

1.22 All causes age-standardised death rates

The number of Aboriginal and Torres Strait Islander Australian deaths, expressed as a rate by age group, age-standardised rate and rate ratio

Data sources

Data for this measure come from the AIHW 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.

Although 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 5-year period 2002–2006 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. Rates published in this report may therefore differ slightly from those published in the previous edition for comparable years of data.

Analyses

Age-standardised rates and ratios have been used 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.

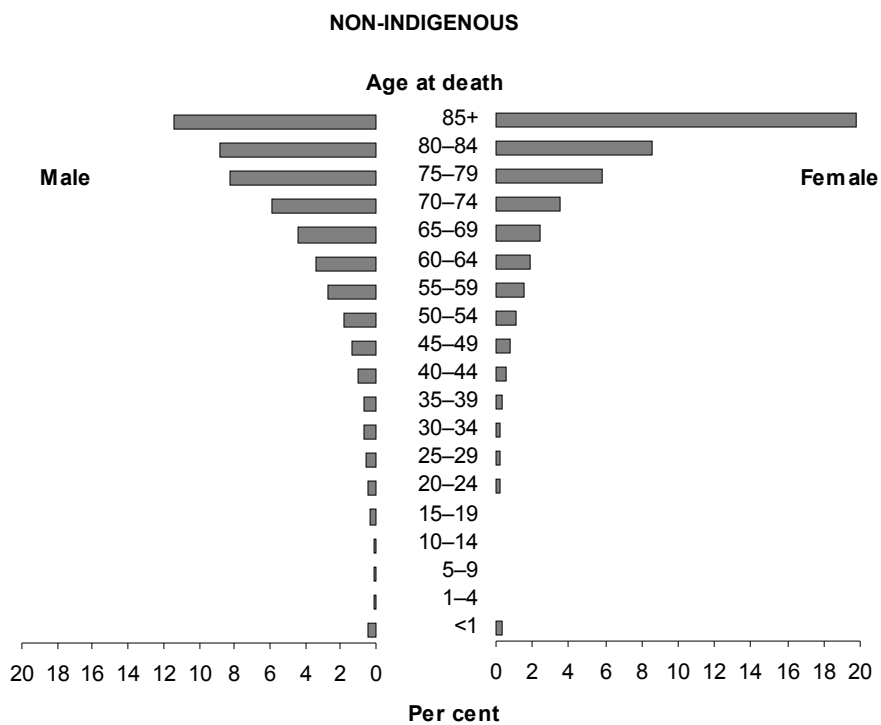
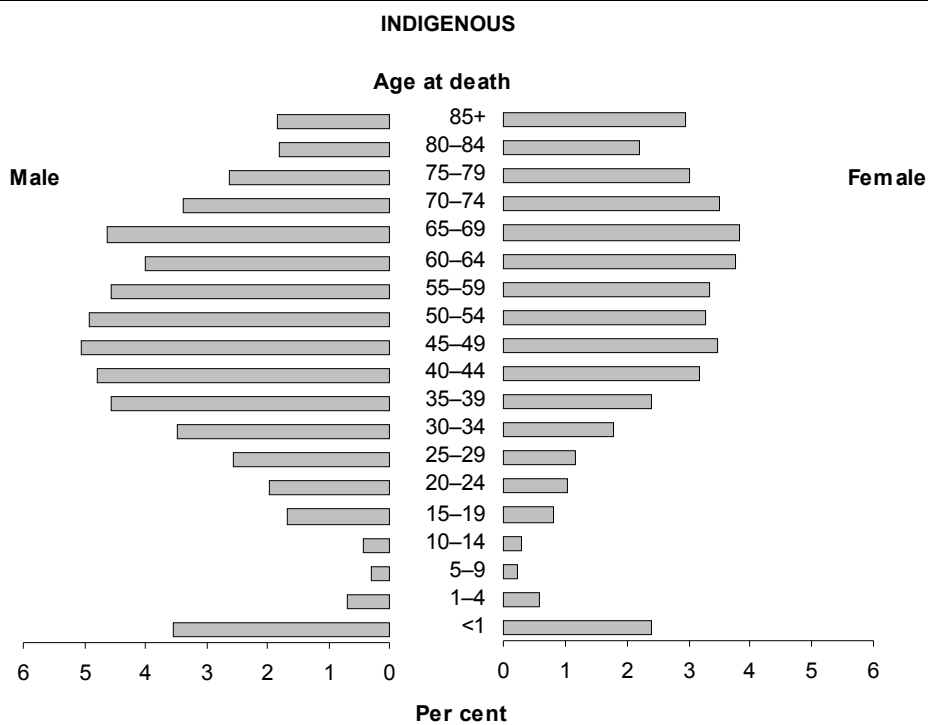
Mortality

- For the period 2002–2006, there were 241,102 deaths in Queensland, Western Australia, South Australia and the Northern Territory, 7,692 (3.2%) of which were deaths of people who identified as Aboriginal or Torres Strait Islander origin and 3,313 (1.4%) of which were deaths for whom Indigenous status was not recorded.

