1.10 Kidney disease

This measure reports on prevalence, deaths and hospitalisations for kidney disease among Aboriginal and Torres Strait Islander people, as well as incidence of treated end-stage kidney disease (ESKD) as registered by the Australia and New Zealand Dialysis and Transplant Registry.

Introduction

This is no. 10 of 68 measures in the *Aboriginal and Torres Strait Islander Health Performance Framework 2014 report: detailed analyses*. This report provides information on a range of measures of health status, determinants of health and the health system performance relating to Aboriginal and Torres Strait Islander people.

The Framework comprises 3 tiers:

Tier 1—Health status and outcomes

Tier 2—Determinants of health

Tier 3—Health system performance.

The full report, including a comprehensive description of all data sources used in the report, and notes about the data quality is available from <http://www.aihw.gov.au/publication-detail/?id=60129550779>.

Tables referenced are available from <http://www.aihw.gov.au/indigenous-data/health-performance-framework/>.

Data sources

- Australian Aboriginal and Torres Strait Islander Health Survey
- Australian Health Survey
- National Mortality Database
- National Hospital Morbidity Database
- Australia and New Zealand Dialysis and Transplant Registry.

For more information, see 'Data sources and quality' at the end of this measure.

Data analyses

Age-standardised rates and ratios have been used as a measure of morbidity in the Indigenous Australian population relative to non-Indigenous Australians. Ratios of this type illustrate differences between the rates of morbidity among Indigenous Australians and non-Indigenous Australians, taking into account differences in age distributions.

Information on Indigenous persons with treated ESKD is available from the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA).

Registrations data are only estimates of incidence and prevalence because not all cases of ESKD may be reported and not all persons with ESKD may be receiving treatment. Here, new registrations are used to estimate incidence, and total registrations are used to estimate prevalence.

For more information related to kidney disease, see measures 1.05, 1.07, 1.09 and 2.22. Also see 'Other related information' at the end of this measure.

The following data are presented for this measure:

- Prevalence, see tables 1.10.1–3
- Deaths from kidney disease, see tables 1.10.4 and 1.23.23
- Hospitalisations for chronic kidney disease, see tables 1.10.5–9
- Incidence of treated end-stage kidney disease (ESKD), see tables 1.10.10–16.

Prevalence

Current period

In the period 2012–13:

- Based on the 2012–13 Australian Aboriginal and Torres Strait Islander Health Survey, nearly 1 in 5 (18%) Indigenous Australian adults had blood or urine test results showing signs of kidney problems (infection, acute or chronic condition) (ABS 2014a).
- After adjusting for age, Indigenous Australians were 2.1 times as likely as non-Indigenous Australians to have chronic kidney disease.
- The rate of chronic kidney disease was highest among Indigenous Australians aged 55 and over (40 per 100). The rate for non-Indigenous Australians was also highest for this age group (21 per 100).

- Indigenous males were more likely than Indigenous females to have chronic kidney disease (25 and 20 per 100 respectively). There was little difference in the rates for non-Indigenous males and females (11 and 10 per 100, respectively) (Table 1.10.1).

Deaths

Current period

In the period 2008 to 2012 in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory combined:

- 2.5% of deaths of Indigenous Australians were due to kidney disease.
- After adjusting for age, the death rate from kidney disease for Indigenous Australians was 30 per 100,000, compared with 11 per 100,000 for non-Indigenous Australians.
- The gap between the rate for Indigenous and non-Indigenous Australians was 18 per 100,000. Indigenous Australians were 2.6 times as likely as non-Indigenous Australians to die of kidney disease (Table 1.10.4).

Trend

In the period 1998 to 2012 in New South Wales, Queensland, Western Australia, South Australia and Northern Territory combined:

- There was no significant change in the death rate due to kidney disease for Indigenous or non-Indigenous Australians, and no significant change in the gap between Indigenous and non-Indigenous Australians.

In the period 2006 to 2012 in New South Wales, Queensland, Western Australia, South Australia and Northern Territory combined:

- There was a significant 40% decrease in the death rate due to kidney disease for Indigenous Australians, and a significant 53% decrease in the gap between Indigenous and non-Indigenous Australians.
- Over this time the Indigenous rate decreased from 44 to 25 per 100,000, while the non-Indigenous rate varied between 10 and 13 per 100,000 (Table 1.23.23).

Hospitalisations

Current period

In the period 2011–12 to 2012–13:

- Care involving dialysis was the most common reason for hospitalisation for both Indigenous and non-Indigenous Australians, accounting for 45% of hospitalisations of Indigenous Australians and 12% for non-Indigenous Australians (Table 1.02.7).
- There were more than 334,000 hospitalisations of Indigenous Australians for care involving dialysis, an age-standardised rate of 432 per 1,000. For non-Indigenous Australians there were almost 2.2 million hospitalisations for care involving dialysis, at an age-standardised rate of 44 per 1,000.
- Indigenous Australians were hospitalised for care involving dialysis at almost 10 times the rate of non-Indigenous Australians. The rate difference between Indigenous and non-Indigenous Australians was 388 per 1,000.

- For chronic kidney disease excluding dialysis, Indigenous Australians were hospitalised at a rate of 4 per 1,000 while non-Indigenous were hospitalised at a rate of 1 per 1,000 (4,120 and 61,817 hospitalisations, respectively). The rate difference was 3 per 1,000 (Table 1.10.5).

Treated end-stage kidney disease

End-stage kidney disease (ESKD) is a complete or near-complete failure of the kidneys to excrete wastes, concentrate urine, and regulate electrolytes. ESKD occurs when the kidneys are no longer able to function at a level that is necessary for day-to-day life. It usually occurs as chronic renal failure worsens to the point where kidney function is less than 10% of normal. Common associated complications include inflammation of the tissue layers surrounding the heart, bleeding in the gastrointestinal tract, altered brain function and structure, disturbances or structural or functional changes in the peripheral nervous system. Treatment for ESKD involves ongoing kidney replacement therapy (dialysis or kidney transplantation).

Information on persons with treated ESKD is available from the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA).

Current period

In the period 2010 to 2012:

- There were 716 new Indigenous patients and 6,644 new non-Indigenous patients registered with ANZDATA. This represents an age-standardised rate for treated ESKD of 62 persons per 100,000 for Indigenous Australians and 9 per 100,000 for non-Indigenous Australians.
- The gap in the incidence rate between Indigenous and non-Indigenous Australians was 52 per 100,000. Indigenous Australians were almost 7 times as likely as non-Indigenous Australians to commence treatment for ESKD.
- Indigenous Australians starting ESKD treatment tended to be younger than non-Indigenous Australians. Over half (60%) of the new Indigenous patients registered with ANZDATA were aged less than 55, compared with around one third (31%) of non-Indigenous patients.
- The largest gap was in the 55–64 age group where the rates for Indigenous and non-Indigenous Australians were 180 per 100,000 and 19 per 100,000 respectively (a rate difference of 161 per 100,000) (Table 1.10.10).

Trend

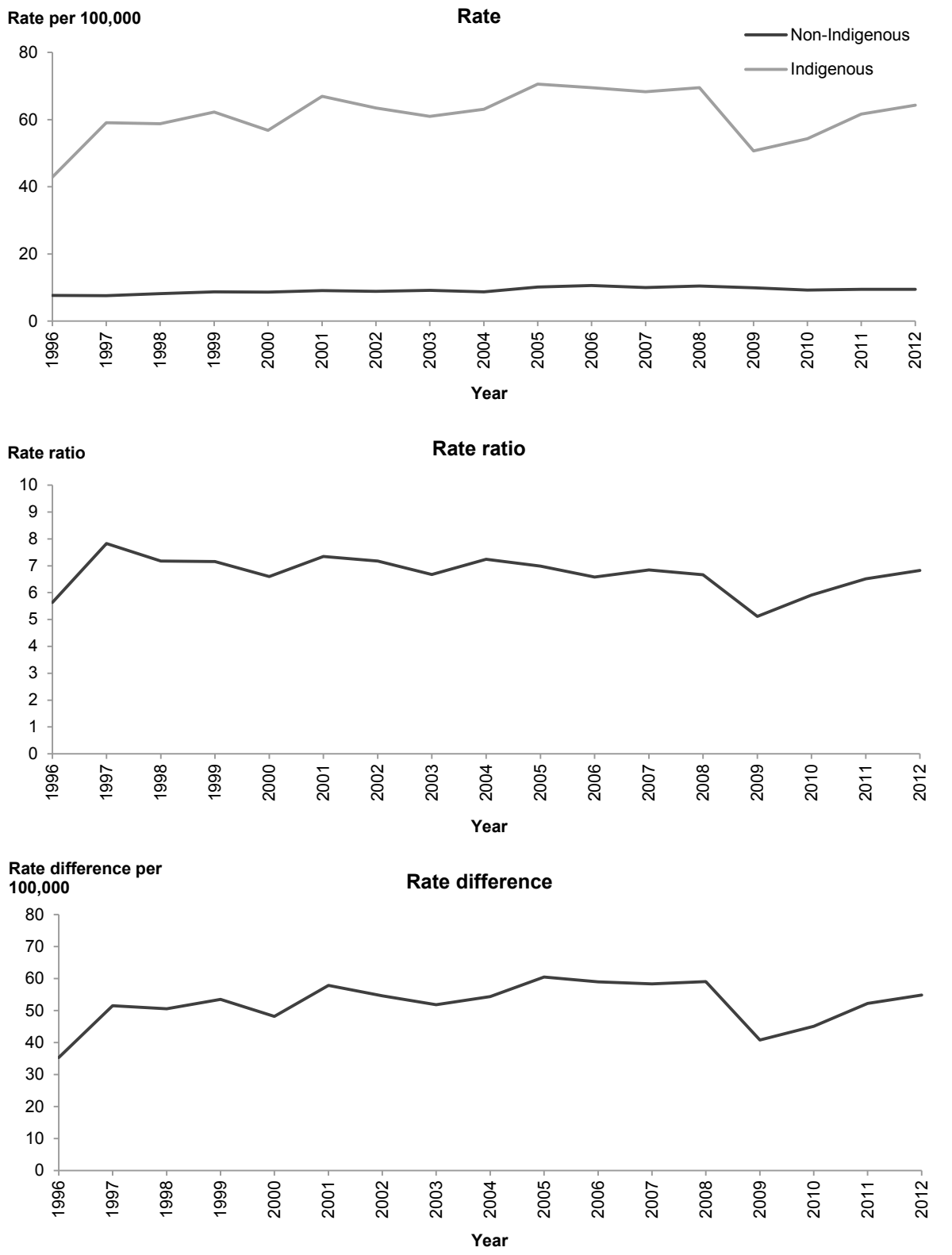
Caution should be exercised in assessing trends in Indigenous treated ESKD rates over time as fluctuations in the incidence rates may reflect changing levels of identification of Indigenous registrations in the ANZDATA Registry and Indigenous population estimates.

