1998

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Australian Bureau of Statistics

DEATHS

AUSTRALIA

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CONTENTS

■ For further information about these and related statistics, contact Client Services in any ABS office as shown on the back cover of this publication, or Paul Atyeo on Canberra 02 6252 7612.

NOTES

ABOUT THIS ISSUE

This publication brings together statistics and indicators for deaths in Australia

DATA IN THIS PUBLICATION

This publication uses death registration data except where otherwise stated.

SYMBOLS AND OTHER USAGES

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
ASDR	Age-specific death rate
Aust.	Australia
CDR	Crude death rate
ERP	Estimated resident population
HIV/AIDS	Human immuno-deficiency virus/acquired immuno-deficiency virus
IMR	Infant mortality rate
ISDR	Indirect standardised death rate
n.a.	not available
n.p.	not available for publication but included in totals where applicable
NSW	New South Wales
NT	Northern Territory
n.y.a.	not yet available
OT	Other Territories
p	preliminary
Qld	Queensland
r	figure or series revised since previous issue
SA	South Australia
SIDS	Sudden Infant Death Syndrome
SD	Statistical Division
SDR	Standardised death rate
SLA	Statistical Local Area
SMR	Standardised mortality ratio
Tas.	Tasmania
Vic.	Victoria
WA	Western Australia
. .	not applicable
—	nil, rounded to zero or less than three (see Explanatory Notes, paragraph 3)
——	break in continuity of series where drawn across a column between consecutive figures

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Acting Australian Statistician

LIST OF TABLES

MAIN FEATURES

- In 1998 there were 127,200 deaths registered in Australia. While this number is less than for 1997 (129,400), the long-term trend has been an increase in deaths due to the ageing of the population. Death rates have continued to decline.
- Currently births outnumber deaths by 2 to 1. The excess of births over deaths is expected to decrease in the future as the population grows older and the birth rate falls. Population projections for Australia indicate that sometime in the 2030s the number of deaths will exceed the number of births. From then on, any increase in population size would occur from net overseas migration (page 7).
- Half of all deaths were of people aged 77 years and over, while more than one-quarter were of people aged 85 years and over in 1998. In comparison, half of all deaths in 1978 were of people aged 72 years and over, and 15% of all deaths were to people aged 85 years or over (page 46).
- Over the last 10 years, death rates have fallen for males and females in most age groups. The notable exception was a small increase in death rates for males aged 30–39 years (up 5%) (page 28).

CAUSES OF DEATH

- In 1998, malignant neoplasms (cancer) was the leading cause of death, with 34,600 deaths or 27% of all deaths. Ischaemic heart disease was the second leading cause of death, contributing 27,800 deaths or 22% of all deaths. Respiratory diseases were responsible for 10% of all deaths while stroke was responsible for 9% (page 11).
- External causes, which include motor vehicle accidents, falls, drowning and suicide, accounted for 6% of all deaths (page 12).

LIFE EXPECTANCY

- Reflecting the general decrease in death rates, life expectancy at birth continued to increase. A boy born in 1996–98 could be expected to live 75.9 years, while a girl could be expected to live 81.5 years (page 11).
- Internationally, Australia's life expectancy ranks behind Japan, Sweden, Iceland, Hong Kong, Canada and Switzerland (lower by up to 3 years), and is about the same as France, Spain and Greece, and is one year higher than New Zealand, the United Kingdom and the United States of America (page 8).

INFANT MORTALITY

- The 1998 infant mortality rate was the lowest ever in Australia, with 5.0 deaths per 1,000 live births. One-third of all infant deaths occurred within one day of birth (page 50).

SEX

- With an overall male death rate 63% higher than the female rate, males were more likely to die than females at every age. The greatest difference in age-specific death rates occurred in the 20–29 years age group where male death rates were over three times higher than female rates (page 29).

MARITAL STATUS

- Males and females who were never married had death rates almost twice those of their married counterparts (page 30).

OVERSEAS BORN POPULATION

- Overseas-born people in Australia had lower death rates than the Australian-born population. This was particularly apparent among the Asian born population. Viet Nam-born residents had the lowest death rates in 1998, with a death rate around half that of the total population (page 32).

REGIONAL DIFFERENCES

- Life expectancy at birth was highest for males in the ACT with 77.5 years expected, while Western Australia had the highest female life expectancy with 81.9 years. The Northern Territory had the lowest male and female life expectancies with 70.6 years for males and 75.0 for females (page 11).
- Death rates in much of Australia's remote areas were significantly higher than the more highly populated areas. The highest death rates were in the Northern Territory balance and the Kimberley which were double the national rate (page 35).
- Most capital cities had death rates below the 1998 national level of 6.8 deaths per 1,000 population. Canberra had the lowest rate (6.0 deaths per 1,000 population), followed by Perth (6.4), Melbourne (6.4) and Sydney (6.6). Darwin and Hobart were exceptions, with death rates above the national level (page 35).
- Males residing in the most disadvantaged areas experienced mortality rates 12% higher than the average Australian male mortality, and 30% higher than males in the least disadvantaged areas. For females, the association between socio-economic advantage and death rates was less apparent (page 33).

INDIGENOUS DEATHS

- Overall the Indigenous population had death rates at least three times higher than the total population in 1998 (page 56).
- The 1998 infant mortality rate for Indigenous Australians was at least three times the Australian rate (page 56).
- The median age at death for Indigenous people was 50 years, around 27 years less than the median age for all deaths of 77 years (page 56).
- Indigenous life expectancy at birth was about 20 years less than for the total population (page 56).

DEATHS AS A COMPONENT OF POPULATION CHANGE

Australian population growth is composed of births minus deaths plus net overseas migration. The excess of births over deaths represents natural increase, the major component of population growth. While net overseas migration makes a significant contribution to population growth in Australia, natural increase has been the greater contributor in every year since 1950 except during 1987–89.

POPULATION CHANGE, Components(a)

	Live births	*Deaths*	*Natural increase*	*Net overseas migration*	*Population at end of period*	*Population increase.....*	
Period(b)	'000	'000	'000	'000	'000	'000(c)	%
1978	224.2	108.4	115.8	47.4	14 430.8	149.3	1.0
1979	223.1	106.6	116.6	68.6	14 602.5	171.7	1.2
1980	225.5	108.7	116.8	100.9	14 807.4	204.9	1.4
1981	235.8	109.0	126.8	123.1	15 054.1	246.7	1.7
1982	239.9	114.8	125.1	102.7	15 288.9	234.8	1.6
1983	242.6	110.1	132.5	55.0	15 483.5	194.6	1.3
1984	238.5	111.9	126.6	59.8	15 677.3	193.8	1.3
1985	242.9	116.8	126.1	89.3	15 900.6	223.3	1.4
1986	243.4	115.0	128.4	110.7	16 138.8	238.2	1.5
1987	244.0	117.3	126.6	136.1	16 394.6	255.9	1.6
1988	246.2	119.9	126.3	172.8	16 687.1	292.4	1.8
1989	250.9	124.2	126.6	129.5	16 936.7	249.6	1.5
1990	262.6	120.1	142.6	97.1	17 169.8	233.0	1.4
1991	259.1	119.7	139.4	81.7	17 387.0	217.3	1.3
1992	262.1	122.9	139.2	51.4	17 581.3	194.3	1.1
1993	258.6	120.1	137.8	34.8	17 760.0	178.7	1.0
1994	258.4	127.0	131.4	55.5	17 951.5	191.5	1.1
1995	254.9	125.1	129.8	106.9	18 196.1	244.6	1.4
1996	252.9	128.2	124.7	97.4	18 423.6	227.6	1.3
1997	251.1	128.8	122.3	72.4	18 618.3	194.7	1.1
1998p	250.1	128.8	121.3	111.6	18 851.2	232.9	1.3

(a) Births and deaths are as recorded for population estimation purposes.

(b) Calendar years.

(c) Total growth will not necessarily equate with the difference between the population in consecutive years. This difference is known as intercensal discrepancy. See Glossary for more information.

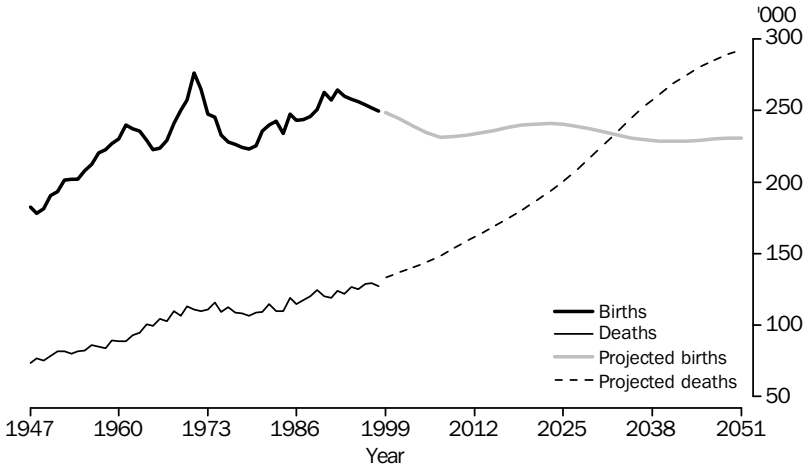
The average number of deaths occurring each year over the period 1988–98 was 124,200, just under half the average number of births occurring over the same period (255,500). This has resulted in an average annual level of natural increase of 131,400 or 59% of total population growth.

The number of deaths registered in 1998 was 127,200, a 6% increase on the number of deaths registered in 1988 (119,900). This increase has resulted from an overall increase in the population, and in particular, an increase in the number of older people.

DEATHS AS A COMPONENT OF POPULATION CHANGE *continued*

While natural increase has been positive in Australia throughout the 20th century, since 1976, the fertility rate has been at a lower level than can replace the population in the long-term. Natural increase has remained positive despite the fall in fertility because the relatively young age structure of the population has provided a sufficient number of women of childbearing ages to maintain a relatively high number of total births. At the same time, there have been fewer people in the older ages where death rates are high, resulting in a relatively small number of deaths. As the population ages however, the gap between the number of births and deaths will decrease, and, assuming a total fertility rate of 1.6 births per woman and net overseas migration of 90,000 per year, natural increase is projected to fall below zero sometime around 2030.

ACTUAL AND PROJECTED(a) BIRTHS AND DEATHS



(a) Series K in *Population Projections, 1997–2051* (Cat. no. 3222.0).

Beyond this point, only net overseas migration will contribute to population growth. The projected decline in natural increase is particularly affected by the ageing of the large cohort of Australians born between the late 1940s and the early 1960s, known as the baby boomers. Once the women within this cohort have moved out of the child bearing ages, there is little prospect of an increase in the total number of annual births, given that the following cohorts of women are smaller in number. A second significant demographic impact of the ageing baby boomers is expected to occur as this group moves into their 70s in the years 2020 and beyond. The total number of deaths is expected to increase particularly rapidly for a period of around 20 years at this time.

REGISTRATION/OCCURRENCE OF DEATHS

Most of the analysis in this publication is based on the number of deaths which were registered in a given year, usually 1998. Because there is a delay between when a death occurs and when it is registered, only 96% of the deaths registered in 1998 had actually occurred in 1998. Virtually all of the remaining deaths (4%) occurred in 1997.

DEATHS AS A COMPONENT OF POPULATION ESTIMATES

The ABS produces estimates of the population in each State and Territory every three months. These are produced by taking the population at one point, adding births, subtracting deaths and adding net overseas migration. To meet the conflicting demands for accuracy and timeliness, this is done three times; preliminary estimates are produced six months after the end of the reference period, revised estimates are produced 15 months after a financial year and final estimates are produced following a census. Therefore three estimates of the number of deaths are produced.

INTERNATIONAL CONTEXT

Throughout 1999, it is expected that around 54 million deaths would occur world-wide. This has not increased much since 1950 when, in that year, there were around 50 million deaths. However, over the same period, the world's population has grown from 2.5 billion to 6 billion inhabitants. The relatively small increase in deaths from a rapidly growing population is reflected in the more than halving of the crude death rate from 20 deaths per 1,000 population to 9 deaths over the 49 year period. Much of the decline in world death rates can be attributed to the significant decrease in death rates throughout the less developed world. The unprecedented population increase seen since 1950 is largely a result of mortality declines in Africa, Asia, Central and South America, coupled with fertility levels remaining relatively high. Although the total fertility rate has declined from 5.0 to 2.9 since 1950, the annual number of births has increased from 94 to 138 million over the 1950–99 period, leading to average annual population growth of around 84 million (or 1.4%) in 1999 (PRB, 1999; UN, 1998).

Life expectancy at birth

As death rates have declined, average life expectancy has increased. In 1999, global life expectancy at birth was projected to be 66 years (males and females combined), a gain of more than 20 years of life from 1950 when a newborn infant could expect to live on average for 45 years. However, life expectancy differs markedly in different regions of the world. Regions defined by the UN as being made up of less developed countries[1] have an overall life expectancy of 64 years, compared to 75 years for developed regions. The African continent has the lowest life expectancy at birth of 52 years, with wide variation across the continent. The lowest life expectancies were projected for the Sub-Saharan African countries where HIV/AIDs has had a devastating impact. Malawi and Zambia for example, have projected life expectancies of only 36 and 37 years respectively for 1999.

In contrast, Australia's 1998 life expectancy of 76 years for males and 82 years for females is amongst the highest in the world. In a summary produced by the Population Reference Bureau (1999), Australia's combined male-female life expectancy for 1999 is projected to be 78 years, behind Japan (81 years), Canada, Hong Kong, Sweden and Switzerland (each 79 years). Similar life expectancies to Australia are projected for France, Spain and Greece. The United Kingdom, the United States of America and New Zealand have projected life expectancies of 77 years each. The world's most populous country, China, is projected to have a life expectancy of 71 years in 1999, while a life expectancy of 60 years is projected for India.

