

3.08 Discharge against medical advice

The rate at which Aboriginal and Torres Strait Islander people leave hospital against medical advice or are discharged at their own risk

Data sources

Data for this measure come from the AIHW's National Hospital Morbidity Database.

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, 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 2-year period from July 2006 to June 2008. An aggregate of 2 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. 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 the 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.

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.

Proportion of hospitalisations involving discharge against medical advice

Tables 3.08.1 and 3.08.2 present the crude and age standardised proportions of hospitalisations that involved discharge against medical advice in Australia.

- For the period from July 2006 to June 2008, there were 65,065 hospitalisations in Australia where the patient left hospital against medical advice or was discharged at their own risk, 12,780 (20%) of which were hospitalisations of Indigenous patients.
- For approximately 2.5% of all hospitalisations of Indigenous Australians, the patient was discharged against medical advice. The Northern Territory had the highest proportion of Indigenous persons hospitalised who discharged against medical advice (3.8%).
- After adjusting for differences in age structure, Indigenous persons were almost six times as likely as other persons to discharge themselves from hospital against medical advice. Disparities were greatest in South Australia, Western Australia and Victoria where Indigenous persons discharged from hospital against medical advice at nine, six and six times the rate of other persons respectively (Table 3.08.1).
- Indigenous males were more likely than Indigenous females to discharge against medical advice (2.8% compared with 2.3%) (Table 3.08.2).

Table 3.08.1: Discharges from hospital against medical advice, by Indigenous status and state/territory (excluding mental and behavioural disorders), July 2006 to June 2008^{(a)(b)(c)}

	Number		Proportion	Age standardised proportion ^(d)		Ratio ^(f)
	Indigenous	Other ^(e)	Indigenous	Indigenous	Other ^(e)	
New South Wales	2,557	24,645	2.5	2.1	0.6	3.7
Victoria	327	9,193	1.6	1.3	0.2	5.8
Queensland	2,167	10,068	1.7	1.4	0.4	3.9
Western Australia	2,279	3,814	2.2	1.7	0.3	6.1
South Australia	1,205	3,210	3.2	2.4	0.3	8.7
Tasmania	48	614	0.9	0.7	0.3	2.2
Australian Capital Territory	26	355	1.1	0.9	0.3	3.1
Northern Territory	4,171	386	3.8	3.4	0.7	5.0
Australia	12,780	52,285	2.5	2.1	0.4	5.6

(a) Ratio= observed hospitalisations divided by the expected number of hospitalisations based on the age and sex specific proportions for other Australians.

(b) Jurisdictional data excludes private hospitals in Tasmania, the Northern Territory and the Australian Capital Territory..

(c) Data are based on state/territory of usual residence.

(d) Proportions are age-standardised using the age-specific rates of other Australians.

(e) Other includes separations for non-Indigenous Australians and those for whom Indigenous status was not stated.

(f) Ratio = observed hospitalisations divided by the expected number of hospitalisations based on the age and sex specific proportions for other Australians.

Source: AIHW National Hospital Morbidity Database.

Table 3.08.2: Discharges from hospital against medical advice, by Indigenous status and sex (excluding mental and behavioural disorders), Australia, July 2006 to June 2008^(a)

	Number		Proportion	Age standardised proportion		Ratio ^(b)
	Indigenous	Other	Indigenous	Indigenous	Other ^(a)	
Males	6,221	30,035	2.8	2.2	0.4	4.8
Females	6,559	22,250	2.3	1.9	0.3	6.4
Persons	12,780	52,285	2.5	2.1	0.4	5.6

(a) Other includes separations for non-Indigenous Australians and those for whom Indigenous status was not stated.

(b) Ratio = observed hospitalisations divided by the expected number of hospitalisations based on the age and sex specific proportions for other Australians.

Notes

1. Excludes private hospitals in Tasmania, the Northern Territory and the Australian Capital Territory.
2. Data are based on state/territory of usual residence.
3. Care types 7.3, 9 and 10 (newborn – unqualified days only; organ procurement; hospital boarder) excluded from analysis.

Source: AIHW National Hospital Morbidity Database.

Rates (hospitalisations per 1,000 population) of discharge against medical advice

Tables 3.08.3 and 3.08.4 present the number of hospitalisations involving discharge against medical advice per 1,000 population in the six jurisdictions with adequate Indigenous identification in their hospital recording systems (New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory).

Hospitalisations by age and sex

- Indigenous males had slightly higher rates of discharge against medical advice than Indigenous females; however the disparity between Indigenous and non-Indigenous females in rates of discharge against medical advice was greater than the disparity for males (rate ratio of 13 compared with 11) (Table 3.08.3).
- Indigenous Australians aged 34–44 (5.2%) and 15–24 years (4.5%) had the highest proportions of discharged from hospital against medical advice (Table 3.08.4).

Table 3.08.3: Discharges from hospital against medical advice, by Indigenous status and sex (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008^{(a)(b)(c)(d)}

	Number		Per cent ^(e)		Indigenous			Other ^(f)			Rate ratio ^(j)
	Indigenous	Other ^(f)	Indigenous	Other ^(f)	No. per 1000 ^(g)	95% LCL ^(h)	95% UCL ⁽ⁱ⁾	No. per 1,000 ^(g)	95% LCL ^(h)	95% UCL ⁽ⁱ⁾	
Males	6,187	29,481	2.9	0.5	15.7	15.3	16.2	1.5	1.5	1.5	10.5*
Females	6,519	21,835	2.3	0.3	14.4	14.0	14.8	1.1	1.1	1.1	13.4*
Persons	12,706	51,316	2.5	0.4	15.0	14.7	15.3	1.3	1.3	1.3	11.7*

* 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).

(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, Queensland, Western Australia, South Australia and the Northern Territory 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) Percentage of hospital separations (excluding mental and behavioural disorders) in the period 2006–07 to 2007–08.

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

(g) Directly age-using the age-specific rates of other Australians.

(h) LCL = lower confidence limit.

(i) UCL = upper confidence limit.

(j) Rate ratio—Indigenous: other.

Notes

1. Population estimates based on 2006 Census.

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.

Table 3.08.4: Discharges from hospital against medical advice, by Indigenous status and age group (excluding mental and behavioural disorders), Australia, July 2006 to June 2008^{(a)(b)(c)}

Age group (years)	Number		Per cent ^(d)	
	Indigenous	Other ^(e)	Indigenous	Other ^(e)
0–4	632	1,291	1.6	0.2
5–14	222	664	0.9	0.2
15–24	2,320	7,175	4.5	0.8
25–34	3,090	9,298	5.2	0.7
35–44	3,443	8,926	4.0	0.6
45–54	2,064	7,941	2.1	0.5
55–64	756	6,538	0.8	0.3
65+	253	10,452	0.4	0.2
Total^(f)	12,780	52,285	2.1	0.4

* 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).

(c) Financial year reporting.

(d) Percentage of hospital separations (excluding mental and behavioural disorders) in the period 2006–07 to 2007–08.

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

(f) Directly age-standardised using the age-specific rates of other Australians.

Notes

1. Population estimates based on 2006 Census.

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 state/territory

Table 3.08.5 presents hospitalisations for which patients were discharged against medical advice for the two-year period from July 2006 to June 2008 for New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory.

- Overall, Indigenous Australians in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined were discharged from hospital against medical advice at 12 times the rate of other Australians.
- Indigenous Australians were discharged from hospital against medical advice at six times the rate of other Australians in New South Wales, and seven times in Victoria and Queensland. In Western Australia, South Australia and the Northern Territory, Indigenous Australians were discharged from hospital against medical advice at 20, 25 and 26 times the rate of other Australians in these jurisdictions, respectively (Table 3.08.5; Figure 3.08.1).

Table 3.08.5: Discharges from hospital against medical advice, by Indigenous status and state/territory (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, Tas and ACT, July 2006 to June 2008^{(a)(b)(c)(d)}

	Number		Per cent ^(e)		Indigenous			Other ^(f)			Rate ratio ^(j)
	Indig.	Other	Indig.	Other	No. per 1,000 ^(g)	95% LCL ^(h)	95% UCL ⁽ⁱ⁾	No. per 1000 ^(g)	95% LCL ^(h)	95% UCL ⁽ⁱ⁾	
NSW	2,557	24,645	2.5	0.6	10.3	9.8	10.7	1.8	1.8	1.8	5.8*
Vic	327	9,193	1.6	0.2	5.7	5.1	6.4	0.9	0.8	0.9	6.6*
Qld	2,167	10,068	1.7	0.4	8.8	8.4	9.2	1.2	1.2	1.3	7.1*
WA	2,279	3,814	2.2	0.3	18.3	17.5	19.1	0.9	0.9	1.0	19.8*
SA	1,205	3,210	3.2	0.3	25.2	23.6	26.7	1.0	1.0	1.1	24.7*
NT	4,171	386	3.8	0.7	35.8	34.6	37.0	1.4	1.2	1.5	26.1*
NSW, Vic, Qld, WA, SA and NT	12,706	51,316	2.5	0.4	15.0	14.7	15.3	1.3	1.3	1.3	11.7*
Tas	48	614	0.9	0.3	1.5	1.0	2.0	0.7	0.6	0.7	2.3*
ACT	26	355	1.1	0.3	2.9	1.8	4.1	0.5	0.5	0.6	5.6*

