Persons	9,122	38.9	37.9	40.0	166,153	22.7	22.6	22.9	1.7*
<b>WA</b>									
Males	4,286	67.7	65.3	70.1	43,859	23.8	23.6	24.0	2.8*
Females	3,928	63.7	61.4	66.0	32,421	16.9	16.7	17.1	3.8*
Persons	8,214	65.8	64.1	67.5	76,280	20.5	20.4	20.7	3.2*
<b>SA</b>									
Males	1,187	48.5	45.2	51.9	36,991	25.0	24.7	25.2	1.9*
Females	1,086	45.5	42.3	48.7	30,363	18.1	17.9	18.3	2.5*
Persons	2,273	47.1	44.8	49.5	67,354	21.7	21.6	21.9	2.2*
<b>NT</b>									
Males	2,996	55.8	53.3	58.3	3,625	25.7	24.7	26.6	2.2*
Females	2,650	49.9	47.7	52.2	1,579	15.3	14.4	16.2	3.3*
Persons <sup>(j)</sup>	5,646	52.9	51.2	54.6	5,209	21.0	20.3	21.6	2.5*
<b>Qld, WA, SA and NT<sup>(d)</sup></b>									
<b>Males</b>	13,776	53.0	51.9	54.1	182,963	25.8	25.7	25.9	2.1*
<b>Females</b>	11,479	45.2	44.2	46.2	132,028	17.7	17.6	17.8	2.6*
<b>Persons<sup>(j)</sup></b>	25,255	49.1	48.4	49.9	314,996	21.9	21.8	22.0	2.2*

\* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 ICD10-AM (National Centre for Classification in Health 2004); 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.
- (e) Other includes non-Indigenous hospitalisations and those for whom Indigenous status was not stated.
- (f) Directly age standardised using the Australian 2001 Standard population.
- (g) LCL = lower confidence limit.
- (h) UCL = upper confidence limit.
- (i) Rate ratio Indigenous:other.
- (j) Includes hospitalisations for which sex was 'indeterminate' or 'not stated'.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

## Hospitalisations by principal diagnosis

### Type of injury

Table 1.03.2 presents hospitalisations for a principal diagnosis of injury and poisoning by type of injury for the two-year period July 2002 to June 2004 for the four jurisdictions.

- For the period 2002-03 to 2003-04 in Queensland, Western Australia, South Australia and the Northern Territory, 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 peoples (77%) followed by complications of medical and surgical care (10%).
- Indigenous males and females were hospitalised at three and four times the rate of other males and females respectively for 'other effects of external causes (such as radiation, hypothermia, maltreatment syndromes) and early complications of trauma'.
- In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males were hospitalised for injury and poisoning at twice the rate of other males, and Indigenous females were hospitalised at three times the rate of other females.

**Table 1.03.2: Hospitalisations of Indigenous persons for principal diagnosis of injury and poisoning, by type of injury and sex, Qld, WA, SA and NT, July 2002–June 2004<sup>(a)(b)(c)(d)</sup>**