In the period from 1996 to 2012:

- Although there was a significant increase (26%) in the rate for non-Indigenous Australians, there was no significant change in the rate for Indigenous Australians and no significant change in the gap (Figure 1.10.1 and Table 1.10.14).
- The rate for Indigenous males increased significantly by 33%, but there was no significant change in the gap between Indigenous and non-Indigenous males. There was no significant change in either the rates or the gap for females.
  - Rates for Indigenous males gradually increased over the period 1996 to 2008, then declined substantially in 2009 before beginning to rise again. Rates for Indigenous females and persons showed a less consistent pattern (Table 1.10.14).

Management of end-stage kidney disease

- Of all Indigenous ESKD patients registered, 88% relied on dialysis and only 12% had received a kidney transplant. In contrast, 53% of non-Indigenous Australians living with ESKD relied on dialysis and 47% had received a kidney transplant.
- Indigenous Australians with treated-ESKD were 9 times as likely as non-Indigenous Australians to rely on dialysis (Table 1.10.15).



Source: Table 1.10.14.

Figure 1.10.1: Age-standardised incidence rates, rate ratios and rate differences for end-stage kidney disease, 1996–2012

Table 1.10.1: Persons (18 and over) with chronic kidney disease, by remoteness, Indigenous status, age, sex and state/territory, 2011–13[(a)(b)(c)]

	Remoteness											Overall population distribution	
	Non-remote			Remote			Australia						
	Indigenous	Non-Indigenous	Rate ratio[(d)]	Indigenous	Non-Indigenous	Rate ratio[(d)]	Indigenous	Non-Indigenous	Rate ratio[(d)]	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
	Rate[(e)]									Number		Per cent[(f)]	
Age[(g)]													
18–24	6.2†	. .	. .	11.7	. .	. .	7.4†	8.5	. .	5,326	155,961	21.5	11.8
25–34	5.8†	. .	. .	24.8	. .	. .	10.5	5.4	. .	8,246	156,149	23.5	18.7
35–44	7.0†	. .	. .	36.9	. .	. .	14.0	5.5	. .	10,177	154,295	21.8	18.2
45–54	17.7	. .	. .	48.8	. .	. .	24.9	6.0	. .	14,116	168,612	17.0	18.1
55+	36.0	. .	. .	55.2	. .	. .	40.3	20.7	. .	21,698	1,066,707	16.2	33.2
Sex													
Males	20.6	. .	. .	40.1	. .	. .	25.2	10.7	2.4	31,069	861,869	49.4	49.4
Females	14.3	. .	. .	37.6	. .	. .	19.6	10.2	1.9	28,495	839,855	50.6	50.6
State/territory													
NSW	17.0	. .	. .	32.8	. .	. .	17.7	10.6	1.7	15,398	584,730	31.7	33.1
Vic	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Qld	20.1	. .	. .	35.5	. .	. .	24.3	10.6	2.3	16,193	338,689	26.4	19.7
SA	18.9†	. .	. .	32.7	. .	. .	21.2	8.1	2.6	3,317	105,007	5.7	7.2
WA	18.9	. .	. .	35.5	. .	. .	26.1	11.0	2.4	10,250	176,354	13.5	10.1
Tas	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
NT	14.6†	. .	. .	46.5	. .	. .	39.8	8.7	4.6	11,978	9,130	11.1	0.7
ACT	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
All	**17.1**	**10.4**	**1.6**	**38.8**	**8.4†**	**4.6**	**22.2**	**10.4**	**2.1**	**17.9**	**11.0**	**100.0**	**100.0**
Total number	**33,576**	**1,689,591**	**. .**	**25,987**	**12,134†**	**. .**	**59,563**	**1,701,725**	**. .**	**59,563**	**1,701,725**	**333,082**	**15,503,514**

(continued)

Table 1.10.1 (continued): Persons (18 and over) with chronic kidney disease, by remoteness, Indigenous status, age, sex and state/territory, 2011–13[(a)(b)(c)]

† Estimate has a relative standard error between 25% and 50% and should be used with caution.

(a) Chronic Kidney Disease is derived using a combination of participants' estimated glomerular filtration rate (eGFR) results with their albumin creatinine ratio (ACR) results.

(b) Data excludes not stated responses. Total excludes persons who did not supply a urine sample or for whom a valid test result was not obtained.

(c) Directly age-standardised to the 2001 Australian Estimated Resident Population based on the 2001 Census, using 10 year age groups up to 55+.

(d) Rate ratio is calculated by dividing the Indigenous rate by the non-Indigenous rate.

(e) Persons with chronic kidney disease aged 18 and over per 100 persons aged 18 and over.

(f) Distribution of total population.

(g) Data for specific age groups are not age-standardised, only the totals.

Source: ABS and AIHW analysis of 2012–13 Australian Aboriginal and Torres Strait Islander Health Survey and 2011–12 Australian Health Survey.

Table 1.10.2: Indigenous Australians (18 and over) reporting kidney disease, by selected socioeconomic and health characteristics, 2012–13

	Has kidney disease[a]	Does not have kidney disease	Total	Has kidney disease[a]	Does not have kidney disease	Total
	Number			Per cent		
SEIFA[b]						
1st quintile (most disadvantaged)	6,257	187,093	193,350	3.2	96.8	100.0
5th quintile (least disadvantaged)	221‡	15,553	15,774	1.4‡	98.6	100.0
Ratio most/least disadvantaged	28.3	12.0	12.3	2.3	1.0	1.0
Employment						
Employed	2,463	173,701	176,163	1.4	98.6	100.0
Unemployed	764†	40,539	41,304	1.8†	98.1	100.0
Not in the labour force	6,571	141,830	148,401	4.4	95.6	100.0
Ratio unemployed/employed	0.3	0.2	0.2	1.3	1.0	1.0
Has non-school qualification[c]						
Yes	3,970	156,692	160,662	2.5	97.5	100.0
No	5,828	199,378	205,206	2.8	97.2	100.0
Ratio no/yes	1.5	1.3	1.3	1.1	1.0	1.0
Highest year of school completed						
Year 12	1,633	97,355	98,988	1.6	98.4	100.0
Year 9 or below[d]	4,447	100,012	104,459	4.3	95.7	100.0
Ratio Year 9 or below/Year 12	2.7	1.0	1.1	2.6	1.0	1.0
Smoker status						
Current smoker[e]	3,552	167,036	170,588	2.1	97.9	100.0
Non-smoker[f]	6,245	189,034	195,280	3.2	96.8	100.0
Ratio smoker/non-smoker	0.6	0.9	0.9	0.7	1.0	1.0
Adequate daily vegetable intake[g]						
Yes	846†	16,013	16,859	5.0†	95.0	100.0
No	8,951	340,057	349,009	2.6	97.4	100.0
Ratio no/yes	10.6	21.2	20.7	0.5	1.0	1.0
Adequate daily fruit intake[h]						
Yes	4,290	146,527	150,818	2.8	97.2	100.0
No	5,507	209,543	215,050	2.6	97.4	100.0
Ratio no/yes	1.3	1.4	1.4	0.9	1.0	1.0
Obese[i]						
Yes	4,165	119,469	123,634	3.4	96.6	100.0
No	4,103	183,219	187,322	2.2	97.8	100.0
Ratio yes/no	1.0	0.7	0.7	1.5	1.0	1.0
Total number[j]	**8,268**	**302,688**	**310,956**	**2.7**	**97.3**	**. .**

(continued)

Table 1.10.2 (continued): Indigenous Australians (18 and over) reporting kidney disease, by selected socioeconomic and health characteristics, 2012–13

	Has kidney disease[(a)]	Does not have kidney disease	Total	Has kidney disease[(a)]	Does not have kidney disease	Total
	Number			Per cent		
Self-assessed health status						
Excellent/very good/good	3,291	267,553	270,845	1.2	98.8	100.0
Fair/poor	6,506	88,517	95,023	6.8	93.2	100.0
Ratio fair, poor/excellent, very good	2.0	0.3	0.4	5.6	0.9	1.0
Heart/circulatory problems[(k)]						
Yes	4,766	66,296	71,062	6.7	93.3	100.0
No	5,032	289,774	294,806	1.7	98.3	100.0
Ratio yes/no	0.9	0.2	0.2	3.9	0.9	1.0
Diabetes[(l)]						
Yes	4,867	42,887	47,754	10.2	89.8	100.0
No	4,931	313,184	318,114	1.6	98.5	100.0
Ratio yes/no	1.0	0.1	0.2	6.6	0.9	1.0
Total number of persons 18+	**9,798**	**356,070**	**365,868**	**2.7**	**97.3**	**. .**

† Estimate has a relative standard error between 25% and 50% and should be used with caution.

