

1.24 Avoidable and preventable deaths

The number of deaths of Aboriginal and Torres Strait Islander peoples aged 0–74 years from avoidable and preventable conditions, expressed as a standardised rate and rate ratio

Data sources

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

The National Mortality Database is a national collection of de-identified information for all deaths in Australia and is maintained by the AIHW. Information on the characteristics and causes of death of the deceased is provided by the Registrars of Births, Deaths and Marriages and coded nationally by the ABS. Information on the cause of death is supplied by the medical practitioner certifying the death, or by a coroner. The data are updated each calendar year.

While the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and the AIHW as having adequate identification. These four jurisdictions represent approximately 60% of the Indigenous population of Australia. Data are presented by state/territory of usual residence rather than state/territory where death occurs.

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

Data have been combined for the five-year period 2000–2004 due to the small number of deaths from some conditions each year. Data have been analysed using the year of occurrence of death for the period 2000–2003 and year of registration of death for 2004. This is because mortality data by year of occurrence of death is a more accurate reflection of mortality during a particular year than year of registration data, however, year of occurrence data for 2004 are still incomplete owing to late registrations.

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

The ICD-9 and ICD-10 codes used for avoidable mortality in this measure come from the report *Australian and New Zealand atlas of avoidable mortality* (Page et al., in press).

Avoidable and preventable mortality refers to deaths from certain conditions that are considered avoidable given timely and effective health care. This also includes deaths amenable to legal measures such as traffic safety (for example, speed limits and use of seat belts and motorcycle helmets). Avoidable and preventable conditions are sometimes further differentiated into conditions where death can be averted by prevention ('preventable') or by treatment ('amenable, 'treatable'):

Amenable conditions are defined as those from which it is reasonable to expect death to be averted even after the condition has developed, for example, through early detection and effective treatment (such as cervical cancer).

Preventable conditions include those for which there are effective means of preventing the condition from occurring, for example, where the aetiology is to a considerable extent related to lifestyle factors (such as smoking).

Analyses

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

Mortality

- Over the period 2000–2004, there were 65,981 deaths of people aged 0–74 years from avoidable causes in Queensland, Western Australia, South Australia and the Northern Territory combined, 4,845 (7.3%) of which were deaths of Aboriginal and Torres Strait Islander peoples.
- Avoidable causes represented over three-quarters (76%) of all deaths of Indigenous Australians aged 0–74 years in these four jurisdictions. This was slightly higher than the proportion of deaths from avoidable causes in the non-Indigenous population (70%).

Avoidable mortality by age, sex and state/territory

Data presented below are for deaths from avoidable causes for persons aged 0–74 years in Queensland, Western Australia, South Australia and the Northern Territory in the period 2000–2004.

- Indigenous males and females had higher mortality rates from avoidable causes than non-Indigenous males and females across all age groups. Indigenous males and females aged 35–44, 45–54 and 55–64 years died from avoidable causes at four–six times the rate of non-Indigenous males and females respectively (Table 1.24.1).
- Indigenous males and females died from avoidable causes at around four and five times the rate of non-Indigenous males and females respectively.
- After adjusting for differences in age structure, Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory died from all avoidable causes at four times the rate of non-Indigenous Australians. This was similar to the difference between the two populations for all cause mortality.
- In Queensland, Indigenous Australians aged 0–74 years died from avoidable causes at three times the rate of non-Indigenous Australians of the same age, and in Western Australia, South Australia and the Northern Territory, Indigenous Australians died from avoidable causes at four times the rate of non-Indigenous Australians (Table 1.24.2).
- The proportion of deaths at ages 0–74 years from avoidable causes which are considered to be amenable to health care was higher for Indigenous Australians (22%) than non-Indigenous Australians (11%) (Table 1.24.3).