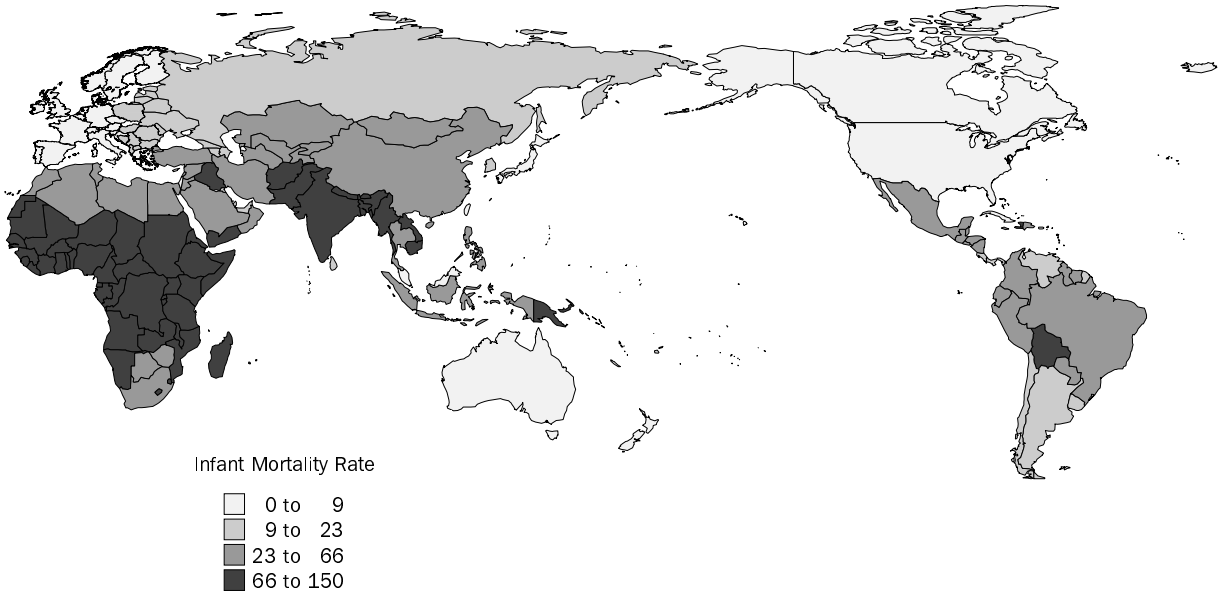
[1] Countries outside Europe, North America, Australia, Japan and New Zealand (1999, PRB).

Infant mortality

The infant mortality rate (IMR) is used widely as a general indicator of population health and living conditions. The 1999 world IMR is projected to be 57 deaths per 1,000 live births. As with the world average life expectancy, the average IMR belies the marked contrast between the developed and less developed regions.

Australia's 1998 IMR of 5.0 deaths per 1,000 live births was the lowest ever, and amongst the lowest in the world. Projections for 1999 (PRB,1999) show Iceland with the lowest IMR, of 2.6 deaths per 1,000 live births, followed by Singapore with (3.3), Sweden (3.6), Japan (3.7), and Hong Kong (3.9). In contrast, the world's highest IMRs were projected for Sub-Saharan Africa where the projected IMR averaged 94 deaths per 1,000 live births for 1999. Most infant deaths in Africa are from infectious and parasitic diseases (including HIV/AIDs) and from nutritional deficiencies.

INTERNATIONAL INFANT MORTALITY RATES



NATIONAL AND STATE REGISTRATIONS

In 1998, a total of 127,200 deaths (67,100 males and 60,100 females) were registered from among Australia's 18.7 million residents (at June 1998). This represents a decrease of 2,100 (1.7%) on the registrations for 1997, although the 20 year trend shows the number of deaths increasing by an average of 1.6% per year since 1978. The steady increase in the number of deaths over time reflects the increasing size of the population, and in particular, the increasing number of older people. With the continued ageing of the population, the number of deaths will continue to rise in the future.

The proportion of deaths registered by State or Territory of usual residence followed the State and Territory population distribution, with more than three-quarters of all deaths from the three most populous eastern States. Of the total 127,200 deaths registered in 1998, 35% were from New South Wales (44,700), 25% were from Victoria (32,000) and 18% were from Queensland (23,300).

NATIONAL AND STATE REGISTRATIONS *continued*

While the total number of deaths throughout Australia in 1998 was around 6% higher than in 1988, there was great variation among the States and Territories in the percentage increase over the 10 year period.

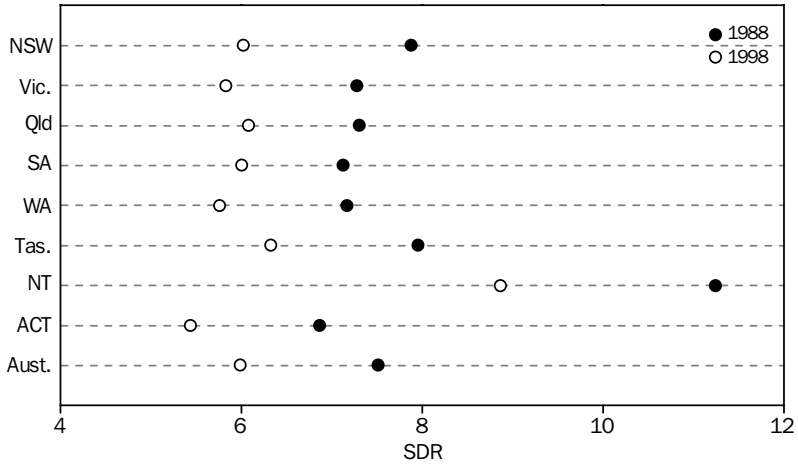
Australian Capital Territory registrations increased the most, up 25% over the 1988–98 period. The high population growth States of Queensland and Western Australia followed with increases of 19% and 12% respectively. South Australia had the fourth highest percentage increase (up 10%), although this increase can be mostly attributed to the slightly older South Australian population, rather than population growth. In contrast, the relatively young population of the Northern Territory recorded a 1% reduction in death registrations over the period, while the number of New South Wales registrations was unchanged.

STANDARDISED DEATH RATES

Despite the ageing of the population over the last 20 years, the crude death rate (CDR) fell slightly, from 7.6 deaths per 1,000 population in 1978 to 6.8 deaths in 1998. The fall in CDR against the background of an older population indicates the considerable declines in age-specific death rates over the period. The standardised death rate (SDR) (which eliminates the effect of the changing age-sex structure of the population) was 6.0 deaths per 1,000 population in 1998, down by 4% from 1997 (6.3) and down by 34% from 1978 (9.0), or 4% per year.

Although all States and Territories contributed to the national decline in the SDR, there were some considerable State-Territory differences in SDRs. In 1998, the lowest SDR was recorded in the ACT with 5.4 deaths per 1,000 standard population. Western Australia and Victoria followed with SDRs of 5.8 each. The Northern Territory had the highest SDR with 8.9 deaths per 1,000 standard population, and Tasmania had the second highest SDR with 6.3.

STANDARDISED DEATH RATES(a)



(a) Per 1,000 of the mid-year 1991 population.

EXPECTATION OF LIFE

Reductions in SDRs were also reflected in an increase in life expectancy at birth. In 1996–98 life expectancy at birth was 75.9 years for males and 81.5 years for females, an increase of 0.3 and 0.2 years respectively over the 1995–97 life expectancies at birth. Male life expectancy was highest in the Australian Capital Territory (77.5 years), while female life expectancy was highest in Western Australia (81.9 years). The lowest life expectancy was in the Northern Territory where a boy born in 1996–98 could be expected to live an average of 70.6 years, and a girl, 75.0 years.

Life expectancy calculations assume that the mortality rates prevailing over the reference period will continue indefinitely. As future reductions in mortality rates are probable, the actual average life expectancy of males and females born in the 1996–98 period is likely to be higher than figures given here.

Since 1971, life expectancy at birth has increased by 7.6 years for males and 6.7 years for females. While 13% of this increase in life expectancy has come from the reductions in infant deaths over the period, more than 70% has come from mortality decreases in the population aged 45 years and over. As a consequence of the declines in mortality of people in the middle and older age groups, life expectancy of 65 year olds has increased by more than four years for both males and females over the 1971–98 period to 16.3 years for males and 20 years for females. Assuming the age specific death rate declines of the past quarter century continue, life expectancy at birth will be around 82.0 years for males and 86.1 years for females by 2051.

Assuming that the mortality levels prevailing in the Australian population over the 1996–98 period were to continue, a boy born in this period would have a 0.9% chance of living to 100 years of age, while a girl would have a 2.5% chance of becoming a centenarian.

AGE AT DEATH

The median age at death in 1998 was 74.5 years for males and 81.0 years for females, increases of 2.9 and 2.8 years respectively from the median age at death in 1988. This reflects the ageing of the population and the gain in life expectancy over the period.

The median age at death in the Northern Territory was more than 20 years less than the median age nationally. This results from a combination of a young age structure and high mortality of the Indigenous population who comprise around 28% of the total Territory's population. South Australia had the highest median ages at death with 75.4 years for males and 82.0 years for females, reflecting the slightly older population of South Australia compared to other States and Territories.

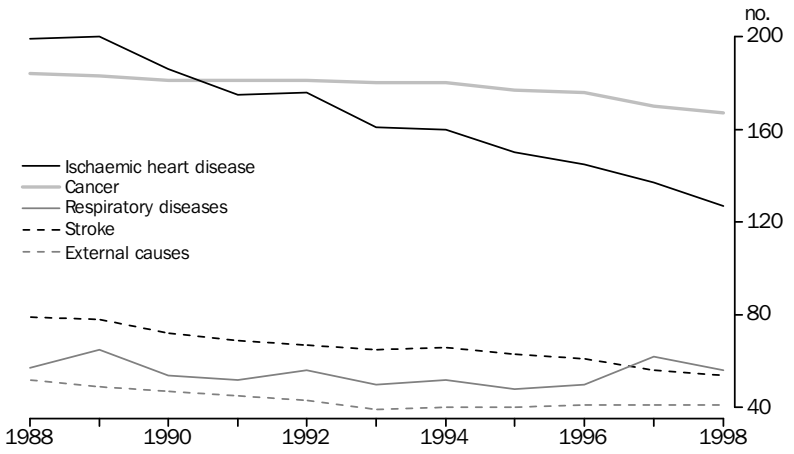
LEADING CAUSES OF DEATH

In 1998, malignant neoplasms (cancer) was the leading cause of death, with 34,600 deaths or 27% of all deaths with an SDR of 167 deaths per 100,000 population. Ischaemic heart disease (IHD) was the second leading cause of death, contributing 27,800 deaths or 22% of all deaths with a SDR of 127 per 100,000 population. During the last decade, IHD and cancer remained the two leading causes of death. In 1991, cancer overtook IHD as the leading cause of death. This has been the result of the long-term downward trend in the SDR for IHD, declining by an average of 4.4% per year, while the SDR for malignant neoplasms declined by an average of just 1% per year over the same period.

LEADING CAUSES OF DEATH *continued*

Of deaths due to malignant neoplasms, lung cancer was the leading cause among males (contributing 25% of all male cancer deaths), while breast cancer was the leading cancer-type death among females, contributing 17% of all female cancer deaths.

CAUSES OF DEATH, Standardised death rates(a)



(a) Per 100,000 of the mid-year 1991 population.

Diseases of the respiratory system was the third leading cause of death in 1998, with 10% of all deaths and an SDR of 56 deaths per standard 100,000 population. The Northern Territory's SDR for diseases of the respiratory system (113 deaths per 100,000 standard population) was double the national rate, while Tasmania had an SDR 15% higher than the national level with 64 deaths per 100,000 standard population.

Cerebrovascular disease (stroke) was the fourth leading cause of death contributing 9% of all deaths with an SDR of 54 deaths per 100,000 population. Stroke deaths have undergone a decline similar to that of ischaemic heart disease, declining by an average of 3.8% per year from 1988 to 1998. Tasmania also had the highest SDR for stroke, 15% higher than the national rate (62 deaths per 100,000 standard population).

External causes of death was the fifth leading cause of death, accounting for 6% of all deaths with an SDR of 41 deaths per 100,000 standard population. Suicide contributed one-third of these deaths, while motor vehicle traffic accidents contributed 22%. The Northern Territory's SDR for external causes of death was more twice the national level (110 deaths per 100,000 standard population), while Victoria had an SDR for external causes of death 14% less than average (36 deaths per 100,000 standard population).