‡ Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(a) Self-reported data consisting of persons reporting kidney disease which has lasted or is expected to last, for six months or more.

(b) Index of Relative Socio-Economic Advantage and Disadvantage 2011.

(c) Non-school qualifications classified to the Australian Standard Classification of Education (ASCED) (includes eg. Bachelor degree or higher, diploma, advanced diploma, certificate).

(d) Year 9 or below includes never attended school.

(e) Includes persons who smoke daily, persons who smoke at least once a week but not daily, and those who smoked less than weekly.

(f) Includes ex-smoker and those who have never smoked.

(g) As the 2012–13 AATSIHS only collected information on whole serves of vegetables, the 2013 NHMRC Australian Dietary Guidelines have been applied as follows: 5 serves of vegetables for persons aged 9 years and over, with the exception of 18–49 year old males who eat 6 serves.

(h) According to 2013 NHMRC Australian Dietary Guidelines, which recommend 2 serves of fruit per day for persons aged 9 years and over.

(i) Body Mass Index greater than 30.0 for people aged 18 years and over.

(j) Totals exclude measurement not taken.

(k) Self reported data consisting of persons reporting they have a current heart or circulatory condition which has lasted, or is likely to last, for 6 months or more.

(l) Self-reported data consisting of persons reporting diabetes which has lasted, or is expected to last, for six months or more. Includes Type 1 and Type 2 diabetes, type unknown, and persons who reported they had diabetes but that it was not current at the time of interview.

Note: Percentages add within rows. Estimates have been rounded and discrepancies may occur between sums of the component items and totals.

Source: ABS and AIHW analysis of 2012–13 Australian Aboriginal and Torres Strait Islander Health Survey.

Table 1.10.3: Indigenous Australians (18 and over) reporting kidney disease, by selected household and health risk factors, 2012–13

	Has kidney disease[(a)]		Does not have kidney disease		Total number
	Number	Per cent	Number	Per cent	
Equivalised household income[(b)]					
1st quintile (lowest)	5,068	4.1	119,451	95.9	124,518
4th/5th quintile (highest)	321†	0.6†	51,355	99.4	51,676
Ratio lowest/highest	15.8	6.6*	2.3	1.0	2.4
Total number	**7,759**	**2.7**	**284,988**	**97.3**	**292,747**
Financial stress—whether household could raise $2,000 in an emergency[(b)]					
Yes	2,817	1.8	155,458	98.2	158,276
No	6,132	3.3	178,509	96.7	184,641
Ratio yes/no	0.5	0.5*	0.9	1.0	0.9
Total number	**8,949**	**2.6**	**333,968**	**97.4**	**342,917**
Household had day/s without money for basic living expenses in last 12 months					
Yes	3,955	2.7	143,244	97.3	147,199
No	5,773	2.7	211,136	97.3	216,909
Ratio yes/no	0.7	1.0	0.7	1.0	0.7
Total number	**9,728**	**2.7**	**354,380**	**97.3**	**364,108**
Housing tenure type					
Owner	2,086	1.9	108,130	98.1	110,215
Renter	7,610	3.0	244,937	97.0	252,547
Ratio renter/owner	3.6	1.6	2.3	1.0	2.3
Total number[(c)]	**9,728**	**2.7**	**354,449**	**97.3**	**364,177**
Lives in overcrowded household[(d)]					
Yes	1,345†	1.9†	70,036	98.1	71,380
No	8,384	2.9	284,344	97.1	292,728
Ratio yes/no	0.2	0.7	0.2	1.0	0.2
Total number	**9,728**	**2.7**	**354,380**	**97.3**	**364,108**
Alcohol consumption					
Abstained from alcohol in last 12 months[(e)]	3,968	4.8*	79,216	95.2	83,184
Short-term/single occasion risk[(f)]					
Yes	3,654	1.7	205,325	98.3	208,979
No	1,902†	2.8†	65,235	97.2	67,136
Ratio yes/no	1.9	0.6	3.1	1.0	3.1

(continued)

Table 1.10.3 (continued): Indigenous Australians (18 and over) reporting kidney disease, by selected household and health risk factors, 2012–13

	Has kidney disease[(a)]		Does not have kidney disease		Total number
	Number	Per cent	Number	Per cent	
Physical activity[(g)]					
Met guidelines[(h)]	2,326†	2.0†	114,798	98.0	117,125
Did not meet guidelines[(i)]	4,741	2.9	161,169	97.1	165,910
Ratio did not meet/met guidelines	2.0	1.4	1.4	1.0	1.4
Total number	**7,067**	**2.5**	**275,967**	**97.5**	**283,035**
Disability status[(j)]					
Has moderate,severe or profound core activity limitation[(k)]	4,106	8.4*	44,780	91.6	48,886
Has a schooling/employment restriction only[(l)]	1515†	3.8†	38,535	96.2	40,050
Has unspecified limitation or restriction	2,271	2.8*	80,054	97.2	82,325
Total with disability/long-term health condition	**7,892**	**4.6**	**163,369**	**95.4**	**171,261**
No disability/long-term health condition	1,836	0.9*	192,770	99.1	194,607
Ratio disability/no disability	4.3	4.9*	0.8	1.0	0.9
Psychological distress (Kessler 5)[(m)(n)]					
Low/moderate	5,505	2.2	246,724	97.8	252,230
High/very high	4,211	3.9	104,924	96.1	109,134
Ratio high, very high/low, moderate	0.8	1.8*	0.4	1.0	0.4
Total number	**9,716**	**2.7**	**351,648**	**97.3**	**361,364**
Stressors experienced in last 12 months[(o)]					
No stressors	1,731†	1.9†	89,613	98.1	91,344
Experienced one or more stressor	7,996	2.9	265,393	97.1	273,389
Ratio one or more/no stressors	4.6	1.5	3.0	1.0	3.0
Total number[(i)]	**9,728**	**2.7**	**355,701**	**97.3**	**365,429**
Long term health conditions[(p)]					
No current long term health condition	0	0.0	63,950	100.0	63,950
One	61‡	0.1*‡	64,185	99.9	64,247
Two	355†	0.6*†	56,739	99.4	57,094
Three or more	9,312	5.2	171,265	94.8	180,577
Ratio three or more/no conditions	. .	. .	2.7	0.9	2.8
Respiratory disease[(q)]					
Yes	4,464	3.2	132,942	96.8	137,406
No	5,264	2.3	223,198	97.7	228,462
Ratio yes/no	0.8	1.4	0.6	1.0	0.6
Total number of persons 18+	**9,728**	**2.7**	**356,140**	**97.3**	**365,868**

(continued)

Table 1.10.3 (continued): Indigenous Australians (18 and over) reporting kidney disease, by selected household and health risk factors, 2012–13

* Represents statistically significant differences at the $p < 0.05$ level. Rate ratios tested for 'Has kidney disease' column only. For Alcohol consumption, 'Abstained' was also tested against those who did not have 'Short term/single occasion risk'. For those with disability or a long-term health condition, level of disability/long-term health condition was also tested with 'Total with disability/long-term health condition' used as the reference category. Number of long term health conditions were also tested with 'Three or more' as the reference category.

† Estimate has a relative standard error between 25% and 50% and should be used with caution.

‡ Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(a) Self-reported data consisting of persons reporting kidney disease which has lasted or is expected to last, for six months or more.

(b) Excludes 'not stated' and 'not known'.

(c) Total includes 'other' and 'life tenure scheme'.

(d) Households requiring at least one additional bedroom, based on the Canadian National Occupancy Standard for Housing Appropriateness.

(e) Abstainer includes those who have never consumed alcohol.

(f) Includes those who drank alcohol. Risk level calculated on exceeding the NHMRC Australian Alcohol Guidelines 2009. For short-term/single occasion risk this is 5 or more standard drinks on any day over last 12 months.

(g) Physical activity data collected from persons 18 years and over; and non-remote areas only.

(h) 150 minutes of moderate/vigorous physical activity from five or more sessions over a week.

(i) Includes 'don't know'.

(j) Self-reported data consisting of persons who reported having a disability or restrictive long-term health condition where a limitation, restriction, impairment, disease or disorder has lasted, or is expected to last for six months or more, and restricts everyday activities.

(k) Levels of activity limitation (profound, severe, moderate, and school/employment restriction only) are based on whether, and how often, a person needs help, has difficulty, or uses aids or equipment with any core activities (self-care, mobility or communication). A person's overall level of core activity limitation is determined by their highest level of limitation in any of these activities.

(l) Only current difficulties with education and/or employment were collected. Respondents aged 65 years and over were not asked about employment restrictions and so some may be categorised as not having a specific limitation or restriction that would otherwise have been assigned 'schooling/employment restriction only' had they been asked the question.

(m) Based on the Kessler-5 (K5) measure of psychological distress. Overall levels of distress are based on how often respondents reported experiencing each feeling. Low/moderate is a score of 5–11. High/very high is a score of 12–25.

(n) Totals for Aboriginal and Torres Strait Islander people exclude a small number of people who were not present at interview and for whom responses were provided by a proxy, and persons for whom level of psychological distress was unable to be determined.