Table 1.24.1: Avoidable mortality, by Indigenous status, age group and sex, persons aged 0–74 years, Qld, WA, SA and NT, 2000–2004^{(a)(b)(c)(d)(e)}

Age group (years)	Males			Females		
	Rate per 100,000 ^(f)		Rate ratio ^(g)	Rate per 100,000 ^(f)		Rate ratio ^(g)
	Indigenous	Non-Indigenous		Indigenous	Non-Indigenous	
Less than 1	683.7	257.3	2.7*	532.0	216.3	2.5*
1–4	34.4	18.7	1.8*	43.9	10.3	4.3*
5–14	20.3	7.9	2.6*	13.4	4.9	2.8*
15–24	165.9	64.6	2.6*	76.8	22.8	3.4*
25–34	345.8	85.8	4.0*	143.9	29.8	4.8*
35–44	620.0	108.2	5.7*	337.9	57.7	5.9*
45–54	1,107.4	207.3	5.3*	686.9	124.5	5.5*
55–64	2,130.5	516.1	4.1*	1,347.5	283.8	4.7*
65–74	4,152.1	1,485.8	2.8*	3,057.6	802.7	3.8*
Total^(h)	876.9	236.8	3.7*	563.7	126.4	4.5*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

- (a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.
- (b) Data are presented in five-year groupings due to the small numbers each year.
- (c) While 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 are by year of occurrence except the latest year which is based on year of registration.
- (e) Rates per 100,000 population. Total rates have been directly age standardised using the 2001 Australian standard population.
- (f) Rate ratio Indigenous:non-Indigenous.
- (g) Totals excludes those aged 75 years and over and those for whom age was not stated.

Note: The completeness of identification of Indigenous deaths can vary by age.

Source: AIHW analysis of AIHW National Mortality Database.

Table 1.24.2: Avoidable mortality, by Indigenous status and state/territory, persons aged 0–74 years, 2000–2004^{(a)(b)(c)(d)}

State/territory	Number ^(e)			Indigenous			Non-Indigenous			Ratio ⁽ⁱ⁾
	Indigenous	Non-Indigenous	Not stated	Rate per 100,000 ^(f)	LCL 95% ^(g)	UCL 95% ^(h)	Rate per 100,000 ^(f)	LCL 95% ^(g)	UCL 95% ^(h)	
Qld	2,130	77,854	672	623.9	577.6	670.1	187.6	187.6	187.6	3.3*
WA	1,291	34,543	548	664.9	605.2	724.5	165.1	165.1	165.1	4.0*
SA	496	39,165	863	679.4	585.6	773.2	183.1	183.1	183.1	3.7*
NT	1,619	1,563	32	965.0	890.9	1039.0	228.8	228.8	228.8	4.2*
Qld, WA, SA & NT⁽ⁱ⁾	4,845	60,816	950	710.1	688.5	731.6	181.4	181.4	181.4	3.9*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

- (a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four states/territories are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.
- (b) Data are presented in five year groupings due to small numbers each year.
- (c) While 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 are by year of occurrence except the latest year which is based on year of registration.
- (e) The ABS calculated the completeness of identification of Indigenous deaths for the period 1999-2003 using population estimates as 54% for Queensland, 72% for Western Australia, 66% for South Australia and 95% for the Northern Territory. The completeness of Indigenous identification for avoidable deaths may differ from the estimates for 'all causes'.
- (f) Directly age standardised using the 2001 Australian standard population.
- (g) LCL = lower confidence limit.
- (h) UCL = upper confidence limit.
- (i) Rate ratio Indigenous:non-Indigenous.

Source: AIHW analysis of AIHW National Mortality Database

Table 1.24.3: Avoidable mortality, by Indigenous status, persons aged 0–74 years, Qld, WA, SA and NT, 2000–2004^{(a)(b)(c)}

Mortality category	Number			Per cent			Rate per 100,000 ^(e)		Ratio ^(f)
	Indigenous	Non-Indigenous	Not stated	Indigenous	Non-Indigenous	Not stated	Indigenous	Non-Indigenous	
Avoidable mortality	4,845	60,816	950	75.5	69.9	61.7	710.1	181.4	3.9*
<i>Amenable mortality</i>	1,198	17,337	418	21.6	11.3	44.0	152.3	48.7	3.1*
Unavoidable mortality	1,569	26,210	589	24.5	30.1	38.3	208.9	78.2	2.7*
Total mortality	6,414	87,026	1,539	100.0	100.0	100.0	918.9	259.6	3.5*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the p<.05 level.