Mortality by age and sex

Figure 1.22.1 presents the age distribution of deaths among Aboriginal and Torres Strait Islander peoples compared with non-Indigenous Australians, and Table 1.22.1 presents age-specific mortality rates for the period 2002–2006 for Queensland, Western Australia, South Australia and the Northern Territory combined.

- The age distribution of deaths among Aboriginal and Torres Strait Islander peoples is very different from that for non-Indigenous Australians. The Indigenous population has a high proportion of deaths occurring in the middle age groups as well as for infants. In comparison, the non-Indigenous population has the large majority of deaths occurring in the older age groups (Figure 1.22.1). Approximately 70% of deaths among Indigenous Australians occur before the age of 65 years compared with 21% of deaths among non-Indigenous Australians.
- For the period 2002–2006, in Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous males and females had higher mortality rates than non-Indigenous males and females across all age groups (Table 1.22.1).
- The greatest difference in rates occurred in the 25–34, 35–44, and 45–54 year age groups where Indigenous males and females died at four, six and five times the rate respectively of non-Indigenous males and females in these age groups (Table 1.22.1).



Source: AIHW analysis of National Mortality Database.

Figure 1.22.1: Age distribution of deaths among Indigenous and non-Indigenous Australians, Qld, WA, SA and NT, 2002-2006

Table 1.22.1: All causes age-specific mortality rates per 100,000, by Indigenous status and sex, Qld, WA, SA and NT, 2002–2006^(a) ^(b) ^(c) ^(d) ^(e)

| | Males | | | Females | | | Persons | | |
|----------------------------|----------------------------|--------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| | Indig. rate ^(f) | Non-Indig. rate ^(f) | Rate ratio ^(g) | Indig. rate ^(f) | Non-Indig. rate ^(f) | Rate ratio ^(g) | Indig. rate ^(f) | Non-Indig. rate ^(f) | Rate ratio ^(g) |
| Less than 1 | 1,452.8 | 448.9 | 3.2* | 1,028.9 | 391.8 | 2.6* | 1,246.3 | 421.2 | 3.0* |
| 1–4 | 70.9 | 26.9 | 2.6* | 62.2 | 21.3 | 2.9* | 66.6 | 24.2 | 2.8* |
| 0–4 years | 351.9 | 110.1 | 3.2* | 256.5 | 94.2 | 2.7* | 305.2 | 102.4 | 3.0* |
| 5–14 | 30.2 | 11.7 | 2.6* | 22.8 | 9.2 | 2.5* | 26.6 | 10.5 | 2.5* |
| 15–24 | 193.2 | 72.4 | 2.7* | 100.5 | 28.4 | 3.5* | 147.2 | 50.9 | 2.9* |
| 25–34 | 419.4 | 101.4 | 4.1* | 192.1 | 37.9 | 5.1* | 301.8 | 69.9 | 4.3* |
| 35–44 | 829.2 | 136.6 | 6.1* | 446.3 | 73.7 | 6.1* | 627.8 | 105.1 | 6.0* |
| 45–54 | 1,381.2 | 279.5 | 4.9* | 847.7 | 170.3 | 5.0* | 1,101.4 | 224.9 | 4.9* |
| 55–64 | 2,358.4 | 692.6 | 3.4* | 1,711.9 | 400.7 | 4.3* | 2,013.7 | 549.2 | 3.7* |
| 65–74 | 5,030.8 | 1,944.2 | 2.6* | 3,627.8 | 1,105.2 | 3.3* | 4,247.3 | 1,519.4 | 2.8* |
| 75 and over | 9,144.6 | 7,500.3 | 1.2* | 8,180.6 | 6,190.6 | 1.3* | 8,573.2 | 6,724.8 | 1.3* |
| Total^(h) | 1,532.2 | 724.3 | 2.1* | 1,136.6 | 521.2 | 2.2* | 1,318.0 | 615.7 | 2.1* |

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

(a) Data are reported for Queensland, Western Australia, South Australia and the Northern Territory only. These 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 5-year groupings because of small numbers each year.

(c) These data exclude 3,313 registered deaths where the Indigenous status is not stated.

(d) 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.

(e) Deaths are by year of registration.

(f) Age-specific rate per 100,000 population.

(g) Rate ratio Indigenous:non-Indigenous.

(h) Total rates have been directly age-standardised using the 2001 Australian standard population.

Source: AIHW analysis of National Mortality Database.

Mortality by state/territory

Table 1.22.2 presents the number of deaths and mortality rates for the 5-year period 2002–2006 for Indigenous and non-Indigenous Australians in Queensland, Western Australia, South Australia and the Northern Territory.

- In Queensland, Western Australia, South Australia and the Northern Territory combined, Indigenous Australians died at twice the rate of non-Indigenous Australians.
- In Queensland, Western Australia and South Australia, Indigenous Australians died at around twice the rate of non-Indigenous Australians. In the Northern Territory, Indigenous Australians died at 2.5 times the rate of non-Indigenous Australians.