Principal diagnosis	Males						Females						Persons <sup>(k)</sup>					
	No.	% <sup>(f)</sup>	Rate per 1,000 <sup>(g)</sup>	LCL 95% <sup>(h)</sup>	UCL 95% <sup>(i)</sup>	Ratio <sup>(j)</sup>	No.	% <sup>(f)</sup>	Rate per 1,000 <sup>(g)</sup>	LCL 95% <sup>(h)</sup>	UCL 95% <sup>(i)</sup>	Ratio <sup>(j)</sup>	No.	% <sup>(f)</sup>	Rate per 1,000 <sup>(g)</sup>	LCL 95% <sup>(h)</sup>	UCL 95% <sup>(i)</sup>	Ratio <sup>(j)</sup>
Injuries (S00–T19)	10,954	79.5	40.5	39.5	41.4	2.1*	8,391	73.1	31.5	30.7	32.4	2.8*	19,345	76.6	36.0	35.4	36.6	2.3*
Complications of surgical & medical care (T80–T89)	1,180	8.6	6.8	6.3	7.2	1.7*	1,396	12.2	7.7	7.2	8.1	2.2*	2,576	10.2	7.2	6.9	7.6	2.0*
Poisoning (T36–T50)	458	3.3	1.7	1.5	1.9	1.4*	788	6.9	2.9	2.6	3.1	1.6*	1,246	4.9	2.3	2.2	2.4	1.5*
Other effects of external causes/ complications of trauma (T66–T79)	459	3.3	1.7	1.5	1.9	3.2*	408	3.6	1.5	1.3	1.7	3.7*	867	3.4	1.6	1.4	1.7	3.4*
Burns and frostbite (T20–T35)	430	3.1	1.4	1.2	1.6	2.6*	280	2.4	1.0	0.8	1.1	3.7*	710	2.8	1.2	1.1	1.3	2.9*
Toxic effects (T51–T65)	295	2.1	1.0	0.9	1.2	2.0*	216	1.9	0.7	0.5	0.8	2.1*	511	2.0	0.8	0.7	0.9	2.0*
<b>Total<sup>(k)</sup></b>	<b>13,776</b>	<b>100.0</b>	<b>53.0</b>	<b>51.9</b>	<b>54.1</b>	<b>2.1*</b>	<b>11,479</b>	<b>100.0</b>	<b>45.2</b>	<b>44.2</b>	<b>46.2</b>	<b>2.6*</b>	<b>25,255</b>	<b>100.0</b>	<b>49.1</b>	<b>48.4</b>	<b>49.9</b>	<b>2.2*</b>

(continued)

\* Represents results with statistically significant differences in the Indigenous/Other comparisons at the p<.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 (National Centre for Classification in Health 2004); 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.

**Table 1.03.2 (continued): Hospitalisations of Indigenous persons for principal diagnosis of injury and poisoning, by type of injury and sex, Qld, WA, SA and NT, July 2002–June 2004<sup>(a)(b)(c)(d)</sup>**

- (d) Data are reported by state/territory of usual residence of the patient hospitalised and are for Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have the highest level of accuracy of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for four 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) Percentage of male, female and total hospitalisations of Indigenous persons in the period 2002–03 to 2003–04.
- (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).

*Source:* AIHW analysis of AIHW National Hospital Morbidity database.

## **External cause of injury and poisoning**

Table 1.03.3 presents hospitalisations for external causes of injury and poisoning for Aboriginal and Torres Strait Islander peoples in Queensland, Western Australia, South Australia and the Northern Territory.

- In the two-year period July 2002 to June 2004, assault was the most common cause for hospitalisation for Indigenous males and females hospitalised with a principal diagnosis of injury and poisoning (26% and 37% respectively) in Queensland, Western Australia, South Australia and the Northern Territory combined.
- Aboriginal and Torres Strait Islander males and females were 10 and 47 times more likely to be hospitalised for injuries due to assault as other males and females respectively.
- Indigenous males were hospitalised for intentional self-harm at more than twice the rate of other males.
- Indigenous males and females were twice and three times as likely to be hospitalised for exposure to electrical currents, smoke, fire, animals or nature as other males and females respectively.

**Table 1.03.3: Hospitalisations of Indigenous persons for external causes of injury and poisoning, by sex, Qld, WA, SA and NT, July 2002–June 2004<sup>(a)(b)(c)(d)</sup>**