- (a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.
- (b) Data are presented in five-year groupings due to small numbers each year.
- (c) While 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 are by year of occurrence except the latest year which is based on year of registration.
- (e) Directly age standardised using the 2001 Australian standard population.
- (f) Rate ratio Indigenous:non-Indigenous.

Source: AIHW analysis of AIHW National Mortality Database.

Avoidable mortality by cause of death

Table 1.24.4 presents avoidable mortality by cause of death and Indigenous status for persons aged 0–74 years in Queensland, Western Australia, South Australia and the Northern Territory combined over the period 2000–2004.

- The most common types of avoidable conditions causing death among Aboriginal and Torres Strait Islander people were ischaemic heart disease (20%), followed by cancer (13%), in particular lung cancer, diabetes (11%) and suicide (8%). Indigenous Australians died from these conditions at four, two, 18 and two times the rate of non-Indigenous Australians respectively (Table 1.24.4).
- Indigenous Australians died from selected invasive bacterial and protozoal infections at around eight times the rate of non-Indigenous Australians, from alcohol-related disease at nine times the rate of non-Indigenous Australians, from violence at 10 times the rate of non-Indigenous Australians, from nephritis and nephrosis at 18 times the rate of non-Indigenous Australians and from rheumatic heart disease and other valvular heart disease at 19 times the rate of non-Indigenous Australians.

Table 1.24.4: Avoidable mortality, by cause of death and Indigenous status, persons aged 0–74 years, Qld, WA, SA and NT, 2000–2004^{(a)(b)(c)(d)(e)}

Cause of death	Number ^(f)			Per cent			Indigenous			Non-Indigenous			Ratio ⁽ⁱ⁾
	Indig.	Non-Indig.	Not stated	Indig.	Non-Indig.	Not stated	Rate per 100,000 ^(g)	LCL 95% ^(h)	UCL 95% ⁽ⁱ⁾	Rate per 100,000 ^(g)	LCL 95% ^(h)	UCL 95% ⁽ⁱ⁾	
Ischaemic heart disease	962	12,824	219	19.9	21.1	19.3	163.2	158.9	167.6	38.3	38.3	38.3	4.3*
Cancer	643	21,821	264	13.3	35.9	23.2	120.3	116.8	123.9	64.6	64.6	64.6	1.9*
Lung cancer	243	7,410	98	5.0	12.2	10.3	46.7	40.5	52.9	20.8	20.8	20.8	2.2*
Diabetes	539	1,935	26	11.1	3.2	2.3	104.7	101.4	108.0	5.8	5.8	5.8	18.1*
Suicide	371	4,218	137	7.7	6.9	12.1	27.2	24.5	29.9	12.6	12.6	12.6	2.2*
Road traffic injuries	315	2,974	107	6.5	4.9	9.4	25.9	23.4	28.4	8.9	8.9	8.9	2.9*
Cerebrovascular disease	220	3,630	55	4.5	6.0	4.8	40.6	38.5	42.7	10.9	10.9	10.9	3.7*
Alcohol-related disease	297	1,456	27	6.1	2.4	2.4	37.6	35.2	40.0	4.3	4.3	4.3	8.8*
Chronic obstructive pulmonary disease	205	3,027	58	4.2	5.0	5.1	45.0	42.9	47.0	9.1	9.1	9.1	5.0*
Selected invasive bacterial and protozoal infections	234	1,245	36	4.8	2.0	3.2	30.7	28.5	32.8	3.7	3.7	3.7	8.2*
Nephritis and nephrosis	154	509	6	3.2	0.8	0.5	28.0	26.3	29.7	1.5	1.5	1.5	18.2*
Violence	146	391	18	3.0	0.6	1.6	11.6	10.0	13.3	1.2	1.2	1.2	10.0*

(continued)