1.1 DEATHS, SUMMARY(a), STATES AND TERRITORIES

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*OT*(b)	*Aust.*
					DEATHS					
Total deaths	**44,741**	**32,007**	**22,321**	**11,714**	**10,664**	**3,605**	**871**	**1,272**	**7**	**127,202**
Males	23,520	16,407	12,235	6,095	5,750	1,889	527	646	4	67,073
Females	21,221	15,600	10,086	5,619	4,914	1,716	344	626	3	60,129
Sex ratio	110.8	105.2	121.3	108.5	117.0	110.1	153.2	103.2	133.3	111.5
Indigenous deaths	*n.a.*	*n.a.*	*593*	*127*	*378*	*n.a.*	*415*	*n.a.*	*n.a.*	*n.a.*
Males	n.a.	n.a.	349	74	230	n.a.	229	n.a.	n.a.	n.a.
Females	n.a.	n.a.	244	53	148	n.a.	186	n.a.	n.a.	n.a.
Standardised death rates	*6.0*	*5.8*	*6.1*	*6.0*	*5.8*	*6.3*	*8.9*	*5.4*	*n.p.*	*6.0*
Males	7.7	7.4	7.8	7.7	7.4	8.1	9.8	6.6	n.p.	7.6
Females	4.7	4.6	4.7	4.7	4.5	5.0	7.8	4.6	n.p.	4.7
Crude death rates	*7.1*	*6.9*	*6.5*	*7.9*	*5.8*	*7.6*	*4.6*	*4.1*	*n.p.*	*6.8*
Males	7.5	7.1	7.1	8.3	6.2	8.1	5.3	4.2	n.p.	7.2
Females	6.7	6.6	5.8	7.5	5.4	7.2	3.8	4.0	n.p.	6.4
Median age at death	77.5	78.1	76.6	78.4	76.9	77.7	53.6	75.3	n.p.	77.4
Males	74.5	75.0	74.0	75.4	73.7	75.0	52.3	72.7	n.p.	74.5
Females	80.9	81.7	80.3	82.0	80.8	80.9	58.2	78.9	n.p.	81.0
Age specific death rates										
Age group (years)										
Males										
0	4.7	4.9	7.3	4.6	5.9	7.9	12.0	4.5	n.p.	5.5
1-4	0.4	0.3	0.4	0.3	0.3	0.4	0.3	0.1	n.p.	0.4
5-14	0.2	0.2	0.2	0.1	0.1	0.1	0.5	0.1	n.p.	0.2
15-24	1.0	0.9	0.9	1.1	1.2	1.0	2.1	1.0	n.p.	1.0
25-34	1.4	1.3	1.4	1.5	1.6	1.5	3.1	1.1	n.p.	1.4
35-44	1.8	1.4	1.8	1.7	1.7	1.5	4.6	1.4	n.p.	1.7
45-54	3.2	3.0	3.4	3.4	2.7	3.5	7.9	2.0	n.p.	3.2
55-64	9.4	8.5	9.6	8.9	8.5	10.0	12.5	7.2	n.p.	9.1
65-74	26.3	25.7	27.2	26.8	25.2	27.5	34.5	19.8	n.p.	26.2
75-84	67.9	66.5	68.2	69.0	64.5	73.6	84.2	60.8	n.p.	67.5
85+	170.4	165.1	163.6	169.6	166.7	177.0	58.5	166.7	n.p.	167.2
Females										
0	4.0	4.5	5.4	3.3	4.0	3.4	12.7	7.6	n.p.	4.5
1-4	0.3	0.3	0.3	0.3	0.3	0.4	0.0	0.4	n.p.	0.3
5-14	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.0	n.p.	0.1
15-24	0.3	0.3	0.4	0.3	0.5	0.3	1.2	0.3	n.p.	0.4
25-34	0.5	0.4	0.5	0.5	0.5	0.4	1.3	0.2	n.p.	0.5
35-44	0.8	0.9	0.9	1.0	0.9	1.2	3.3	0.8	n.p.	0.9
45-54	2.1	2.0	2.1	2.2	1.9	2.7	4.2	2.0	n.p.	2.1
55-64	5.3	5.0	5.4	5.3	4.5	5.4	10.9	4.3	n.p.	5.2
65-74	14.5	13.5	14.6	13.6	13.8	15.1	25.7	15.2	n.p.	14.2
75-84	43.6	43.2	41.2	43.5	41.4	44.9	61.5	36.2	n.p.	42.9
85+	135.1	140.1	133.0	136.9	129.8	141.9	136.5	153.4	n.p.	136.1
Expectation of life(c)										
Males										
Age 0	75.8	76.3	75.6	76.0	76.1	75.1	70.6	77.5	n.p.	75.9
Age 1	75.2	75.7	75.1	75.4	75.6	74.7	70.4	76.9	n.p.	75.3
Age 25	52.0	52.4	52.0	52.2	52.4	51.4	47.7	53.6	n.p.	52.1
Age 45	33.3	33.6	33.4	33.4	33.8	32.6	30.3	34.7	n.p.	33.4
Age 65	16.3	16.4	16.5	16.3	16.6	15.7	15.0	17.1	n.p.	16.3
Age 85	5.4	5.4	5.6	5.4	5.5	5.1	5.1	5.6	n.p.	5.4
Females										
Age 0	81.6	81.7	81.5	81.6	81.9	80.4	75.0	81.6	n.p.	81.5
Age 1	80.9	81.1	81.0	80.9	81.2	79.8	74.9	81.1	n.p.	80.9
Age 25	57.3	57.4	57.4	57.3	57.6	56.2	51.6	57.4	n.p.	57.3
Age 45	38.0	38.0	38.1	38.0	38.3	36.9	32.9	38.0	n.p.	38.0
Age 65	20.0	20.0	20.2	20.0	20.3	19.3	16.9	20.0	n.p.	20.0
Age 85	6.5	6.5	6.6	6.5	6.6	6.3	5.7	6.5	n.p.	6.5

See foonotes at end of table.

1.1 DEATHS, SUMMARY(a), STATES AND TERRITORIES — *continued*

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*OT*(b)	*Aust.*
					DEATHS					
Principal causes of death (SDR 100,000 per 100,000 population)										
Males										
Neoplasms (140-239)	219	223	228	213	215	225	218	197	n.p.	221
Diseases of the circulatory system (390-459)	296	268	294	295	267	320	301	240	n.p.	286
Diseases of the respiratory system (460-519)	79	72	80	84	73	87	115	64	n.p.	78
Diseases of the digestive system (520-579)	22	21	21	26	21	20	44	24	n.p.	22
All other diseases (remainder of 001-779)	94	100	90	94	95	99	140	72	n.p.	95
External causes (800-899)	62	51	65	62	72	61	163	59	n.p.	61
Females										
Neoplasms (140-239)	132	136	131	133	129	138	168	138	n.p.	133
Diseases of the circulatory system (390-459)	194	177	191	187	170	201	250	162	n.p.	186
Diseases of the respiratory system (460-519)	44	41	40	47	40	50	111	46	n.p.	43
Diseases of the digestive system (520-579)	15	15	15	15	15	16	26	15	n.p.	15
All other diseases (remainder of 001-779)	65	75	67	62	69	69	165	76	n.p.	69
External causes (800-899)	20	20	25	21	25	22	60	18	n.p.	22
					INFANT DEATHS					
Total Infant deaths	**371**	**283**	**299**	**73**	**123**	**34**	**45**	**24**	**—**	**1,252**
Males	205	152	175	43	75	24	23	9	—	706
Females	166	131	124	30	48	10	22	15	—	546
Aboriginal and Torres Strait Islander infant deaths	*n.a.*	*n.a*	*42*	*3*	*25*	*n.a*	*29*	—	*n.a*	*n.a*
Males	n.a.	n.a.	27	—	16	n.a.	13	—	n.a.	n.a.
Females	n.a.	n.a.	15	—	9	n.a.	16	—	n.a.	n.a.
Infant mortality rates	*4.3*	*4.7*	*6.4*	*4.0*	*5.0*	*5.7*	*12.4*	*6.0*	—	*5.0*
Males	4.7	4.9	7.3	4.6	5.9	7.9	12.0	4.5	—	5.5
Females	4.0	4.5	5.4	3.3	4.0	3.4	12.7	7.6	—	4.5
Age at death										
Males										
Under 1 day	75	54	52	11	17	5	9	5	n.p.	228
1 day and under I week	39	31	34	6	12	7	0	3	n.p.	132
1 week and under 1 month	28	24	35	8	10	3	6	0	n.p.	114
1 month an under 1 year	63	43	54	18	36	9	8	1	n.p.	232
Females										
Under 1 day	57	48	52	13	8	4	9	7	n.p.	198
1 day and under I week	26	25	17	2	8	0	4	1	n.p.	83
1 week and under 1 month	30	18	19	4	10	2	1	3	n.p.	87
1 month an under 1 year	53	40	36	11	22	4	8	4	n.p.	178

(a) See Glossary for definitions of terms used. (b) Due to the small numbers involved only details of total deaths have been provided for Other Territories. (c) Life expectancy was calculated over the three year period 1996–98.

1.2 DEATHS, SUMMARY(a), AUSTRALIA, SELECTED YEARS, 1988–98

	1988	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*
				DEATHS			
Total deaths	**119,866**	**121,599**	**126,692**	**125,133**	**128,719**	**129,350**	**127,202**
Males	65,082	65,089	67,464	66,251	68,206	67,752	67,073
Females	54,784	56,510	59,228	58,882	60,513	61,598	60,129
Sex ratio	118.8	115.2	113.9	112.5	112.7	110.0	111.5
Standardised death rates	*7.5*	*6.6*	*6.7*	*6.4*	*6.4*	*6.3*	*6.0*
Males	9.8	8.6	8.7	8.2	8.2	7.9	7.6
Females	5.8	5.1	5.2	5.0	5.0	4.9	4.7
Crude death rates	*7.3*	*6.9*	*7.1*	*6.9*	*7.0*	*7.0*	*6.8*
Males	7.9	7.4	7.6	7.4	7.5	7.4	7.2
Females	6.6	6.4	6.6	6.5	6.6	6.6	6.4
Median Age at death	74.6	76.1	76.6	76.6	77.0	77.2	77.4
Males	71.6	72.9	73.5	73.5	74.0	74.2	74.5
Females	78.2	79.5	80.2	80.3	80.7	81.0	81.0
Age specific death rates							
Age group (years)							
Males							
0	9.7	6.9	6.5	6.1	6.5	5.8	5.5
1-4	0.5	0.5	0.4	0.4	0.4	0.4	0.4
5-14	0.3	0.2	0.2	0.2	0.2	0.2	0.2
15-24	1.3	1.0	1.0	1.0	1.0	1.1	1.0
25-34	1.4	1.3	1.3	1.3	1.3	1.3	1.4
35-44	1.9	1.7	1.8	1.8	1.7	1.7	1.7
45-54	4.6	3.7	3.6	3.5	3.4	3.4	3.2
55-64	13.6	11.2	10.8	10.3	9.9	9.6	9.1
65-74	34.7	29.9	30.2	28.9	28.3	27.4	26.2
75-84	85.5	76.5	78.5	73.6	74.1	70.6	67.5
85+	188.9	178.7	186.9	176.6	181.3	174.0	167.2
Females							
0	7.5	5.3	5.2	5.1	5.0	4.9	4.5
1-4	0.4	0.3	0.3	0.3	0.3	0.2	0.3
5-14	0.2	0.1	0.2	0.2	0.1	0.1	0.1
15-24	0.5	0.4	0.3	0.4	0.3	0.4	0.4
25-34	0.5	0.5	0.4	0.5	0.5	0.5	0.5
35-44	1.0	0.9	0.9	0.9	0.9	0.9	0.9
45-54	2.7	2.2	2.2	2.2	2.1	2.1	2.1
55-64	7.1	6.1	5.9	5.7	5.7	5.5	5.2
65-74	18.2	16.2	16.2	15.6	15.1	15.1	14.2
75-84	52.8	47.7	48.8	47.0	46.4	44.8	42.9
85+	149.5	141.3	149.2	142.6	145.7	144.6	136.1
Expectation of life (b)							
Males							
Age 0	73.1	75.0	75.0	75.0	75.2	75.6	75.9
Age 1	72.8	74.5	74.5	74.5	74.7	75.0	75.3
Age 25	49.8	51.3	51.3	51.3	51.5	51.8	52.1
Age 45	31.1	32.5	32.5	32.5	32.8	33.1	33.4
Age 65	14.8	15.7	15.7	15.7	15.8	16.1	16.3
Age 85	4.9	5.1	5.1	5.1	5.1	5.3	5.4
Females							
Age 0	79.5	80.9	80.9	80.8	81.1	81.3	81.5
Age 1	79.1	80.3	80.3	80.3	80.5	80.7	80.9
Age 25	55.6	56.7	56.7	56.7	56.9	57.1	57.3
Age 45	36.3	37.4	37.3	37.3	37.5	37.7	38.0
Age 65	18.7	19.5	19.4	19.5	19.6	19.8	20.0
Age 85	6.0	6.3	6.2	6.3	6.4	6.4	6.5

For foonotes, see end of table.

1.2 DEATHS, SUMMARY(a), AUSTRALIA, SELECTED YEARS, 1988–98 — *continued*

	1988	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*
				DEATHS			
Principal causes of death (SDR per 100,000 population)							
Males							
Neoplasms (140-239)	246	239	243	235	234	223	221
Diseases of the circulatory system (390-459)	438	359	359	336	328	307	286
Diseases of the respiratory system (460-519)	90	75	78	70	72	85	78
Diseases of the digestive system (520-579)	33	25	25	24	24	23	22
All other diseases (remainder of 001-779)	98	99	104	101	104	95	95
External causes (800-899)	76	59	59	59	61	60	61
Females							
Neoplasms (140-239)	144	143	142	141	141	137	133
Diseases of the circulatory system (390-459)	278	231	230	216	209	198	186
Diseases of the respiratory system (460-519)	36	34	37	34	37	48	43
Diseases of the digestive system (520-579)	21	16	16	16	15	15	15
All other diseases (remainder of 001-779)	71	70	75	73	75	71	69
External causes (800-899)	29	20	21	23	20	22	22
				INFANT DEATHS			
Total Infant deaths	**2,132**	**1,591**	**1,512**	**1,449**	**1,460**	**1,341**	**1,252**
Males	1,227	918	866	807	843	744	706
Females	905	673	646	642	617	597	546
Infant mortality rates	*8.7*	*6.1*	*5.9*	*5.7*	*5.8*	*5.3*	*5.0*
Males	9.7	6.9	6.5	6.1	6.5	5.8	5.5
Females	7.5	5.3	5.2	5.1	5.0	4.9	4.5
Age at death							
Males							
Under 1 day	425	321	326	313	313	262	228
1 day and under 1 week	199	140	153	118	133	132	132
1 week and under 1 month	117	123	107	103	100	91	114
1 month an under 1 year	486	334	280	273	297	259	232
Females							
Under 1 day	297	252	238	241	244	239	198
1 day and under I week	142	104	113	97	92	94	83
1 week and under 1 month	115	77	71	85	82	81	87
1 month an under 1 year	351	240	224	219	199	183	178

(a) See Glossary for definitions of terms used. (b) From 1995 onwards life expectation was calculated over 3 years ending the year in the table heading.