External cause	Males						Females						Persons <sup>(e)</sup>					
	No.	% <sup>(f)</sup>	Rate per 1,000 <sup>(g)</sup>	LCL 95% <sup>(h)</sup>	UCL 95% <sup>(i)</sup>	Ratio <sup>(j)</sup>	No.	% <sup>(f)</sup>	Rate per 1,000 <sup>(g)</sup>	LCL 95% <sup>(h)</sup>	UCL 95% <sup>(i)</sup>	Ratio <sup>(j)</sup>	No.	% <sup>(f)</sup>	Rate per 1,000 <sup>(g)</sup>	LCL 95% <sup>(h)</sup>	UCL 95% <sup>(i)</sup>	Ratio <sup>(j)</sup>
Assault (X85–Y09)	3,597	26.1	14.1	13.6	14.6	10.3*	4,259	37.1	14.8	14.3	15.2	47.2*	7,856	31.1	14.4	14.1	14.7	17.0*
Accidental falls (W00–W19)	2,191	15.9	8.7	8.2	9.2	1.5*	1,648	14.4	8.3	7.7	8.8	1.3*	3,839	15.2	8.6	8.2	9.0	1.4*
Exposure to inanimate mechanical forces (W20–W49)	1,992	14.5	6.3	6.0	6.7	1.4*	972	8.5	2.9	2.7	3.1	2.2*	2,964	11.7	4.6	4.4	4.8	1.6*
Complications of medical and surgical care (Y40–Y48)	1,158	8.4	6.8	6.3	7.3	1.7*	1,383	12.0	7.8	7.3	8.3	2.1*	2,541	10.1	7.3	7.0	7.7	1.9*
Transport accidents (V01–V99)	1,486	10.8	5.0	4.7	5.3	1.3*	705	6.1	2.3	2.1	2.5	1.4*	2,191	8.7	3.6	3.4	3.7	1.3*
Other accidental exposures <sup>(k)</sup>	1,046	7.6	4.3	4.0	4.6	1.5*	663	5.8	2.7	2.5	3.0	1.8*	1,709	6.8	3.5	3.3	3.7	1.6*
Intentional self-harm (X60–X84)	642	4.7	2.3	2.1	2.5	2.4*	778	6.8	2.7	2.5	2.9	1.9*	1,420	5.6	2.5	2.4	2.7	2.1*
Exposure to electric current/smoke/fire/animals/nature (W85–W99, X00–X39) <sup>(l)</sup>	582	4.2	1.9	1.7	2.1	2.1*	387	3.4	1.3	1.1	1.5	2.9*	969	3.8	1.6	1.5	1.7	2.4*
Exposure to animate mechanical forces (W50–W64)	614	4.5	2.1	1.9	2.4	2.3*	260	2.3	0.9	0.8	1.0	2.2*	874	3.5	1.5	1.4	1.6	2.2*
Accidental poisoning by and exposure to noxious substances (X40–X49)	308	2.2	1.0	0.8	1.1	1.6*	290	2.5	1.0	0.8	1.1	1.6*	598	2.4	1.0	0.9	1.1	1.6*

(continued)

**Table 1.03.3 (continued): Hospitalisations of Indigenous persons for external causes of injury and poisoning, by sex, Qld, WA, SA and NT, July 2002–June 2004<sup>(a)(b)(c)(d)</sup>**

External cause	Males						Females						Persons <sup>(e)</sup>					
	No.	% <sup>(f)</sup>	Rate per 1,000 <sup>(g)</sup>	LCL 95% <sup>(h)</sup>	UCL 95% <sup>(i)</sup>	Ratio <sup>(j)</sup>	No.	% <sup>(f)</sup>	Rate per 1,000 <sup>(g)</sup>	LCL 95% <sup>(h)</sup>	UCL 95% <sup>(i)</sup>	Ratio <sup>(j)</sup>	No.	% <sup>(f)</sup>	Rate per 1,000 <sup>(g)</sup>	LCL 95% <sup>(h)</sup>	UCL 95% <sup>(i)</sup>	Ratio <sup>(j)</sup>
Other external causes <sup>(m)</sup>	145	1.1	0.6	0.5	0.6	4.7*	125	1.1	0.5	0.4	0.6	4.0*	270	1.1	0.5	0.4	0.6	4.3*
<b>Total<sup>(n)</sup></b>	<b>13,776</b>	<b>100.0</b>	<b>53.0</b>	<b>51.9</b>	<b>54.1</b>	<b>2.1*</b>	<b>11,479</b>	<b>100.0</b>	<b>45.2</b>	<b>44.2</b>	<b>46.2</b>	<b>2.6*</b>	<b>25,255</b>	<b>100.0</b>	<b>49.1</b>	<b>48.4</b>	<b>49.9</b>	<b>2.2*</b>

\* Represents results with statistically significant differences in the Indigenous/other comparisons at the p<.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 (National Centre for Classification in Health 2004); 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 Western Australia, South Australia, the Northern Territory and Queensland only. These four jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations. Hospitalisation data for four 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) Percentage of male, female and total hospitalisations of Indigenous persons in the period 2002–03 to 2003–04.
- (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 (Y9–Y98).
- (n) Includes injuries where no external cause was reported.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.