(o) Stressors experiences by self, family or friends.

(p) Self-reported data consisting of persons reporting a current medical condition which has lasted, or is expected to last, for six months or more.

(q) Self reported data consisting of persons reporting they have a current respiratory condition which has lasted, or is expected to last, for 6 months or more. Includes chronic obstructive pulmonary disease, asthma, chronic sinusitus, and other diseases of the respiratory system.

Note: Estimates have been rounded and discrepancies may occur between sums of the component items and totals. Data excludes not stated responses.

Source: ABS and AIHW analysis of 2012–13 Australian Aboriginal and Torres Strait Islander Health Survey.

Table 1.10.4: Deaths of Indigenous Australians from kidney disease, by Indigenous status, NSW, Qld, WA, SA and NT, 2008–2012[(a)(b)(c)(d)(e)]

	Number			Per cent			Rate per 100,000[(f)]				
	Indigenous	Non-Indigenous	Not stated	Indigenous	Non-Indigenous	Not stated	Indigenous	Non-Indigenous	Rate ratio[(g)]	Rate difference[(h)]	Rate difference %[(i)]
Kidney diseases (N00–N29)	290	9,372	77	2.5	1.9	1.4	29.6	11.2	2.6*	18.4*	4.7
All causes	**11,612**	**495,782**	**5,517**	**100.0**	**100.0**	**100.0**	**985.6**	**596.7**	**1.7***	**388.9***	**100.0**

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

(a) Data are reported for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory only, which are considered to have adequate levels of Indigenous identification in mortality data. Data for these jurisdictions over-represent Indigenous populations in less urbanised and more remote locations, and should not be assumed to represent the experience in the other jurisdictions.

(b) Data are presented in 5-year groupings because of small numbers each year. For rate calculations, the numerator is the average of the total number of deaths and the denominator is the mid-point of the population for the time period.

(c) Although most deaths of Indigenous Australians are registered, it is likely that some are not accurately identified as Indigenous. Therefore, these statistics are likely to underestimate the Indigenous mortality rate. It is also difficult to exactly identify the difference between the Indigenous and other mortality rates because of these data quality issues.

(d) Care should be taken when interpreting mortality rates for Queensland due to recent changes in the timeliness of birth and death registrations. Queensland deaths data for 2010 have been adjusted to minimise the impact of late registration of deaths on mortality indicators.

(e) All causes of death data from 2006 onward are subject to a revisions process—once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2008–2010 (final), 2011 (revised), 2012 (preliminary). For further information see Explanatory Notes 29–33 and Technical Note, Causes of Death Revisions, 2010 and 2011 in Causes of Death, Australia, 2012 (cat. no. 3303.0).

(f) Directly age-standardised using the 2001 Australian standard population, by 5-year age group up to 75+.

(g) Rate ratio is the mortality rate for Indigenous Australians divided by the mortality rate for non-Indigenous Australians.

(h) Rate difference is the mortality rate for Indigenous Australians minus the mortality rate for non-Indigenous Australians.

(i) Rate difference per cent is the rate difference for each specific cause divided by the rate difference for all causes.

Source: ABS and AIHW analysis of National Mortality Database.

Table 1.10.5: Hospitalisations for chronic kidney disease and its sequelae, by Indigenous status and type of kidney disease, Australia, 2011–12 to 2012–13[(a)(b)]

	Number		Per cent		No. per 1,000[(c)]			
Principal diagnosis	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Indigenous**	**Non-Indigenous**	**Ratio[(d)]**	**Difference[(e)]**
Care involving dialysis (ESKD) (Z49)	334,265	2,155,803	98.8	97.2	431.9	43.8	9.9	388.1
Diabetic nephropathy (E102, E112, E132, E142)	241	1,683	0.1	0.1	0.3	__	9.5	0.3
Renal-tubulo interstitial diseases (N11, N12, N14, N15, N16)	1,287	17,125	0.4	0.8	1.1	0.4	2.9	0.7
Chronic renal failure (N18, N19)	1,585	23,985	0.5	1.1	1.9	0.5	3.9	1.4
Glomerular diseases (N00–08)	437	7,013	0.1	0.3	0.3	0.2	1.8	0.1
Hypertensive renal disease (I12, I13,I150, I151)	104	1,435	0.0	0.1	0.1	__	3.6	0.1
Other chronic diseases (N25, N26, N27, N28, Q60, Q61, Q62, Q63, N391, N392, T824, T861, Z940)	466	10,576	0.1	0.5	0.4	0.2	1.9	0.2
Total	**338,385**	**2,217,620**	**100.0**	**100.0**	**436.1**	**45.2**	**9.7**	**390.9**
Total excl. dialysis	**4,120**	**61,817**	**1.2**	**2.8**	**4.2**	**1.3**	**3.1**	**2.8**

(a) Data includes public and private hospitals in all jurisdictions.

(b) Categories are based on the ICD-10-AM seventh edition (National Centre for Classification in Health 2010).

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

(d) Rate ratio is the age-standardised rate for Indigenous Australians divided by the age-standardised rate for non-Indigenous.

(e) Rate difference is the age-standardised rate for Indigenous Australians minus the age-standardised rate for non-Indigenous.

Notes

1. Rates are calculated using ABS backcast population estimates and projections based on the 2011 Census.
2. Excludes separations with care types 7.3, 9 and 10 (newborn, unqualified days only; organ procurement; and hospital boarder).
3. Principal diagnosis code used unless specified otherwise.

Source: AIHW analysis of National Hospital Morbidity Database.

Table 1.10.6: Hospitalisations of Indigenous Australians for chronic kidney disease and its sequelae, by sex and type of kidney disease, Australia, 2011–12 to 2012–13[(a)(b)]

	Males					Females				
Principal diagnosis	**Number**	**Per cent**[(c)]	**No per 1,000**[(d)]	**Ratio**[(e)]	**Difference**[(f)]	**Number**	**Per cent**[(c)]	**No per 1,000**[(d)]	**Ratio**[(e)]	**Difference**[(f)]
Care involving dialysis (ESKD) (Z49)	142,417	99.0	384.3	6.6	326.4	191,848	98.6	475.9	15.0	444.1
Diabetic nephropathy (E102, E112, E132, E142)	120	0.1	0.3	7.6	0.3	121	0.1	0.3	12.5	0.3
Renal-tubulo interstitial diseases (N11, N12, N14, N15, N16)	145	0.1	0.3	2.3	0.2	1,142	0.6	1.9	2.9	1.2
Chronic renal failure (N18, N19)	733	0.5	1.9	2.7	1.2	852	0.4	2.0	6.0	1.6
Glomerular diseases (N00–08)	219	0.2	0.3	1.5	0.1	218	0.1	0.3	2.2	0.1
Hypertensive renal disease (I12, I13,I150, I151)	49	0.0	0.1	2.4	0.1	55	0.0	0.1	5.4	0.1
Other chronic kidney diseases (N25, N26, N27, N28, Q60, Q61, Q62, Q63, N391,N392,T824,T861,Z940)	212	0.1	0.4	1.5	0.1	254	0.1	0.5	2.4	0.3
Total	**143,895**	**100.0**	**387.6**	**6.5**	**328.3**	**194,490**	**100.0**	**480.9**	**14.5**	**447.8**
Total excl. dialysis	**1,478**	**1.0**	**3.3**	**2.4**	**1.9**	**2,642**	**1.4**	**5.0**	**3.7**	**3.7**

(a) Data includes public and private hospitals in all jurisdictions.

(b) Categories are based on the ICD-10-AM seventh edition (National Centre for Classification in Health 2010).

(c) Proportion of hospitalisations of Indigenous males and females in the period 2011–12 to 2012–13.

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

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

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

Notes

1. Rates are calculated using ABS backcast population estimates and projections based on the 2011 Census.
2. Excludes separations with care types 7.3, 9 and 10 (newborn, unqualified days only; organ procurement; and hospital boarder).

Source: AIHW analysis of National Hospital Morbidity Database.

Table 1.10.7: Age-specific hospitalisation rates for a principal diagnosis of chronic kidney disease (excluding dialysis), by Indigenous status and sex, Australia, 2011–12 to 2012–13[(a)(b)]

									All ages[(c)]	
	0–4	5–14	15–24	25–34	35–44	45–54	55–64	65+	Crude	Age-std.[(d)]
Males										
Indigenous	1.2	0.8	0.6	1.1	3.1	6.0	7.6	6.7	2.2	3.3
Non-Indigenous	1.2	0.4	0.3	0.6	0.8	1.5	1.8	4.5	1.4	1.3
Rate ratio[(e)]	1.0	2.2	1.9	1.7	3.9	4.0	4.2	1.5	1.6	2.4
Rate difference[(f)]	__	0.4	0.3	0.5	2.3	4.5	5.7	2.2	0.8	1.9
Females										
Indigenous	1.0	1.3	2.9	3.4	5.3	8.7	9.7	8.2	3.9	5.0
Non-Indigenous	1.0	0.4	1.7	1.3	1.1	1.2	1.4	2.6	1.4	1.3
Rate ratio[(e)]	1.1	3.3	1.6	2.6	4.8	7.2	6.7	3.2	2.7	3.7
Rate difference[(f)]	0.1	0.9	1.1	2.1	4.2	7.5	8.2	5.6	2.4	3.7
Persons[(g)]										
Indigenous	1.1	1.0	1.7	2.3	4.2	7.4	8.6	7.6	3.0	4.2
Non-Indigenous	1.1	0.4	1.0	1.0	1.0	1.4	1.6	3.5	1.4	1.3
Rate ratio[(e)]	1.0	2.7	1.7	2.3	4.4	5.5	5.3	2.2	2.1	3.1
Rate difference[(f)]	__	0.7	0.7	1.3	3.3	6.1	7.0	4.1	1.6	2.8

(a) Data includes public and private hospitals in all jurisdictions.