Table 1.24.4 (continued): Avoidable mortality, by cause of death and Indigenous status, persons aged 0–74 years, Qld, WA, SA and NT, 2000–2004^{(a)(b)(c)(d)}

Cause of death	Number ^(f)			Per cent			Indigenous			Non-Indigenous			Ratio ^(j)
	Indig.	Non-Indig.	Not stated	Indig.	Non-Indig.	Not stated	Rate per 100,000 ^(g)	LCL 95% ^(h)	UCL 95% ⁽ⁱ⁾	Rate per 100,000 ^(g)	LCL 95% ^(h)	UCL 95% ⁽ⁱ⁾	
Birth defects	125	943	24	2.6	1.6	2.1	6.5	4.9	8.1	2.9	2.9	2.9	2.2*
Rheumatic and other valvular heart disease	88	178	2	1.8	0.3	0.2	10.2	8.9	11.5	0.5	0.5	0.5	19.1*
Other ^(k)	546	5,665	157	11.3	9.3	13.8	58.6	55.3	61.9	17.0	17.0	17.0	3.5*
Total	4,845	60,816	1,136	100.0	100.0	100.0	710.1	700.3	719.8	181.4	181.4	181.4	3.9*

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < .05$ level.

- (a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These four jurisdictions are considered to have adequate levels of Indigenous identification in mortality data. They do not represent a quasi-Australian figure.
- (b) Data are presented in five year groupings due to small numbers each year.
- (c) Rates exclude 950 deaths where the Indigenous status was not stated.
- (d) While 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. It is also difficult to exactly identify the difference between the Indigenous and non-Indigenous mortality rates due to these data quality issues.
- (e) Deaths are by year of occurrence except the latest year which is based on year of registration.
- (f) It should be noted that 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.
- (g) Directly age standardised using the Australian 2001 standard population.
- (h) LCL = lower confidence limit.
- (i) UCL = upper confidence limit.
- (j) Rate ratio Indigenous:non-Indigenous.
- (k) Other includes: tuberculosis, hepatitis, HIV/AIDS, viral pneumonia and influenza, thyroid disorders, illicit drug disorders, epilepsy, hypertensive heart disease, aortic aneurysm, obstructive uropathy & prostatic hyperplasia, deep vein thrombosis with pulmonary embolism, asthma, peptic ulcer disease, acute abdomen/appendicitis/intestinal obstruction/cholecystitis/lithiasis/pancreatitis/hernia, chronic liver disease, complications of perinatal period, falls, fires/burns, accidental poisonings, drownings.

Source: AIHW analysis of AIHW National Mortality Database.

Time series analysis

Longer term mortality trend data are limited to three jurisdictions – Western Australia, South Australia and the Northern Territory, which have over 10 years of adequate identification of Indigenous deaths in their recording systems.

There is a consistent time series of population estimates from 1991. Due to changes in the classification and coding of causes of death from ICD-9 (used up until 1996) to ICD-10 (used from 1997 onwards) which affects the comparability of the data, the analysis reported for this indicator has been done for two time periods – 1991–1996 and 1997–2003. Data for 2004 were not used because of late registration of some deaths.

Due to the late inclusion of a ‘not stated’ category of Indigenous status in 1998 (before which not stated responses were included with non-Indigenous deaths), Indigenous mortality rates have been compared with the mortality rates of ‘other’ Australians (which include deaths of both non-Indigenous people and deaths for which Indigenous status was not stated).

Mortality rates, rate ratios and rate differences between Indigenous and other Australians for avoidable causes over the period 1991 to 1996 and 1997 to 2003 are presented in Tables 1.24.5a and 1.24.5b and Figure 1.25.1 below.

