2.20 Risky and high-risk alcohol consumption

The proportion of Aboriginal and Torres Strait Islander peoples who consume alcohol at risky or high-risk levels

Data sources

Data for this measure come from the National Aboriginal and Torres Strait Islander Health Survey, the National Hospital Morbidity Database, the National Mortality Database, the 2008 NATSISS and the Bettering the Evaluation and Care of Health Survey.

National Aboriginal and Torres Strait Islander Health Survey

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

The NATSIHS collected information on risky and high-risk alcohol consumption, which is defined as that which exceeds the National Health and Medical Research Council (NHMRC) guidelines for low-risk drinking, in the short-term or long-term. These guidelines are outlined below.

Risky/high-risk drinking—adult males

- Short-term risky drinking for males is consumption in excess of six but less than 11 standard drinks on any one day.
- Short-term high-risk drinking for males is consumption of 11 or more standard drinks on any one day.
- Long-term risky drinking is average consumption in excess of four but less than six standard drinks per day amounting to 29 but less than 42 standard drinks per week.
- Long-term high-risk drinking is average consumption in excess of six standard drinks per day amounting to 43 or more standard drinks per week.

Risky/high-risk drinking—adult females

- Short-term risky drinking is consumption in excess of four but less than seven standard drinks on any one day.
- Short-term high-risk drinking is consumption in excess of seven or more standard drinks on any one day.
- Long-term risky drinking is average consumption in excess of two but less than five standard drinks per day amounting to 15 but less than 28 standard drinks per week.

- Long-term high-risk drinking is consumption in excess of four standard drinks per day which amounts to 29 or more standard drinks per week.

National Aboriginal and Torres Strait Islander Social Survey

The Australian Bureau of Statistics (ABS) conducted the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS) between August 2002 and April 2003. The 2008 NATSISS was conducted between August 2008 and April 2009. The survey provides information about the Aboriginal and Torres Strait Islander populations of Australia for a wide range of areas of social concern including health, education, culture and labour force participation. The 2008 NATSISS included for the first time children aged under 15. The NATSISS will be conducted every six years, with the next survey planned for 2013.

The 2008 NATSISS collected information by personal interview from 13,300 Indigenous Australians across all states and territories of Australia, including those living in remote areas. The sample covered persons aged 15 years and over who are usual residents in selected private dwellings. It collected information on a wide range of subjects including family and culture, health, education, employment, income, financial stress, housing, and law and justice.

Bettering the Evaluation and Care of Health survey

Information about encounters in general practice is available from the Bettering the Evaluation and Care of Health (BEACH) survey, which the Australian Institute of Health and Welfare (AIHW) Australian General Practice Statistics and Classification Unit conducts. Information is collected from a random sample of approximately 1,000 general practitioners (GPs) from across Australia each year. A sample of 100 consecutive GP-patient encounters is collected from each GP. A more detailed explanation of the BEACH methods can be found in *General practice activity in Australia 2008–09,* (Britt et al. 2009).

The number of Indigenous patients identified in the BEACH survey is likely to be underestimated because some GPs might not ask the question on Indigenous status, or the patient may choose not to identify themselves (AIHW 2002). Further detailed analyses of this issue are covered in *General practice in Australia, heath priorities and policies 1998–2008,* (Britt & Miller 2009, 101).

> 'The findings of a BEACH substudy confirmed this suspected under-identification. In the data period reported here, 1.4% of patients encountered identified themselves as Indigenous. In contrast, in a BEACH substudy that asked 9,245 patients a complete set of questions about their cultural background (including Indigenous status) 2.2% (95% CI: 1.6–2.9) of respondents identified themselves as Indigenous (Britt et al. 2007). This rate is similar to the ABS estimates of Indigenous Australians as a proportion of the total population (ABS 2006).
>
> However, the BEACH substudy included Indigenous Australians seen at Community Controlled Health Services funded through Medicare claims, and the estimate of 2.2% could have been an overestimate for the proportion of encounters that are with Indigenous patients in general practice as a whole. Deeble et al. (2008) conducted further investigations on this data and estimated that the BEACH encounter identification was an underestimate of about 10%, and that a more reliable estimate of the Indigenous population would be about 1.6% of all encounters (Deeble et al. 2008).

The findings of these studies are that some GPs are not routinely asking patients at the encounter about their Indigenous status, even when this is a variable specifically collected for each patient encountered, as it is in BEACH encounter data.'

Before the late inclusion of a 'not stated' category of Indigenous status in 2001–02, 'not stated' responses were included with non-Indigenous encounters. Since then, GP encounters for which Indigenous status was not reported have been included with encounters for non-Indigenous people under the 'other' category.

Data are presented for the 5-year period 2004–05 to 2008–09, during which there were 6,137 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, representing 1.3% of total GP encounters in the survey.

The 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. State and territory health departments provide information annually on the characteristics, diagnoses and care of admitted patients in public and private hospitals to the AIHW.

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

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

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

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

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

The National Mortality Database

The National Mortality Database is a national collection of de-identified unit record level data. It comprises most of the information recorded on death registration forms and medical (cause of death) certificates, including Indigenous status. The AIHW maintains the database. The Registrars of Births, Deaths and Marriages provide information on the characteristics and causes of death of the deceased and the Australian Bureau of Statistics (ABS) codes this nationally. The medical practitioner certifying the death, or a coroner, supplies information on the cause of death. The data are updated each calendar year and are presented by state/territory of usual residence rather than state/territory where death occurs.