(b) Categories are based on the ICD-10-AM seventh edition (National Centre for Classification in Health 2010): ICD-10-AM codes N00–08, N00, N11, N12, N14, N15, N16, N18, N19, I12, I13, N25, N26, N27, N28, Q60, Q61, Q62, Q63, E102, E112, E132, E142, I150, I151, N391, N392, T824, T861, Z940).

(c) All age data includes age not stated.

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

(e) Rate ratio is the age-standardised rate for Indigenous Australians divided by the age-standardised rate for non-Indigenous.

(f) Rate difference is the age-standardised rate for Indigenous Australians minus the age-standardised rate for non-Indigenous.

(g) Persons data includes sex not stated and indeterminate.

Notes

1. Rates calculated based on the 2011 Census.
2. Excludes separations with care types 7.3, 9 and 10 (newborn, unqualified days only; organ procurement; and hospital boarder); and those with a principal diagnosis of dialysis ICD-10-AM Z49.

Source: AIHW analysis of National Hospital Morbidity Database.

Table 1.10.8: Hospitalisations for chronic kidney disease (excluding dialysis) by Indigenous status and jurisdiction, Australia, 2011–12 to 2012–13[(a)(b)(c)(d)(e)]

	Indigenous			Non-Indigenous				
	Number	Crude Rate per 1,000	ASR Rate per 1,000[(e)]	Number	Crude Rate per 1,000	ASR Rate per 1,000[(e)]	Ratio[(f)]	Difference[(g)]
NSW								
Males	241	1.1	1.7	13,598	1.9	1.8	0.9	–0.1
Females	483	2.3	3.0	9,854	1.4	1.3	2.4	1.7
Persons[(h)]	724	1.7	2.4	23,452	1.7	1.5	1.6	0.9
Vic								
Males	100	2.1	3.4	6,939	1.3	1.2	2.8	2.2
Females	104	2.1	2.8	8,411	1.5	1.4	1.9	1.4
Persons[(h)]	204	2.1	3.1	15,350	1.4	1.3	2.3	1.8
Qld								
Males	408	2.1	3.6	4,962	1.1	1.1	3.2	2.5
Females	724	3.7	5.0	6,377	1.5	1.4	3.5	3.6
Persons[(h)]	1,132	2.9	4.3	11,339	1.3	1.3	3.4	3.0
WA								
Males	329	3.7	5.8	2,289	1.0	1.0	5.9	4.9
Females	592	6.5	8.5	3,313	1.4	1.4	6.1	7.1
Persons[(h)]	921	5.1	7.2	5,602	1.2	1.2	6.1	6.0
SA								
Males	94	2.5	3.9	1,714	1.1	1.0	3.9	2.9
Females	163	4.2	5.3	1,894	1.2	1.1	4.9	4.2
Persons[(h)]	257	3.4	4.6	3,608	1.1	1.0	4.5	3.6
Tas								
Males	n.p.	0.4	0.4	n.p.	1.0	1.0	0.4	–0.5
Females	n.p.	1.2	1.2	n.p.	1.1	1.0	1.2	0.2
Persons[(h)]	n.p.	0.8	0.8	n.p.	1.1	1.0	0.8	–0.2
NT								
Males	n.p.	4.2	5.4	n.p.	0.9	1.1	5.1	4.4
Females	n.p.	7.7	10.1	n.p.	1.1	1.2	8.5	8.9
Persons[(h)]	n.p.	5.9	7.9	n.p.	1.0	1.1	7.1	6.8
ACT								
Males	n.p.	0.3	0.6	n.p.	0.6	0.6	1.0	0.0
Females	n.p.	1.0	0.8	n.p.	0.8	0.8	0.9	–0.1
Persons[(h)]	n.p.	0.6	0.7	n.p.	0.7	0.7	0.9	–0.1
Australia								
Males	**1,478**	**2.2**	**3.3**	**30,575**	**1.4**	**1.3**	**2.4**	**1.9**
Females	**2,642**	**3.9**	**5.0**	**31,242**	**1.4**	**1.3**	**3.7**	**3.7**
Persons[(h)]	**4,120**	**3.0**	**4.2**	**61,817**	**1.4**	**1.3**	**3.1**	**2.8**

(continued)

Table 1.10.8 (continued): Hospitalisations for chronic kidney disease (excluding dialysis) by Indigenous status and jurisdiction, Australia, 2011–12 to 2012–13[(a)(b)(c)(d)(e)]

(a) Data include public and private hospital in all jurisdictions. Number of hospitalisations in NT, ACT and TAS are not published for privacy reasons.

(b) Categories are based on the ICD-10-AM seventh edition (National Centre for Classification in Health 2010): ICD-10-AM codes N00–08, N11, N12, N14, N15, N16, N18, N19, I12, I13, N25, N26, N27, N28, Q60, Q61, Q62, Q63, E102, E112, E132, E142, I150, I151, N391, N392, T824, T861, Z940.Data are reported by state/territory of usual residence of the patient hospitalised.

(c) Data are reported by state/territory of usual residence of the patient hospitalised. Directly age-standardised using the Australian 2001 standard population.

(d) 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 groups to 75+. Age-standardised rates for Tasmania and the Australian Capital Territory have been calculated using the direct method, age-standardised by 5 year age group to 65+.

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

(f) Rate ratio is the age-standardised rate for Indigenous Australians divided by the age-standardised rate for non-Indigenous.

(g) Rate difference is the age-standardised rate for Indigenous Australians minus the age-standardised rate for non-Indigenous.

(h) Persons data includes sex not stated and indeterminate.

Notes

1. Rates are calculated using ABS backcast population estimates and projections based on the 2011 Census.
2. Excludes separations with care types 7.3, 9 and 10 (newborn, unqualified days only; organ procurement; and hospital boarder); and those with a principal diagnosis of dialysis ICD-10-AM Z49.
3. Principal diagnosis code used unless specified otherwise.

Source: AIHW analysis of National Hospital Morbidity Database.

Table 1.10.9: Age-specific hospitalisations for chronic kidney disease (excluding dialysis) by Indigenous status and remoteness, Australia, 2011–2012 to 2012–2013[(a)(b)]

	Indigenous		Non-Indigenous			
	Number	No. per 1,000[(c)]	Number	No. per 1,000[(c)]	Ratio[(d)]	Difference[(e)]
Major cities	776	2.3	43,448	1.3	1.7	1.0
Inner regional	563	2.5	12,214	1.4	1.8	1.2
Outer regional[(f)]	1,070	5.0	4,630	1.1	4.4	3.9
Remote[(g)]	695	8.8	714	1.4	6.5	7.5
Very remote	1,002	7.1	241	1.2	6.0	5.9
Total[(h)]	**4,120**	**4.2**	**61,817**	**1.3**	**3.1**	**2.8**

(a) Data includes public and private hospitals in all jurisdictions.

(b) Categories are based on the ICD-10-AM seventh edition (National Centre for Classification in Health 2010): ICD-10-AM codes N00–08, N00, N11, N12, N14, N15, N16, N18, N19, I12, I13, N25, N26, N27, N28, Q60, Q61, Q62, Q63, E102, E112, E132, E142, I150, I151, N391, N392, T824, T861, Z940.

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

(d) Rate ratio is the age-standardised rate for Indigenous Australians divided by the age-standardised rate for non-Indigenous.

(e) Rate difference is the age-standardised rate for Indigenous Australians minus the age-standardised rate for non-Indigenous.

(f) Includes remote Victoria.

(g) Excludes remote Victoria.

(h) Disaggregation by remoteness area is based on the ABS' 2011 Australian Standard Geographical Classification (ASGC) and Australian Statistical Geography Standard (ASGS) and relates to the patient's usual residence. Total includes hospitalisations where remoteness area of residence is unknown.

Notes

1. Rates by remoteness are calculated using AIHW derived populations using ABS population estimates and projections based on the 2011 Census.
2. Excludes separations with care types 7.3, 9 and 10 (newborn, unqualified days only; organ procurement; and hospital boarder); and those with a principal diagnosis of dialysis ICD-10-AM Z49.

Source: AIHW analysis of National Hospital Morbidity Database.

Table 1.10.10: Incidence of end-stage kidney disease, by Indigenous status and age group, 2010–2012[(a)]

	Number		Per cent[(b)]		No. per 100,000[(c)]			
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Rate ratio[(d)]	Rate difference
0–24	19	251	2.7	3.8	1.7	1.2	1.4	0.5
25–44	178	865	24.9	13.0	34.3	4.7	7.4*	29.7*
45–54	232	930	32.4	14.0	122.6	10.4	11.8*	112.2*
55–64	199	1,456	27.8	21.9	180.2	19.3	9.3*	160.9*
65+	88	3,142	12.3	47.3	128.9	34.1	3.8*	94.8*
Total[(e)]	**716**	**6,644**	**100.0**	**100.0**	**61.7**	**9.3**	**6.6***	**52.3***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous Australian comparisons.

(a) Calendar year reporting. Data are presented in 3-year groupings because of small numbers each year.

(b) Proportion of Indigenous and non-Indigenous patients in each age group.

(c) Age-specific rates per 100,000 population.

(d) Rate ratio Indigenous: non-Indigenous.