Table 1.22.2: All causes mortality, by Indigenous status, Qld, WA, SA and NT, 2002–2006^{(a)(b)(c)(d)}

| State/territory | Implied coverage ^(e) (%) | Number of deaths | | | Indigenous | | | Non-Indigenous | | | Ratio ⁽ⁱ⁾ |
|---|-------------------------------------|------------------|----------------|--------------|--------------------------------|------------------------|------------------------|--------------------------------|------------------------|------------------------|----------------------|
| | | Indigenous | Non-Indigenous | Not stated | No. per 100,000 ^(f) | LCL 95% ^(g) | UCL 95% ^(h) | No. per 100,000 ^(f) | LCL 95% ^(g) | UCL 95% ^(h) | |
| Qld | 51 | 2,841 | 115,542 | 1,656 | 1,184.3 | 1,129.4 | 1,239.2 | 620.0 | 616.4 | 623.5 | 1.9* |
| WA | 72 | 1,958 | 54,173 | 630 | 1,357.8 | 1,283.7 | 1,432.0 | 592.9 | 587.9 | 597.9 | 2.3* |
| SA | 62 | 641 | 58,077 | 988 | 1,089.4 | 982.6 | 1,196.2 | 627.6 | 622.5 | 632.7 | 1.7* |
| NT | 90 | 2,252 | 2,305 | 39 | 1,661.1 | 1,574.1 | 1,748.0 | 664.4 | 632.7 | 696.0 | 2.5* |
| Qld, WA, SA & NT^(j) | .. | 7,692 | 230,097 | 3,313 | 1,318.0 | 1,280.9 | 1,355.1 | 615.7 | 613.2 | 618.2 | 2.1* |

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons at the $p < 0.05$ 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 5-year groupings because of small numbers each year.
- (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 are by year of registration.
- (e) Implied coverage is the estimation of the proportion of Indigenous deaths accurately identified as Indigenous in the mortality data collections—estimated to be 55% nationally. *Note:* Tasmania and Australian Capital Territory implied coverage rates were not calculated because of small numbers.
- (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.
- (j) These data exclude 3,313 registered deaths where the Indigenous status is not stated.

Source: AIHW analysis of 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.

As there is a consistent time series of population estimates from 1991, data for the period 1991–2006 have been used for the analysis of Indigenous mortality in this measure.

Because of 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 people for whom Indigenous status was not stated).

Mortality rates, rate ratios and rate differences between Indigenous and other Australians over the period 1991–2006 are presented in Table 1.22.3 and Figure 1.22.2.

- In the period 1991–2006, there were significant declines in recorded mortality rates in Western Australia, South Australia and the Northern Territory combined for Indigenous Australians. The fitted trend implies an average yearly decline in the rate of around 14 per 100,000 (equivalent to a 13% reduction in the rate over this period). The fitted trend showed significant declines in recorded deaths for Indigenous males and females of 11 per 100,000 and 16 per 100,000 respectively (equivalent to a 9% and 15% reduction in the rate over this period) (Table 1.22.3). Most of the observed declines are attributable to significant declines in Indigenous mortality in Western Australia and the Northern Territory.
- There were also significant declines in recorded mortality rates for other males and females between 1991 and 2006. The fitted trend implies an average yearly decline in the rate of around 14 per 100,000 for other Australians (equivalent to a 27% reduction in the rate over this period).
- There were significant increases in the mortality rate ratios between Indigenous and other Australians for males and persons over the period 1991–2006, and a significant increase in the mortality rate difference for males over the same period.

Fluctuations in the level of Indigenous mortality over time partly reflect changing levels of coverage of Indigenous deaths and population estimates. Given the volatility in the measures of Indigenous mortality, caution should be exercised in assessing trends in Indigenous mortality over time and comparisons between jurisdictions and with the non-Indigenous population.

Table 1.22.3: Age-standardised mortality rates, rate ratios and rate differences, WA, SA and NT, 1991–2006