It is considered likely that most deaths of Aboriginal and Torres Strait Islander people are registered. However, a proportion of these deceased are not reported as Aboriginal or Torres Strait Islander by the family, health worker or funeral director during the death registration process. That is, while data are provided to the ABS for the Indigenous status question for 99% of all deaths, there are concerns regarding the accuracy of the data. The funeral director does not always ask the Indigenous status question of relatives and friends of the deceased. Detailed breakdowns of Aboriginal and Torres Strait Islander deaths are therefore only provided for five jurisdictions—New South Wales, Queensland, South Australia, Western Australia and the Northern Territory (AIHW 2010).

Deaths for which the Indigenous status of the deceased was not reported have been excluded from the analysis.

Additional revised 2007 and preliminary 2008 mortality data for this indicator was supplied by the ABS from the ABS Cause of Death database. For further information see *Causes of death, Australia, 2008* (ABS 2010a).

Data have been combined for the 5-year period 2004–2008 because of the small number of deaths from some conditions each year. Data have been analysed using the year of registration of death for all years. Note that the 2006 edition of this report used year of occurrence of death for all years of analysis except for the latest year of available data for which year of registration of death was used. Data published in this report may therefore differ slightly from those published in the previous edition for comparable years of data.

Data analyses

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

Self-reported alcohol consumption and risk levels

The 2004–05 NATSIHS collected information on alcohol consumption and risk level of Aboriginal and Torres Strait Islander peoples.

- In 2004–05, approximately 50% of Indigenous Australians aged 18 years and over reported having consumed alcohol in the week before the survey, and around one-quarter (24%) of Indigenous adults reported they had not consumed alcohol in the previous 12 months.

- Overall, approximately 17% of Indigenous adults reported drinking at long-term risky/high-risk levels. Of those who consumed alcohol in the week before the survey, around one-third (34%) reported drinking at long-term risky/high-risk levels.
- Approximately 55% of Indigenous adults drank at short-term risky/high-risk levels in the previous 12 months and 19% drank at short-term risky/high-risk levels at least once a week in the previous 12 months.
- After adjusting for differences in age structure, Indigenous Australians were twice as likely as non-Indigenous Australians to drink at short-term risky/high-risk levels at least once a week in the previous 12 months. Overall, Indigenous and non-Indigenous Australians were equally as likely to drink at long-term risky/high-risk levels in the week before the survey (15% and 14% respectively); however, of those who drank, Indigenous adults were around 1.5 times as likely as non-Indigenous adults to drink at long-term risky/high-risk levels. Indigenous adults were twice as likely as non-Indigenous Australians to have abstained from alcohol consumption in the previous 12 months.

Alcohol risk levels by age

- Indigenous Australians aged 35–44 years were most likely to report drinking at long-term risky/high-risk levels in the previous week (20%) (Table 2.20.1).
- Indigenous Australians were more likely than non-Indigenous Australians to report drinking at short-term risky/high-risk levels at least once in the previous 12 months across all age groups, although the levels are close for the age group 18–24 years.
- A significantly higher proportion of Indigenous Australians aged 25–34 and 35–44 years drank at long-term risky/high-risk levels in the previous week than non-Indigenous Australians of the same age.

Table 2.20.1: Alcohol risk levels[(a)], by Indigenous status and age, persons aged 18 years and over, 2004–05

	Age group (years)														
	18–24		25–34		35–44		45–54		55 and over		Total non-age-standardised		Total age-standardised		
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Rate ratio
	Per cent														
Abstainers[(b)]	16*	12*	18*	12*	22*	12*	31*	15*	46*	22*	24*	15*	29	15	1.9*
Short-term risk[(c)]															
Drank at risky/high-risk levels in last 12 months[(d)]	64	63	64*	56*	59*	46*	45*	35*	22	16	55*	39*	47	40	1.2*
Drank at risky/high-risk levels at least once a week[(e)]	23*	15*	20*	9*	22*	9*	16*	8*	9*	4*	19*	8*	17	8	2.1*
Long-term risk[(f)]															
Low	33*	47*	36*	51*	34*	52*	31*	50*	21*	47*	32*	49*	30	49	0.6*
Risky or high-risk	16	14	17*	13*	20*	15*	17	16	10	12	17*	14*	15	14	1.1
Total long-term risk[(g)]	*50**	*61**	*53**	*64**	*54**	*66**	*48**	*66**	*32**	*58**	*49**	*63**	*46*	*63*	*0.7**
Total[(h)(i)]	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	. .
Total number ('000)	**56.7**	**1,857.1**	**69.8**	**2,761.4**	**59.1**	**2,899.6**	**39.6**	**2,705.6**	**33.2**	**4,529.7**	**258.3**	**14,753.3**	**258.3**	**14,753.3**	. .

(continued)

Table 2.20.1 (continued): Alcohol risk levels[(a)], by Indigenous status and age, persons aged 18 years and over, 2004–05

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

(a) Risk level based on Australian Alcohol Guidelines 2000.

(b) No alcohol consumed in previous 12 months.

(c) Based on responses to questions in 2004–05 NHS/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months.

(f) Risk level based on consumption in week before the interview.