1.3 SUMMARY, AUSTRALIA AND SELECTED COUNTRIES

	Australia	*Canada*	*Germany*	*Greece*	*Hong Kong*	*Italy*	*Japan*	*Malaysia*	*Republic of Korea*	*New Zealand*	*UK*	*USA*
						MALES						
Crude death rate												
Reference year	1998	1995	1996	1995	1996	1994	1996	1996	1995	1992	1996	1995
Rate	7.2	7.6	10.2	10.2	5.8	10.3	7.9	5.1	6.0	8.6	10.6	9.1
Infant mortality rate												
Reference period	1998	1995	1996	n.a.	n.a.	1994	1996	1996	n.a.	n.a.	1996	1995
Rate	5.5	6.7	5.6	n.a.	n.a.	7.2	4.1	10.0	n.a.	n.a.	(a)6.1	8.3
Expectation of life (years)												
Reference period	1996-98	1992	1994-96	1995	1996	1994	1996	1996	1991	1992-94	1996	1995
Age 0	75.9	74.6	73.3	75.0	76.3	74.3	77.0	69.3	67.7	73.4	74.3	72.5
Age 1	75.3	74.1	72.7	74.7	75.7	73.9	76.3	69.2	67.3	73.0	73.8	72.1
Age 25	52.1	50.9	49.4	51.4	52.2	50.6	52.9	46.5	44.5	50.1	50.1	49.2
Age 45	33.4	32.1	30.7	32.7	33.1	31.9	33.8	28.2	26.7	31.5	31.5	31.3
Age 65	16.3	15.7	14.8	16.1	16.2	15.4	16.9	12.7	12.3	15.0	14.8	15.6
Age 85	5.4	5.4	4.8	5.7	5.3	4.9	5.4	n.a.	n.a.	5.1	4.9	5.2
Age-specific death rates (b)												
Reference period	1998	1995	1996	1995	1996	1994	1996	1996	1995	1992	1996	1995
0	5.5	6.6	5.6	9.0	4.3	7.1	4.1	10.7	3.2	8.4	7.0	8.4
1-4	0.4	0.3	0.3	0.2	0.2	0.3	0.4	0.8	0.7	0.5	0.3	0.4
5-9	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.4	0.4	0.3	0.1	0.2
10-14	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.5	0.4	0.4	0.2	0.3
15-19	0.8	0.8	0.7	0.7	0.5	0.8	0.5	1.4	1.0	1.3	0.6	1.2
20-24	1.3	1.0	1.0	1.2	0.7	0.9	0.7	1.8	1.2	1.8	0.9	1.6
25-29	1.3	1.1	1.0	1.2	0.8	1.2	0.7	1.8	1.6	1.6	0.9	1.7
30-34	1.5	1.3	1.2	1.3	0.8	1.7	0.8	2.1	2.0	1.4	1.1	2.3
35-39	1.5	1.7	1.7	1.6	1.1	1.7	1.1	2.7	3.0	1.8	1.3	2.9
40-44	1.9	2.2	2.8	2.3	1.9	2.1	1.8	3.4	4.5	2.1	2.0	3.8
45-49	2.5	3.2	4.1	3.5	2.6	3.1	2.9	5.2	6.5	3.4	3.2	5.0
50-54	4.0	5.1	7.1	5.0	4.6	5.5	4.9	8.7	10.1	6.2	5.3	7.3
55-59	6.8	8.4	10.4	8.5	8.1	8.9	7.3	13.9	14.1	10.8	9.2	11.1
60-64	11.8	14.1	16.9	14.0	13.2	15.2	12.6	22.6	20.4	17.1	15.8	17.7
65-69	20.0	23.3	27.6	22.9	22.8	25.0	19.4	36.2	33.7	28.6	26.9	26.5
70-74	33.5	36.8	42.5	35.5	35.1	39.1	29.6	58.3	54.6	43.4	45.2	40.3
75-79	53.6	59.3	62.6	58.7	54.0	63.5	50.9	(c)127.5	91.0	69.1	69.8	60.4
80-84	92.9	94.8	121.4	103.1	91.0	100.3	86.4	n.a.	(d)189.6	113.8	113.6	96.3
85 and over	167.2	171.8	198.6	170.0	128.2	183.2	168.3	n.a.	n.a.	197.5	130.3	179.8

For foonotes, see end of table.

Source of international data: United Nations 1999, *1997 Demographic Yearbook*.

1.3 DEATHS: SUMMARY, AUSTRALIA AND SELECTED COUNTRIES—*continued*

	Australia	*Canada*	*Germany*	*Greece*	*Hong Kong*	*Italy*	*Japan*	*Malaysia*	*Republic of Korea*	*New Zealand*	*UK*	*USA*
						FEMALES						
Crude death rate												
Reference period	1998	1995	1996	1995	1996	1994	1966	1996	1995	1992	1996	1995
Rate	6.4	6.6	11.3	8.9	4.4	9.2	6.4	3.9	4.7	7.3	11.1	8.5
Infant mortality rate												
Reference period	1998	1995	1996	n.a.	n.a.	1994	1996	1996	n.a.	n.a.	1996	1995
Rate	4.5	5.5	4.4	n.a.	n.a.	5.8	3.4	8.1	n.a.	na	(a)6.1	6.8
Expectation of life (years)												
Reference period	1996-98	1992	1994-96	1995	1996	1994	1996	1996	1991	1992-94	1996	1995
Age 0	81.5	80.9	79.7	80.2	81.8	80.7	83.6	74.1	75.7	79.1	79.5	78.9
Age 1	80.9	80.4	79.1	79.8	81.1	80.2	82.9	73.8	75.4	78.6	78.9	78.5
Age 25	57.3	56.8	55.5	56.1	57.5	56.6	59.2	50.5	52.3	55.2	55.2	55.0
Age 45	38.0	37.4	36.2	36.7	38.0	37.2	39.8	31.5	24.4	36.0	35.9	36.0
Age 65	20.0	19.9	18.5	18.4	19.7	19.2	21.5	14.7	16.1	18.8	18.3	18.9
Age 85	6.5	6.9	5.6	5.6	6.4	5.7	7.1	n.a.	n.a.	6.4	6.2	6.3
Age-specific death rates (b)												
Reference period	1998	1995	1996	1995	1996	1994	1966	1996	1995	1992	1996	1995
0	4.5	5.5	4.4	7.2	3.5	5.8	3.5	8.6	2.6	6.1	5.5	6.9
1-4	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.6	0.6	0.4	0.2	0.4
5-9	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.3	0.3	0.1	0.2
10-14	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.3	0.2	0.2	0.1	0.2
15-19	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.5	0.5	0.5	0.3	0.5
20-24	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.5	0.6	0.6	0.3	0.5
25-29	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.7	0.7	0.5	0.4	0.6
30-34	0.5	0.5	0.5	0.5	0.4	0.6	0.4	0.8	0.8	0.6	0.5	0.9
35-39	0.8	0.8	0.9	0.7	0.6	0.7	0.6	1.2	1.0	1.0	0.8	1.3
40-44	1.1	1.2	1.4	1.0	1.0	1.0	1.0	1.9	1.5	1.4	1.3	1.8
45-49	1.6	2.0	2.2	1.5	1.4	1.7	1.6	3.2	2.2	2.6	2.1	2.6
50-54	2.6	3.1	3.5	2.2	2.1	2.7	2.4	5.0	3.7	4.0	3.5	4.1
55-59	4.0	5.1	4.7	3.7	3.6	4.1	3.3	8.5	5.5	6.3	5.6	6.6
60-64	6.5	7.7	7.6	6.1	6.1	6.6	5.2	14.5	8.6	9.7	9.2	10.4
65-69	10.4	12.7	13.3	11.7	10.9	11.1	8.2	24.8	15.5	15.0	15.8	15.7
70-74	18.2	20.1	23.0	20.3	18.8	19.9	13.8	42.5	28.8	24.6	26.7	24.4
75-79	31.5	33.5	36.8	44.2	33.8	36.8	26.1	(c)102.9	54.2	41.5	42.9	38.2
80-84	59.9	59.0	80.4	84.9	59.3	66.5	49.5	n.a.	(d)143.4	71.2	74.6	63.6
85 and over	136.1	136.4	163.9	173.7	112.5	155.6	117.9	n.a.	n.a.	150.8	80.6	144.9

(a) Combined male and female rate. (b) Rates are the number of deaths per 1,000 population. (c) 75 years and over. (d) 80 years and over.

Source of international data: United Nations 1999, *1997 Demographic Yearbook.*

1.4 DEATHS REGISTERED, SEX, STATES AND TERRITORIES

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*OT*	*Aust.*
					MALES					
1978	22,232	16,001	9,496	5,449	4,466	1,848	324	465	—	60,281
1983	21,899	15,823	9,725	5,465	4,796	1,846	462	434	—	60,450
1988	23,877	16,426	10,597	5,793	5,363	1,908	552	566	—	65,082
1993	22,925	16,389	11,058	6,015	5,632	1,965	469	632	4	65,089
1994	23,690	16,765	11,896	6,241	5,598	2,136	489	644	5	67,464
1995	23,612	16,960	11,112	5,879	5,617	1,952	521	593	5	66,251
1996	23,765	17,009	12,151	6,061	5,978	2,052	487	698	5	68,206
1997	23,746	17,122	11,915	6,029	5,774	1,966	535	663	—	67,752
1998	23,520	16,407	12,235	6,095	5,750	1,889	527	646	4	67,073
					FEMALES					
1978	18,254	13,205	7,071	4,293	3,316	1,468	192	345	—	48,144
1983	18,648	13,542	7,331	4,404	3,573	1,473	265	398	—	49,634
1988	20,799	14,300	8,206	4,897	4,169	1,639	324	450	—	54,784
1993	20,144	14,808	8,914	5,513	4,684	1,672	296	478	—	56,510
1994	21,073	15,588	9,759	5,469	4,695	1,775	287	578	4	59,228
1995	21,161	15,465	9,551	5,339	4,747	1,802	292	521	4	58,882
1996	21,376	15,717	10,130	5,545	5,049	1,820	271	602	3	60,513
1997	21,895	16,139	10,030	5,629	5,033	1,843	356	671	—	61,598
1998	21,221	15,600	10,086	5,619	4,914	1,716	344	626	3	60,129
					PERSONS					
1978	40,486	29,206	16,567	9,742	7,782	3,316	516	810	—	108,425
1983	40,547	29,365	17,056	9,869	8,369	3,319	727	832	—	110,084
1988	44,676	30,726	18,803	10,690	9,532	3,547	876	1,016	—	119,866
1993	43,069	31,197	19,972	11,528	10,316	3,637	765	1,110	5	121,599
1994	44,763	32,353	21,655	11,710	10,293	3,911	776	1,222	9	126,692
1995	44,773	32,425	20,663	11,218	10,364	3,754	813	1,114	9	125,133
1996	45,141	32,726	22,281	11,606	11,027	3,872	758	1,300	8	128,719
1997	45,641	33,261	21,945	11,658	10,807	3,809	891	1,334	4	129,350
1998	44,741	32,007	22,321	11,714	10,664	3,605	871	1,272	7	127,202

1.5 STANDARDISED DEATH RATES, SEX, STATES AND TERRITORIES

Selected	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*OT*	*Aust.*
					MALES					
1978	12.1	11.8	11.7	11.6	11.1	12.3	12.7	10.9	. .	11.8
1983	10.8	10.4	10.3	10.1	10.1	0.0	15.9	8.5	. .	10.5
1988	10.2	9.5	9.6	9.4	9.5	10.2	13.2	8.8	. .	9.8
1993	8.7	8.4	8.5	8.7	8.5	9.3	12.2	7.8	n.p.	8.6
1994	8.8	8.4	8.8	8.8	8.2	9.9	12.2	7.5	n.p.	8.7
1995	8.5	8.3	7.9	8.1	7.9	8.9	11.6	6.8	n.p.	8.2
1996	8.3	8.1	8.3	8.1	8.2	9.2	10.3	7.8	n.p.	8.2
1997	8.0	7.9	7.8	7.8	7.7	8.6	11.5	7.1	n.p.	7.9
1998	7.7	7.4	7.8	7.7	7.4	8.1	9.8	6.6	n.p.	7.6
					FEMALES					
1978	7.1	6.8	6.9	6.4	6.6	7.4	10.9	7.3	. .	6.9
1983	6.4	6.1	5.9	5.7	5.7	8.2	11.2	5.9	. .	6.1
1988	6.1	5.6	5.5	5.4	5.4	6.2	9.2	5.3	. .	5.8
1993	5.2	5.1	5.0	5.3	5.1	5.6	8.3	4.4	n.p.	5.1
1994	5.2	5.2	5.2	5.1	4.9	5.7	8.9	5.2	n.p.	5.2
1995	5.1	5.0	4.9	4.9	4.8	5.7	8.2	4.4	n.p.	5.0
1996	5.0	4.9	5.0	4.9	4.9	5.6	6.8	4.9	n.p.	5.0
1997	5.0	4.9	4.8	4.8	4.7	5.5	8.2	5.1	n.p.	4.9
1998	4.7	4.6	4.7	4.7	4.5	5.0	7.8	4.6	n.p.	4.7
					PERSONS					
1978	9.2	8.9	9.0	8.6	8.6	9.5	11.9	9.1	. .	9.0
1983	8.2	7.9	7.9	7.6	7.6	4.6	34.5	7.0	. .	8.0
1988	7.9	7.3	7.3	7.1	7.2	8.0	11.2	6.8	. .	7.5
1993	6.7	6.5	6.5	6.8	6.6	7.2	10.1	5.9	n.p.	6.6
1994	6.8	6.6	6.8	6.7	6.4	7.6	10.5	6.3	n.p.	6.7
1995	6.6	6.4	6.3	6.3	6.2	7.1	9.9	5.4	n.p.	6.4
1996	6.4	6.3	6.5	6.3	6.4	7.1	8.6	6.1	n.p.	6.4
1997	6.3	6.2	6.2	6.1	6.0	6.8	9.9	6.0	n.p.	6.3
1998	6.0	5.8	6.1	6.0	5.8	6.3	8.9	5.4	n.p.	6.0