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Annual change ^(a) | % change ^(b) |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------------------------------|-------------------------|
| Indigenous rate (no. per 100,000)^(c) | | | | | | | | | | | | | | | | | | |
| Males | 1,818.8 | 1,760.1 | 1,717.0 | 1,797.5 | 1,864.2 | 1,698.5 | 1,918.3 | 1,798.8 | 1,609.7 | 1,802.7 | 1,791.1 | 1,539.2 | 1,699.5 | 1,663.4 | 1,629.0 | 1,709.7 | -10.5* | -8.7 |
| Females | 1,571.3 | 1,371.3 | 1,414.3 | 1,474.3 | 1,349.0 | 1,142.3 | 1,328.8 | 1,237.7 | 1,260.3 | 1,380.4 | 1,071.3 | 1,220.3 | 1,034.4 | 1,393.9 | 1,221.7 | 1,324.4 | -16.0* | -15.3 |
| Persons | 1,694.8 | 1,560.0 | 1,562.3 | 1,631.4 | 1,590.6 | 1,404.2 | 1,594.1 | 1,496.1 | 1,429.5 | 1,575.4 | 1,395.5 | 1,364.7 | 1,337.2 | 1,525.0 | 1,410.5 | 1,505.0 | -14.1* | -12.5 |
| Other rate (no. per 100,000)^(d) | | | | | | | | | | | | | | | | | | |
| Males | 979.2 | 954.5 | 975.4 | 974.8 | 916.2 | 932.5 | 887.0 | 859.7 | 825.9 | 811.0 | 778.0 | 771.8 | 761.3 | 717.4 | 718.1 | 693.6 | -20.8* | -31.9 |
| Females | 628.7 | 623.2 | 641.3 | 625.0 | 604.1 | 616.1 | 600.2 | 576.3 | 556.3 | 548.1 | 548.1 | 553.0 | 542.1 | 512.6 | 507.2 | 511.3 | -9.3* | -22.1 |
| Persons | 782.5 | 769.1 | 789.0 | 778.6 | 743.0 | 757.0 | 728.5 | 704.2 | 677.8 | 666.6 | 652.8 | 652.8 | 642.2 | 607.2 | 605.3 | 596.4 | -14.0* | -26.8 |
| Rate ratio^(e) | | | | | | | | | | | | | | | | | | |
| Males | 1.9 | 1.8 | 1.8 | 1.8 | 2.0 | 1.8 | 2.2 | 2.1 | 1.9 | 2.2 | 2.3 | 2.0 | 2.2 | 2.3 | 2.3 | 2.5 | 0.04* | 31.4 |
| Females | 2.5 | 2.2 | 2.2 | 2.4 | 2.2 | 1.9 | 2.2 | 2.1 | 2.3 | 2.5 | 2.0 | 2.2 | 1.9 | 2.7 | 2.4 | 2.6 | 0.01 | 6.2 |
| Persons | 2.2 | 2.0 | 2.0 | 2.1 | 2.1 | 1.9 | 2.2 | 2.1 | 2.1 | 2.4 | 2.1 | 2.1 | 2.1 | 2.5 | 2.3 | 2.5 | 0.02* | 16.9 |
| Rate difference^(f) | | | | | | | | | | | | | | | | | | |
| Males | 839.6 | 805.6 | 741.6 | 822.7 | 948.0 | 766.1 | 1,031.3 | 939.1 | 783.8 | 991.8 | 1,013.1 | 767.4 | 938.2 | 946.0 | 910.8 | 1,016.1 | 10.3* | 18.4 |
| Females | 942.5 | 748.0 | 772.9 | 849.3 | 744.9 | 526.3 | 728.6 | 661.4 | 704.0 | 832.3 | 523.1 | 667.3 | 492.3 | 881.4 | 714.4 | 813.0 | -6.8 | -10.8 |
| Persons | 912.2 | 790.9 | 773.3 | 852.8 | 847.7 | 647.2 | 865.6 | 792.0 | 751.8 | 908.8 | 742.6 | 712.0 | 695.0 | 917.8 | 805.3 | 908.6 | -0.1 | -0.2 |

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1991–2006.

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

(b) Per cent change between 1991 and 2006 based on the average annual change over the period.

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

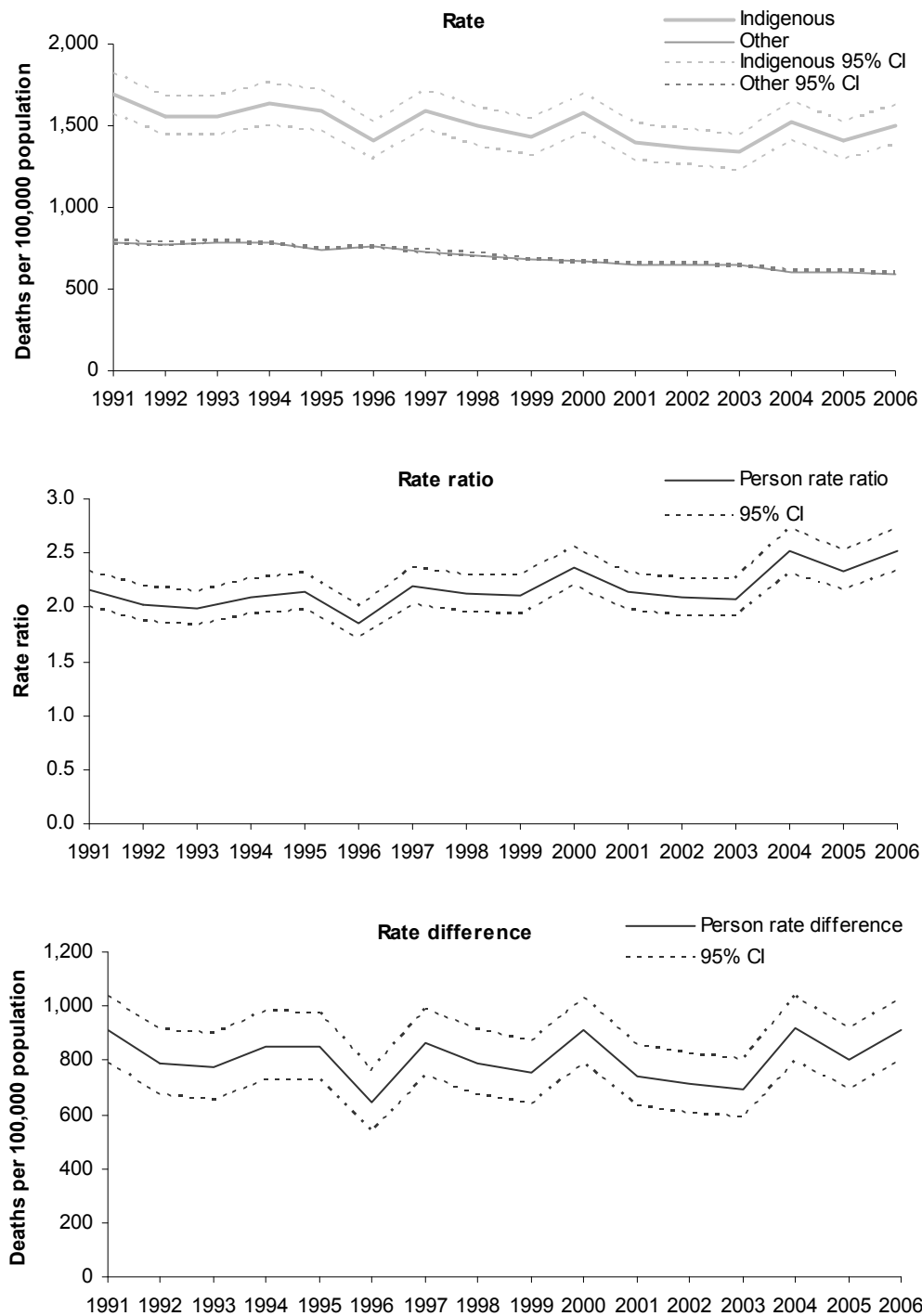
(d) 'Other' includes deaths of non-Indigenous people and those for whom Indigenous status was not stated.