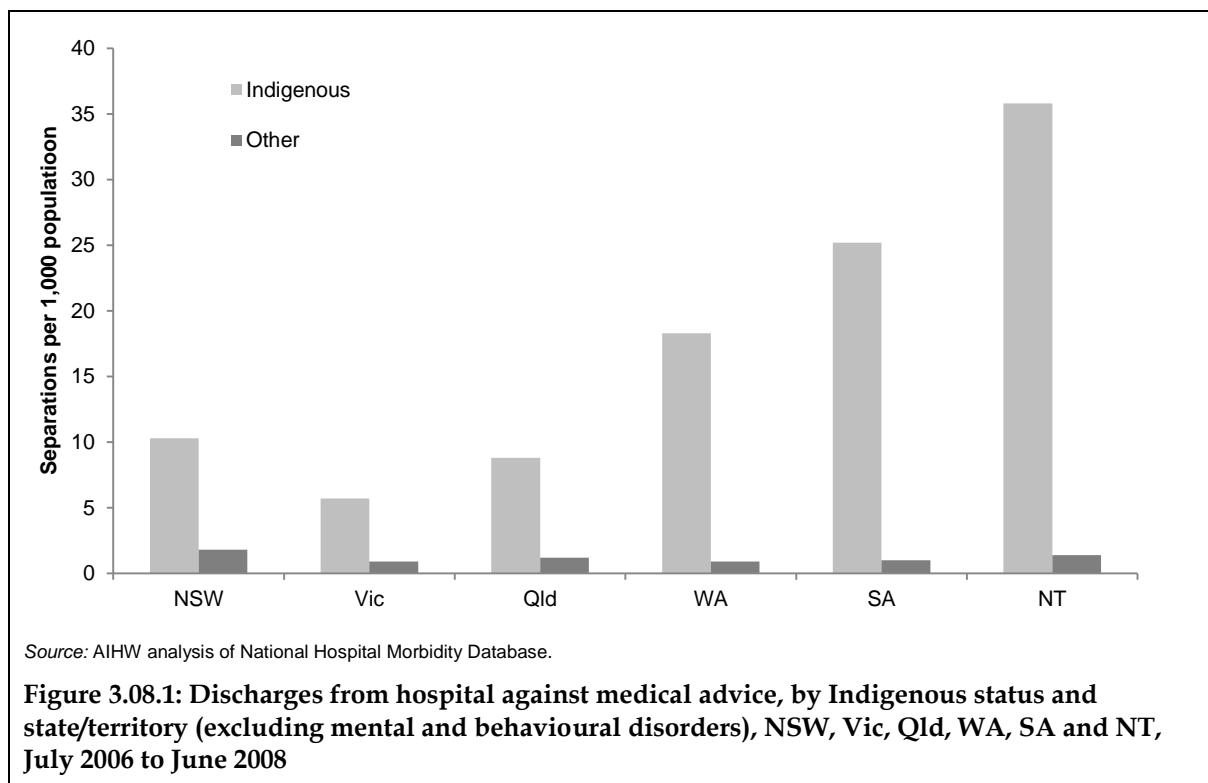
* Represents results with statistically significant differences in the Indigenous/other comparisons at the $p < 0.05$ level.

- (a) Jurisdictional data are from public and most private hospitals. Jurisdictional data exclude private hospitals in the Northern Territory, Tasmania and the Australian Capital Territory.
- (b) Categories are based on the ICD-10-AM fifth 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 and are for New South Wales, Victoria, Queensland, Western Australia, South Australia, and the Northern Territory 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) Percentage of hospital separations (excluding mental and behavioural disorders) in the period 2006–07 to 2007–08.
- (f) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
- (g) Directly age-using the age-specific rates of other Australians.
- (h) LCL = lower confidence limit.
- (i) UCL = upper confidence limit.
- (j) Rate ratio—Indigenous: other.

Notes:

- Population estimates based on 2006 Census.
- 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 remoteness

Hospitalisation rates for ambulatory care sensitive hospital conditions in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory are presented by remoteness using the Australian Standard Geographical Classification (ASGC) in Table 3.08.6, covering the period July 2007 to June 2009.

- Indigenous Australians in all remoteness areas were more likely to be discharged against advice than other Australians. The ratio of discharges against advice of Indigenous people compared with other Australians was higher and the difference was statistically significant for all ASGC areas.
- Rates of discharges against advice per 1,000 head of population were highest for Indigenous people living in *Remote* areas, at 32.4 per 1,000. The rate was highest for other Australians who lived in *Very remote* areas, at 2.1 per 1,000. The lowest rates were observed in *Major cities* areas for both Indigenous people (8.1 per 1,000) and other Australians (1.3 per 1,000).
- Indigenous people were discharged against advice at a rate 17 times that of other Australians in *Remote* areas of Australia. In *Major cities*, where the lowest ratio was observed, Indigenous Australians were hospitalised at a rate of six times that of other Australians. Nationally, the rate was 11 times.

Table 3.08.6: Discharges against advice, by Indigenous status and remoteness, NSW, Vic, Qld, WA, SA and NT, July 2007 to June 2009^{(a)(b)(c)(d)(e)(f)}

	Indigenous				Other ^(g)				Ratio ^(k)
	Number	No. per 1,000 ^(h)	LCL 95% ⁽ⁱ⁾	UCL 95% ^(j)	Number	No. per 1,000 ^(h)	LCL 95% ⁽ⁱ⁾	UCL 95% ^(j)	
Major cities	2,117	8.1	7.7	8.5	36,587	1.3	1.3	1.3	6.2*
Inner regional	1,600	9.5	8.9	10.0	10,694	1.5	1.5	1.5	6.3*
Outer regional	2,777	15.4	14.8	16.0	5,778	1.7	1.7	1.8	8.9*
Remote	2,798	32.4	31.1	33.7	981	2.0	1.8	2.1	16.5*
Very remote	3,879	25.2	23.8	26.6	348	2.1	2.0	2.2	12.0*
Missing	59	281
Total^(l)	13,230	15.2	15.0	15.5	54,669	1.4	1.4	1.4	11.0*

* 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.
 (b) Categories are based on the ICD-10-AM fifth 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 65+.
 (f) 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.
 (g) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
 (h) Directly age-using the age-specific rates of other Australians.
 (i) LCL = lower confidence limit.
 (j) UCL = upper confidence limit.
 (k) Rate ratio Indigenous: other.
 (l) Total includes hospitalisations where ASGC is missing.

Notes:

1. Population estimates based on the 2006 Census.
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

- The most common principal diagnoses of hospitalisations of Indigenous Australians who were discharged against medical advice were injury and poisoning (2,934 separations) followed by respiratory diseases (1,570). These two groups of diagnoses represented 35% of all Indigenous hospitalisations discharged against medical advice. As a proportion of all separations for each specific diagnoses group, discharge against medical advice for Indigenous people was also highest for injury and poisoning (7.3%), followed by diseases of the skin (6.7%), diseases of the nervous system (6.3%) and symptoms, signs and abnormal clinical and laboratory findings (6.0%) (Table 3.08.7).
- The age-standardised proportion of Indigenous Australians who were discharged from hospital against medical advice for diseases of the digestive system was 11.6 times the proportion of other Australians. This was followed by the Indigenous

Australians who were hospitalised for disease of the nervous system, 9.1 times the proportion of other Australians and Indigenous Australians who were hospitalised for diseases of the skin and subcutaneous tissue, were discharged against medical advice at 8.7 times the proportion of other Australians (Table 3.08.7).

Table 3.08.7: Discharges from hospital against medical advice, by Indigenous status and principal diagnosis (excluding mental and behavioural disorders), Australia, July 2006 to June 2008^{(a)(b)(c)}

	Number		Per cent ^(d)		Age-standardised ^{(d)(e)}		Ratio
	Indigenous	Other ^(f)	Indigenous	Other ^(f)	Indigenous	Other ^(f)	
Injury, poisoning and certain other consequences of external causes (S00–Y98)	2,934	10,088	7.3	1.0	5.5	1.0	5.2
Diseases of the respiratory system (J00–J99)	1,570	3,691	4.9	0.6	4.3	0.6	7.6
Symptom, signs and abnormal clinical and laboratory findings, n.e.c. (R00–R99)	1,398	8,307	6.0	0.9	4.6	0.9	5.4
Diseases of the digestive system (K00–K93)	1,306	5,612	4.6	0.3	4.0	0.3	11.6
Complications of pregnancy, childbirth and the puerperium (O00–O99)	981	3,431	2.5	0.4	1.8	0.4	4.8
Diseases of the skin and subcutaneous tissue (L00–L99)	818	1,543	6.7	0.7	5.7	0.7	8.7
Diseases of the circulatory system (I00–I99)	695	4,257	4.1	0.5	2.9	0.5	6.1
Endocrine, nutritional and metabolic diseases (E00–E90)	572	1,630	5.3	0.6	4.2	0.6	7.2
Factors influencing health status and contact with health services (Z00–Z99)	525	4,719	0.2	0.1	0.2	0.1	1.6
Certain infectious and parasitic diseases (A00–B99)	485	992	4.6	0.6	4.8	0.6	8.4
Diseases of the nervous system (G00–G99)	458	1,828	6.3	0.5	4.8	0.5	9.1
Other ^(g)	1,038	6,187	2.2	0.2	1.9	0.2	10.7
Total^(h)	12,780	52,285	2.5	0.4	2.1	0.4	5.6

(continued)

Table 3.08.7 (continued): Discharges from hospital against medical advice, by Indigenous status and principal diagnosis (excluding mental and behavioural disorders), 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).
- (c) Financial year reporting.
- (d) Percentage of hospital separations (excluding mental and behavioural disorders) in the period 2006–07 to 2007–08.
- (e) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.
- (f) Directly age- standardised using the age-specific rates of other Australians.
- (g) Includes: neoplasms, certain conditions originating in the perinatal period, diseases of the ear and mastoid process, diseases of the eye and adnexa, diseases of the genitourinary system, diseases of the musculoskeletal system, diseases of the blood and blood-forming organs and certain disorders involving the immune system, and congenital malformations and deformations and chromosomal abnormalities.
- (h) Includes hospitalisations for which no principal diagnosis was recorded. Excludes mental and behavioural disorders (F00–F99).

Notes

1. Population estimates based on 2006 Census.
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.

Time series analyses

Time series data are presented for the four jurisdictions that have been assessed as having adequate identification of Indigenous hospitalisations for all years from 2001–02 to 2007–08 – Queensland, Western Australia, South Australia and the Northern Territory. These four jurisdictions represent approximately 60% of the Indigenous Australian population. New South Wales and Victoria were identified as having adequate identification of Indigenous hospitalisations from 2004–05 onwards, and are included as part of a separate time series analyses analysis (2004–05 to 2007–08).

The number and rate of hospitalisations for which Indigenous and other Australians were discharged against medical advice over the period 2001–02 to 2007–08 are presented in Table 3.08.8a and Figure 3.08.2a and data for the period 2004–05 to 2007–08 are presented in Table 3.08.8b and Figure 3.08.2b.

- Over the period 2001–02 to 2007–08, in Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant differences in the rate ratios between Indigenous and other Australians rates of discharge from hospital against medical advice.
- In 2001–02, Indigenous persons were discharged from hospital against medical advice at a rate of 17 per 1,000. This rate increased during the period to 18 per 1,000 in 2007–08. However, in 2001–02, Indigenous persons were discharged against medical advice at 19 times the rate of other Australians, but by 2007–08 this had reduced to being discharged at 16 times the rate of other Australians.
- During the period 2004–05 to 2007–08, in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, there were significant differences in the rate ratios between Indigenous and other Australians rates of discharge from hospital against medical advice. In 2004–05, Indigenous persons were discharged against medical advice at 12 times the rate of other Australians; by 2007–08 this had reduced to being discharged at 11 times the rate of other Australians.