(g) Includes persons whose risk level was reported as 'not known'.

(h) Includes persons who consumed alcohol more than 1 week but less than 12 months before the survey.

(i) Includes persons who reported time since last consumed alcohol 'not known'.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Alcohol risk levels by sex

- A higher proportion of Indigenous females than Indigenous males reported abstaining from alcohol consumption in the 12 months prior to survey (30%compared with 17%) (Table 2.20.2).
- Indigenous males were more likely to report drinking at short-term and long-term risky/high-risk levels than Indigenous females.
- Indigenous males and females were two and three times as likely as non-Indigenous males and females to report drinking at short-term risky/high-risk levels at least once a week in the previous 12 months.
- Indigenous males were more likely to report drinking at long-term risky/high-risk levels in the week before the survey than non-Indigenous males (18% compared with 15%). The proportions of Indigenous and non-Indigenous females reporting drinking at long-term risky/high-risk levels were similar.

Table 2.20.2: Alcohol risk levels[a], by Indigenous status and sex, persons aged 18 years and over, 2004–05 (per cent)

	Non age-standardised proportions				Age-standardised proportions					
	Males		Females		Males			Females		
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Ratio	Indig.	Non-Indig.	Ratio
	%	%	%	%	%	%		%	%	
Abstainers[b]	17*	11*	30*	20*	22*	10	2.1*	35	20	1.8*
Short-term risk[c]										
Drank at risky/high-risk levels in last 12 months[d]	64*	48*	46*	30*	56	48	1.2*	40	31	1.3*
Drank at risky/high-risk levels at least once a week[e]	24*	12*	15*	4*	21	12	1.8*	14	5	3.0*
Long-term risk[f]										
Low	38*	56*	27*	43*	36	50	0.7*	24	43	0.6*
Risky or high-risk	20*	15*	14	12	18	15	1.2*	13	12	1.1
Total long-term risk[g]	*58**	*71**	*41**	*55**	*55*	*71*	*0.8**	*38*	*55*	*0.7**
Total[h][i]	**100**	**100**	**100**	**100**	**100**	**100**	**. .**	**100**	**100**	**. .**
Total number	**120,479**	**7,257,683**	**137,818**	**7,495,573**	**120,479**	**7,257,683**	**. .**	**137,818**	**7,495,573**	**. .**

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

(a) Risk level based on Australian Alcohol Guidelines 2000.

(b) No alcohol consumed in previous 12 months.

(c) Based on responses to questions in 2004–05 NHS/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months.

(f) Risk level based on consumption in week before the interview.

(g) Includes persons whose risk level was reported as 'not known'.

(h) Includes persons who consumed alcohol more than 1 week but less than 12 months before the survey.

(i) Includes persons who reported time since last consumed alcohol 'not known'.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Alcohol risk levels by state/territory

- The proportion of Indigenous adults who drank at long-term risky/high-risk levels ranged from 8% in the Northern Territory to 19% in Queensland and Western Australia (Table 2.20.3a).
- Indigenous Australians were more likely than non-Indigenous Australians to report drinking at short-term risky/high-risk levels at least once a week in all states and territories. The proportion of Indigenous and non-Indigenous Australians reporting drinking at long-term risky/high-risk levels in the previous week was similar across all states and territories (Table 2.20.3b).

Table 2.20.3a: Alcohol risk levels[(a)], Indigenous persons aged 18 years and over, by state/territory, 2004–05

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Per cent				
Abstainers[(b)]	19	16	21	26	23	11	12	48	24
Short-term risk[(c)]									
Drank at risky/high-risk levels in last 12 months[(d)]	56	58	59	57	49	54	59	40	55
Drank at risky/high-risk levels at least once a week[(e)]	19	17	18	27	19	14	17	16	19
Long-term risk[(f)]									
Drank at risky/high-risk levels in last week	17	16	19	19	17	13	11	8	16
Total number	**75,001**	**16,516**	**70,623**	**36,542**	**14,480**	**9,477**	**2,300**	**33,358**	**258,297**

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

(a) Risk level based on Australian Alcohol Guidelines 2000.

(b) No alcohol consumed in previous 12 months.

(c) Based on responses to questions in 2004–05 NHS/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months.

(f) Risk level based on consumption in the week before the interview.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.20.3b: Alcohol risk levels[(a)], persons aged 18 years and over, by Indigenous status and state/territory, 2004–05

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT[(b)]	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
									Per cent							
Abstainers[(c)]	23*	17*	19	16	28*	13*	30*	14*	34*	13*	14	11	11[(g)]	11	51	n.a.
Short-term risk[(d)]																
Drank at risky/high-risk levels in last 12 months[(e)]	49*	37*	50*	38*	51*	42*	43	42	47	43	47	44	51*	40*	37	n.a.
Drank at risky/high-risk levels at least once a week[(f)]	17*	7*	17*	7*	16*	9*	18*	8*	22*	10*	13	10	15*[(g)]	6*	15	n.a.
Long-term risk[(h)]																
Drank at risky/high-risk levels in last week	17	13	17[(h)]	12	18	14	16	15	16	16	13	12	9[(g)]	14	7	n.a.
Total number	**75,001**	**4,970,170**	**16,516**	**3,758,032**	**70,623**	**2,790,801**	**14,480**	**1,138,920**	**36,542**	**1,418,543**	**9,477**	**347,075**	**2,300**	**239,879**	**33,358**	**n.a.**

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

(a) Risk level based on Australian Alcohol Guidelines 2000.