## **Time series analysis**

### **Injury and poisoning**

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for injury and poisoning over the five-year period 1998–99 to 2003–04 are presented in Table 1.03.4 and Figure 1.03.2.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, there were apparent declines in hospitalisation rates for injury and poisoning among Indigenous males, females and persons during the period 1998–99 to 2003–04, however, these declines were not significant.
- There were significant declines in hospitalisation rates for injury and poisoning among other Australian males, females and persons during the same period, with an average yearly decline in the rate of around 0.3 per 1,000 population.
- There were no significant changes in the hospitalisation rate ratios or rate differences between Indigenous and other Australians for the period 1998–99 to 2003–04.

It should be noted 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. Also, changes in access, hospital policies and practices all impact on the level of hospitalisation over time. Caution should be used in interpreting changes over time as it is not possible to ascertain whether a change in reported hospitalisation rates 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 hospitalisations may reflect better access rather than a worsening of health.

**Table 1.03.4: Age-standardised hospitalisation rates, rate ratios and rate differences from injury and poisoning, Qld, WA, SA and NT, 1998–99 to 2003–04**

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change <sup>(a)</sup>
<b>Indigenous rate per 1,000</b>							
Males	58.8	54.0	55.1	57.0	52.4	53.6	-0.8
Females	46.8	46.4	45.0	46.1	44.4	45.9	-0.3
Persons	52.6	50.2	49.9	51.5	48.4	49.8	-0.5
<b>Other Australian<sup>(b)</sup> rate per 1,000</b>							
Males	27.7	27.8	27.0	26.5	25.7	26.1	-0.4*
Females	18.6	18.3	18.2	17.8	17.6	17.9	-0.2*
Persons	23.3	23.2	22.7	22.3	21.8	22.2	-0.3*
<b>Rate ratio<sup>(c)</sup></b>							
Males	2.1	1.9	2.0	2.1	2.0	2.1	0.0
Females	2.0	2.0	2.0	2.1	2.0	2.1	0.0
Persons	2.3	2.2	2.2	2.3	2.2	2.2	0.0
<b>Rate difference<sup>(d)</sup></b>							
Males	31.1	26.3	28.1	30.5	26.7	27.5	-0.4
Females	23.5	23.2	22.3	23.8	22.7	23.8	0.0
Persons	29.3	27.0	27.2	29.2	26.7	27.6	-0.2

\* Represents results with statistically significant increases or declines at the  $p < .05$  level over the period 1998–99 to 2003–04.