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. Also, changes in access, hospital policies and practices all have an impact on the level of hospitalisation over time. Caution should be used in interpreting changes over time because 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 reflect better access to hospitals, rather than a worsening of health.

Table 3.08.8a: Discharges against medical advice, by Indigenous status (excluding mental and behavioural disorders), Qld, WA, SA and NT, 2001–02 to 2007–08^{(a)(b)(c)(d)}

	Number		Indigenous			Other ^(e)			Rate ratio ⁽ⁱ⁾
	Indigenous	Other ^(e)	No. per 1,000 ^(f)	95% LCL ^(g)	95% UCL ^(h)	No. per 1,000 ^(f)	95% LCL ^(g)	95% UCL ^(h)	
2001–02	4,184	6,414	16.9	16.4	17.5	0.9	0.9	0.9	18.5*
2002–03	4,134	6,134	16.7	16.1	17.2	0.9	0.8	0.9	19.4*
2003–04	4,316	6,439	17.0	16.5	17.6	0.9	0.9	0.9	19.3*
2004–05	4,559	6,986	17.9	17.3	18.4	0.9	0.9	1.0	19.0*
2005–06	4,975	7,448	19.2	18.6	19.8	1.0	1.0	1.0	19.5*
2006–07	4,871	8,275	18.3	17.8	18.9	1.1	1.0	1.1	17.2*
2007–08	4,951	9,203	18.3	17.7	18.8	1.2	1.1	1.2	15.9*

* 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).

(c) Financial year reporting.

(d) Data are reported by state/territory of usual residence of the patient hospitalised and are for Queensland, Western Australia, South Australia, and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these four jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

(e) 'Other' includes hospitalisations of non-Indigenous people 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.

Source: AIHW analysis of National Hospital Morbidity Database.

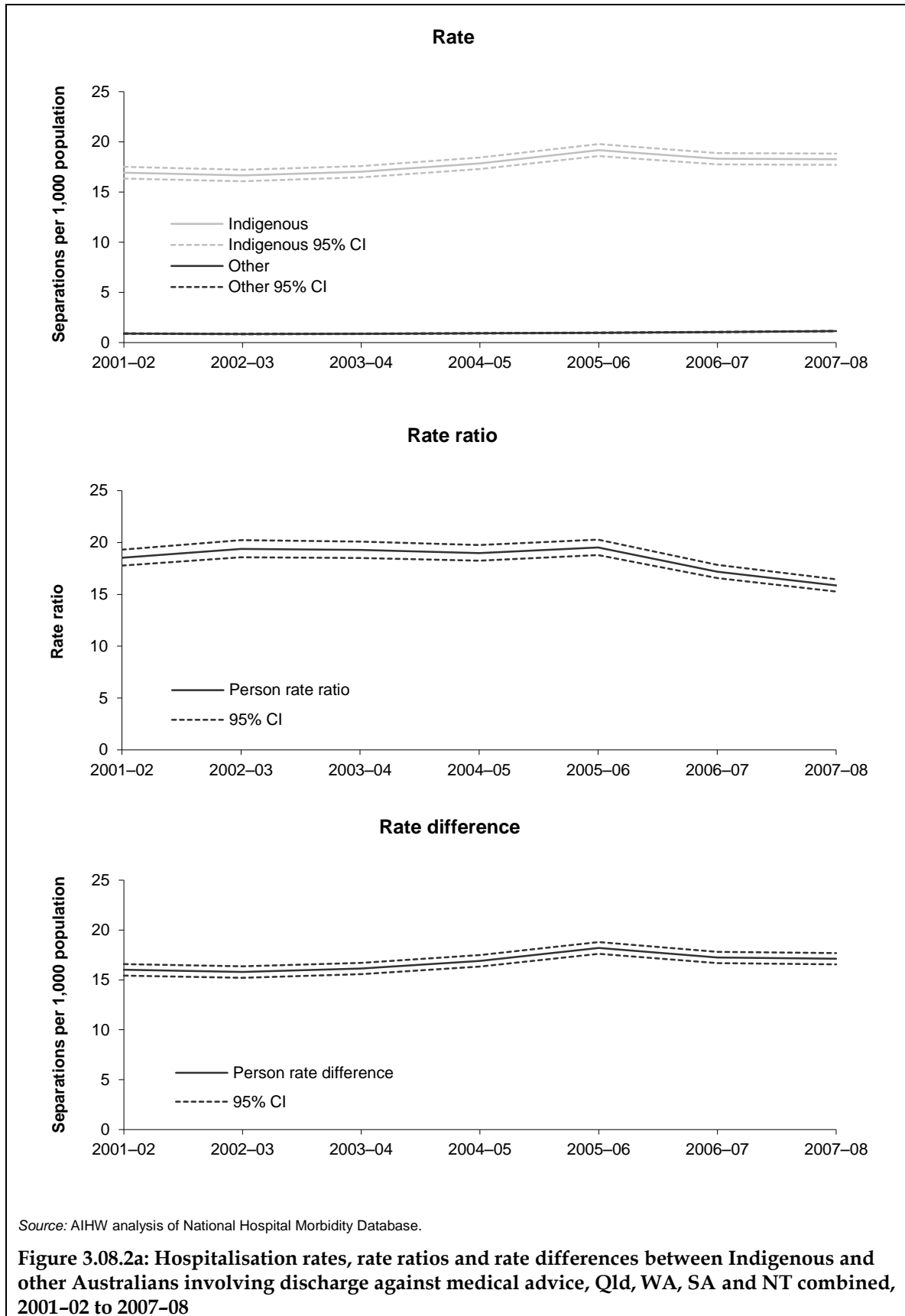


Table 3.08.8b: Discharges against medical advice, by Indigenous status (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, 2004–05 to 2007–08^{(a)(b)(c)(d)}

	Number		Indigenous			Other ^(e)			Rate ratio ⁽ⁱ⁾
	Indigenous	Other ^(e)	No. per 1,000 ^(f)	95% LCL ^(g)	95% UCL ^(h)	No. per 1,000 ^(f)	95% LCL ^(g)	95% UCL ^(h)	
2004–05	5,631	21,490	13.9	13.5	14.3	1.1	1.1	1.1	12.4*
2005–06	6,249	22,790	15.1	14.7	15.5	1.2	1.2	1.2	12.9*
2006–07	6,258	24,338	14.9	14.5	15.3	1.2	1.2	1.2	12.2*
2007–08	6,448	26,981	15.1	14.7	15.5	1.3	1.3	1.3	11.4*

* 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).

(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, Queensland, Western Australia, South Australia, and the Northern Territory 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) 'Other' includes hospitalisations of non-Indigenous people and those for whom Indigenous status was not stated.

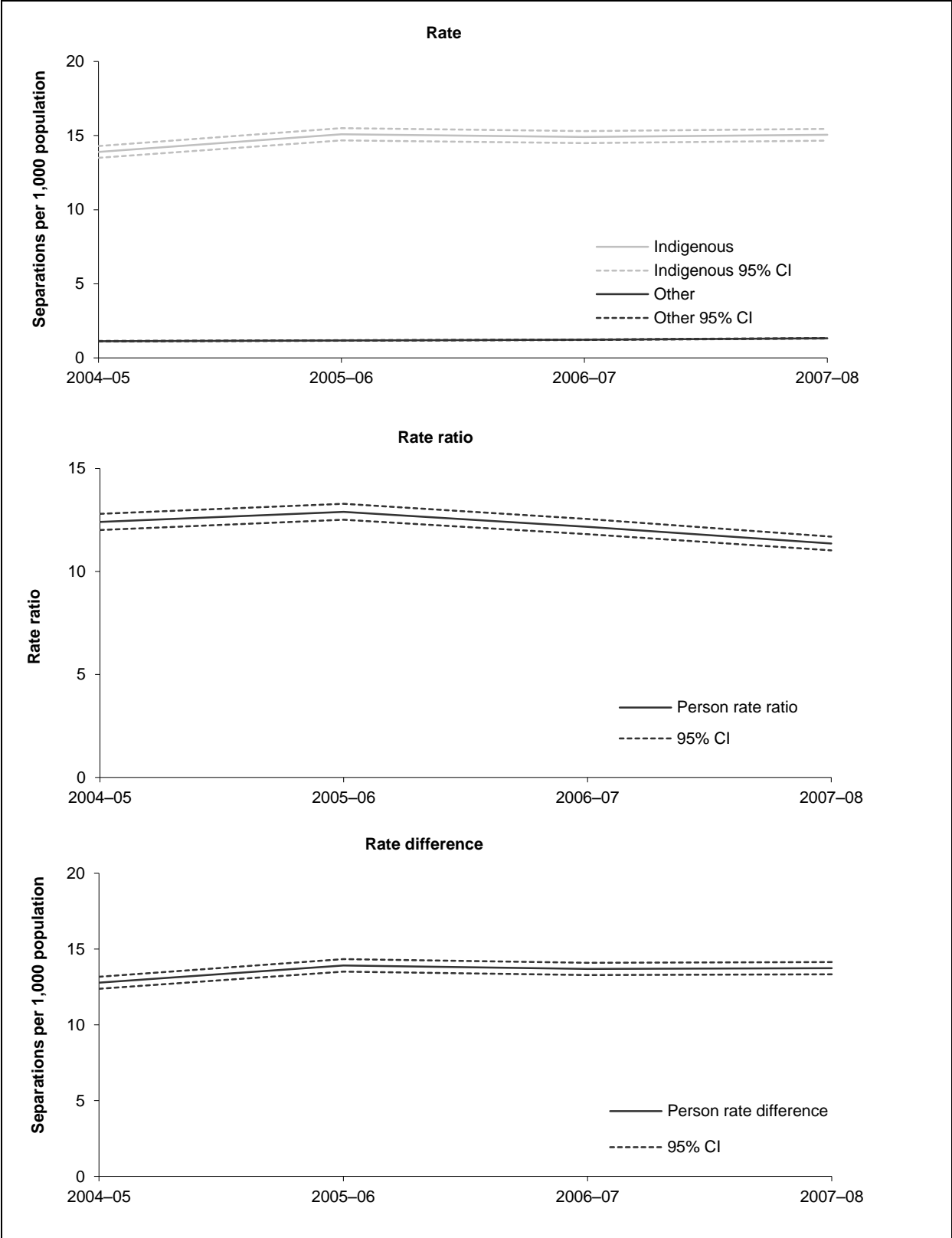
(f) Directly age-standardised using the Australian 2001 standard population.