(e) Total rates are directly age-standardised using the Australian 2001 standard population. Age-standardised rates have been calculated using the direct method, age-standardised by 5 year age group to 65+.

Source: AIHW analysis of ANZDATA data.

Table 1.10.11: Incidence of end-stage kidney disease for Indigenous Australians, by age group and sex, 2010–2012[(a)]

	Indigenous males						
Age group	**No.**	**Per cent[(b)]**	**No. per 100,000[(c)]**	**LCL 95%[(d)]**	**UCL 95%[(d)]**	**Rate ratio[(e)]**	**Rate difference[(f)]**
0–14 years	2	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
15–24 years	6	1.9	2.9	0.6	5.2	1.4	0.9
25–34 years	20	6.3	14.7	8.3	21.2	4.2*	11.3*
35–44 years	62	19.4	52.7	39.5	65.8	7.0*	45.1*
45–54 years	110	34.5	120.5	98.0	143.0	9.2*	107.4*
55–64 years	83	26.0	156.1	122.5	189.7	6.3*	131.4*
65 +years	36	11.3	119.8	80.7	158.9	2.5*	72.0*
Total[(g)]	**319**	**100.0**	**57.2**	**50.2**	**64.2**	**4.7***	**44.9***
	Indigenous females						
Age group	**No.**	**Per cent[(b)]**	**No. per 100,000[(c)]**	**LCL 95%[(d)]**	**UCL 95%[(d)]**	**Rate ratio[(e)]**	**Rate difference[(f)]**
0–14 years	3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
15–24 years	8	2.0	4.1	1.3	6.9	2.9*	2.7
25–34 years	17	4.3	12.3	6.5	18.1	4.2*	9.3*
35–44 years	79	19.9	62.1	48.4	75.9	13.3*	57.5*
45–54 years	122	30.7	124.6	102.5	146.7	16.0*	116.8*
55–64 years	116	29.2	202.7	165.8	239.6	14.5*	188.7*
65 +years	52	13.1	136.1	99.1	173.1	6.1*	113.7*
Total[(g)]	**397**	**100.0**	**65.6**	**58.7**	**72.6**	**9.8***	**59.0***
	Indigenous Total						
Age group	**No.**	**Per cent[(b)]**	**No. per 100,000[(c)]**	**LCL 95%[(d)]**	**UCL 95%[(d)]**	**Rate ratio[(e)]**	**Rate difference[(f)]**
0–14 years	5	1.0	0.7	0.1	1.3	0.8	–0.1
15–24 years	14	2.8	3.5	1.7	5.3	2.0*	1.7
25–34 years	37	7.3	13.5	9.2	17.9	4.2*	10.3*
35–44 years	141	27.8	57.6	48.1	67.1	9.4*	51.5*
45–54 years	232	45.8	122.6	106.8	138.4	11.8*	112.2*
55–64 years	199	39.3	180.2	155.2	205.3	9.3*	160.9*
65 +years	88	17.4	128.9	102.0	155.8	3.8*	94.8*
Total[(g)]	**716**	**100.0**	**61.7**	**56.7**	**66.6**	**6.6***	**52.3***

* Represents results with statistically significant differences in the Indigenous/non-Indigenous Australian comparisons.

(a) Calender year reporting. Data are presented in 3-year groupings because of small numbers each year.

(b) Proportion of male, female and total registration rates for Indigenous persons in the period 2010–2012.

(c) Age-specific rates per 100,000 population.

(d) LCL = lower confidence limit, UCL = upper confidence limit.

(e) Rate ratio Indigenous: non-Indigenous.

(f) Rate difference is Indigenous minus non-Indigenous.

(g) Total rates are directly age-standardised using the Australian 2001 standard population. Age-standardised rates have been calculated using the direct method, age-standardised by 5 year age group to 65+.

Source: AIHW analysis of ANZDATA data.

Table 1.10.12: Incidence of end-stage kidney disease, by Indigenous status, sex and state/territory, 2010–2012[(a)]

	Males				Females				Persons			
	No.	No. per 100,000[(b)]	Ratio[(c)]	Rate difference[(d)]	No.	No. per 100,000[(b)]	Ratio[(c)]	Rate difference[(d)]	No.	No. per 100,000[(b)]	Ratio[(c)]	Rate difference[(d)]
NSW/ACT												
Indigenous	52	29.3	2.4*	17.0*	62	37.1	5.3*	30.1*	114	33.5	3.5*	24.0*
Non-Indigenous	1,453	12.3	. .	. .	891	7.0	. .	. .	2,344	9.5	. .	. .
Vic												
Indigenous	20	50.5	3.8*	37.2*	15	n.p.	n.p.	n.p.	35	43.7	4.4*	33.8*
Non-Indigenous	1,136	13.3	. .	. .	634	6.8	. .	. .	1,770	9.9	. .	. .
Qld												
Indigenous	86	59.6	5.4*	48.5*	93	54.3	8.5*	47.9*	179	56.5	6.5*	47.8*
Non-Indigenous	739	11.1	. .	. .	451	6.4	. .	. .	1,190	8.7	. .	. .
WA												
Indigenous	61	82.4	6.8*	70.3*	74	97.6	16.0*	91.5*	135	91.1	10.1*	82.1*
Non-Indigenous	415	12.1	. .	. .	221	6.1	. .	. .	636	9.0	. .	. .
SA												
Indigenous	16	n.p.	n.p.	n.p.	29	86.1	13.5*	79.7*	45	73.1	7.9*	63.8*
Non-Indigenous	338	12.6	. .	. .	182	6.4	. .	. .	520	9.3	. .	. .
Tas												
Indigenous	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Non-Indigenous	89	10.4	. .	. .	52	5.6	. .	. .	141	7.9	. .	. .
NT												
Indigenous	82	132.6	13.3*	122.6*	121	171.3	n.p.	n.p.	203	151.9	16.0*	142.4*
Non-Indigenous	24	10.0	. .	. .	19	n.p.	. .	. .	43	9.5	. .	. .

(continued)

Table 1.10.12 (continued): Incidence of end-stage kidney disease, by Indigenous status, sex and state/territory, 2010–2012[(a)]

	Males				Females				Persons			
	No.	No. per 100,000[(b)]	Ratio[(c)]	Rate difference[(d)]	No.	No. per 100,000[(b)]	Ratio[(c)]	Rate difference[(d)]	No.	No. per 100,000[(b)]	Ratio[(c)]	Rate difference[(d)]
Australia												
Indigenous	319	57.2	4.7*	45.0*	397	65.6	9.8*	58.9*	716	61.7	6.6*	52.4*
Non-Indigenous	4,194	12.2	. .	. .	2,450	6.7	. .	. .	6,644	9.3	. .	. .

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

(a) Calendar year reporting. Data are presented in 3-year groupings because of small numbers each year.

(b) Directly age-standardised using the Australian 2001 standard population. Age-standardised rates have been calculated using the direct method, age-standardised by 5 year age group to 65+.

(c) Rate ratio Indigenous: non-Indigenous.

(d) Rate difference is Indigenous minus non-Indigenous.

Source: AIHW analysis of ANZDATA data.

Table 1.10.13: Incidence of end-stage kidney disease, by Indigenous status and remoteness, 2010–2012[(a)]

	Number		Per cent[(b)]		No. per 100,000[(c)]			
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Rate ratio[(d)]	Rate difference[(e)]
Major cities	120	4,695	17.0	71.1	32.8	9.6	3.4*	23.2*
Inner regional	80	1,230	11.3	18.6	36.5	8.6	4.2*	27.9*
Outer regional	183	575	26.0	8.7	68.7	8.7	7.9*	60.0*
Remote	158	74	22.4	1.1	148.6	9.0	16.5*	139.5*
Very remote	164	26	23.3	0.4	96.6	7.9	12.2*	88.7*
Australia[(f)]	**716**	**6,644**	**100.0**	**100.0**	**61.7**	**9.3**	**6.6***	**52.4***

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

(a) Calendar year reporting. Data are presented in 3-year groupings because of small numbers each year.

(b) Proportion of Indigenous and non-Indigenous patients in each remoteness category.

(c) Directly age-standardised using the Australian 2001 standard population. Age-standardised rates have been calculated using the direct method, age-standardised by 5 year age group to 65+.

(d) Rate ratio Indigenous: non-Indigenous.

(e) Rate difference is Indigenous minus non-Indigenous.

(f) Australia total includes cases where remoteness category was not known.

Source: AIHW analysis of ANZDATA data.