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

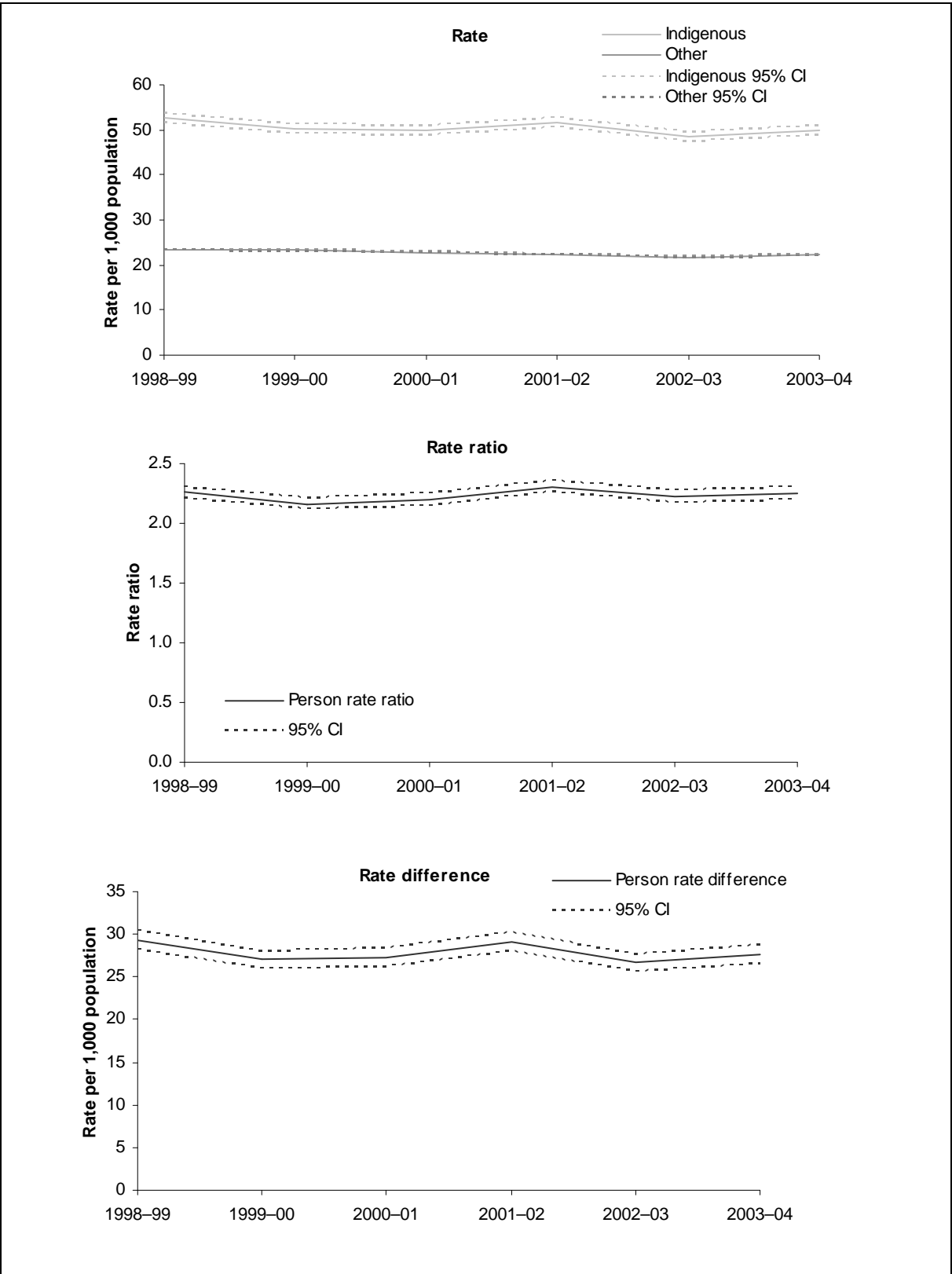
(b) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

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

Note: Rates have been directly age standardised using the 2001 Australian standard population.

Source: AIHW analysis of AIHW National Hospital Morbidity Database.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

**Figure 1.03.2: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians from injury and poisoning, Qld, WA, SA and NT, 1998-99 to 2003-04**

### **Sensitivity of hospitalisation trends to changes in identification**

- The fitted trends described above have been examined for their sensitivity to changes in Indigenous identification. Three scenarios for identification were posted – constant identification, increasing identification and decreasing identification.
  - Under the constant identification scenario, the number of hospitalisations for the period under study were adjusted using the following identification factors:
    - Qld 80%
    - WA 94%
    - SA 90%
    - NT 98%
  - Under the increasing identification scenario, hospitalisations were adjusted by linearly increasing the identification through the period under study – from 70% in 1998–99 to 80% in 2003–04 for Queensland, from 90% to 94% for Western Australia, from 85% to 90% for South Australia, and from 96% to 98% for the Northern Territory.
  - Under the decreasing identification scenario, hospitalisations were adjusted by linearly decreasing the identification from 90% in 1998–99 to 80% in 2003–04 for Queensland, from 98% to 94% for Western Australia, from 95% to 90% for South Australia, and from 100% to 98% for the Northern Territory.
- The adjustments in the latter two scenarios were based on judgements about the largest plausible shifts in identification during the period; of course if any actual shift in identification were more extreme than has been posted under these scenarios, then the observed trends in hospitalisations might not persist.
- The decline in the hospitalisation rates from injury and poisoning for other Australian males, females and persons during the period 1998–99 to 2003–04 remained significant under all three scenarios.