(g) LCL = lower confidence limit.

(h) UCL = upper confidence limit.

(i) Rate ratio—Indigenous: other.

Source: AIHW analysis of National Hospital Morbidity Database.



Source: AIHW analysis of National Hospital Morbidity Database.

Figure 3.08.2b: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians involving discharge against medical advice, NSW, Vic, Qld, WA, SA and NT combined, 2004-05 to 2007-08

Additional information

Detailed analysis of discharge from hospital against medical advice

In 2009–10 the AIHW undertook a series of univariate and multivariate regression analyses to examine the relative importance of selected variables including Indigenous status, in affecting the outcome of whether a patient discharged themselves from hospital against medical advice for the period 2006–07 to 2007–08 in Australia. All eight states and territories were included in the detailed analyses.

The first series of univariate analyses revealed that there were variations in the likelihood of discharging against medical advice by state and principal diagnosis chapter. As shown in Figure 3.08.3, in all states and territories, Indigenous Australians were more likely to leave hospital against medical advice than other Australians. For Indigenous Australians, the highest proportions were in the Northern Territory, South Australia, New South Wales, and Western Australia, with the lowest in the Australian Capital Territory and Tasmania.

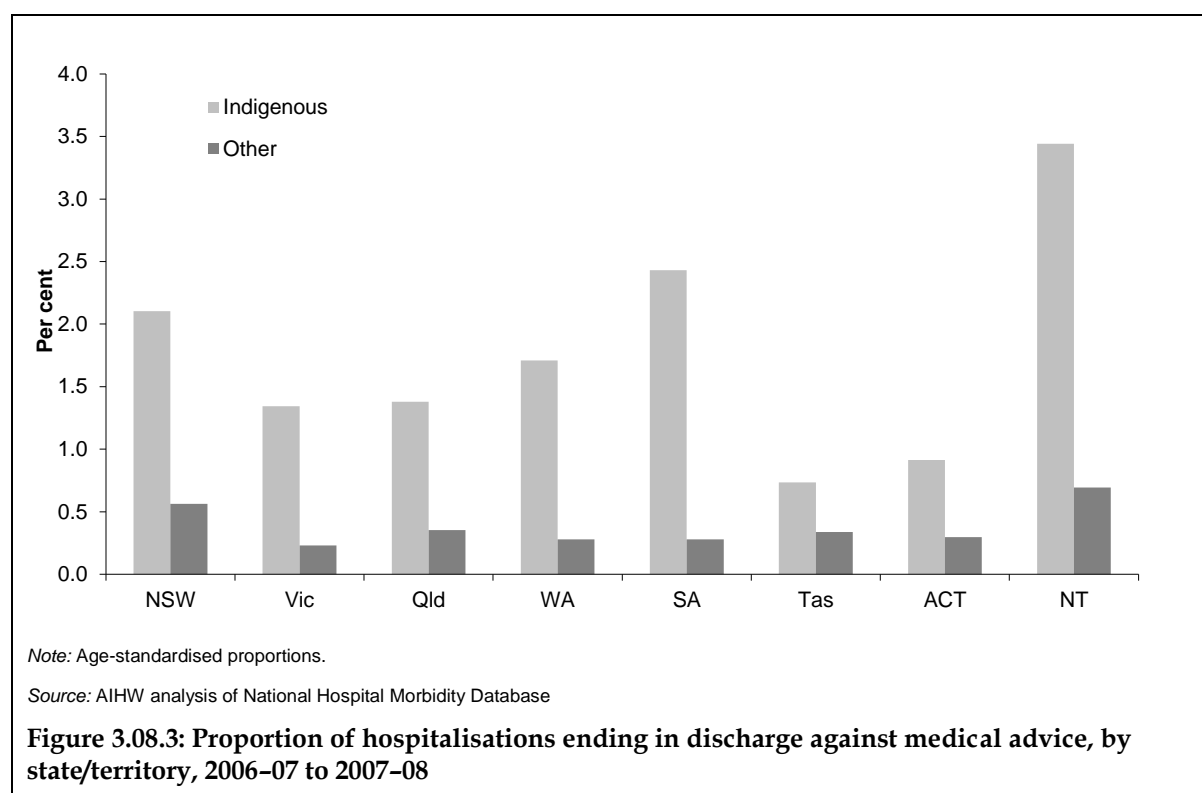


Figure 3.08.4 and Table 3.08.9 show that the greatest disparities were observed in Western Australia and South Australia, where Indigenous patients were 6 to 9 times as likely to be discharged against medical advice as other patients. The lowest disparities were in Tasmania and the ACT.

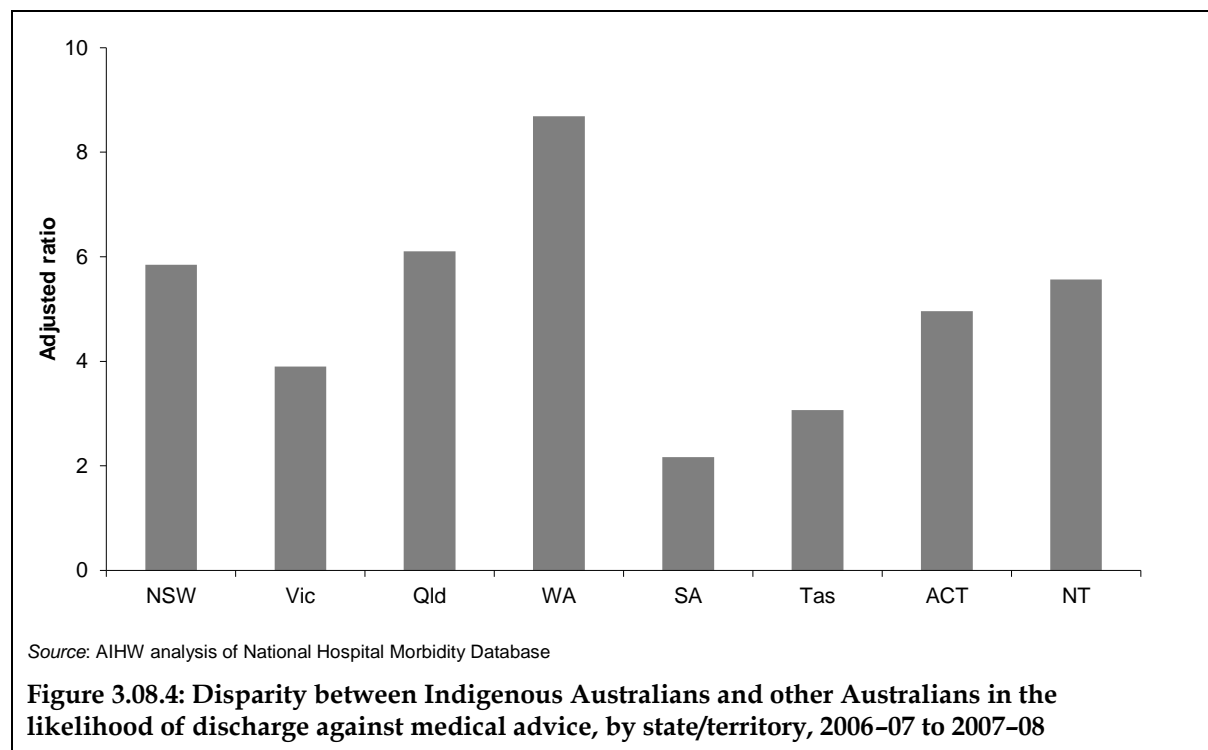


Table 3.08.9: Proportion of hospitalisations ending in discharge against medical advice, by state/territory, 2006-07 to 2007-08

	Indigenous	Other ^(a)	Ratio ^(b)
NSW	2.1	0.6	3.7
Vic	1.3	0.2	5.8
Qld	1.4	0.4	3.9
WA	1.7	0.3	6.1
SA	2.4	0.3	8.7
Tas	0.7	0.3	2.2
ACT	0.9	0.3	3.1
NT	3.4	0.7	5.0

(a) Other includes people for whom Indigenous status was not stated.

(b) Ratio = observed hospitalisations divided by the expected number of hospitalisations based on the age and sex specific proportions for other Australians.

Note: Age-standardised proportions.

Source: AIHW analysis of National Hospital Morbidity Database

The univariate analyses also found that a higher proportion of Indigenous patients were discharged against medical advice across all diagnostic categories, except for congenital malfunctions. Apart from mental and behavioural disorders, the principal diagnoses that

had the highest numbers of separations for Indigenous people ending in self-discharge were diseases of the skin and injury, poisoning and external causes (Figure 3.08.05). Table 3.08.10 further shows that the diagnosis categories with the highest proportions of self-discharge were diseases of the skin (5.7%), injury, poisoning and external causes (5.5%), diseases of the nervous system (4.8%), and infectious and parasitic diseases (4.8%).

The disease categories with the greatest difference in self-discharge between Indigenous and other Australians were diseases of the musculoskeletal system (ratio of 15), diseases of the eye (ratio of 12), diseases of the digestive system (ratio of 12), and diseases of the genitourinary system (ratio of 11).