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

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

Note: Rates presented in this table may differ from those presented in the 2006 edition of this report for comparable years because of a change from using year of occurrence of death to year of registration of death for mortality analyses.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 1.22.2: Mortality rates, rate ratios and rate differences between Indigenous and other Australians, WA, SA and NT, 1991–2006

Additional trends analysis has been presented for Queensland, Western Australia, South Australia and the Northern Territory combined from 1998 to 2006 for Indigenous and non-Indigenous Australians in Table 1.22.4 and Figure 1.22.3. Queensland has had adequate identification of Indigenous deaths in its recording systems since 1998, and these have been compared with those of non-Indigenous Australians (excluding deaths for which Indigenous status was not stated).

- Over the period 1998–2006, there were non-significant declines in recorded mortality rates in Queensland, Western Australia, South Australia and the Northern Territory combined for Indigenous Australians.
- Over the same period, there were significant declines in recorded mortality rates for non-Indigenous males and females in the four jurisdictions. The fitted trend implies an average yearly decline in the rate of around 14 per 100,000 for non-Indigenous persons (equivalent to a 16% reduction in the rate over this period).
- There were significant increases in the mortality rate ratios between Indigenous and non-Indigenous Australians over the period 1998–2006 (17% increase), and no significant changes in the mortality rate differences over the same period.

Table 1.22.4: Age-standardised mortality rates, rate ratios and rate differences, Qld, WA, SA and NT, 1998–2006

| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Annual change ^(a) | % change ^(b) |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|------------------------------|-------------------------|
| Indigenous rate (no. per 100,000)^(c) | | | | | | | | | | | |
| Males | 1,616.7 | 1,493.6 | 1,613.0 | 1,625.5 | 1,491.8 | 1,562.1 | 1,560.6 | 1,428.3 | 1,618.3 | –6.0 | –2.9 |
| Females | 1,154.9 | 1,145.0 | 1,236.4 | 1,001.9 | 1,150.6 | 1,040.5 | 1,235.7 | 1,086.0 | 1,178.6 | –0.8 | –0.5 |
| Persons | 1,369.1 | 1,308.8 | 1,409.4 | 1,281.7 | 1,304.1 | 1,280.7 | 1,386.9 | 1,247.0 | 1,376.4 | –3.4 | –2.0 |
| Non-indigenous rate (no. per 100,000)^(d) | | | | | | | | | | | |
| Males | 868.5 | 828.8 | 802.6 | 771.0 | 765.7 | 745.3 | 727.8 | 697.4 | 691.3 | –21.3* | –19.6 |
| Females | 577.1 | 568.1 | 545.7 | 539.3 | 552.3 | 527.1 | 519.0 | 504.9 | 505.5 | –9.0* | –12.5 |
| Persons | 709.2 | 687.3 | 662.5 | 645.9 | 650.8 | 627.8 | 616.1 | 594.9 | 592.6 | –14.2* | –16.1 |
| Rate ratio^(e) | | | | | | | | | | | |
| Males | 1.9 | 1.8 | 2.0 | 2.1 | 1.9 | 2.1 | 2.1 | 2.0 | 2.3 | 0.05* | 20.9 |
| Females | 2.0 | 2.0 | 2.3 | 1.9 | 2.1 | 2.0 | 2.4 | 2.2 | 2.3 | 0.03 | 13.8 |
| Persons | 1.9 | 1.9 | 2.1 | 2.0 | 2.0 | 2.0 | 2.3 | 2.1 | 2.3 | 0.04* | 16.9 |
| Rate difference^(f) | | | | | | | | | | | |
| Males | 748.2 | 664.8 | 810.4 | 854.5 | 726.1 | 816.8 | 832.8 | 730.9 | 927.0 | 15.3 | 16.4 |
| Females | 577.8 | 576.9 | 690.8 | 462.6 | 598.3 | 513.5 | 716.7 | 581.1 | 673.1 | 8.3 | 11.5 |
| Persons | 659.9 | 621.6 | 746.8 | 635.9 | 653.3 | 652.9 | 770.7 | 652.0 | 783.7 | 10.9 | 13.2 |

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1998–2006.