### **Assault**

Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for assault over the five-year period 1998–99 to 2003–04 are presented in Table 1.03.5 and Figure 1.03.3 below.

- Over the period 1998–99 to 2003–04, there were significant declines in the hospitalisation rate for assault among Indigenous males and females. The fitted trend implies an average yearly decline in the rate of around 0.4 per 1,000.
- Over the same period there was no significant change in the hospitalisation rate for assault for other Australians.
- There were significant declines in both hospitalisation rate ratios and rate differences between Indigenous and other Australians for assault over the period 1998–99 to 2003–04, which reflect both a relative and absolute decline in the gaps between them.

**Table 1.03.5: Age-standardised hospitalisation rates, rate ratios and rate differences for assault, Qld, WA, SA and NT, 1998–99 to 2003–04**

	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	Annual change <sup>(a)</sup>
<b>Indigenous rate per 1,000</b>							
Males	16.2	15.3	15.2	15.8	14.6	13.6	-0.4*
Females	16.6	16.1	15.1	15.5	15.0	14.5	-0.4*
Persons	16.4	15.7	15.1	15.6	14.8	14.1	-0.4*
<b>Other Australian<sup>(b)</sup> rate per 1,000</b>							
Males	1.4	1.4	1.5	1.5	1.4	1.3	0.0
Females	0.3	0.3	0.3	0.3	0.3	0.3	0.0
Persons	0.9	0.9	0.9	0.9	0.9	0.8	0.0
<b>Rate ratio<sup>(c)</sup></b>							
Males	11.5	11.1	10.2	10.8	10.4	10.1	-0.2*
Females	19.0	18.8	16.3	17.1	17.4	17.4	-0.3
Persons	18.7	18.3	16.4	17.3	17.2	16.8	-0.3*
<b>Rate difference<sup>(d)</sup></b>							
Males	14.8	13.9	13.7	14.4	13.2	12.3	-0.4*
Females	15.7	15.2	14.1	14.6	14.1	13.7	-0.4*
Persons	15.5	14.8	14.2	14.7	13.9	13.2	-0.4*

\* Represents results with statistically significant increases or declines at the  $p < .05$  level over the period 1998–99 to 2003–04.