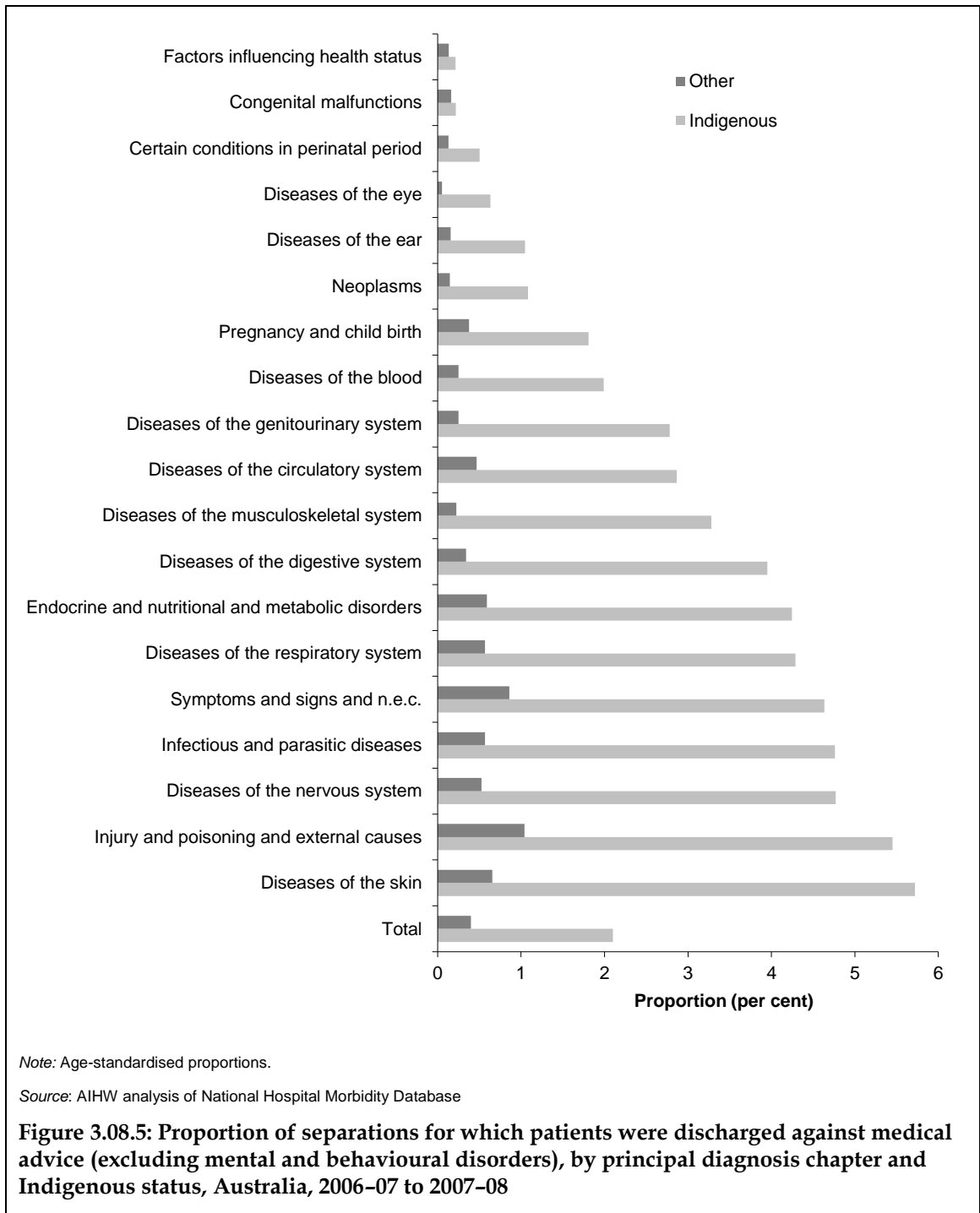


Table 3.08.10: Proportion of separations for which patients were discharged against medical advice (excluding mental and behavioural disorders), by principal diagnosis chapter and Indigenous status, Australia, 2006–07 to 2007–08

Principal diagnoses	Indigenous	Other	Ratio^(a)
Diseases of the skin	5.7	0.7	8.7
Injury and poisoning and external causes	5.5	1.0	5.2
Diseases of the nervous system	4.8	0.5	9.1
Infectious and parasitic diseases	4.8	0.6	8.4
Symptoms and signs and n.e.c.	4.6	0.9	5.4
Diseases of the respiratory system	4.3	0.6	7.6
Endocrine and nutritional and metabolic disorders	4.2	0.6	7.2
Diseases of the digestive system	4.0	0.3	11.6
Diseases of the musculoskeletal system	3.3	0.2	14.7
Diseases of the circulatory system	2.9	0.5	6.1
Diseases of the genitourinary system	2.8	0.2	11.1
Diseases of the blood	2.0	0.3	7.9
Pregnancy and child birth	1.8	0.4	4.8
Neoplasms	1.1	0.1	7.4
Diseases of the ear	1.0	0.2	6.8
Diseases of the eye	0.6	0.1	12.1
Certain conditions in perinatal period	0.5	0.1	3.8
Congenital malfunctions	0.2	0.2	1.3
Factors influencing health status	0.2	0.1	1.6
Total	2.1	0.4	5.6

(a) Ratio= observed hospitalisations divided by the expected number of hospitalisations based on the age and sex specific proportions for other Australians.

Notes

1. Proportions are age-standardised.
2. Excludes private hospitals in Tasmania, the Northern Territory and the Australian Capital Territory.
3. Other includes separations for non-Indigenous Australians and those for whom Indigenous status was not stated.
4. Data are based on state/territory of usual residence.
5. Care types 7.3, 9 and 10 (newborn – unqualified days only; organ procurement; hospital boarder) excluded from analysis.

Source: AIHW National Hospital Morbidity Database.

Further analyses by state/territory found that the Northern Territory had the highest proportion of separations of Indigenous patients discharged against medical advice for most diagnostic chapters. For example, for diseases of the skin, diseases of the respiratory system, endocrine, nutrition and metabolic disorders, and infectious and parasitic diseases, over 8% of separations of Indigenous patients involved discharge against medical advice.

In Queensland, disparities were greatest for diseases of the digestive system (ratio of 8), diseases of the nervous system (ratio of 6), diseases of the musculoskeletal system (ratio of 6), and diseases of the blood (ratio of 6). In Western Australia, disparities were greatest for musculoskeletal diseases (ratio of 27), diseases of the blood (ratio of 15), and diseases of the digestive system (ratio of 14). In South Australia, disparities were greatest for diseases of the eye (ratio of 35) and musculoskeletal diseases (ratio of 27). In the Northern Territory, disparities were greatest for diseases of the blood (ratio of 27) and neoplasms (ratio of 20). In New South Wales, disparities were greatest for diseases of the musculoskeletal diseases (ratio of 7) and diseases of the eye (ratio of 8). In Victoria, disparities were greatest for diseases of the blood (ratio of 15) and certain conditions in perinatal period (ratio of 14).

A second series of univariate analyses focused on differences by state/territory, diagnosis chapter, and remoteness category. Table 3.08.11 and Figure 3.08.6 illustrate that the proportion of separations for which patients were discharged against medical advice among Indigenous Australians was much higher than among other Australians across all remoteness categories (excluding mental and behavioural disorders). For both Indigenous and other Australians, the proportions increased with increasing remoteness.

Table 3.08.11: Proportion of hospitalisations ending in discharge against medical advice, by Indigenous status and remoteness, 2006–07 to 2007–08

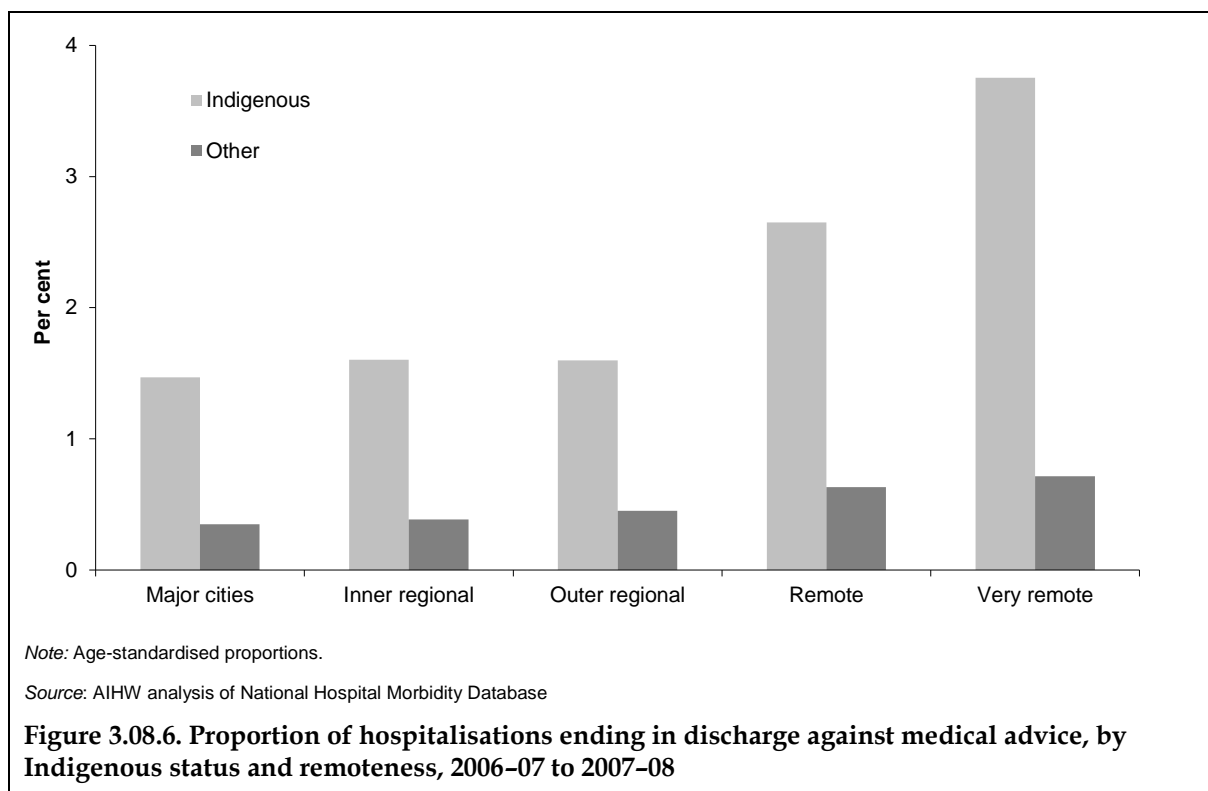
ASGC remoteness category	Indigenous	Other	Ratio^(a)
Major cities	1.5	0.3	4.2
Inner regional	1.6	0.4	4.2
Outer regional	1.6	0.4	3.6
Remote	2.7	0.6	4.2
Very remote	3.8	0.7	5.3

(a) Ratio = observed hospitalisations divided by the expected number of hospitalisations based on the age and sex specific proportions for other Australians.

Notes

1. Proportions are age standardised.
2. Excludes private hospitals in Tasmania, the Northern Territory and the Australian Capital Territory.
3. Other includes separations for non-Indigenous Australians and those for whom Indigenous status was not stated.
4. Data are based on state/territory of usual residence.
5. Care types 7.3, 9 and 10 (newborn – unqualified days only; organ procurement; hospital boarder) excluded from analysis.