(b) Non-Indigenous data not available for the Northern Territory because of small sample size. Northern Territory records for non-Indigenous people contribute to the national estimates but are insufficient to support reliable estimates for the Northern Territory.

(c) No alcohol consumed in previous 12 months.

(d) Based on responses to questions in 2004–05 NHS/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(f) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months.

(g) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(h) Risk level based on consumption in the week before the interview.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Alcohol risk levels by remoteness

- Indigenous adults in remote areas were more likely than those in non-remote areas to report drinking at short-term risky/high risk-levels in the week before the interview. Similar proportions of Indigenous Australians in remote and non-remote areas reported drinking at long-term risky/high-risk levels in the week before the interview (15% and 17%) (Table 2.20.4). Indigenous adults in remote areas were much more likely to have abstained from alcohol consumption in the previous 12 months than Indigenous adults in non-remote areas (38% compared with 19%).

Table 2.20.4: Alcohol risk levels[(a)], by remoteness, Indigenous persons aged 18 years and over, 2004–05

	Non-remote	Remote	Total
		Per cent	
Abstainers[(b)]	19	38	24
Short-term risk[(c)]			
Drank at risky/high-risk levels in last 12 months[(d)]	57	49	55
Drank at risky/high-risk levels at least once a week in last 12 months[(e)]	18	23	19
Long-term risk[(f)]			
Drank at risky or high-risk levels in last week	17	15	16
Total number	**185,515**	**72,782**	**258,297**

(a) Risk level based on Australian Alcohol Guidelines 2000.

(b) No alcohol consumed in previous 12 months.

(c) Based on responses to questions in 2004–05 NHS/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months.

(f) Risk level based on consumption in the week before the interview.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Alcohol risk levels by selected health and population characteristics

- The proportion of Indigenous Australians aged 18 years and over who drank at long-term risky/high-risk levels and reported their health as fair/poor (25%) was similar to the proportion of Indigenous Australians in the total population who reported their health as fair/poor (24%) (Table 2.20.5).
- Indigenous Australians who spoke English as their main language at home (18%) or were in the highest (4th and 5th) quintiles of household income (20%) were more likely to drink at long-term risky/high-risk levels than Indigenous Australians who spoke a language other than English as their main language (9%) or were in the lowest (1st) quintile of household income (15%) (Table 2.20.6).
- Indigenous Australians who were not in the labour force were less likely to report drinking at short-term or long-term risky/high-risk levels than Indigenous Australians who were employed or unemployed (Table 2.20.6).

Table 2.20.5: Alcohol risk levels[(a)], by self-assessed health status, Indigenous persons aged 18 years and over, 2004–05

	Long-term[(b)]	Short-term[(c)]		Total population
Health status	Drank at risky/high-risk levels in last week	Drank at risky/high-risk levels in last 12 months[(d)]	Drank at risky/high-risk levels at least once a week in last 12 months[(e)]	Indigenous persons aged 18 years and over
		Per cent		
Excellent/very good	35	41	36	40
Good	40	38	42	36
Fair/poor	25	21	22	24
Total	**100**	**100**	**100**	**100**

(a) Risk level based on Australian Alcohol Guidelines 2000.

(b) Based on responses to questions in 2004–05 NHS/NATSIHS about frequency of consumption of specified number of drinks in previous year. The number of drinks was based on the NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(c) Risk level based on consumption in the week before the interview.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(e) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.20.6: Alcohol risk level, by selected population characteristics, Indigenous persons aged 18 years and over, 2004–05

	Long-term risk[(a)]	Short-term risk[(b)]	
	Drank at risky/high-risk levels in last week	Drank at risky/high-risk levels in last 12 months[(c)]	Drank at risky/high-risk levels at least once a week in last 12 months[(d)]
	Per cent		
Main language spoken at home			
English	18	57	20
Language other than English	9	39	16
Location			
Remote	15	49	23
Non-remote	17	57	18
Household income			
1st quintile (lowest)	15	49	20
4th and 5th quintile (highest)	20	63	15
Employment			
Employed CDEP	21	60	32
Employed non-CDEP	19	62	18
Total employed	*19*	*61*	*21*
Unemployed	20	67	23
Not in the labour force	12	43	16
Housing tenure type			
Owner[(e)]	19	55	14
Renter	15	54	21
Other[(f)]	25[(g)]	65	22
Treatment when seeking health care in last 12 months compared with non-Indigenous people			
Worse	16	56	19
The same or better	16	53	19

(a) Risk level based on Australian Alcohol Guidelines 2000 for risk of harm in the long-term.

(b) Based on responses to questions in 2004–05 National Health Survey/NATSIHS about frequency of consumption of specified number of standard drinks in the previous year. The number of standard drinks is based on NHMRC guidelines for risky and high-risk short-term alcohol consumption for males and females.

(c) Persons who consumed alcohol at specified risky/high-risk levels in the short-term on at least one occasion in the previous 12 months.

(d) Persons who consumed alcohol at specified risky/high-risk levels in the short-term at least once a week in the previous 12 months

(e) Includes owners with a mortgage and owners without a mortgage.