1.6 DEATHS, STATE OR TERRITORY OF USUAL RESIDENCE BY STATE OR TERRITORY OF REGISTRATION

	State or Territory of registration								
State or Territory of usual residence	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
New South Wales	43,943	194	324	47	17	—	10	204	44,741
Victoria	213	31,647	78	32	13	9	10	5	32,007
Queensland	202	32	22,048	13	10	3	6	7	22,321
South Australia	30	38	12	11,607	8	4	12	3	11,714
Western Australia	11	9	10	8	10,610	—	14	—	10,664
Tasmania	10	22	7	3	—	3,560	—	—	3,605
Northern Territory	8	8	7	32	4	—	812	—	871
Australian Capital Territory	53	8	6	3	—	—	—	1,202	1,272
Other Territories	—	—	—	—	6	—	—	—	7
Australia	**44,471**	**31,958**	**22,492**	**11,745**	**10,668**	**3,580**	**866**	**1,422**	**127,202**

1.7 DEATHS REGISTERED, YEAR OF OCCURRENCE(a)

	State or Territory of registration								
Year of occurrence	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
Before 1990	8	—	—	—	—	—	—	—	9
1990	—	—	—	—	—	—	—	—	3
1991	—	—	—	—	—	—	—	—	—
1992	—	—	—	—	—	—	—	—	—
1993	—	—	3	—	—	—	—	—	6
1994	—	—	3	—	—	—	—	—	7
1995	3	7	7	—	—	—	—	—	17
1996	7	9	16	3	3	—	—	—	41
1997	1,357	1,087	1,474	415	380	155	83	72	5,023
1998	43,092	30,850	20,988	11,327	10,284	3,423	781	1,348	122,093
Total	**44,471**	**31,958**	**22,492**	**11,745**	**10,668**	**3,580**	**866**	**1,422**	**127,202**

(a) See paragraph 2 of the Explanatory Notes.

1.8 PRINCIPAL CAUSES OF DEATH (NUMBER), SEX, SELECTED YEARS, 1988–98

Cause of death	*1988*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*
			MALES				
Neoplasms (140–239)	*16,977*	*18,727*	*19,553*	*19,425*	*19,889*	*19,571*	*19,861*
Malignant neoplasms (cancer) (140–208)	16,828	18,479	19,287	19,144	19,586	19,279	19,590
Trachea, bronchus and lung (162)	4,631	4,552	4,810	4,696	4,773	4,605	4,821
Prostate (185)	1,884	2,544	2,590	2,575	2,660	2,448	2,531
Other (remainder 140–239)	149	248	266	281	303	292	271
Diseases of the circulatory system (390–459)	*27,779*	*26,372*	*27,031*	*26,261*	*26,550*	*25,717*	*24,746*
Ischaemic heart disease (410–414)	17,737	16,337	16,515	16,133	16,092	15,565	15,024
Other heart disease (393–398, 402, 404, 415, 416, 420–429)	3,096	3,254	3,327	3,128	3,421	3,406	3,177
Cerebrovascular disease (stroke) (430–438)	5,034	4,819	5,260	5,108	5,205	4,879	4,812
Other (remainder of 390–459)	1,912	1,962	1,929	1,892	1,832	1,867	1,733
Diseases of the respiratory system (460–519)	*5,614*	*5,468*	*5,791*	*5,407*	*5,733*	*6,960*	*6,593*
Chronic obstructive pulmonary disease and allied conditions(490–496)	4,258	3,974	4,132	3,884	4,147	3,830	3,628
Diseases of the digestive system (520–579)	*2,172*	*1,938*	*1,962*	*1,961*	*2,022*	*2,024*	*1,969*
Chronic liver disease and cirrhosis(571)	851	723	729	731	768	764	725
Diseases of the genitourinary system (580–629)	*821*	*855*	*977*	*947*	*1,001*	*1,090*	*1,117*
Congenital anomalies (740–759)	*458*	*397*	*413*	*343*	*350*	*411*	*334*
Certain conditions originating in the perinatal period (760–779)	*511*	*412*	*402*	*384*	*391*	*336*	*325*
All other diseases (remainder of 001–799)	*4,770*	*5,870*	*6,246*	*6,369*	*6,836*	*6,250*	*6,514*
External causes (800–999)	*5,980*	*5,050*	*5,089*	*5,154*	*5,434*	*5,393*	*5,614*
Motor vehicle traffic accidents (810–819)	2,176	1,385	1,370	1,398	1,399	1,240	1,224
Accidental falls (880–888)	436	418	458	457	523	486	531
Accidental drowning and submersion (910)	232	226	209	190	188	217	187
All other accidents (remainder of 800–949)	1,052	1,044	926	930	1,057	989	1,221
Suicide (950–959)	1,730	1,687	1,830	1,873	1,931	2,146	2,150
Other (remainder of 800–999)	354	290	296	306	336	315	301
Total	**65,082**	**65,089**	**67,464**	**66,251**	**68,206**	**67,752**	**67,073**
			FEMALES				
Neoplasms (140–239)	*12,910*	*14,449*	*14,653*	*14,943*	*15,363*	*15,316*	*15,212*
Malignant neoplasms (cancer) (140–208)	12,734	14,212	14,374	14,662	15,085	15,037	14,970
Trachea, bronchus and lung (162)	1,538	1,828	1,887	1,993	2,054	2,058	2,053
Breast (174)	2,348	2,641	2,655	2,629	2,623	2,602	2,542
Other (remainder 140–239)	176	237	279	281	278	279	242
Diseases of the circulatory system (390–459)	*27,301*	*26,868*	*27,858*	*27,146*	*27,440*	*26,924*	*26,051*
Ischaemic heart disease (410–414)	13,847	13,425	14,061	13,480	13,545	13,486	12,801
Other heart disease (393–398, 402, 404, 415, 416, 420–429)	4,074	4,239	4,353	4,270	4,446	4,350	4,253
Cerebrovascular disease (stroke) (430–438)	7,407	7,319	7,578	7,572	7,601	7,254	7,170
Other (remainder of 390–459)	1,973	1,885	1,866	1,824	1,848	1,834	1,827
Diseases of the respiratory system (460–519)	*3,422*	*3,777*	*4,167*	*4,024*	*4,561*	*6,299*	*5,817*
Chronic obstructive pulmonary disease and allied conditions(490–496)	2,090	2,364	2,581	2,504	2,814	2,627	2,486
Diseases of the digestive system (520–579)	*1,982*	*1,821*	*1,897*	*1,910*	*1,871*	*1,928*	*1,968*
Chronic liver disease and cirrhosis(571)	309	266	319	286	305	287	293
Diseases of the genitourinary system (580–629)	*1,029*	*1,069*	*1,133*	*1,127*	*1,243*	*1,362*	*1,433*
Congenital anomalies (740–759)	*406*	*342*	*341*	*335*	*301*	*349*	*271*
Certain conditions originating in the perinatal period (760–779)	*383*	*284*	*293*	*291*	*309*	*284*	*252*
All other diseases (remainder of 001–799)	*4,855*	*5,929*	*6,787*	*6,846*	*7,302*	*6,792*	*6,793*
External causes (800–999)	*2,496*	*1,971*	*2,099*	*2,260*	*2,123*	*2,344*	*2,332*
Motor vehicle traffic accidents (810–819)	902	572	590	631	544	561	507
Accidental falls (880–888)	522	438	545	538	579	639	651
Accidental drowning and submersion (910)	70	62	41	69	59	59	58
All other accidents (remainder of 800–949)	314	353	338	352	331	353	425
Suicide (950–959)	467	394	428	495	462	577	533
Other (remainder of 800–999)	221	152	157	175	148	155	158
Total	**54,784**	**56,510**	**59,228**	**58,882**	**60,513**	**61,598**	**60,129**

1.9 PRINCIPAL CAUSES OF DEATH (NUMBER), SEX, STATES AND TERRITORIES

Cause of death	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*OT*	*Aust.*
					MALES					
Neoplasms (140–239)	*6,880*	*5,077*	*3,658*	*1,717*	*1,693*	*543*	*92*	*201*	—	*19,861*
Malignant neoplasms (cancer) (140–208)	6,790	5,013	3,609	1,683	1,673	536	90	196	—	19,590
Trachea, bronchus and lung (162)	1,693	1,189	900	426	393	142	30	48	—	4,821
Prostate (185)	880	705	462	208	167	81	4	24	—	2,531
Other (remainder 140–239)	90	64	49	34	20	7	—	5	—	271
Diseases of the circulatory system (390–459)	*8,893*	*5,907*	*4,529*	*2,331*	*1,994*	*739*	*140*	*211*	—	*24,746*
Ischaemic heart disease (410–414)	5,327	3,517	2,891	1,444	1,213	428	79	124	—	15,024
Other heart disease (393–398, 402, 404, 415, 416, 420–429)	1,148	870	471	287	250	97	31	23	—	3,177
Cerebrovascular disease (stroke) (430–438)	1,792	1,125	845	433	393	157	24	42	—	4,812
Other (remainder of 390–459)	626	395	322	167	138	57	6	22	—	1,733
Diseases of the respiratory system (460–519)	*2,321*	*1,565*	*1,211*	*658*	*532*	*199*	*52*	*54*	—	*6,593*
Chronic obstructive pulmonary disease and allied conditions(490–496)	1,251	937	694	303	263	124	24	31	—	3,628
Diseases of the digestive system (520–579)	*686*	*477*	*339*	*208*	*165*	*48*	*22*	*24*	—	*1,969*
Chronic liver disease and cirrhosis(571)	*254*	*167*	*120*	*77*	*64*	*18*	*14*	*11*	—	*725*
Diseases of the genitourinary system (580–629)	*365*	*311*	*185*	*103*	*104*	*33*	*5*	*11*	—	*1,117*
Congenital anomalies (740–759)	*94*	*80*	*84*	*19*	*35*	*11*	*5*	*6*	—	*334*
Certain conditions originating in the perinatal period (760–779)	*98*	*77*	*78*	*18*	*26*	*13*	*11*	*4*	—	*325*
All other diseases (remainder of 001–799)	*2,272*	*1,739*	*1,062*	*585*	*571*	*166*	*64*	*55*	—	*6,514*
External causes (800–999)	*1,911*	*1,174*	*1,089*	*456*	*630*	*137*	*136*	*80*	—	*5,614*
Motor vehicle traffic accidents (810–819)	375	295	203	111	139	22	56	23	—	1,224
Accidental falls (880–888)	202	110	112	26	49	15	9	8	—	531
Accidental drowning and submersion (910)	77	38	33	14	16	—	7	—	—	187
All other accidents (remainder of 800–949)	444	241	200	84	166	44	23	19	—	1,221
Suicide (950–959)	705	446	454	199	234	49	35	28	—	2,150
Other (remainder of 800–999)	108	44	87	22	26	5	6	—	—	301
Total	**23,520**	**16,407**	**12,235**	**6,095**	**5,750**	**1,889**	**527**	**646**	**4**	**67,073**
					FEMALES					
Neoplasms (140–239)	*5,290*	*4,017*	*2,565*	*1,385*	*1,281*	*422*	*63*	*188*	—	*15,212*
Malignant neoplasms (cancer) (140–208)	5,200	3,948	2,523	1,365	1,267	417	62	187	—	14,970
Trachea, bronchus and lung (162)	758	537	322	155	187	56	9	29	—	2,053
Breast (174)	856	686	442	240	209	62	8	39	—	2,542
Other (remainder 140–239)	90	69	42	20	14	5	—	—	—	242
Diseases of the circulatory system (390–459)	*9,543*	*6,522*	*4,408*	*2,497*	*2,007*	*759*	*90*	*224*	—	*26,051*
Ischaemic heart disease (410–414)	4,636	3,117	2,355	1,273	947	340	39	93	—	12,801
Other heart disease (393–398, 402, 404, 415, 416, 420–429)	1,560	1,170	555	419	350	141	22	36	—	4,253
Cerebrovascular disease (stroke) (430–438)	2,706	1,769	1,174	642	572	215	19	73	—	7,170
Other (remainder of 390–459)	641	466	324	163	138	63	10	22	—	1,827
Diseases of the respiratory system (460–519)	*2,081*	*1,489*	*885*	*625*	*449*	*182*	*42*	*64*	—	*5,817*
Chronic obstructive pulmonary disease and allied conditions(490–496)	904	666	392	199	187	84	25	29	—	2,486
Diseases of the digestive system (520–579)	*664*	*506*	*342*	*190*	*175*	*57*	*13*	*21*	—	*1,968*
Chronic liver disease and cirrhosis(571)	108	63	45	30	29	6	5	7	—	293
Diseases of the genitourinary system (580–629)	*526*	*411*	*223*	*113*	*95*	*34*	*14*	*17*	—	*1,433*
Congenital anomalies (740–759)	*80*	*70*	*55*	*20*	*22*	*7*	*9*	*8*	—	*271*
Certain conditions originating in the perinatal period (760–779)	*79*	*60*	*62*	*14*	*16*	*6*	*9*	*6*	—	*252*
All other diseases (remainder of 001–799)	*2,229*	*1,966*	*1,075*	*584*	*626*	*185*	*55*	*72*	—	*6,793*
External causes (800–999)	*729*	*559*	*471*	*191*	*243*	*64*	*49*	*26*	—	*2,332*
Motor vehicle traffic accidents (810–819)	156	123	84	50	58	10	17	9	—	507
Accidental falls (880–888)	215	170	131	48	58	17	5	7	—	651
Accidental drowning and submersion (910)	24	12	9	—	5	3	—	—	—	58
All other accidents (remainder of 800–949)	138	103	75	31	45	19	9	5	—	425
Suicide (950–959)	157	133	125	45	53	10	7	3	—	533
Other (remainder of 800–999)	39	18	47	15	24	5	9	—	—	158
Total	**21,221**	**15,600**	**10,086**	**5,619**	**4,914**	**1,716**	**344**	**626**	**3**	**60,129**