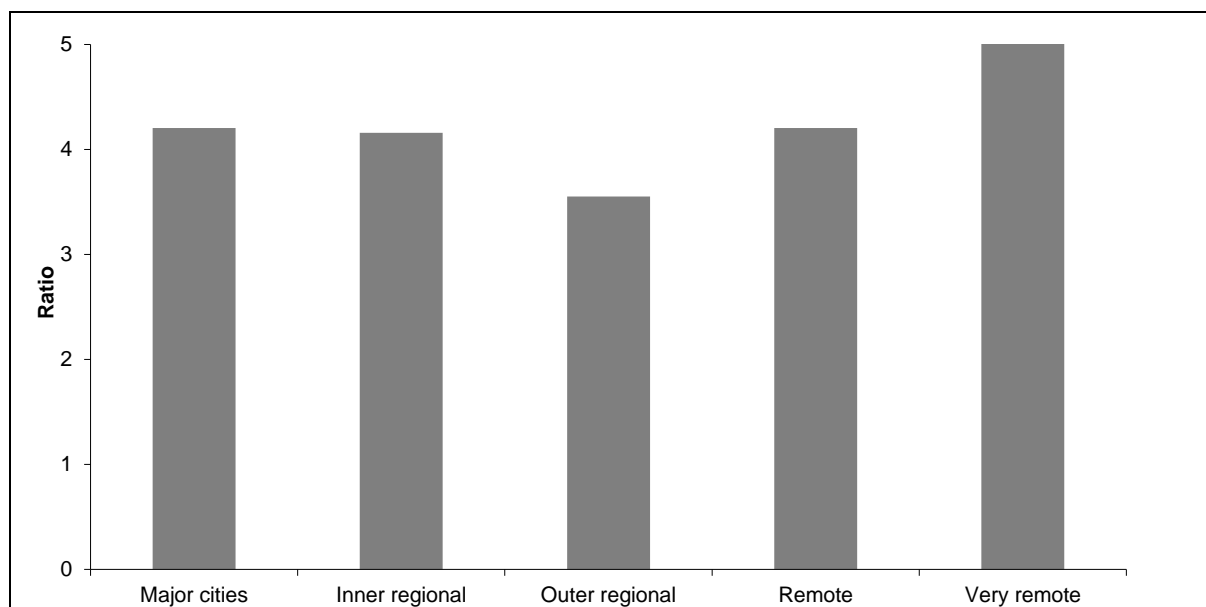
Source: AIHW National Hospital Morbidity Database.



An examination of the variation in remoteness *within* each state/territory showed that these patterns of increasing proportions with increasing remoteness were exhibited in four states. In Queensland, proportions for Indigenous patients were highest in *Remote* areas (2.2%), followed by *Major cities* (1.4%). In Western Australia, proportions were highest in *Very remote areas* (2.8%), followed by *Inner regional areas* (2.3%). In South Australia, proportions were highest in *Remote* and *Very remote* areas (4.2% and 5.4% respectively). In the Northern Territory, proportions were highest in *Remote* areas (3.4%), followed by *Very remote* areas (3.2%).

In New South Wales, the proportions were highest in *Remote* areas (3.3%), followed by *Very remote* areas (2.6%). In Victoria, proportions were slightly higher in *Remote* areas (2.3%) followed by *Major cities* (1.4%). In Tasmania, proportion for *Inner* and *Outer regional* areas were 1.0% and 0.5% respectively.

As shown in Figure 3.08.7, the greatest disparities between Indigenous Australians and other Australians were found in the *Very remote* and *Remote* areas, with Indigenous Australians 4 and 5 times as likely as other Australians to discharge themselves.



Source: AIHW analysis of National Hospital Morbidity Database

Figure 3.08.7. Disparity between Indigenous and other Australians in the likelihood of discharge against medical advice, by remoteness, 2006-07 to 2007-08

These patterns generally hold within the state/territory. The data were further broken down by remoteness category and principal diagnosis. The proportions of separations for which Indigenous patients were discharged against medical advice were highest in *Remote* and *Very remote* areas for most principal diagnoses.

The diagnostic chapters with the highest proportions of Indigenous separations ending in discharge against medical advice varied by region (Table 3.08.12). Although some diagnostic chapters appear frequently (such as diseases of the respiratory system and symptoms and signs), injury, poisoning and external causes have high rates in *Remote* regions.

Table 3.08.12: Diagnosis chapters with the highest proportions of Indigenous separations ending in discharge against medical advice

Remoteness category	Highest proportion	Second highest proportion	Third highest proportion
Major cities	Symptoms, signs, n.e.c. (3.8%)	Diseases of the respiratory system (3.7%)	Infectious and parasitic diseases (3.3%)
Inner regional	Diseases of the nervous system (5.0%)	Injury, poisoning, external causes (3.4%)	Symptoms, signs, n.e.c. (3.4%)
Outer regional	Symptoms, signs, n.e.c. (4.9%)	Diseases of the respiratory system (4.7%)	Injury, poisoning and external causes (4.6%)
Remote	Injury, poisoning and external causes (5.9%)	Infectious and parasitic diseases (5.8%)	Diseases of the skin (5.7%)
Very remote	Diseases of the nervous system (8.3%)	Diseases of the respiratory system (7.8%)	Diseases of the skin (7.1%)

Source: AIHW analysis of National Hospital Morbidity Database

A third series of more detailed univariate analysis looked at the association between discharge against medical advice and other variables such as age, sex, average length of stay and diagnosis subcategories.

This analysis showed that Indigenous males were more likely to be discharged from hospital against medical advice than Indigenous females (3% compared with 2% of hospitalisations). The disparity between Indigenous and other Australians in the proportion of hospitalisations for which patients were discharged against medical advice was greater for females (ratio of 6) than males (ratio of 5).

The majority of hospitalisations for which Indigenous and other patients were discharged against medical advice were among those aged 25–44 years (51% of Indigenous hospitalisations and 35% of other Australian hospitalisations). Within each age group, the highest proportion of hospitalisations for which Indigenous and other patients were discharged from hospital against medical advice were among those aged 25–34 years (5.2% for Indigenous patients and around 0.7% for other patients). The greatest disparities between Indigenous and other Australians in the proportion of hospitalisations for which patients were discharged against medical advice were among those aged 25–34 years, 0–4 years and 35–44 years (ratios of 7.8, 7.4 and 6.6, respectively) (Figure 3.08.8; Table 3.08.13).

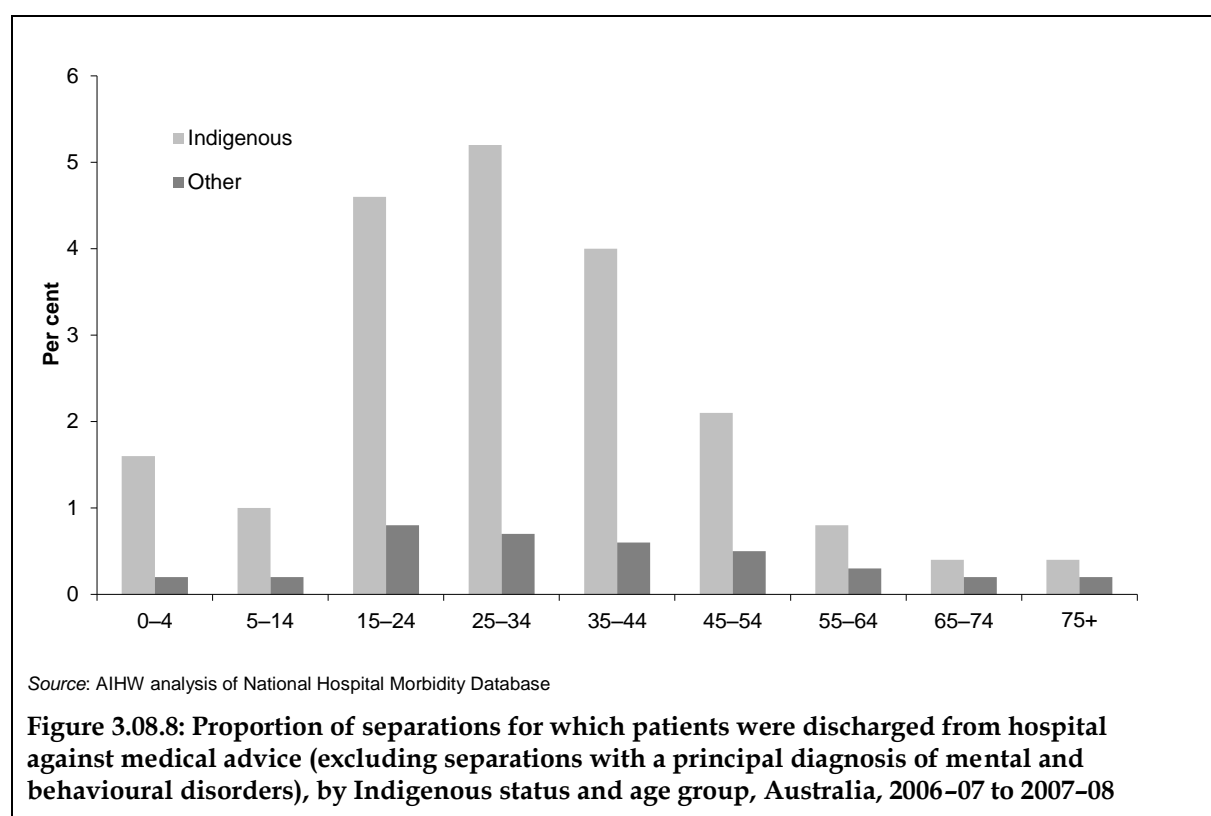


Table 3.08.13: Proportion of separations for which patients were discharged from hospital against medical advice (excluding separations with a principal diagnosis of mental and behavioural disorders), by Indigenous status and age group, Australia, 2006–07 to 2007–08

Age groups (years)	Indigenous		Other ^(a)		Ratio ^(b)
	No.	Per cent	No.	Per cent	
0–4	632	1.6	1,291	0.2	7.4
5–14	222	1.0	664	0.2	6.1
15–24	2,320	4.6	7,175	0.8	5.8
25–34	3,090	5.2	9,298	0.7	7.8
35–44	3,443	4.0	8,926	0.6	6.6
45–54	2,064	2.1	7,941	0.5	4.5
55–64	756	0.8	6,538	0.3	2.8
65–74	200	0.4	4,836	0.2	2.1
75+	53	0.4	5,616	0.2	1.9

(a) 'Other' includes those for whom Indigenous status was not stated.

(b) Ratio—proportion of separations for other Australians divided by proportion for Indigenous Australians.

Notes

1. Excludes private hospitals in Tasmania, the Northern Territory and the Australian Capital Territory.
2. Other includes separations for non-Indigenous Australians and those for whom Indigenous status was not stated.
3. Data are based on state/territory of usual residence.
4. Care types 7.3, 9 & 10 (Newborn – unqualified days only; organ procurement; hospital boarder) excluded from analysis.