(f) Includes persons living under life tenure schemes, participants of rent/buy (or shared equity) schemes, persons living rent-free, boarders and other tenure type.

(g) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

Note: CDEP = Community Development Employment Projects scheme.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Hospitalisations

Table 2.20.7 presents hospitalisations of Indigenous and other Australians for principal diagnoses related to alcohol use in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory combined, over the period July 2006 to June 2008.

- There were 7,354 hospitalisations of Indigenous Australians in the six jurisdictions combined with a principal diagnosis related to alcohol use. This represented approximately 1.4% of all hospitalisations of Indigenous Australians in these jurisdictions.
- Indigenous males were hospitalised for diagnoses related to alcohol use at five times the rate of other males, and Indigenous females were hospitalised for alcohol-related conditions at three times the rate of other females.
- Over three-quarters (82%) of all hospitalisations of Indigenous Australians that were related to alcohol use had a principal diagnosis of mental and behavioural disorders due to alcohol use (6,015 hospitalisations). The most common type of mental and behavioural disorder due to alcohol use was acute intoxication, for which Indigenous Australians were hospitalised at seven times the rate of other Australians. Indigenous Australians were hospitalised at 8 times the rate of other Australians for mental and behavioural disorders due to withdrawal state and 17 times the rate of other Australians for psychotic disorder.
- Indigenous Australians were hospitalised for alcoholic liver disease at five times the rate of other Australians and for accidental poisoning by alcohol at two times the rate of other Australians.

Table 2.20.7: Hospitalisations for principal diagnoses related to alcohol use, NSW, Vic, Qld, WA, SA and NT, July 2006 to June 2008[(a)(b)(c)(d)]

	Males					Females					Persons				
	Number		No. per 1,000[(e)]			Number		No. per 1,000[(e)]			Number		No. per 1,000[(e)]		
Principal diagnosis	**Indig.**	**Other[(f)]**	**Indig.**	**Other[(f)]**	**Ratio[(g)]**	**Indig.**	**Other[(f)]**	**Indig.**	**Other[(f)]**	**Ratio[(g)]**	**Indig.**	**Other[(f)]**	**Indig.**	**Other[(f)]**	**Ratio[(g)]**
Mental & behavioural disorders due to alcohol use (F10)															
Acute intoxication (F10.0)	1,738	12,157	4.6	0.6	7.5*	1,213	7,388	2.8	0.4	7.3*	2,951	19,545	3.6	0.5	7.4*
Dependence syndrome (F10.2)	962	23,030	2.6	1.1	2.3*	491	19,955	1.2	1.0	1.3*	1,453	42,985	1.9	1.1	1.8*
Withdrawal state (F10.3, F10.4)	872	5,049	2.4	0.3	9.4*	226	2,030	0.5	0.1	5.3*	1,098	7,079	1.4	0.2	8.1*
Psychotic disorder (F10.5)	129	385	0.3	—	16.2*	45	105	0.1	—	19.5*	174	490	0.2	—	16.6*
Harmful use (F10.1)	164	1,457	0.4	0.1	5.8*	89	1,049	0.2	0.1	3.8*	253	2,506	0.3	0.1	4.9*
Other[(h)] (F10.6– F10.9)	59	853	0.2	—	4.9*	27	210	0.1	—	7.5*	86	1,063	0.1	—	5.3*
Total F10 categories	*3,924*	*42,931*	*10.6*	*2.1*	*4.9**	*2,091*	*30,737*	*4.9*	*1.5*	*3.2**	*6,015*	*73,668*	*7.6*	*1.8*	*4.2**
Alcoholic liver disease (K70)	460	3,864	1.4	0.2	7.5*	324	1,166	0.9	0.1	15.9*	784	10,088	1.1	0.2	4.7*
Intentional self-poisoning by alcohol (X65)	132	3,550	0.3	0.2	1.7*	233	5,312	0.5	0.3	1.9*	365	8,862	0.4	0.2	1.9*
Accidental poisoning by alcohol (X45)	69	1,002	0.2	0.1	3.1*	35	954	0.1	—	1.7*	104	1,956	0.1	—	2.4*
Poisoning by alcohol undetermined intent (Y15)	45	867	0.1	—	2.1*	41	973	0.1	—	1.8*	86	1,840	0.1	—	2.0*
Total	**4,630**	**52,214**	**12.5**	**2.6**	**4.8***	**2,724**	**39,142**	**6.5**	**1.9**	**3.3***	**7,354**	**96,414**	**9.4**	**2.4**	**3.9***

(continued)

Table 2.20.7 (continued): Hospitalisations for principal diagnoses related to alcohol use, NSW, Vic, Qld, WA, SA and NT, July 2004 to June 2006(a)(b)(c)(d)

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

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

(b) Categories are based on 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, Western Australia, South Australia.the Northern Territory and Queensland only. These six jurisdictions are considered to have adequate levels of Indigenous identification, although the level of accuracy varies by jurisdiction and hospital. Hospitalisation data for these six jurisdictions should not be assumed to represent the hospitalisation experience in the other jurisdictions.

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

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

(g) Rate ratio Indigenous:other.

(h) Includes amnesic syndrome, residual or late onset psychotic disorder, other and unspecified mental and behavioural disorders due to alcohol use.

Source: AIHW analysis of National Hospital Morbidity Database.