1.10 PRINCIPAL CAUSES OF DEATH, STANDARDISED DEATH RATES, MEDIAN AGE, SEX, SELECTED YEARS 1988–98

Cause of death	*1988*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*Median age (years)*
				MALES				
Neoplasms (140–239)	*246*	*239*	*243*	*235*	*234*	*223*	*221*	*72.4*
Malignant neoplasms (cancer) (140–208)	243	236	239	232	230	220	218	72.4
Trachea, bronchus and lung (162)	65	57	59	56	55	52	53	71.7
Prostate (185)	31	35	35	33	33	29	29	78.5
Other (remainder 140–239)	2	3	4	4	4	4	3	76.3
Diseases of the circulatory system (390–459)	*438*	*359*	*359*	*336*	*328*	*307*	*286*	*77.6*
Ischaemic heart disease (410–414)	271	218	215	203	196	184	172	76.5
Other heart disease (393–398, 402, 404, 415, 416, 420–429)	51	46	45	41	43	41	37	78.9
Cerebrovascular disease (stroke) (430–438)	84	68	72	67	66	59	57	80.1
Other (remainder of 390–459)	32	27	26	24	23	23	20	78.3
Diseases of the respiratory system (460–519)	*90*	*75*	*78*	*70*	*72*	*85*	*78*	*79.1*
Chronic obstructive pulmonary disease and allied conditions(490–496)	68	54	54	49	51	45	42	76.8
Diseases of the digestive system (520–579)	*33*	*25*	*25*	*24*	*24*	*23*	*22*	*72.9*
Chronic liver disease and cirrhosis(571)	11	8	8	8	8	8	8	60.6
Diseases of the genitourinary system (580–629)	*15*	*13*	*14*	*13*	*13*	*14*	*13*	*81.9*
Congenital anomalies (740–759)	*5*	*5*	*5*	*4*	*4*	*5*	*4*	*0.5*
Certain conditions originating in the perinatal period (760–779)	*6*	*5*	*5*	*4*	*4*	*4*	*4*	*0.0*
All other diseases (remainder of 001–799)	*72*	*77*	*81*	*79*	*83*	*73*	*74*	*73.3*
External causes (800–999)	*76*	*59*	*59*	*59*	*61*	*60*	*61*	*37.7*
Motor vehicle traffic accidents (810–819)	27	16	16	16	16	14	13	31.4
Accidental falls (880–888)	7	6	6	6	7	6	6	79.6
Accidental drowning and submersion (910)	3	3	2	2	2	2	2	33.7
All other accidents (remainder of 800–949)	13	12	11	10	12	11	13	36.5
Suicide (950–959)	22	19	21	21	21	23	23	36.8
Other (remainder of 800–999)	4	3	3	3	4	3	3	35.6
Total	**980**	**858**	**867**	**824**	**824**	**794**	**764**	**74.5**
				FEMALES				
Neoplasms (140–239)	*144*	*143*	*142*	*141*	*141*	*137*	*133*	*73.4*
Malignant neoplasms (cancer) (140–208)	142	141	139	138	139	135	131	73.3
Trachea, bronchus and lung (162)	17	19	19	19	19	19	19	72.2
Breast (174)	27	27	26	26	25	24	23	66.5
Other (remainder 140–239)	2	2	3	2	2	2	2	78.6
Diseases of the circulatory system (390–459)	*278*	*231*	*230*	*216*	*209*	*198*	*186*	*84.3*
Ischaemic heart disease (410–414)	143	117	118	109	105	101	92	83.8
Other heart disease (393–398, 402, 404, 415, 416, 420–429)	41	36	35	33	33	32	30	84.9
Cerebrovascular disease (stroke) (430–438)	75	62	61	59	57	53	50	84.7
Other (remainder of 390–459)	20	16	15	14	14	14	13	83.6
Diseases of the respiratory system (460–519)	*36*	*34*	*37*	*34*	*37*	*48*	*43*	*83.3*
Chronic obstructive pulmonary disease and allied conditions(490–496)	23	22	24	22	24	22	21	77.4
Diseases of the digestive system (520–579)	*21*	*16*	*16*	*16*	*15*	*15*	*15*	*81.5*
Chronic liver disease and cirrhosis(571)	4	3	3	3	3	3	3	62.8
Diseases of the genitourinary system (580–629)	*10*	*9*	*9*	*9*	*10*	*10*	*10*	*83.9*
Congenital anomalies (740–759)	*5*	*4*	*4*	*4*	*3*	*4*	*3*	*0.6*
Certain conditions originating in the perinatal period (760–779)	*5*	*3*	*3*	*3*	*4*	*3*	*3*	*0.0*
All other diseases (remainder of 001–799)	*51*	*53*	*59*	*57*	*58*	*54*	*52*	*81.6*
External causes (800–999)	*29*	*20*	*21*	*23*	*20*	*22*	*22*	*55.2*
Motor vehicle traffic accidents (810–819)	11	6	6	7	6	6	5	39.4
Accidental falls (880–888)	5	4	4	4	4	4	4	86.7
Accidental drowning and submersion (910)	1	1	—	1	1	1	1	19.3
All other accidents (remainder of 800–949)	4	4	4	4	3	3	4	50.8
Suicide (950–959)	6	4	5	5	5	6	6	39.9
Other (remainder of 800–999)	3	2	2	2	2	2	2	38.3
Total	**579**	**515**	**521**	**503**	**498**	**492**	**467**	**81.0**

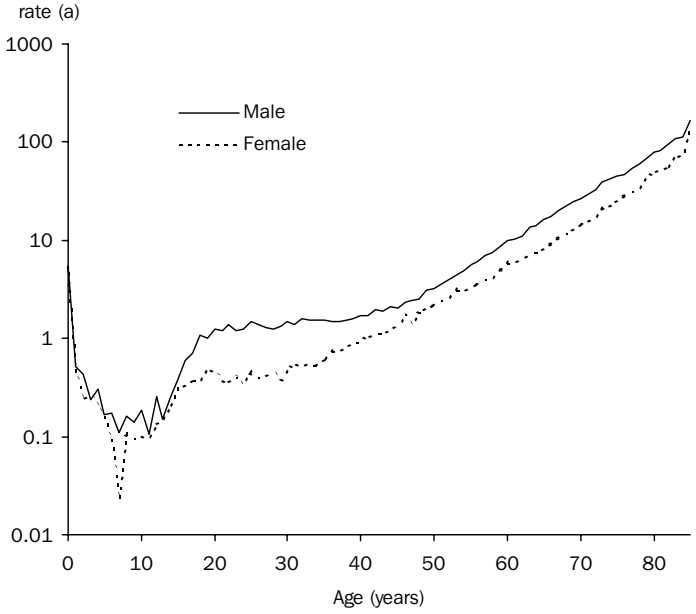
1.11 PRINCIPAL CAUSES OF DEATH, STANDARDISED DEATH RATES, SEX, STATES AND TERRITORIES

Cause of death	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*OT*	*Aust.*
					MALES					
Neoplasms (140–239)	*219*	*223*	*228*	*213*	*215*	*225*	*218*	*197*	*n.p.*	*221*
Malignant neoplasms (cancer) (140–208)	217	220	225	208	212	222	208	193	n.p.	218
Trachea, bronchus and lung (162)	54	52	56	52	50	57	69	47	n.p.	53
Prostate (185)	29	32	30	26	23	34	17	26	n.p.	29
Other (remainder 140–239)	3	3	3	4	3	3	9	3	n.p.	3
Diseases of the circulatory system (390–459)	*296*	*268*	*294*	*295*	*267*	*320*	*301*	*240*	*n.p.*	*286*
Ischaemic heart disease (410–414)	175	158	186	181	161	182	173	135	n.p.	172
Other heart disease (393–398, 402, 404, 415, 416, 420–429)	39	40	31	37	34	44	56	27	n.p.	37
Cerebrovascular disease (stroke) (430–438)	61	52	56	55	54	70	57	52	n.p.	57
Other (remainder of 390–459)	21	18	21	21	19	24	15	25	n.p.	20
Diseases of the respiratory system (460–519)	*79*	*72*	*80*	*84*	*73*	*87*	*115*	*64*	*n.p.*	*78*
Chronic obstructive pulmonary disease and allied conditions(490–496)	41	43	45	38	36	53	67	35	n.p.	42
Diseases of the digestive system (520–579)	*22*	*21*	*21*	*26*	*21*	*20*	*44*	*24*	*n.p.*	*22*
Chronic liver disease and cirrhosis(571)	8	7	7	9	7	7	19	10	n.p.	8
Diseases of the genitourinary system (580–629)	*13*	*15*	*13*	*13*	*15*	*14*	*13*	*12*	*n.p.*	*13*
Congenital anomalies (740–759)	*3*	*4*	*5*	*3*	*4*	*5*	*4*	*4*	*n.p.*	*4*
Certain conditions originating in the perinatal period (760–779)	*3*	*4*	*5*	*3*	*3*	*6*	*9*	*3*	*n.p.*	*4*
All other diseases (remainder of 001–799)	*75*	*78*	*67*	*75*	*73*	*73*	*114*	*52*	*n.p.*	*74*
External causes (800–999)	*62*	*51*	*65*	*62*	*72*	*61*	*163*	*59*	*n.p.*	*61*
Motor vehicle traffic accidents (810–819)	12	13	12	15	15	10	65	15	n.p.	13
Accidental falls (880–888)	7	5	7	3	7	7	16	8	n.p.	6
Accidental drowning and submersion (910)	2	2	2	2	2	1	6	—	n.p.	2
All other accidents (remainder of 800–949)	14	10	12	11	19	20	32	15	n.p.	13
Suicide (950–959)	23	19	26	27	26	21	36	19	n.p.	23
Other (remainder of 800–999)	3	2	5	3	3	2	8	1	n.p.	3
Total	**773**	**736**	**778**	**774**	**742**	**812**	**981**	**655**	**n.p.**	**764**
					FEMALES					
Neoplasms (140–239)	*132*	*136*	*131*	*133*	*129*	*138*	*168*	*138*	*n.p.*	*133*
Malignant neoplasms (cancer) (140–208)	130	134	129	131	127	136	165	138	n.p.	131
Trachea, bronchus and lung (162)	19	19	17	15	20	18	21	22	n.p.	19
Breast (174)	22	24	23	25	21	22	22	28	n.p.	23
Other (remainder 140–239)	2	2	2	2	1	2	3	1	n.p.	2
Diseases of the circulatory system (390–459)	*194*	*177*	*191*	*187*	*170*	*201*	*250*	*162*	*n.p.*	*186*
Ischaemic heart disease (410–414)	95	85	103	97	82	91	100	68	n.p.	92
Other heart disease (393–398, 402, 404, 415, 416, 420–429)	31	31	24	31	30	36	65	25	n.p.	30
Cerebrovascular disease (stroke) (430–438)	54	47	50	47	47	57	59	53	n.p.	50
Other (remainder of 390–459)	13	13	14	12	12	17	26	16	n.p.	13
Diseases of the respiratory system (460–519)	*44*	*41*	*40*	*47*	*40*	*50*	*111*	*46*	*n.p.*	*43*
Chronic obstructive pulmonary disease and allied conditions(490–496)	21	21	20	17	18	26	70	22	n.p.	21
Diseases of the digestive system (520–579)	*15*	*15*	*15*	*15*	*15*	*16*	*26*	*15*	*n.p.*	*15*
Chronic liver disease and cirrhosis(571)	3	2	2	3	3	2	7	5	n.p.	3
Diseases of the genitourinary system (580–629)	*11*	*11*	*10*	*8*	*8*	*9*	*36*	*13*	*n.p.*	*10*
Congenital anomalies (740–759)	*3*	*3*	*3*	*3*	*3*	*3*	*8*	*6*	*n.p.*	*3*
Certain conditions originating in the perinatal period (760–779)	*3*	*3*	*4*	*2*	*2*	*3*	*8*	*5*	*n.p.*	*3*
All other diseases (remainder of 001–799)	*49*	*58*	*50*	*49*	*56*	*54*	*114*	*53*	*n.p.*	*52*
External causes (800–999)	*20*	*20*	*25*	*21*	*25*	*22*	*60*	*18*	*n.p.*	*22*
Motor vehicle traffic accidents (810–819)	5	5	5	6	6	4	17	6	n.p.	5
Accidental falls (880–888)	4	4	5	3	5	4	12	5	n.p.	4
Accidental drowning and submersion (910)	1	1	1	—	1	1	2	1	n.p.	1
All other accidents (remainder of 800–949)	4	4	4	4	5	7	13	4	n.p.	4
Suicide (950–959)	5	6	7	5	6	4	7	2	n.p.	6
Other (remainder of 800–999)	1	1	3	2	3	2	9	1	n.p.	2
Total	**469**	**463**	**468**	**465**	**448**	**495**	**780**	**457**	**n.p.**	**467**

AGE AT DEATH AND CAUSE OF DEATH

The median age at death in 1998 was 74.5 years for males and 81.0 years for females, an increase of 2.9 years and 2.8 years respectively on the median age at death in 1988. This reflects the ageing of the population, as well as an increase in the life expectancy of males and females over the period.