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

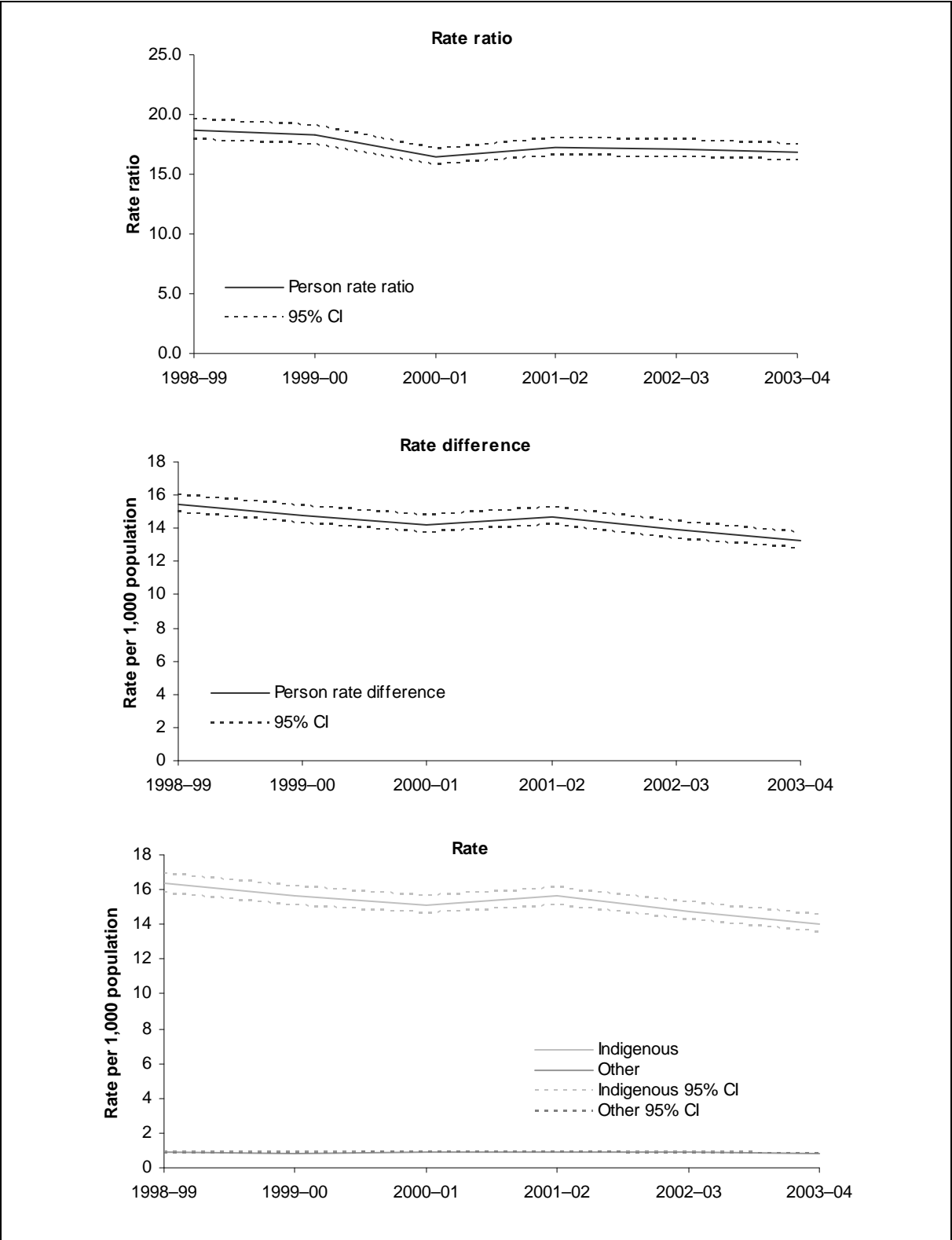
(b) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

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

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

Note: Rates have been directly age standardised using the 2001 Australian standard population.

Source: AIHW analysis of AIHW National Hospital Morbidity database.



Source: AIHW analysis of AIHW National Hospital Morbidity Database.

**Figure 1.03.3: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians for assault, Qld, WA, SA and NT, 1998-99 to 2003-04**

## **Data quality issues**

### **Hospital separations data**

#### ***Separations***

*The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.*

#### ***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).*

#### ***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. While the identification of Indigenous people in hospitalisations is incomplete in all states and territories, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed as having adequate Indigenous identification in 2003–04 (AIHW 2005). It has therefore been recommended that reporting of Indigenous hospital separations data be limited to aggregated information from Queensland, Western Australia, South Australia and the Northern Territory. The proportion of the Indigenous population covered by these four jurisdictions is 60%. The following caveats have also been recommended:*

- *Interpretation of results should take into account the relative quality of the data from the jurisdictions included (currently a degree of Indigenous under-identification in Western Australia and relatively marked Indigenous under-identification in Queensland data).*
- *Data for these four jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.*
- *Hospitalisation data for four jurisdictions should not be assumed to represent the hospitalisation experience in other jurisdictions (ABS & AIHW 2005).*

#### ***Numerator and denominator***

*Rate and ratio calculations rely on good numerator and denominator data. The changes in the completeness of identification of Indigenous people in hospital records may take place at different rates than changes in the identification of Indigenous people in other administrative collections and population censuses. Denominators used here are sourced from ABS's Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009 (ABS 2004).*

#### ***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 Dataset. This dataset includes the standard Indigenous status question but does not include injury coding (for example, ICD-10). The Injury Surveillance National Minimum Dataset includes injury coding (components of ICD-10) but does not include demographic details such as Indigenous status. Therefore, there is currently no national minimum dataset containing both Indigenous status and injury coding.*

## References

ABS (Australian Bureau of Statistics) 2004. Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009. ABS cat. no. 3238.0. Canberra: ABS.

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