Hospitalisations by remoteness

Hospitalisation rates for hospitalisations with a primary diagnosis related to alcohol abuse in New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory are presented by Australian Standard Geographical Classification (ASGC) in Table 2.20.8, covering the period July 2007 to June 2009.

- Indigenous Australians in all remoteness areas were more likely to be hospitalised for these conditions than other Australians. The ratio of hospitalisations of Indigenous people compared to other Australians was higher and the difference was statistically significant for all ASGC areas.
- Rates of hospitalisations per 1,000 head of population were highest for Indigenous people living in *Remote* areas, at 16 per 1,000. The rate was highest for other Australians who lived in *Major cities*, at 2.5 per 1,000. The lowest rates were observed in *Very remote* areas for Indigenous people (7.4 per 1,000) and *Inner regional, Outer regional and Remote* areas for other Australians (all 1.8 per 1,000).
- Indigenous people were hospitalised for these conditions at a rate of 8.7 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 3.5 times that of other Australians. Nationally, the rate was 4.2 times.

Table 2.20.8: Hospitalisations with a principal diagnosis related to alcohol abuse, 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)]				
	Number	No. per 1,000[(h)]	LCL 95%[(i)]	UCL 95%[(j)]	Number	No. per 1,000[(h)]	LCL 95%[(i)]	UCL 95%[(j)]	Ratio[(k)]
Major cities	2,115	8.9	8.5	9.3	71,051	2.5	2.5	2.6	3.5*
Inner regional	1,351	8.8	8.3	9.3	12,995	1.8	1.7	1.8	5.0*
Outer regional[(l)]	1,700	10.5	10.0	11.1	6,422	1.8	1.8	1.9	5.7*
Remote	1,179	15.6	14.7	16.6	911	1.8	1.7	1.9	8.7*
Very remote	946	7.4	6.6	8.2	305	2.0	1.9	2.0	3.7*
Missing	144	. .	. .	. .	1,015	. .	. .	. .	. .
Total[(m)]	**7,435**	**9.8**	**9.6**	**10.1**	**92,699**	**2.3**	**2.3**	**2.3**	**4.2***

* 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-standardised using the Australian 2001 standard population.

(i) LCL = lower confidence limit.

(j) UCL = upper confidence limit.

(k) Rate ratio Indigenous: other.

(l) Outer regional includes remote Victoria.

(m) Total includes hospitalisations where ASGC is missing.

Notes:

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

Source: AIHW analysis of National Hospital Morbidity Database.

Mortality

Table 2.20.9 presents deaths related to alcohol use of Indigenous Australians in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory over the period 2004–2008.

- In New South Wales, Queensland, Western Australia, South Australia and the Northern Territory, there were 395 deaths of Indigenous Australians related to alcohol use (Table 2.20.9). This represented approximately 3.6% of total deaths of Indigenous Australians in these states and territories.
- Of all deaths related to alcohol use among Indigenous people, the majority were for alcoholic liver disease (274 deaths).
- Overall, Indigenous males died from alcohol-related causes at 5 times the rate of non-Indigenous males and Indigenous females died from alcohol-related causes at 9 times the rate of non-Indigenous females.
- Indigenous Australians died from mental and behavioural disorders due to alcohol use at 7 times the rate of non-Indigenous Australians, and from alcoholic liver disease and poisoning by alcohol at 6 times the rate.

Table 2.20.9: Deaths related to alcohol use, NSW, Qld, WA, SA and NT, 2004–2008[a][b][c][d][e][f][g]

	Males					Females					Persons				
	Number		No. per 100,000[h]			Number		No. per 100,000[h]			Number		No. per 100,000[h]		
Principal diagnosis	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Ratio[i]**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Ratio[i]**	**Indig.**	**Non-Indig.**	**Indig.**	**Non-Indig.**	**Ratio[i]**
Alcoholic liver disease (K70)	175	1,794	24.8	4.8	5.2	99	555	13.3	1.4	9.2	274	2,349	18.9	3.1	6.1
Mental & behavioural disorders due to alcohol use (F10)	63	667	11.4	1.9	6.1	32	174	4.4	0.4	10.1	95	841	7.5	1.1	6.8
Poisoning by alcohol (X45, X65, Y15)	18	119	1.9	0.3	5.9	8	47	0.9	0.1	7	26	166	1.4	0.2	6.1
Total	**256**	**2,580**	**38.1**	**7**	**5.4**	**139**	**776**	**18.6**	**2**	**9.3**	**395**	**3,356**	**27.8**	**4.4**	**6.3**

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

(a) Data are presented in 5-year groupings because of small numbers each year.

(b) Data are reported for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory only. These five jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.

(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 all-causes mortality rate.

(d) Deaths prior to 2007 are by year of registration and state/territory of usual residence. Deaths from 2007 onwards are by reference year and state/territory of usual residence. Registration year prior to 2007 is equivalent to reference year from 2007 onwards.

(e) Causes of death data for 2007 have been revised and are subject to further revisions. See Causes of death, Australia, 2008 (ABS 2010) Technical Note 2: Revisions Process for further information.

(f) 2008 data have been subject to a process improvement which has increased the quality of these data. See Causes of death, Australia, 2008 (ABS 2010) Technical Note 1: 2008 COD Collection - Process Improvement for further information.

(g) Excludes 59 deaths for which Indigenous status was not stated.