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Table 1.10.14: Age-standardised incidence rates, rate ratios and rate differences for end-stage kidney disease, 1996–2012

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Annual change[(a)]	% change over period[(b)]
Indigenous																			
Males	46	57	67	58	66	70	81	81	90	91	104	108	117	85	97	105	117	3.9*	116.8*
Females	57	95	70	99	84	104	92	93	105	127	117	131	134	111	109	151	137	4.1*	90.0*
Persons	103	152	137	157	150	174	173	174	195	218	221	239	251	196	206	256	254	8.0*	101.3*
Non-Indigenous																			
Males	760	782	883	949	930	1,042	1,058	1,082	1,085	1,271	1,370	1,371	1,428	1,393	1,360	1,379	1,455	45.6*	92.6*
Females	563	552	586	643	672	692	659	722	669	805	843	772	872	842	764	861	825	19.1*	53.5*
Persons	1,323	1,334	1,469	1,592	1,602	1,734	1,717	1,804	1,754	2,076	2,213	2,143	2,300	2,235	2,124	2,240	2,280	64.8*	76.2*
Indigenous rate (no. per 100,000)[(c)]																			
Males	36.2	40.4	58.2	43.4	53.9	49.7	60.4	62.0	58.4	58.9	67.5	65.6	68.2	46.7	52.4	52.7	62.5	1.0*	32.6*
Females	52.8	79.7	61.8	74.6	62.5	82.2	74.3	68.8	73.1	91.2	71.7	79.2	74.1	57.5	62.9	71.2	68.8	0.1	2.5
Persons	42.9	59.1	58.8	62.2	56.8	67.0	63.5	61.0	63.1	70.6	69.5	68.3	69.5	50.7	54.3	61.7	64.3	0.4	12.3
Non-Indigenous[(c)] rate (no. per 100,000)																			
Males	9.2	9.3	10.3	10.9	10.6	11.6	11.6	11.6	11.4	13.1	13.8	13.5	13.6	12.9	12.4	12.2	12.6	0.2*	37.0*
Females	6.3	6.0	6.3	6.8	6.9	7.0	6.5	7.0	6.4	7.5	7.7	6.9	7.6	7.2	6.4	7.1	6.6	0.0	10.6
Persons	7.6	7.5	8.2	8.7	8.6	9.1	8.9	9.1	8.7	10.1	10.6	10.0	10.4	9.9	9.2	9.5	9.4	0.1*	26.3*
Rate ratio[(d)]																			
Males	3.9	4.3	5.6	4.0	5.1	4.3	5.2	5.3	5.1	4.5	4.9	4.9	5.0	3.6	4.2	4.3	4.9	n.a.	n.a.
Females	8.4	13.2	9.7	11.0	9.0	11.7	11.4	9.8	11.4	12.1	9.3	11.4	9.7	8.0	9.8	10.1	10.4	n.a.	n.a.
Persons	5.6	7.8	7.2	7.2	6.6	7.3	7.2	6.7	7.2	7.0	6.6	6.8	6.7	5.1	5.9	6.5	6.8	n.a.	n.a.

(continued)

Table 1.10.14 (continued): Age-standardised incidence rates, rate ratios and rate differences for end-stage kidney disease, 1996–2012

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Annual change[(a)]	% change over period[(b)]
Rate difference[(e)]																			
Males	27.0	31.1	47.9	32.4	43.3	38.1	48.9	50.4	47.0	45.8	53.7	52.1	54.6	33.8	40.0	40.5	49.8	0.7	31.4
Females	46.5	73.7	55.4	67.8	55.6	75.2	67.8	61.8	66.7	83.7	64.0	72.3	66.5	50.3	56.5	64.1	62.2	0.1	1.6
Persons	35.3	51.5	50.6	53.5	48.2	57.8	54.6	51.8	54.4	60.5	59.0	58.3	59.1	40.8	45.1	52.2	54.9	0.3	10.0

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1996–2012.

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

(b) Per cent change between 1996 and 2012 based on the average annual change over the period.

(c) Rates have been directly age-standardised using the Australian 2001 standard population. Age-standardised rates have been calculated using the direct method, age-standardised by 5 year age group to 75+.

(d) Incidence rate for Indigenous people divided by the rate for non-Indigenous Australians.

(e) Incidence rate for Indigenous people minus the rate for non-Indigenous Australians.

Source: AIHW analysis of ANZDATA data.

Table 1.10.15: Total patients with end-stage kidney disease, by Indigenous status and treatment, as at 31 December 2012[(a)]

	Number		Per cent[(b)]		No. per 100,000[(c)]			
Treatment	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Ratio[(d)]**	**Ratio difference[(e)]**
Dialysis	1,425	10,021	88.1	52.7	370.4	40.1	9.2*	330.3*
Transplant	192	8,977	11.9	47.3	43.5	38.1	1.1	5.4
Total	**1,617**	**18,998**	**100.0**	**100.0**	**413.9**	**78.2**	**5.3***	**335.6***

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

(a) Calendar year reporting.

(b) Proportion of Indigenous and non-Indigenous patients receiving dialysis and transplants.

(c) Directly age-standardised using the Australian 2001 standard population. Age-standardised rates have been calculated using the direct method, age-standardised by 5 year age group to 75+.

(d) Rate ratio Indigenous: non-Indigenous.

(e) Rate difference is Indigenous minus non-Indigenous.

Source: AIHW analysis of ANZDATA data.

Table 1.10.16: Incidence of end-stage kidney disease in Aboriginal and Torres Strait Islander people, by state and territory, 1996–2012

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Per cent change[(a)]
									Number									
New South Wales	10	19	20	17	14	23	17	20	13	25	21	33	29	19	29	35	47	192.3
Victoria	3	5	2	5	6	5	3	3	8	6	11	8	4	9	11	10	14	355.7
Queensland	27	34	36	44	42	49	59	48	47	48	66	66	56	49	62	63	54	78.8
South Australia	3	6	9	12	7	15	6	11	10	16	15	9	19	16	17	16	12	157.5
Western Australia	19	42	35	32	37	29	37	41	44	46	35	55	63	41	32	61	42	68.2
Northern Territory	40	46	35	45	43	53	49	48	72	76	71	67	76	59	52	67	84	90.3
Australia[(b)]	**103**	**152**	**137**	**157**	**150**	**174**	**173**	**174**	**195**	**218**	**221**	**239**	**251**	**196**	**206**	**256**	**254**	**101.3**
									Crude rate (per 100,000 population)									
New South Wales	6.5	12.1	12.4	10.3	8.4	13.5	9.8	11.3	7.2	13.5	11.1	17.1	14.7	9.5	14.2	16.8	22.1	96.2
Victoria	n.p.	15.3	n.p.	14.5	17.1	14.0	n.p.	n.p.	20.7	15.1	27.0	19.1	n.p.	20.2	23.9	21.1	28.9	153.4
Queensland	22.4	27.2	27.8	32.8	30.3	34.1	39.8	31.5	29.9	29.7	39.7	38.7	32.0	27.2	33.6	33.3	27.9	14.9
South Australia	n.p.	23.6	34.2	44.1	24.8	51.6	20.1	35.9	31.8	49.6	45.2	26.5	54.5	44.8	46.5	42.8	31.4	68.3
Western Australia	29.9	64.5	52.4	46.7	52.7	40.3	50.2	54.5	57.3	58.7	43.6	67.1	75.4	48.1	36.9	69.1	46.6	19.9
Northern Territory	72.8	82.4	61.7	78.0	73.3	88.8	80.5	77.4	113.9	118.0	108.3	101.0	113.4	87.1	76.1	97.3	120.0	48.5
Australia[(b)]	**22.0**	**31.6**	**27.7**	**30.9**	**28.8**	**32.5**	**31.6**	**31.0**	**34.0**	**37.1**	**36.7**	**38.8**	**39.9**	**30.5**	**31.4**	**38.2**	**37.1**	**37.9**

(a) Per cent change between 1996 and 2012, calculated using linear regression.

(b) Data for Tasmania and the Australian Capital Territory are not published due to small numbers, but are included in the Australian totals.

Source: AIHW analysis of ANZDATA data.

Data sources and quality

National Mortality Database

Mortality data presented in this report are from the ABS National Mortality Database. The National Mortality Database includes information on the factors that caused death, as well as other information about the deceased person, such as age at death, place of death, country of birth, and where applicable, the circumstances of their death. These data are collected in Australia by the Registrars of Births, Deaths and Marriages in each state and territory. The data are then compiled nationally by the ABS, which codes the data according to the International Classification of Diseases (ICD).

Deaths

The count of deaths for Indigenous Australians can be influenced by the accuracy of identification of Indigenous deaths, late registration of deaths, as a result of coronial inquiry, and changes to death forms and/or processing systems. Due to the small size of the Indigenous population, these factors can significantly impact on trends over time and between jurisdictions.

Queensland deaths

In November 2010, the Queensland Registrar of Births, Deaths and Marriages advised the ABS of an outstanding deaths registration initiative undertaken by the Registry. This initiative resulted in the November 2010 registration of 374 previously unregistered deaths which occurred between 1992 and 2006 (including a few for which a date of death was unknown). Of these, around three-quarters (284) were deaths of Indigenous Australians.

The ABS discussed different methods of adjustment of Queensland death registrations data for 2010 with key stakeholders. Following the discussion, a decision was made by the ABS and key stakeholders to use an adjustment method that added together deaths registered in 2010 for usual residents of Queensland which occurred in 2007, 2008, 2009 and 2010. This method minimises the impact on mortality indicators used in various government reports. However, care should still be taken when interpreting Indigenous death data for Queensland for 2010.

Western Australia deaths

Indigenous deaths registered in Western Australia in 2007, 2008 and 2009 were corrected by the ABS in mid-2012 due to some non-Indigenous deaths being incorrectly recorded as Indigenous for these years. Data presented in this report are based on the corrected data and will differ from mortality data presented in the 2010 Health Performance Framework report which presented data before the ABS corrections.

Indigenous status question

All jurisdictions broadly comply with the standard wording for the Indigenous status question for their death registration forms. However, the response categories tend to differ between a number of jurisdictions, most notably WA provides an additional 'Unknown' response category and the NT does not provide clear instructions on how to select both Aboriginal and Torres Strait Islander origin (for example, by ticking both boxes) (ABS & AIHW 2005).

Under-identification

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded or reported, or recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Indigenous population (ABS 2013a). As a result, the observed differences between Indigenous and non-Indigenous mortality are under-estimates of the true differences. While the identification of Indigenous Australians in deaths data is incomplete in all state and territory registration systems, 5 jurisdictions (New South Wales, Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. Longer-term mortality trend data are presented for these jurisdictions from 1998 onwards. The ABS calculated the identification rate of Indigenous deaths for the period 2011–12 through data linkage between the Census and death registration records to examine differences in reporting of Indigenous status across the 2 datasets (ABS 2013b).