- Over the period 1991–1996, in Western Australia, South Australia and the Northern Territory there were significant declines in mortality rates from avoidable causes among Indigenous Australians aged 0–74 years. The fitted trend implies an average yearly decline in the rate of around 18 per 100,000. These declines were significant for Indigenous females but not for Indigenous males.
- Over the same period, there were significant declines in mortality rates for avoidable causes for other Australians.
- Over the period 1991–1996, there were significant declines in the mortality rate ratios and rate differences between Indigenous and other Australians from avoidable causes for females only.
- Over the period 1997–2003, in Western Australia, South Australia and the Northern Territory there were also significant declines in the mortality rates from avoidable causes among Indigenous Australians aged 0–74 years. The fitted trend implies an average yearly decline in the rate of around 29 per 100,000. These declines were significant for both males and females.
- Over the same period, there were significant declines in mortality rates for avoidable causes for other Australians.
- Over the period 1997–2003, there were significant increases in the mortality rate ratios between Indigenous and other males from avoidable mortality. There were significant declines in the mortality rate differences between Indigenous and other Australians.

Table 1.24.5a: Age-standardised mortality rates, rate ratios and rate differences, avoidable causes, persons aged 0-74 years, WA, SA & NT, 1991-1996

	1991	1992	1993	1994	1995	1996	Annual change ^(a)
Indigenous rate per 100,000^(b)							
Males	1,077.8	1,030.3	1,131.7	1,182.5	1,104.9	1,020.9	0.3
Females	873.1	843.1	808.9	771.7	697.4	743.9	-32.0*
Persons	976.5	936.0	965.7	968.5	888.2	876.9	-18.2*
Other^(c) rate per 100,000^(b)							
Males	341.5	337.5	333.5	328.6	315.8	310.7	-6.4*
Females	176.2	178.1	168.2	165.5	161.2	160.1	-3.8*
Persons	256.7	255.5	248.7	245.2	237.0	234.3	-4.9*
Rate ratio^(d)							
Males	3.2	3.1	3.4	3.6	3.5	3.3	0.1
Females	3.4	3.3	3.3	3.1	2.9	3.2	-0.1*
Persons	3.8	3.7	3.9	4.0	3.7	3.7	0.0
Rate difference^(e)							
Males	736.3	692.9	798.2	853.9	789.0	710.1	6.1
Females	696.9	664.9	640.7	606.2	536.2	583.8	-28.2*
Persons	719.8	680.4	717.0	723.3	651.2	642.6	-13.4

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1991-1996.

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

(b) Rates have been directly age standardised using the 2001 Australian standard population.

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

(d) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(e) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Source: AIHW analysis of AIHW National Mortality Database

Table 1.24.5b: Age-standardised mortality rates, rate ratios and rate differences, avoidable causes, persons aged 0-74 years, WA, SA & NT, 1997-2003

	1997	1998	1999	2000	2001	2002	2003	Annual change ^(a)
Indigenous rate per 100,000^(b)								
Males	1,130.8	1,044.8	986.2	1,025.0	1,016.8	876.0	1,002.4	-24.7*
Females	760.2	728.5	597.1	740.4	597.7	656.9	505.9	-32.3*
Persons	932.4	879.2	781.2	875.3	791.4	761.3	736.3	-29.1*
Other^(c) rate per 100,000^(b)								
Males	294.3	289.0	266.6	261.8	247.0	233.1	223.5	-12.3*
Females	153.1	142.6	137.7	135.8	130.5	127.5	122.6	-4.6*
Persons	222.6	215.0	201.4	198.1	188.3	179.9	172.7	-8.3*
Rate ratio^(d)								
Males	3.8	3.6	3.7	3.9	4.1	3.8	4.5	0.1*
Females	3.4	3.4	3.0	3.7	3.2	3.7	2.9	0.0
Persons	4.2	4.1	3.9	4.4	4.2	4.2	4.3	0.0
Rate difference^(e)								
Males	836.4	755.8	719.6	763.2	769.8	642.9	778.9	-12.4
Females	537.5	513.5	395.7	542.3	409.4	477.0	333.2	-24.0
Persons	709.7	664.3	579.8	677.2	603.1	581.4	563.7	-20.7*

* Represents results with statistically significant increases or declines at the p<.05 level over the period 1997-2003.