Source: AIHW National Hospital Morbidity Database.

Indigenous patients who were discharged from hospital against medical advice stayed in hospital longer on average than Indigenous patients who were not discharged from hospital against medical advice (3.0 days compared with 2.6 days) (Table 3.08.14). Indigenous patients who were discharged from hospital against medical advice had a similar average length of stay to other patients (3.0 days). In comparison, Indigenous patients who were not discharged from hospital against medical advice had a lower average length of stay in hospital than other patients (2.6 days compared with 3.1 days).

Table 3.08.14: Average length of stay in hospital for patients who were discharged against medical advice (excluding diagnoses for mental and behavioural disorders) and not discharged against medical advice, by Indigenous status and sex, Australia, 2006–07 to 2007–08

	Discharged against medical advice					Not discharged against medical advice				
	Number of bed days		Average length of stay		Ratio	Number of bed days		Average length of stay		Ratio
	Indig	Other ^(a)	Indig.	Other ^(a)		Indig.	Other ^(a)	Indig.	Other ^(a)	
Males	19,144	90,773	3.0	3.0	1.0	595,068	19,866,256	2.8	3.0	0.9
Females	19,541	64,870	2.9	2.9	1.0	710,798	23,050,171	2.5	3.1	0.8
Persons	38,685	155,643	3.0	3.0	1.0	1,305,866	42,916,427	2.6	3.1	0.9

(a) 'Other' includes those for whom Indigenous status was not recorded.

Source: AIHW analysis of National Hospital Morbidity Database.

The most common diagnosis subcategories for which Indigenous patients were discharged from hospital against medical advice were injuries to the head, representing 7.3% of total hospitalisations for which Indigenous patients were discharged against medical advice, followed by infections of the skin and subcutaneous tissues (5.9%) and influenza and pneumonia (5.0%). These three diagnosis subcategories were the most common diagnosis subcategories for which both Indigenous males and Indigenous females were discharged from hospital against medical advice.

Indigenous patients were more likely to be discharged from hospital against medical advice than other patients for all of the top 15 most common diagnosis subcategories for which patients were discharged against medical advice. The greatest disparities were for episodic and paroxysmal disorders, influenza and pneumonia, and diseases of the gallbladder and biliary tract and pancreas (ratios of 7.3, 6.8 and 6.6, respectively).

Given the importance of all these factors, a further series of univariate and multivariate analyses were performed to examine the relative importance of selected variables in affecting the outcome of whether a person discharges against medical advice, and to see whether controlling for these factors eliminated the impact of Indigenous status. Thus, the analyses sought to answer the question of whether compositional differences between the two populations accounted for differences in the likelihood of discharge against medical advice. Categories of included variables were state and territory, remoteness, and principal diagnoses. All analyses controlled for age and sex. Univariate analyses showed that females hospitalised for each principal diagnosis chapter were less likely to discharge against medical advice than males (odds ratios ranged from 0.54 for factors influencing health status to 0.60 for injury and poisoning).

Results from both the univariate and multivariate analyses showed that Indigenous status was the most significant variable contributing to whether a patient would discharge themselves from hospital against medical advice, even after controlling for the other factors.

The principal diagnosis chapters of 'mental and behavioural disorders' and 'injury, poisoning and external causes' were the second and third most significant variables after Indigenous status that affected the outcome of discharge from hospital against medical advice. Patients within these categories were more likely to discharge against medical advice than patients hospitalised for other diagnoses.

Aside from other principal diagnosis chapters (factors influencing health status, injury, poisoning and external causes and symptoms, signs and n.e.c), sex was the next most significant variable, with males approximately twice as likely as females to take their own discharge. Aside from diseases of the respiratory system, age group was the next most significant variable.

Hospitalisation for mental and behavioural disorders was the most significant variable of all principal diagnosis chapters that increased the likelihood of being discharged against medical advice, followed by hospitalisations for injury, poisoning and external causes.

State/territory of usual residence of a patient paired with state/territory of hospital location was more significant in contributing to the outcome of whether a patient would discharge themselves from hospital than remoteness of usual residence paired with remoteness of hospital location. When the usual residence and hospital location variables were considered separately, results show that where a patient is hospitalised is more important than where a patient resides.

Given that the control variables did have a significant impact on the outcome variable, separate multivariate regressions were run for Indigenous and other Australians to test whether the impact of these variables was similar for both groups; for example, whether living in a remote area has the same effect for other Australians that it does for Indigenous Australians.

The findings demonstrate that there were general similarities in the impacts of sex, age, and remoteness for Indigenous and other Australians. Results for Indigenous Australians showed that females were less likely to discharge against medical advice than males (odds ratio of 0.81). Similarly, for other Australians, females were also less likely to discharge against medical advice (odds ratio of 0.62). For Indigenous Australians, the odds of discharge against medical advice for patients in the 20–24, 25–29, 30–34, 35–39 and 40–44 year age groups were between 10 and 12 times the odds for patients aged 75 years and over. These age groups were also associated with higher rates of discharge against medical advice for other Australians, but the odds ratios were much lower than for other Australians (between 3 and 4).

In general, for both Indigenous and other Australians, compared with patients with a usual residence in *Major cities* and who were hospitalised in *Major cities*, patients who were resident in *Inner or Outer regional*, *Remote* or *Very remote* areas and were hospitalised in *Remote* or *Very remote* areas were more likely to discharge against medical advice.

For Indigenous Australians, patients who were resident in *Very remote* areas and were hospitalised in *Remote* areas were most likely to discharge against medical advice (odds ratio of 3.57), followed by patients with residence in *Inner regional* areas who were hospitalised in *Very remote* areas (ratios of around 3.2)

For other Australians, patients who were resident in *Outer regional* areas and were hospitalised in *Remote* areas were most likely to discharge against medical advice (odds ratio of 2.6), followed by patients with residence in *Major cities* who were hospitalised in *Outer regional* areas (ratio of 2.5) and patients with residence in *Remote* areas who were hospitalised in *Very remote* areas (ratio of 2.4)

Results for Indigenous Australians showed that principal diagnosis was the most significant variable contributing to whether patients would discharge from hospital against medical advice. Age group was the second most significant variable contributing to whether Indigenous patients would discharge against medical advice – odds ratios were highest amongst those aged 25–44 years. Sex was the next most significant variable. Remoteness of usual residence/remoteness of hospital was the least significant variable affecting the outcome of discharge against medical advice for Indigenous Australians – odds ratios were highest among those residing in *Inner or Outer regional*, *Remote* or *Very remote* areas and hospitalised in *Remote* or *Very remote* areas.

In contrast, results for other Australians showed that sex was the most significant variable affecting the outcome of whether a patient would discharge from hospital against medical advice – odds ratios were lower for females compared with males. Principal diagnosis was the second most significant variable affecting the outcome of discharge from hospital against medical advice – mental and behavioural disorders had the highest odds ratio. Age group was the next most significant variable contributing to whether a patient would discharge from hospital against medical advice for other Australians, followed by remoteness of usual residence/remoteness of hospital.