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

(i) Rate ratio Indigenous: non-Indigenous.

Note: Different causes of death may have different levels of completeness of identification of Indigenous deaths that differ from the all-cause under-identification (coverage) estimates.

Source: ABS and AIHW analysis of ABS Mortality Database

Alcohol consumption during pregnancy

Information about alcohol consumption during pregnancy is available from the 2008 NATSISS.

- In 2008, 3.3% of mothers of Indigenous children aged 0-3 years drank more or the same amount of alcohol during pregnancy, 16% drank less and 80% did not drink at all during their pregnancy (Table 2.20.10).
- The proportion of these mothers who did not drink alcohol during pregnancy was greatest in the Northern Territory (85%), and lowest in Victoria and Queensland (77%). The proportion of these mothers who drank more or the same amount of alcohol during pregnancy was greatest in Tasmania and the Australian Capital Territory combined (6%) and lowest in South Australia and Queensland (2%) (Table 2.20.10).

Table 2.20.10: Alcohol consumption by child's mother during pregnancy, Indigenous children aged 0-3 years, by state/territory, 2008

Alcohol consumption	NSW	Vic	Qld	WA	SA	Tas/ ACT	NT	Aust.
	%	%	%	%	%	%	%	%
Drank more or the same amount of alcohol during pregnancy	3.4	5.4	2.3	5.0	1.8	6.0	3.0	3.3
Drank less alcohol during pregnancy	14.1	17.6	20.5	15.7	15.2	13.1	11.9	16.3
Did not drink alcohol during pregnancy	82.6	77.0	77.3	79.3	83.1	80.9	85.1	80.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total number	**13,261**	**2,474**	**13,334**	**5,444**	**2,240**	**1,856**	**4,144**	**42,753**

Note: Excludes not stated & not collected.

Source: AIHW analysis of 2008 NATSISS.

General practitioner encounters

Information about GP encounters is available from the Bettering the Evaluation and Care of Health (BEACH) survey.

- In the five years of BEACH reporting between April 2004–March 2005 to April 2008–March 2009 there were 6,137 GP encounters with Aboriginal and Torres Strait Islander patients recorded in the survey, at which 9,305 problems were managed. Of these, 0.8% (74) were problems related to alcohol abuse (Table 1.16.23).
- After adjusting for differences in the age distribution of Indigenous patients, alcohol abuse was managed at GP encounters with Indigenous patients at around three times the management rate at encounters with other patients.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

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

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

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

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

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

Hospital separations data

Separations

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

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

Indigenous status question

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

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

Under-identification

The incompleteness of Indigenous identification means the number of hospital separations recorded as Indigenous is an underestimate of hospitalisations involving Aboriginal and Torres Strait Islander people. Based on an analysis of a sample of data conducted in 2010, an estimated 89% of Indigenous patients were correctly identified in Australian public hospital

admission records in 2007–08 (AIHW 2010). In other words, 11% of Indigenous patients were not identified, and the 'true' number of hospital admissions for Indigenous persons was about 12% higher than reported.

For several years, Queensland, South Australia, Western Australia and the Northern Territory reported that Indigenous status in their hospital separations data were of acceptable quality (AIHW 2007). The AIHW, however, has recently completed an assessment of the level of Indigenous under-identification in hospital data in all states and territories. Results from this assessment indicate that all hospitals in New South Wales, Victoria, Queensland, Western Australia and South Australia and public hospitals in the Northern Territory have adequate Indigenous identification (80% or higher overall levels of Indigenous identification in public hospitals only) in their separations data. For Tasmania and the Australian Capital Territory, the levels of Indigenous identification were not considered acceptable for analysis purposes. It has therefore been recommended that reporting of Indigenous hospital separations data be limited to information from New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory, individually or in aggregate. The proportion of the Indigenous population 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.
- Interpretation of time series analysis should take into account the possible contribution of changes over time in ascertainment of Indigenous status to changes in hospitalisation rates for Indigenous people.
- Bias may have been introduced due to the sampling method of hospitals used in the study. Hospitals with high proportions of Indigenous separations were used in the study to ensure sufficient numbers of Indigenous people were included. Proportions of Indigenous separations should therefore not be taken to represent the NHMD overall.
- Hospitalisation data for these six jurisdictions are not necessarily representative of other jurisdictions.

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

Remoteness areas

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

Numerator and denominator

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

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.

Mortality data

Deaths

The mortality rate for Indigenous Australians can be influenced by identification of Indigenous deaths, late registration of deaths, and changes to death forms and/or processing systems. Because of the small size of the Indigenous population, these factors can significantly affect trends over time and between jurisdictions. At present, there is considerable variation across the states and territories in the completeness of mortality and hospital data for Indigenous people.

Indigenous status question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, although data are provided to the ABS for the Indigenous status question for 99% of all deaths, there are concerns regarding the accuracy of the data. The Indigenous status question is not always directly asked. Detailed breakdowns of Indigenous deaths are therefore provided for only five jurisdictions—New South Wales, Queensland, South Australia, Western Australia and the Northern Territory.

Indigenous status information from the two sources is kept in the database, although this may not be consistent for an individual.

In 2004, a new range of codes were introduced as part of the effort to standardise and improve Indigenous identification in data collection nationally.

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 and examined differences in the reporting of Indigenous status across the two data sets.