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

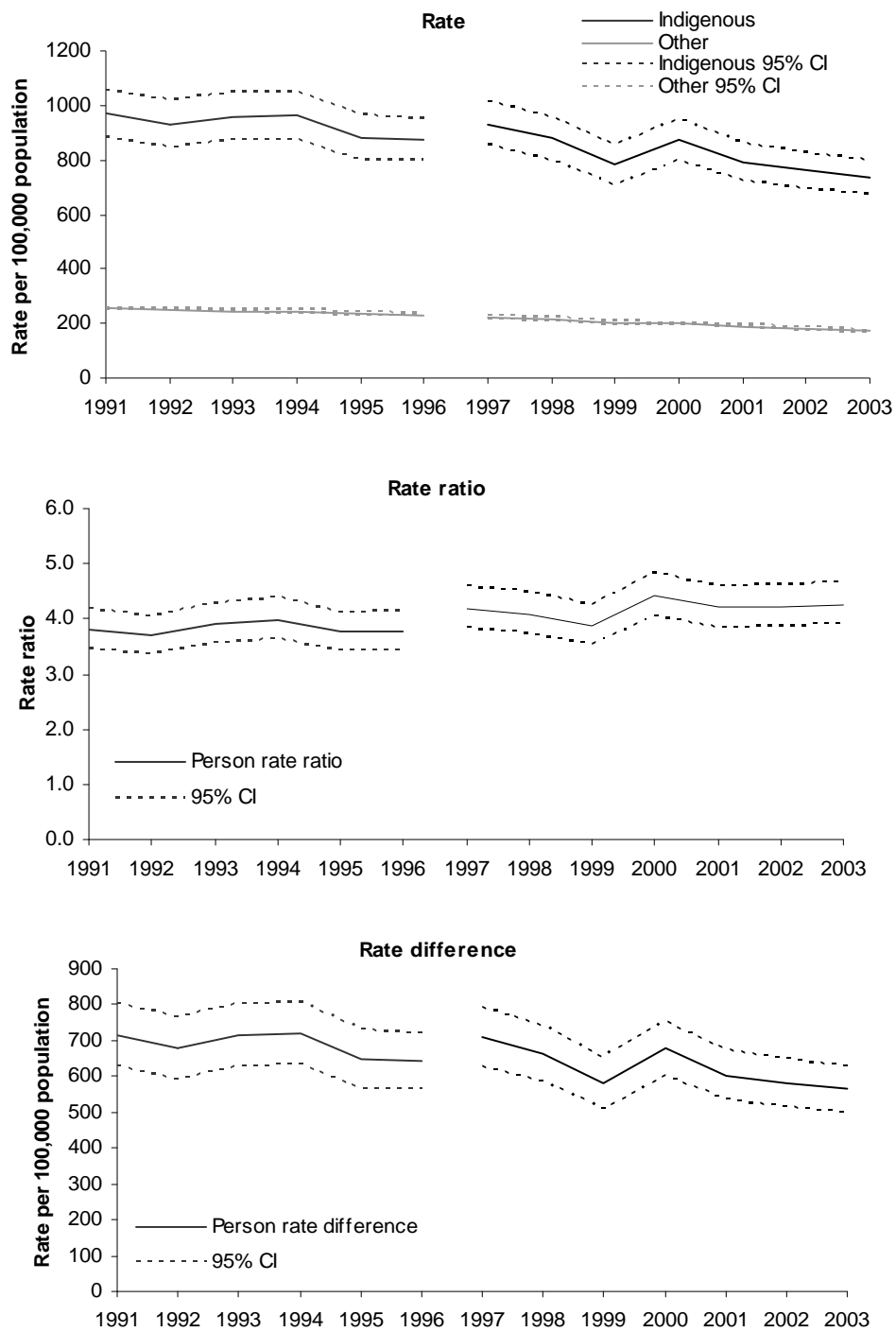
(b) Rates have been directly age standardised using the 2001 Australian standard population.

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

(d) Mortality rate for Indigenous Australians divided by the mortality rate for other Australians.

(e) Mortality rate for Indigenous Australians minus the mortality rate for other Australians.