MALE AND FEMALE AGE-SPECIFIC DEATH RATES—1998



(a) Logarithmic scale

From the relatively high rates of death in infancy (where the leading causes of death were perinatal conditions, congenital anomalies and sudden infant death syndrome), the age-specific death rates (ASDRs) sharply decline through childhood. The lowest death rates at any age were experienced by males and females aged 5–9 years, with an ASDR of around 0.2 male deaths and 0.1 female deaths per 1,000 respective populations. While the ASDRs of children aged 10–14 years were slightly higher than at 5–9 years, the increase seen after age 15 is far more dramatic. Males aged 15–19 years had an ASDR of 0.75 per 1,000 male population — four times higher than the 10–14 years ASDR, while the female ASDR at ages 15–19 years (0.37 deaths per 1,000 females) was almost three times higher than the 10–14 years age group. Motor vehicle traffic accidents have been the leading cause of death of the 15–19 year olds, contributing one-third of male deaths and one-quarter of female deaths. Suicide was the second most common cause of 15–19 year old deaths with 23% of male and 15% of female deaths in this age group.

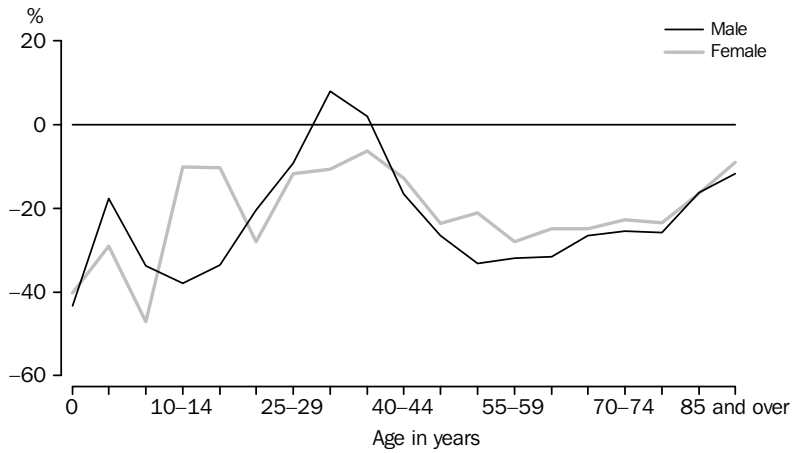
AGE AT DEATH AND CAUSE OF DEATH *continued*

The male ASDR increased a further 68% to age 20–24 years, and levelled off somewhat until after age 40 where it increased steadily into middle and old age. Suicide was the leading cause of male deaths throughout the 20–44 years age group, causing one-quarter of all deaths in 1998. Drug related deaths contributed around 15%, while motor vehicle traffic accidents caused around 12% of these deaths. Females aged 15–29 years had relatively constant ASDRs although the leading cause of death changed with age. For females aged 20–24 years, the leading causes of death were motor vehicle traffic accidents (23%) and suicide (18%), while for those aged 25–29 years, suicide and malignant neoplasms contributed 18% and 17% of deaths respectively. Steady increase in the female ASDR was seen after age 30 which continued throughout the remaining age groups. Beyond age 30, malignant neoplasms among women were the dominant cause of death until age 80 and beyond when ischaemic heart disease was more common. Malignant neoplasms also dominated male deaths in the 45–79 years age group, with ischaemic heart disease being the leading cause from age 80 years.

DECLINES IN DEATH RATES

Between 1988 and 1998, the risk of dying has declined for people of almost all age groups. Since 1988, the infant mortality rate declined by 43% for males and 40% for females. The largest declines in male ASDRs occurred in the 5–9 years and 15–19 years age groups (34% each) and 50–54 years age group (33%). However, male ASDRs increased in the 30–34 years (8%) and 35–39 years (2%) age groups. This increase can be attributed to substantial increases in suicide and drug related deaths, despite a considerable decrease in motor vehicle traffic accident deaths at these ages. Female ASDRs declined substantially in the age groups of 5–9 years (47%), 1–4 years (29%) and 20–24 years and 55–59 years (28% each).

PERCENTAGE CHANGE IN AGE-SPECIFIC DEATH RATES—1988–1998

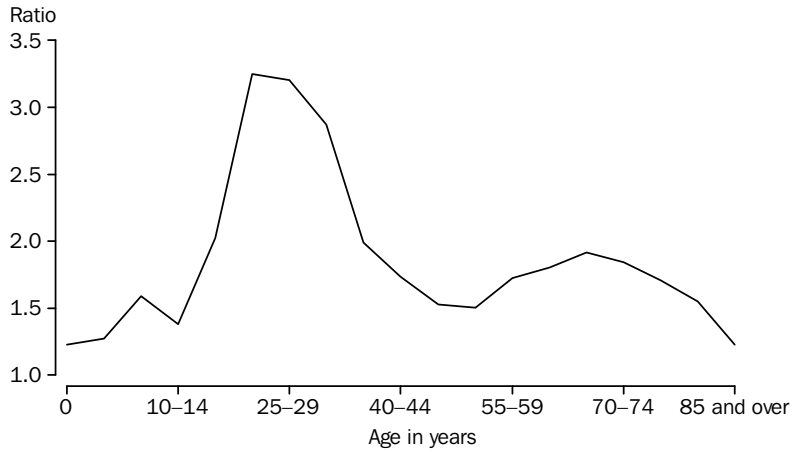


SEX

Male deaths (67,100) outnumbered female deaths (60,100) among deaths registered in 1998, giving a sex ratio of 112 male deaths for every 100 female deaths. This ratio has decreased from 119 male deaths per 100 female deaths in 1988. Since 1988, the number of male deaths registered increased by 3% while female death registrations increased by 10%, due to the change in the composition of the population.

Overall in 1998, the male standardised death rate (SDR) of 7.6 deaths per 1,000 population was 63% higher than the female SDR. The male age-specific death rates for all age groups were at least 22% higher than female death rates at the same age. The greatest difference in age-specific death rates occurred in the 20–24 year and 25–29 year age groups where male death rates were 3.2 times higher than the female death rates. Overall, male and female age-specific death rates in 1998 showed the greatest similarity at the beginning and end of life, and in the 10–14 year and 45–54 year age groups.

RATIO OF MALE TO FEMALE AGE-SPECIFIC DEATH RATES—1998



Although male ASDRs and SDRs have always been higher than females', in the last 20 years or so the gap has narrowed as males (mainly over 45 years) have experienced considerable declines in deaths from circulatory diseases. In 1978 males had an SDR of 11.8 deaths per 1,000 standard population, almost five deaths higher than the female SDR of 6.9 deaths per 1,000 standard population. By 1998, the male SDR was 7.6 deaths per 1,000 standard population, three deaths higher than the female rate of 4.6 deaths per 1,000 standard population. Over the same period the difference in male and female life expectancy at birth also narrowed, from 7.0 years in 1978 (life expectancy of 70.3 years for males and 77.3 years for females) to 5.7 years in 1998 (life expectancy of 75.9 years for males and 81.5 years for females).

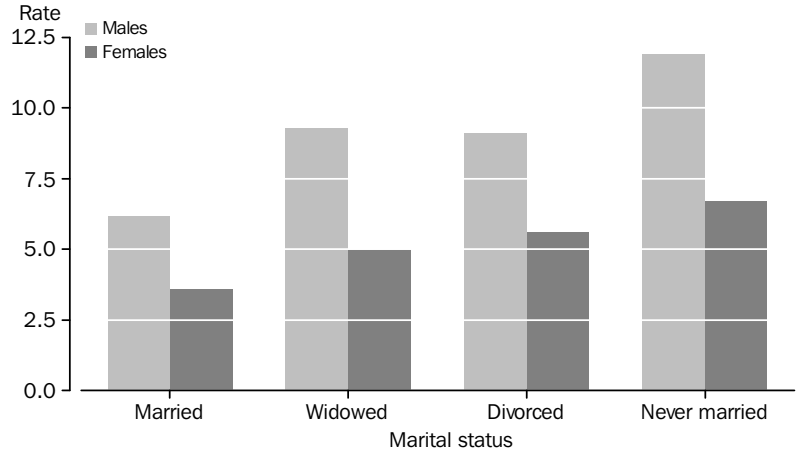
MARITAL STATUS

Of all men whose deaths were registered during 1998, 57% were married at the time of death, while 19% were widowed and 16% had never married. In contrast, of all women whose deaths were registered during 1998, 57% were widowers at the time of death, with a further 27% being married and 10% never married. This difference is a consequence of the greater longevity of women.

MARITAL STATUS *continued*

SDRs by sex and marital status for 1998 indicate that males and females who have never married had death rates almost twice the death rates of their married counterparts. Men who were widowed had a slightly higher death rate than men who were divorced. In contrast, divorced women had a higher death rate than widowed women.

STANDARDISED DEATH RATES BY MARITAL STATUS—1998



The difference in ASDRs between never married and married males was highest in the 35–44 year and 25–34 year age groups (3.9 and 3.0 times higher respectively). Amongst females the greatest differences in ASDRs between never married and married females occurred at later ages, in the 45–54 year and 55–64 year age groups (respectively 2.7 and 2.5 times higher).

There are substantial differences in the ASDR by marital status for some causes of death. For example, the ASDR for drug-related deaths of never married males aged 25–34 years was eight times higher than that of married males of the same age. Similarly, for females aged 35–44, the ASDR due to suicide was more than four times higher for never married females than for married females.

The fact that married people have lower mortality than unmarried people has been observed in many studies over time and in different countries (Lillard & Panis 1996). The reasons for this have been debated for over 100 years (Farr 1858). Two main explanations have been put forward. The first suggests that marriage improves a person's health status, thus reducing the risk of death. Married people are less likely to participate in risky behaviour and more likely to nurture each other's health through promoting good diet and physical care. The second states that differentials are based on selection of healthier individuals into marriage. Particularly in a country like Australia, where marriage is far from universal, selectivity is likely to be an important factor.

AGE-SPECIFIC DEATH RATES(a), BY MARITAL STATUS, Selected causes of death—1998

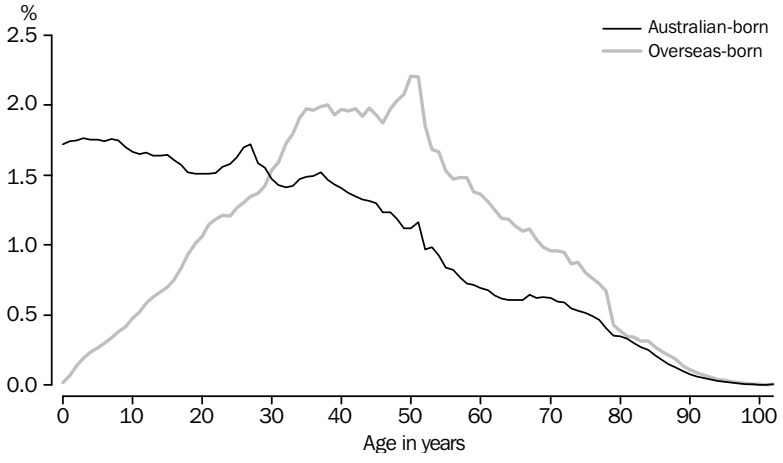
	AGE AND MARITAL STATUS AT DEATH							
	25–34 years		*35–44 years*		*45–54 years*		*55–64 years*	
Cause of death	*Never married*	*Married*	*Never married*	*Married*	*Never married*	*Married*	*Never married*	*Married*
	MALES							
Malignant neoplasms (140-208)	11	9	40	25	146	103	627	353
Diseases of the circulatory system (390-459)	10	8	57	19	208	61	685	222
Diseases of the respiratory system (460-519)	3	1	7	2	40	5	166	35
Diseases of the digestive system (520-579)	3	0	21	2	70	8	126	20
Suicide (950-959)	53	19	62	19	48	19	54	15
Motor vehicle traffic accidents (810-819)	23	10	20	8	16	8	25	9
Drug related deaths (304-305, 850-858)	45	5	56	4	16	1	6	1
Total	**194**	**64**	**369**	**95**	**712**	**234**	**2 008**	**729**
	FEMALES							
Malignant neoplasms (140-208)	11	11	47	35	190	109	466	253
Diseases of the circulatory system (390-459)	6	4	24	10	81	23	240	81
Diseases of the respiratory system (460-519)	4	1	5	3	33	6	102	25
Diseases of the digestive system (520-579)	3	1	8	2	19	6	49	12
Suicide (950-959)	12	4	22	5	15	4	16	4
Motor vehicle traffic accidents (810-819)	6	3	8	3	5	4	13	5
Drug related deaths (304-305, 850-858)	9	1	12	2	8	2	—	1
Total	**69**	**30**	**172**	**69**	**465**	**173**	**1 093**	**431**

(a) Age-specific death rate per 100,000 of the mid-year 1998 population.

COUNTRY OF BIRTH

Australia's overseas-born population accounted for 28% of deaths in 1998 despite making up only 23% of the resident population. The main reason for this is that the overseas-born population has an older age structure than the Australian-born population. The median age of the overseas-born population in 1998 was 44.9 years compared to 30.4 years for the Australian-born population.

POPULATION AGE STRUCTURE OF OVERSEAS AND AUSTRALIAN BORN —1998



COUNTRY OF BIRTH *continued*

Adjusting for the older age structure of the overseas born population, it is apparent that migrants generally have lower death rates than the Australian-born population. This is true for nearly all migrant groups, although the lowest death rates were seen among the Asian-born population.

Viet Nam-born residents had the lowest death rate in 1998, around half (53% less) that of the total population. China-born residents had a death rate that was 40% less than the Australian total, while Philippines-born and Malaysian-born residents had death rates 36% and 32% below the national level. The lower death rates of these Asian born populations were reflected in all leading causes of death.

European countries of birth with the lowest death rates were Greece (27% less than the total Australian rate) and Italy (19% less). India-born residents had a death rate 18% lower than the national rate while Lebanon-born residents were 17% lower.

These results support the notion that migrants are, and have always been, a select group. Firstly, good health is one criteria on which Australian migrants are assessed. Secondly, migrants themselves have chosen to make the upheaval of moving to another country, suggesting that they feel fit enough to cope with the move.