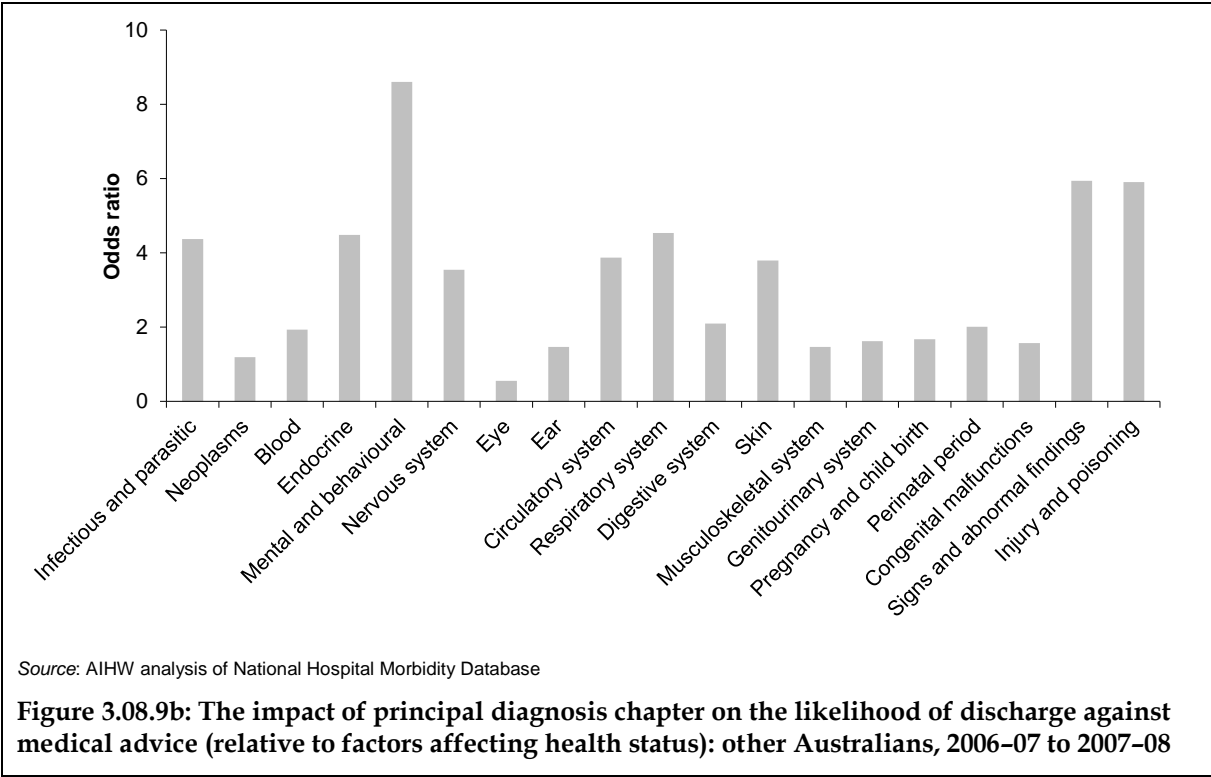
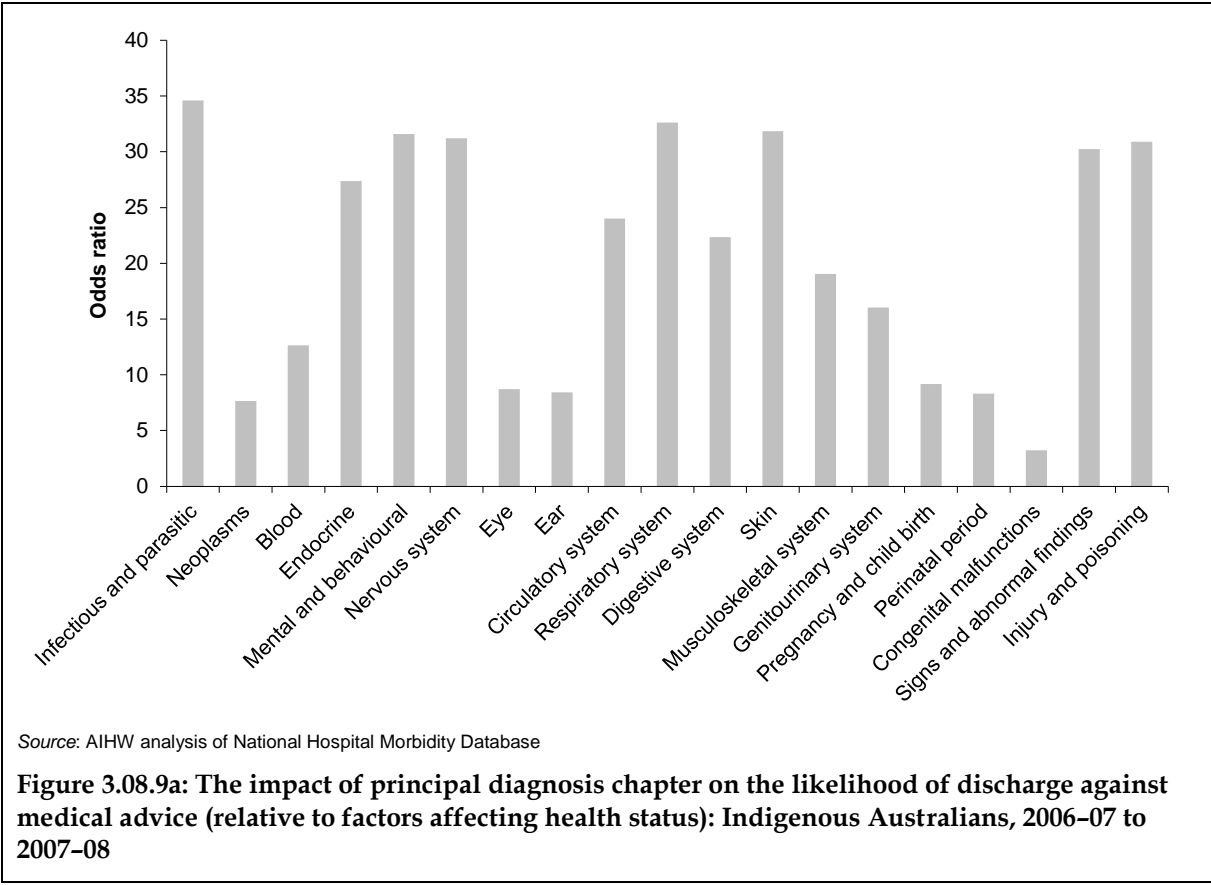
Table 3.08.15 and Figures 3.08.9a and 3.08.9b present the odds ratios of the principal diagnosis chapters for Indigenous Australians and other Australians. The results are relative to “factors affecting health status.” For Indigenous Australians, the highest odds ratios are for infectious and parasitic diseases, diseases of the respiratory system, diseases of the skin, and mental and behavioural disorders. The lowest odds ratios are for congenital malformations, neoplasms, and certain conditions in perinatal period. For other Australians, the highest odds ratios are for mental and behavioural disorders, symptoms, signs and abnormal findings, and injury and poisoning. The lowest odds ratios are for diseases of the eye, congenital malformations, and neoplasms.

Table 3.08.15: The impact of principal diagnosis chapter on the likelihood of discharge against medical advice (relative to factors affecting health status): Indigenous Australians, 2006–07 to 2007–08

	Indigenous	Other ^(a)
	Odds ratio	
Infectious & parasitic	34.6	4.4
Respiratory system	32.6	4.5
Skin	31.9	3.8
Mental & behavioural	31.6	8.6
Nervous system	31.2	3.5
Injury & poisoning	30.9	5.9
Signs & abnormal findings	30.3	5.9
Endocrine	27.4	4.5
Circulatory system	24.0	3.9
Digestive system	22.4	2.1
Musculoskeletal system	19.1	1.5
Genitourinary system	16.0	1.6
Blood	12.7	1.9
Pregnancy & child birth	9.2	1.7
Eye	8.7	0.6
Ear	8.4	1.5
Perinatal period	8.3	2.0
Neoplasms	7.6	1.2
Congenital malfunctions	3.2	1.6

(a) ‘Other’ includes those for whom Indigenous status was not stated.

Source: AIHW National Hospital Morbidity Database.



Although these exploratory analyses have been important in identifying some of the factors underlying the disparity between Indigenous and other Australians in the likelihood of discharging against medical advice, they were not able to fully account for the differences. Thus, they point to the need for further research in other domains such as individual factors (such as psychosocial, personal circumstances, health and wellbeing, and cultural issues) and community level factors (such as trust/mistrust in system) and hospital level factors (such as staff, hospital policies and the environment).

Data quality issues

National Hospital Morbidity Database

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.

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. An estimated 89% of Indigenous patients were correctly identified in Australian public hospital admission records in 2007–08. 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 was 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 New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory have adequate Indigenous identification (80% or higher overall levels of Indigenous identification in public hospitals only) in their hospital 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 covered by these six jurisdictions 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 (currently a small degree of Indigenous under-identification in data from New South Wales and South Australia, and relatively marked Indigenous under-identification in data from Queensland and Victoria).
- Interpretation of time series analysis should take into account the possible contribution of changes over time in ascertainment of Indigenous status. This will be reflected in Indigenous patient changes in hospitalisation rates for Indigenous people.
- Data for these six jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.
- Hospitalisation data for these six jurisdictions are not necessarily representative of the jurisdictions not included.

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 2010 (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.

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

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List of tables

Table 3.08.1:	Discharges from hospital against medical advice, by Indigenous status and state/territory (excluding mental and behavioural disorders), July 2006 to June 2008.....	1779
Table 3.08.2:	Discharges from hospital against medical advice, by Indigenous status and sex (excluding mental and behavioural disorders), Australia, July 2006 to June 2008	1780
Table 3.08.3:	Discharges from hospital against medical advice, by Indigenous status and sex (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008	1781

Table 3.08.4:	Discharges from hospital against medical advice, by Indigenous status and age group (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008	1782
Table 3.08.5:	Discharges from hospital against medical advice, by Indigenous status and state/territory (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, Tas and ACT, July 2006 to June 2008	1784
Table 3.08.6:	Discharges against advice, by Indigenous status and remoteness, NSW, Vic, Qld, WA, SA and NT, July 2007 to June 2009.....	1786
Table 3.08.7:	Discharges from hospital against medical advice, by Indigenous status and principal diagnosis (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008.....	1788
Table 3.08.8a:	Discharges against medical advice, by Indigenous status (excluding mental and behavioural disorders), Qld, WA, SA and NT, 2001-02 to 2007-08	1791
Table 3.08.8b:	Discharges against medical advice, by Indigenous status (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, 2004-05 to 2007-08	1793
Table 3.08.9:	Proportion of hospitalisations ending in discharge against medical advice, by state/territory, 2006-07 to 2007-08.....	1796
Table 3.08.10:	Proportion of separations for which patients were discharged against medical advice (excluding mental and behavioural disorders), by principal diagnosis chapter and Indigenous status, Australia, 2006-07 to 2007-08.....	1799
Table 3.08.11:	Proportion of hospitalisations ending in discharge against medical advice, by Indigenous status and remoteness, 2006-07 to 2007-08	1800
Table 3.08.12:	Diagnosis chapters with the highest proportions of Indigenous separations ending in discharge against medical advice.....	1802
Table 3.08.13:	Proportion of separations for which patients were discharged from hospital against medical advice (excluding separations with a principal diagnosis of mental and behavioural disorders), by Indigenous status and age group, Australia, 2006-07 to 2007-08.....	1804
Table 3.08.14:	Average length of stay in hospital for patients who were discharged against medical advice (excluding diagnoses for mental and behavioural disorders) and not discharged against medical advice, by Indigenous status and sex, Australia, 2006-07 to 2007-08.....	1804
Table 3.08.15:	The impact of principal diagnosis chapter on the likelihood of discharge against medical advice (relative to factors affecting health status): Indigenous Australians, 2006-07 to 2007-08.....	1807

List of figures

Figure 3.08.1:	Discharges from hospital against medical advice, by Indigenous status and state/territory (excluding mental and behavioural disorders), NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008	1785
Figure 3.08.2a:	Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians involving discharge against medical advice, Qld, WA, SA and NT combined, 2001-02 to 2007-08	1792

Figure 3.08.2b: Hospitalisation rates, rate ratios and rate differences between Indigenous and other Australians involving discharge against medical advice, NSW, Vic, Qld, WA, SA and NT combined, 2004-05 to 2007-08	1794
Figure 3.08.3: Proportion of hospitalisations ending in discharge against medical advice, by state/territory, 2006-07 to 2007-08	1795
Figure 3.08.4: Disparity between Indigenous Australians and other Australians in the likelihood of discharge against medical advice, by state/territory, 2006-07 to 2007-08	1796
Figure 3.08.5: Proportion of separations for which patients were discharged against medical advice (excluding mental and behavioural disorders), by principal diagnosis chapter and Indigenous status, Australia, 2006-07 to 2007-08	1798
Figure 3.08.6: Proportion of hospitalisations ending in discharge against medical advice, by Indigenous status and remoteness, 2006-07 to 2007-08	1801
Figure 3.08.7: Disparity between Indigenous and other Australians in the likelihood of discharge against medical advice, by remoteness, 2006-07 to 2007-08	1802
Figure 3.08.8: Proportion of separations for which patients were discharged from hospital against medical advice (excluding separations with a principal diagnosis of mental and behavioural disorders), by Indigenous status and age group, Australia, 2006-07 to 2007-08	1803
Figure 3.08.9a: The impact of principal diagnosis chapter on the likelihood of discharge against medical advice (relative to factors affecting health status): Indigenous Australians, 2006-07 to 2007-08	1808
Figure 3.08.9b: The impact of principal diagnosis chapter on the likelihood of discharge against medical advice (relative to factors affecting health status): other Australians, 2006-07 to 2007-08	1808