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

(b) Per cent change between 1998 and 2006 based on the average annual change over the period.

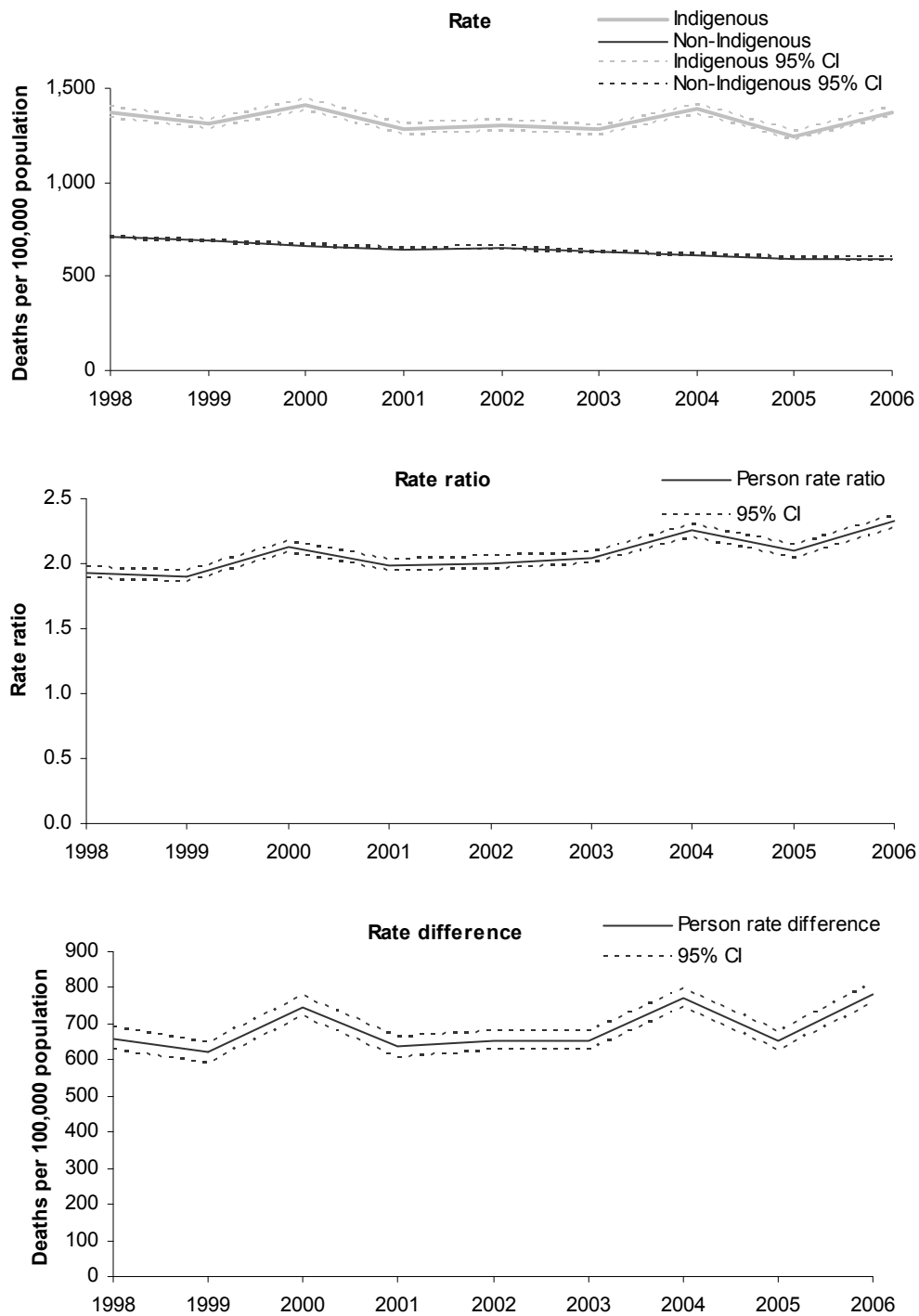
(c) Rates have been directly age-standardised using the 2001 Australian standard population.

(d) Excludes deaths of those for whom Indigenous status was not stated.

(e) Mortality rate for Indigenous Australians divided by the mortality rate for non-Indigenous Australians.

(f) Mortality rate for Indigenous Australians minus the mortality rate for non-Indigenous Australians.

Source: AIHW analysis of National Mortality Database.



Source: AIHW analysis of National Mortality Database.