Indigenous Mortality Quality Study

The ABS conducted a number of quality studies based on the 2006 Census of Population and Housing and other data sets as part of the Census Data Enhancement (CDE) project (ABS 2008). The CDE Indigenous Mortality Quality Study linked Census records with death registration records for the 11-month period following the Census and examined differences in the reporting of Indigenous status across the 2 data sets.

For the purpose of this study, the linked record was assumed to be an Indigenous record if a positive response was recorded against the Indigenous status question on either the death registration or the corresponding Census record. Following linkage, the number of death records identified as Indigenous increased from 1,800 to 2,123 records, or from 1.7% to 2.0% of all registered deaths.

According to ABS 2008: 'While 323 additional death records were able to be identified as Indigenous from Census records, more may have been expected if all death records had been linked. A key reason records could not be linked appears to be Census undercount, with a corresponding Census record not existing to link to for many Indigenous death records'.

The results from the study suggested that coverage of Indigenous deaths in death registrations is considerably higher, at least in 2006–07, than previous estimates have indicated. Nationally, the coverage rate was estimated to be 85%. State/territory coverage estimates were: Victoria 74%, New South Wales 76%, South Australia 86%, Queensland 87%, Western Australia 92% and the Northern Territory 99% (ABS 2008). The AIHW is also undertaking a project to develop an Enhanced Mortality Database by linking death registration records to several additional data sources that contain information on Indigenous deaths.

Numerator and denominator

Mortality rates use the count of deaths in the numerator and population estimates in the denominator. Analysis of trends in mortality rates is therefore also influenced by the assumptions made about mortality in the population backcast and projections, which is somewhat circular. The 2011 Census based backcast mortality assumptions were that Indigenous life expectancy at birth at the Australian level increased by 0.2 years per year for males and 0.15 years per year for females for the period 30 June 1996 to 30 June 2006 and then increased by 0.3 years per year for males and 0.15 years per year for females for the

2006–2011 period. Under this assumption, life expectancy at birth in 1996 would be 65.5 years and 71.4 years for Indigenous males and females respectively. Whether Indigenous life expectancy at birth has changed at a faster or slower rate is unknown (ABS 2014b).

For more information see <http://meteor.aihw.gov.au/content/index.phtml/itemId/395084>.

National Hospital Morbidity Database

The scope of the NMDS is episodes of care for admitted patients in essentially all hospitals in Australia, including public and private acute and psychiatric hospitals, free-standing day hospital facilities, alcohol and drug treatment hospitals and dental hospitals. Hospitals operated by the Australian Defence Force, corrections authorities and in Australia's off-shore territories are not included. Hospitals specialising in ophthalmic aids and other specialised acute medical or surgical care are included. The NHMD does not include episodes of non-admitted patient care provided in outpatient clinics or emergency departments.

For 2012–13, almost all public hospitals provided data for the NHMD. The exception was a mothercraft hospital in the ACT. The great majority of private hospitals also provided data, the exceptions being the private free-standing day hospital facilities in the ACT, the single private free-standing day hospital in the Northern Territory, and a private free-standing day hospital in Victoria.

Hospitalisations

Data are a count of hospital separations (episodes of admitted patient care, which can be a total hospital stay or a portion of a hospital stay that begins or ends in a change of type of care) and not patients. Patients who separated from hospital more than once in the year will be counted more than once in the data set.

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.

Records for newborn episodes that did not include qualified days, and records for hospital boarders and posthumous organ procurement have been excluded as these activities are not considered to be admitted patient care.

Indigenous status information

Approximately 2% of hospital records have Indigenous status of 'not stated', though this proportion varies across the jurisdictions (see Table 1.02.1). These records are excluded from analyses of hospital data in this report. Note that for hospitals in Western Australia, records with an unknown status are reported as non-Indigenous.

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Indigenous Australians.

The AIHW completed an assessment of the level of Indigenous under-identification in selected public hospitals in all states and territories in 2007–08. Results from this assessment indicate that New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory had adequate Indigenous identification (20% or less overall

under-identification of Indigenous patients) in their hospital separations data (AIHW 2010). The study estimated that 89% of Indigenous patients were correctly identified in Australian public hospital admission records in 2007–08.

In 2011–12, the AIHW completed a second study to reassess the level of under-identification in public hospitals data, and found that all jurisdictions had sufficient quality Indigenous identification for reporting from 2010–11 (AIHW 2013). The study estimated that 88% of Indigenous patients were correctly identified in Australian public hospital admission records in 2011–12, and a correction factor of 1.09 is used at the national level to adjust for under-identification in hospital data. Interpretation of results should take into account the relative quality of the data from the jurisdictions.

Time series analysis may be affected by changes in the quality of Indigenous identification over time. The second AIHW study found no statistically significant change in identification rates at the national level, although there were some changes at the jurisdictional level. Time series presentations in this report include data from both public and private hospitals across several jurisdictions, so the overall effect of changes in Indigenous identification over time is unclear. This should be taken into account when interpreting the results of time series analysis.

Change in coding and coding practices

Between 2009–10 and 2010–11, there were significant changes in the coding of diagnoses for diabetes, obstetrics, and imaging procedures. There were also significant changes made to coding practices for diabetes and related conditions for the 2012–13 year, resulting in increased counts for these conditions. Caution should be used in comparing 2011–12 and 2012–13 data with data from previous Health Performance Framework reports.

For more information about the quality of the NHMD and emergency department care data, please refer to Database quality statement summaries in the report *Australian Hospital Statistics 2012–13*, available at <http://www.aihw.gov.au/publication-detail/?id=60129546922>.

Australia and New Zealand Dialysis and Transplant registry

The data reported here on Indigenous persons with end-stage kidney disease (ESKD) have been supplied by the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA). Data sets provided for analysis are de-identified. The interpretation and reporting of these data are the responsibility of the authors and in no way should be seen as an official policy or interpretation of the registry. Data are collected from all dialysis and transplant units in Australia and New Zealand at 31 December each year. This encompasses virtually all patient events that have occurred in the previous 12 months as well as a 'snapshot' of all dialysis and transplants patients on those dates.

Indigenous status question

A survey form is completed for all patients at the commencement of haemodialysis; this survey includes a prompt regarding Indigenous status. Separate results are not always published for Torres Strait Islanders because of the small number of patients.

Under-identification

Indigenous identification is based on self-identification in hospital records and discussion with the treating nurse or physician. The completeness of identification of Indigenous Australians in the registry is not known. However it is believed that Indigenous identification in the registry is more complete than in general hospital data (Cass et al. 2001). ESKD patients have regular contact with renal services from the time of diagnosis, through intensive maintenance therapy until death. There is heightened awareness of kidney disease in Indigenous Australians and multiple opportunities exist to reconfirm data accuracy (Cass et al. 2001).

Australian Aboriginal and Torres Strait Islander Health Survey

The 2012–13 Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS) included a sample of 12,000 Indigenous Australians for the core sample and sub-samples for various components of the survey such as voluntary biomedical data for adults. The AATSIHS sample was specifically designed to select a representative sample of Indigenous Australians and therefore overcome the problem inherent in most national surveys (that is, small and unrepresentative Indigenous samples).

Survey results are subject to sampling errors as only a small proportion of the population is used to produce estimates that represent the whole population. Non-sampling errors may occur where there is non-response to the survey or questions in the survey, misunderstanding of questions or errors in recording, coding or processing the survey. Information recorded in this survey is 'as reported' by respondents. Responses may be affected by imperfect recall or individual interpretation of survey questions. Any data that are self-reported are also likely to under-estimate circumstances about which the respondent is unaware, or may be reluctant to report (for example, certain health conditions, weight, drug use).

Selected non-Indigenous comparisons are available from the 2011–13 Australian Health Survey (AHS). The AHS was conducted in *Major cities*, *Regional* and *Remote areas*, but *Very remote* areas were excluded from the sample.

Further information on AATSIHS data quality issues can be found in the user guide for the survey (ABS 2013c). Time series comparisons for some indicators are available from the 2004–05 NATSIHS, 2008 NATSISS, 2002 NATSISS, 2001 NHS and the 1994 National Aboriginal and Torres Strait Islander Survey (NATSIS).

Australian Health Survey

The Australian Health Survey (AHS) combines the existing ABS National Health Survey (NHS) and the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) together with 2 new elements: a National Nutrition and Physical Activity Survey (NNPAS) and a National Health Measures Survey (NHMS).

For more information see:

- National Health Survey <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4363.0.55.001Main+Features12011-13?OpenDocument>.
- National Aboriginal and Torres Strait Islander Health Survey <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4715.0/>.

- National Nutrition and Physical Activity Survey <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4364.0.55.007~2011-12~Main%20Features~About%20the%20National%20Nutrition%20and%20Physical%20Activity%20Survey~731>.
- National Health Measures Survey <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4364.0.55.005Chapter1102011-12>.

List of symbols used in tables

n.a.	not available
–	rounded to zero (including null cells)
0	zero
. .	not applicable
n.p.	not available for publication but included in totals where applicable, unless otherwise indicated
*	represents results with statistically significant differences at the $p < 0.05$ level, between the categories specified in table footnotes
†	estimate has a relative standard error between 25% and 50% and should be used with caution
‡	estimate has a relative standard error greater than 50% and is considered too unreliable for general use

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