There were 106,945 registered death records available to be linked in the study. Of these, 1,800 (1.7%) were identified as Indigenous on the death registration. Of the total registered deaths, 98,898 (92%) were linked to a Census record. However, a much lower linkage rate

was achieved for Indigenous deaths, with more than one quarter of all Indigenous death registrations (26% or 473) unable to be linked to a Census record. As a result, Indigenous death records were over-represented in the unlinked death registrations.

As well as being over-represented in unlinked death registrations, unlinked Indigenous death records had different characteristics to linked Indigenous death registrations. Indigenous death records with older ages at death and from non-remote regions were more likely to be linked.

Under-identification

Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded/recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an underestimate of deaths occurring in the Aboriginal and Torres Strait Islander population (ABS 2009a). As a result, the observed differences between Indigenous and non-Indigenous mortality are under-estimates of the true differences.

Longer term mortality trend data are limited to three jurisdictions (Western Australia, South Australia and the Northern Territory) with 10 years of adequate identification of Indigenous deaths in their recording systems (ABS & AIHW 2005). The quality of the time series data is also influenced by the late inclusion of a 'not stated' category for Indigenous status in 1998. Before this time, the 'not stated' responses were probably included with the non-Indigenous.

The ABS calculated the implied coverage (identification) of Indigenous deaths for the period 2002–2006 using population estimates: New South Wales 45%, Victoria 32%, Queensland 51%, South Australia 62%, Western Australia 72%, Northern Territory 90%, and Australia 55% (Tasmania and the Australian Capital Territory were not calculated because of small numbers) (ABS 2007).

Note that different causes may have levels of under-identification that differ from the all-cause coverage estimates. Note also that the quality of the cause of death data depends on every step of the process of recording and registering deaths (including the documentation available at each step of the process) from certification to coding of cause of death.

There are also current concerns about data quality for causes of death, especially relating to external causes of death of all Australians (not just Indigenous) (ABS 2006).

Problems associated with identification result in an underestimation of deaths and hospital separations for Indigenous people.

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 death 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 here are sourced from *Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2021*(ABS 2009b).

Cause of death coding

Causes of death are based on the 10th revision of the International Classification of Diseases (ICD-10). Mortality coding using ICD-10 was introduced into Australia on 1 January 1997.

General Practitioner Data (BEACH)

Information about general practitioner encounters is available from the Bettering the Evaluation and Care of Health (BEACH) survey. The BEACH data on Indigenous Australians should be treated with care. First, the sample frame has not been designed to produce statistically significant results for population subgroups such as Indigenous Australians. Second, the identification of Indigenous Australians is not complete. In the BEACH survey, 'not stated' responses to the Indigenous identification question are often higher than the 'yes' responses. It can be assumed, therefore, that the survey consistently under-counts the number of Indigenous Australians visiting general practitioners, but the extent of this under-count is not measurable.

National Aboriginal and Torres Strait Islander Social Survey

The NATSISS is conducted in all states and territories and includes remote and non-remote areas. The 2008 sample was 13,300 persons in 6,900 households, with a response rate of 82% of households. Up to three randomly selected Indigenous people were chosen from selected households to participate in the survey. Trained ABS interviewers conducted the survey using face-to-face interviews. In non-remote areas interviewers used a notebook computer to record responses, while in remote areas a paper questionnaire was used. Interviewers obtained the consent of a parent or guardian before interviewing those aged 15 to 17 years. Indigenous persons usually resident in non-private dwellings such as hotels, motels, hostels, hospitals, short-stay caravan parks, prisons and other correctional facilities were excluded.

The NATSISS uses the standard Indigenous status question. The NATSISS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians.

As with other surveys, the NATSISS is subject to sampling and non-sampling errors

Care has been taken to ensure that the results of this survey are as accurate as possible. All interviews were conducted by trained ABS officers. However, some factor may affect the reliability of the data.

Information recorded in this survey is 'as reported' by respondents, and therefore may differ from information available from other sources or collected using different methodologies.

Data on health-related indicators have been age-standardised to the 2001 total Australian population to account for differences in the age structures of the states and territories and the Indigenous and non-Indigenous population.

Time series comparisons for the 2008 survey are available through the 1994 National Aboriginal and Torres Strait Islander Survey and the 2002 NATSISS. However not all data elements align across the three (1994, 2001 and 2008) NATSISS surveys, hence care is required when reviewing results across the three surveys. There are no strictly comparable non-Indigenous results available for the 2008 NATSISS because the latest General Social Survey (which has been used in the past to compare with Indigenous results from the NATSISS) was run in 2006, with the next being run in 2010-11. Data from other ABS surveys run in 2008 may, however, be used to obtain rough non-Indigenous comparisons for some data items. Where possible, the ABS has provided recommendations for non-Indigenous data comparisons and these have been adopted in this report.

The 2008 NATSISS has a relatively large level of under-coverage when compared to other ABS surveys. There was also an increase in under-coverage compared to previous ABS Indigenous surveys. For example, the estimated under-coverage in the 2004-05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) was 42%. The overall under-coverage rate for the 2008 NATSISS is approximately 53% of the in-scope population at the national level. This rate varies across the states and territories (ABS 2010b).

Further information on NATSISS data quality issues can be found in the 2008 NATSISS User's guide (ABS 2010b).

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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