Figure 1.22.3: Mortality rates, rate ratios and rate differences between Indigenous and non-Indigenous Australians, Qld, WA, SA and NT, 1998–2006

Sensitivity of mortality trends to changes in identification

- The fitted trends described above for the period 1991–2006 in Western Australia, South Australia and the Northern Territory have been examined for their sensitivity to changes in Indigenous identification. Three scenarios for coverage were posted – constant identification, increasing identification and decreasing identification.
 - Under the constant identification scenario, the numbers of deaths for the period under study were adjusted using the following under-identification estimates derived from the most recent ABS analyses (relating to the period 2002–2006):
 - Western Australia 72%
 - South Australia 62%
 - Northern Territory 90%.
 - Under the increasing identification scenario, deaths were adjusted by linearly increasing the identification through the periods under study – from 64% in 1991 to 72% in 2006 for Western Australia, from 52% to 62% for South Australia, and from 80% to 90% for the Northern Territory.
 - Under the decreasing identification scenario, deaths were adjusted by linearly decreasing the identification from 80% in 1991 to 72% in 2006 for Western Australia, from 72% to 62% for South Australia, and from 100% to 90% for the Northern Territory.

The adjustments in the latter two scenarios were based on judgments about the largest plausible shifts in identification during the period; of course, if any actual shift in identification was more extreme than has been posted under these scenarios, then the observed trends in mortality might not persist. For all three scenarios, the population figures (used as denominators in the calculation of mortality rates) were re-estimated to reflect the altered number of deaths implied by each scenario.

- The observed declines in mortality rates over the period 1991–2006 for Indigenous males and persons overall remained statistically significant under the decreasing identification scenario only. The decline in mortality rates for Indigenous females over this period did not remain statistically significant under any identification scenario.
- The observed declines in mortality rates over the period 1991–2006 for other males and females remained statistically significant under all three identification scenarios.
- The increase in mortality rate ratios for males and persons and the increase in the mortality rate difference for males over the period 1991–2006 remained statistically significant under all three identification scenarios.

International comparisons

International indigenous data are available for New Zealand, the United States and Canada.

There are several common issues that adversely affect the quality of Indigenous mortality data in these three countries and Australia. These include the lack of an accurate denominator value for the Indigenous population and the lack of agreement over which population denominator values to use if they do exist. There are differences in how Indigenous status is defined in the different countries. There have also been frequent modifications to the ethnicity question recorded in the censuses in some of these countries. These frequent changes in the census ethnicity question have led to difficulties in comparing mortality trends over time and have also produced difficulties in estimating population denominator counts between censuses.

The most important issue in relation to the quality of Indigenous mortality data is the undercounting of deaths (the numerator for mortality data). In each of the four countries, the undercounting of Indigenous deaths is likely to lead to an underestimation of the relative size of disparities that exist between Indigenous and non-Indigenous populations.

The mortality rates presented below have been directly age-standardised to the WHO World Standard population 2001–2025 to allow for comparisons to be made between the four countries.

International statistics on all-cause mortality show that Indigenous people in the United States, Canada and New Zealand have higher mortality rates than the general population, but the gap is not as great as for Aboriginal and Torres Strait Islander Australians. The all-cause mortality rate for Aboriginal and Torres Strait Islander Australians is around twice that for non-Indigenous Australians (970 per 100,000 compared with 399 per 100,000 for Queensland, Western Australia, South Australia and the Northern Territory combined when directly age-standardised to the World Standard Population). The latest available data from the United States, New Zealand and Canada are outlined below.

- For the period 2002–2006 in New Zealand, the age-standardised all-cause mortality rate for the Maori population was 761 per 100,000, compared with 410 per 100,000 for the non-Indigenous population (Statistics New Zealand unpublished data).
- For the period 2002–2005 in the United States, the age-standardised all-cause mortality rate for American Indians/Alaskan Natives was 487 per 100,000, which was lower than the age standardised all-cause mortality rate for non-Indigenous persons over this period (552 per 100,000) (United States Department of Health and Human Services unpublished data).
- For the period 2001–2002 in Canada, the age standardised all-cause mortality rate for First Nations was 1,062 per 100,000 for males and 754 per 100,000 for females, which was higher than the age standardised all-cause mortality rate for total Canadian persons over this period (559 per 100,000 for males and 384 per 100,000 for females) (Health Canada unpublished data).