Source: AIHW analysis of AIHW National Mortality Database



Source: AIHW National Mortality Database

Figure 1.23.1: Mortality rates, rate ratios and rate differences for avoidable causes of death, Indigenous and other Australians aged 0-74 years, WA, SA & NT, 1991-1996 and 1997-2003

Additional information

Years of potential life lost

Potential years of life lost (PYLL) is an indicator of premature mortality. It represents the total number of years not lived before a given age (e.g. 75 years). This indicator gives more importance to the causes of death that occurred at younger ages than those occurred at older ages.

The PYLL due to death is calculated for each person who died before age 75. Deaths occurring in individuals aged 75 years or older are not included in the calculation. Potential years of life lost correspond to the sum of the PYLL contributed for each individual.

The impact of avoidable mortality on the Indigenous population is more evident at aged below 45 years than for the non-Indigenous population, for whom the impact is more noticeable at older ages. The proportion of potential years of life lost (PYLL) from amenable causes for Indigenous infants under one year of age and Indigenous children aged 1–14 years was almost twice that of non-Indigenous infants and children.

- For the 25–44 year age group, the proportion of PYLL from amendable mortality in the Indigenous population was 1.5 times that of the non-Indigenous population (27% compared with 18%) (Table 1.24.6).
- For the age groups 45–64 and 65–74 years, the proportions of PYLL in the Indigenous population were less than those for the non-Indigenous population.

Table 1.24.6: Potential years of life lost to amenable mortality by Indigenous status and age group, persons aged 0–74 years, Qld, WA, SA & NT, 2000–2004^{(a)(b)(c)(d)(e)}

Age group (years)	Number		Per cent		Ratio ^(g)
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	
Less than 1	15,750	74,250	40.2	24.3	1.7*
1–14	2,590	12,677	6.6	4.1	1.6*
15–24	1,538	11,221	3.9	3.7	1.1*
25–44	10,672	5,431	27.3	18.1	1.5*
45–64	7,509	121,367	19.2	39.6	0.5*
65–74	1,072	31,225	2.7	10.2	0.3*
Total^(f)	39,131	306,171	100.0	100.0	..

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p > .05$.

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

(b) While 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 PYLL.

(c) It is also difficult to exactly identify the difference between the Indigenous and non-Indigenous mortality rates due to these data quality issues.

(d) Deaths are by year of occurrence except the latest year which is based on year of registration.

(e) Data are presented in five year groupings due to the small numbers each year.

(f) Ratio – Indigenous percent divided by non-Indigenous percent.

(g) Excludes those aged 75 years and over and those for whom age was not stated.

Source: AIHW analysis of AIHW National Mortality Database

Data quality issues

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. Due to the small size of the Indigenous population these factors can significantly impact on trends over time and between jurisdictions.

Indigenous Status Question

All jurisdictions comply with the standard wording for the Indigenous status question and categories for their death registration forms. However, New South Wales, Victoria, South Australia, the Northern Territory and the Australian Capital Territory all have slightly different wording to the national standard for the instruction on those with both Aboriginal and Torres Strait Islander origin (ABS & AIHW 2005). While the wording is only slightly different, it would be ideal to have all jurisdictions asking the question in exactly the same way.

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 1997). As a result, the observed differences between Indigenous and non-Indigenous mortality are underestimates of the true differences.

While the identification of Indigenous deaths is incomplete in all state and territory registration systems, four jurisdictions (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 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. The quality of the time series data is also influenced by the late inclusion of a not stated category for Indigenous status in 1998. Prior to 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 2000–2004 using population estimates: New South Wales – 46%, Victoria – 35%, Queensland – 53%, South Australia – 66%, Western Australia – 72%, the Northern Territory – 94%, Tasmania and the Australian Capital Territory were not calculated due to small numbers, Australia – 57% (ABS 2005).

It should be noted that different causes may have different levels of under-identification that differ from the 'all cause' coverage estimates. It should also be noted 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 to all Australians (not just Indigenous) (ABS 2006).

Numerator and denominator

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

(continued)

Data quality issues (continued)

Cause of death coding

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

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