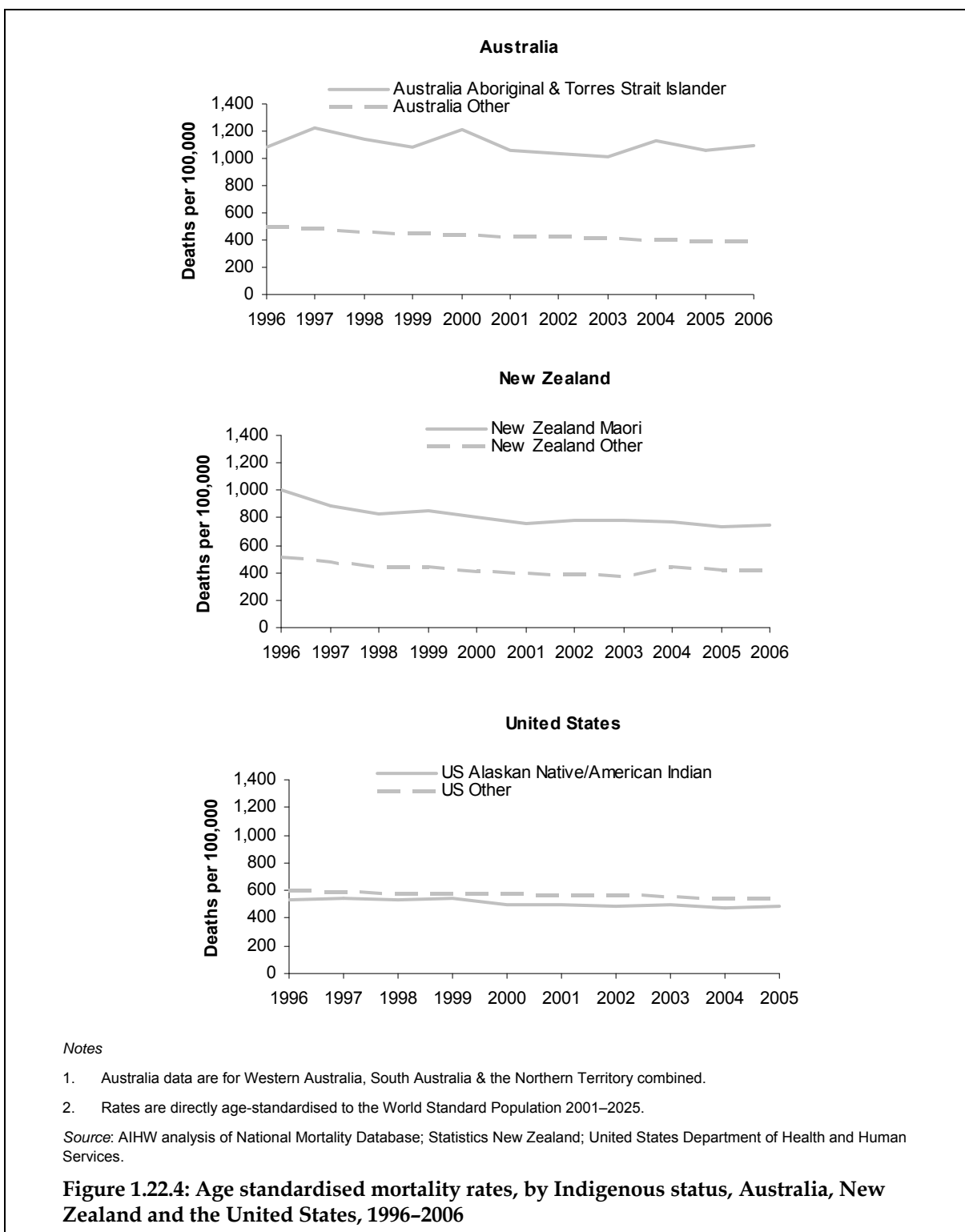
Time series

Mortality data are available from 1996 to 2006 for the Maori population in New Zealand and from 1991 to 2005 for the American Indian/Alaskan Native population in the United States. Reliable time series of mortality data for the First Nations population in Canada is not currently available.

- In New Zealand between 1996 and 2006 there was a significant decline in all-cause mortality rates for the Maori population. The fitted trend implies an average yearly decline in the rate of around 20 per 100,000 which is equivalent to a 20% reduction in the rate over this period. There was also a significant decline in non-Indigenous all-cause mortality rates in New Zealand between 1996 and 2006 (a reduction of 15%).
- In the United States between 1991 and 2005 there was a significant decline in all-cause mortality rates for American Indians/Alaskan Natives. The fitted trend implies an average yearly decline in the rate of around 5 per 100,000 which is equivalent to a 14% reduction in the rate over this period. There was also a significant decline in non-Indigenous all-cause mortality rates in the United States between 1991 and 2005 (a reduction of 13%).

Figure 1.22.4 presents the age-standardised all cause mortality rates for the Indigenous and non-Indigenous populations in Australia, New Zealand and the United States over the period 1996–2006.

- The age-standardised all-cause mortality rate for Aboriginal and Torres Strait Islander peoples was higher than that for Maori and American Indians/Alaskan Natives for all years between 1996 and 2006.



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. Because of the small size of the Indigenous population, these factors can significantly affect 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). Although 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 or 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.

Although 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. 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%, the Northern Territory 90%, Tasmania and the Australian Capital Territory were not calculated because of small numbers, Australia 55% (ABS 2007).

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 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 2009 (ABS 2004).

International comparisons

International indigenous data are available for New Zealand, the United States and Canada. Data quality is an important issue in all countries with small Indigenous populations. The mortality rates are therefore likely to be underestimated to some degree for each of the Indigenous groups. The scope of data collections in Canada and the United States are often limited to the registered or reserve Indigenous populations and therefore do not cover the whole Indigenous population. International comparisons need to take into account that the definition of Indigenous status is specific to each country.

References

ABS (Australian Bureau of Statistics) 1997. Occasional paper: Mortality of Aboriginal and Torres Strait Islander Australians. ABS cat. no. 3315.0. Canberra: ABS.

ABS 2004. Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians 1991 to 2009. ABS cat. no. 3238.0. Canberra: ABS.

ABS 2007. Deaths Australia 2006. ABS cat. no. 3302.0. Canberra: ABS.

ABS & AIHW (Australian Institute of Health and Welfare) 2005. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples 2005. ABS cat. no. 4704.0, AIHW Cat. no. IHW 14. Canberra: ABS.