Residents born in English-speaking countries generally had death rates closer to the Australian level. The Australian-born population had a death rate 3% higher than the national death rate, while those born in the United Kingdom and Ireland and New Zealand were 2% and 3% below the national rate respectively.

LARGEST BIRTHPLACE GROUPS, Indirect Standardised Death Rates(a)

	PRINCIPAL CAUSES OF DEATH							
Birthplace	*Neoplasms* rate	*Diseases of the circulatory system* rate	*Diseases of the respiratory system* rate	*Diseases of the digestive system* rate	*All other diseases* rate	*External causes* rate	*Total* rate	*Total deaths* no.
Australia	193	280	70	22	92	44	701	90 977
China	136	142	38	12	60	18	407	710
Germany	178	255	44	23	82	56	634	1 249
Greece	142	205	38	12	72	29	499	1 157
India	121	255	52	19	93	24	559	535
Italy	154	206	41	19	97	34	548	3 216
Lebanon	127	267	55	(b)	97	29	565	294
Malaysia	146	196	42	(b)	62	22	464	169
Netherlands	194	220	54	15	77	45	606	1 147
New Zealand	178	272	50	18	80	53	659	1 439
Phillipines	139	157	45	(b)	66	21	437	208
UK & Ireland	189	258	71	21	83	42	663	15 073
United States of America	157	261	52	14	88	57	770	268
Viet Nam	137	108	21	(b)	62	28	322	324
Total Australia	**187**	**271**	**66**	**21**	**91**	**42**	**679**	**127 202**

(a) Indirect standardised death rate per 100,000 of the mid-year 1998 population.

(b) Not statistically significant due to the small numbers involved.

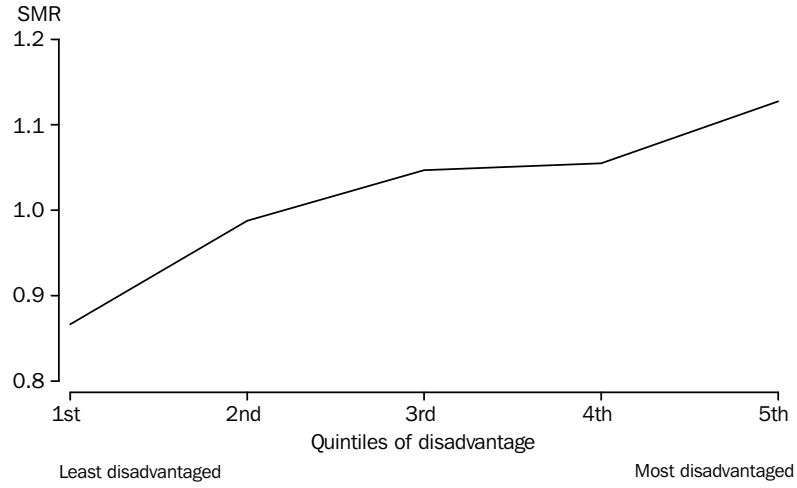
SOCIO-ECONOMIC DIFFERENCES IN MORTALITY

Differences in health and mortality have been clearly shown to be associated with socio-economic inequality (Mathers, 1994a, 1994b, 1995, 1996, ABS, 1999a). One measure of socio-economic status which combines information regarding a number of variables such as income, education and occupation, is the index of relative socio-economic disadvantage. This index is simply a summary measure of the socio-economic conditions of an area. It was derived for all areas of Australia from the 1996 Census using attributes such as low income, low educational attainment, high unemployment and jobs in relatively unskilled occupations (ABS, 1998a).

All Australian Statistical Local Areas (SLAs) which recorded an annual average of 15 or more deaths between 1997 and 1998 were grouped into quintiles of socio-economic disadvantage (the first quintile being the least disadvantaged and the fifth being most disadvantaged). The mortality differential between quintiles is represented by the standardised mortality ratio (SMR) which was derived from the individual SLAs. An SMR of 1.0 represents the national average, whereas an SMR of 1.10 indicates a mortality level 10% above the national average.

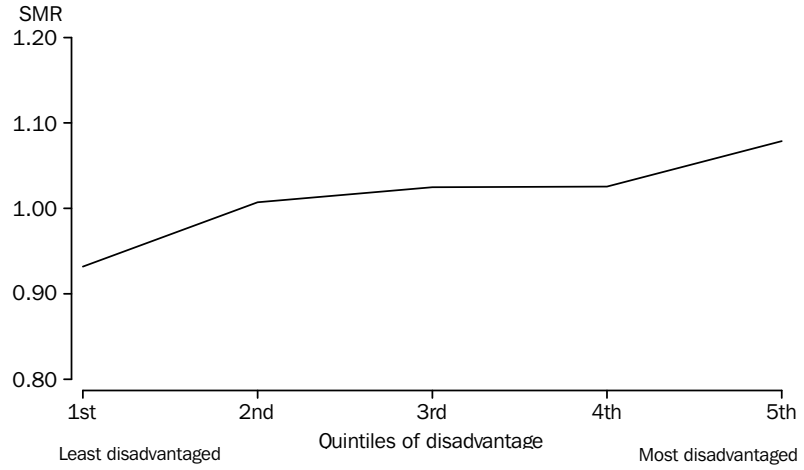
Because the socio-economic level for each SLA is an aggregation of attributes of all households' attributes, some heterogeneity of these variables within each SLA is lost. Therefore, it is likely that the results of this analysis will underestimate the strength of the relationship between socio-economic disadvantage and mortality.

MALE SMR BY QUINTILES OF SOCIO-ECONOMIC DISADVANTAGE—1997–98



For 1997 and 1998, males in the fifth quintile experienced mortality 12% higher than the average Australian male mortality, and 30% higher than males in the first quintile. Among females, the socio-economic / mortality relationship was virtually unapparent throughout the second, third and fourth quintiles, which varied by only 2%. Either side of these middle quintiles, a threshold was passed, with those in the fifth quintile having a 16% higher level of mortality than those in the first quintile.

FEMALE SMR BY QUINTILES OF SOCIO-ECONOMIC DISADVANTAGE—1997–98



In a study of 1985–87 mortality data, Mathers (1994a, 1994b) found that mortality differentials were most apparent in the population aged less than 65 years. For instance, males aged between 25 and 64 in the most disadvantaged quintile had death rates 68% higher than those in the first, while the female differential was 50%. By contrast, in the population aged 65 and over, the differential was only 14% for males and 11% for females.

Part of the relationship between socio-economic status and mortality is believed to operate through risk factors (such as smoking, diet, exercise and risk-taking behaviour) as well as access to health care and health information. Results from the 1995 National Heath Survey show that risk factors are more prevalent in the more disadvantaged areas (ABS, 1999a). Another socio-economic factor thought to be as important as the traditional risk factors in health and illness is the psycho-social environment in which people work and live (Marmot *et al*, 1999). That is, illness and the risk of death are related to the degree of control people have or perceive themselves to have over the forces operating in their work and home lives.

REGIONAL DIFFERENCES IN MORTALITY

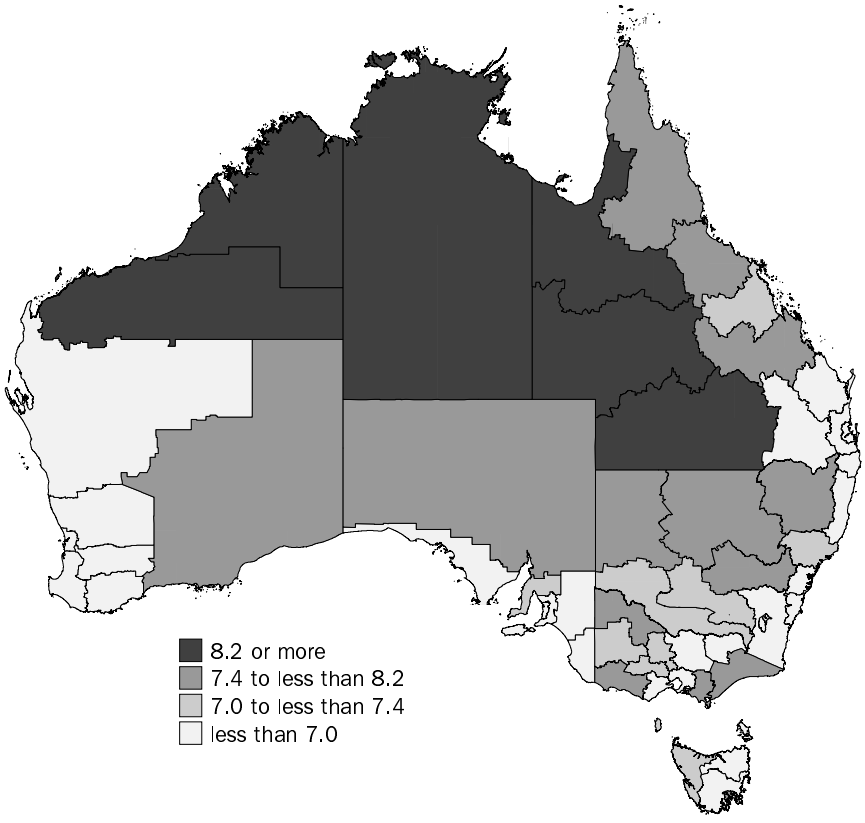
In general, the more remote and sparsely populated areas of Australia had higher mortality levels, while the more densely populated metropolitan areas had a similar or lower rate than the national level. Remoteness has been recognised as contributing to health disadvantage through a number of factors (AIHW, 1998). These include the isolation and distance to services, lack of health services, socio-economic disparities, higher risk of accidents and Indigenous health needs. Of Australia's 58 statistical divisions (SDs), 8 had significantly lower indirect standardised death rates (ISDRs) than the national rate of 6.8 deaths per 1,000 population, while 22 had significantly higher ISDRs. The remaining 28 had ISDRs which were not significantly different from the Australian rate. Although there are many more SDs in the higher ISDR group than in the lower ISDR group, the population of the low ISDR areas was over 10 million — more than 3 times that of the high ISDR areas. This population disparity marks one of the factors which tends to divide SDs into high and low ISDRs.

REGIONAL DIFFERENCES IN MORTALITY *continued*

Of the 22 SDs with significantly higher ISDRs than Australia overall, the most extreme were observed in the north of the continent. The SDs of Northern Territory Balance and Kimberley had the highest ISDRs with 14.1 and 13.7 deaths per 1,000 population respectively. Other SDs with high ISDRs were North West and South West (in Queensland) with ISDRs of 9.5 and 8.3 respectively, Darwin with 8.9, Pilbara (8.5), and North Western (New South Wales) with 8.0 deaths per 1,000 population. While Indigenous people comprise 2% of the total Australian population, the 10 SDs with the highest ISDRs had between 5% and 37% of the population identified as Indigenous in the 1996 Census.

Midlands SD (Western Australia) had the lowest ISDR with 5.9 deaths per 1,000 population, followed by Outer Adelaide and Canberra (both 6.0 per 1,000 population). Also in Western Australia, lower ISDRs were observed in South West (6.3) and Perth (6.4). Melbourne was also significantly lower (6.4), as was Moreton (6.4) and Sydney (6.6). In addition to Darwin, Hobart was the only other capital city with a significantly higher rate than the national level with an ISDR of 7.5 per 1,000 population.

INDIRECT STANDARDISED DEATH RATES, by Statistical Division—1998



REGIONAL PATTERNS OF MORTALITY

Statistical Division	*Deaths, 1998* no.	*Estimated resident population June 1998(a)* no.	*Crude death rate* rate per 1,000	*Indirect standardised death rate* rate per 1,000	*Median age at death, males* years	*Median age at death, females* years	*SEIFA index of Disadvantage(b)* Index	*Indigenous population(c)* %
New South Wales								
Sydney	25 681	3 986 723	6.4	6.6*	74.8	81.3	1 027	0.9
Hunter	4 618	567 302	8.1	7.2*	74.8	81.0	970	1.7
Illawarra	2 788	380 660	7.3	6.8	73.9	79.0	979	1.7
Richmond-Tweed	1 707	206 753	8.3	6.7	75.6	80.9	960	2.4
Mid-North Coast	2 386	268 697	8.9	6.8	74.7	81.0	947	3.0
Northern	1 406	175 883	8.0	7.4*	74.0	81.8	978	5.8
North Western	925	117 144	7.9	8.0*	71.8	78.3	952	10.1
Central West	1 412	172 790	8.2	7.7*	73.6	81.2	982	3.1
South Eastern	1 386	180 594	7.7	7.0	74.4	79.4	1 004	1.8
Murrumbidgee	1 099	149 039	7.4	7.2	73.2	80.7	989	2.9
Murray	892	111 406	8.0	7.2	75.0	79.7	994	2.3
Far West	246	24 603	10.0	7.9*	75.3	80.1	919	6.0
Total	44 741	6 341 594	7.1	6.8	74.5	80.9	1 007	1.7
Victoria								
Melbourne	21 382	3 371 308	6.3	6.4*	75.1	81.7	1 025	0.3
Barwon	1 947	242 796	8.0	6.9	75.3	82.0	995	0.5
Western District	886	99 477	8.9	7.4*	74.4	81.9	1 001	0.7
Central Highlands	1 108	136 446	8.1	7.3*	75.3	82.9	989	0.7
Wimmera	545	51 689	10.5	7.4	76.4	83.2	1 006	0.7
Mallee	774	87 977	8.8	7.7*	73.8	80.7	983	2.0
Loddon-Campaspe	1 293	160 190	8.1	7.1	74.7	82.3	998	0.6
Goulburn	1 409	185 643	7.6	6.8	74.8	82.3	992	1.3
Ovens-Murray	649	90 102	7.2	6.8	75.9	82.1	1 007	0.5
East Gippsland	696	81 146	8.6	7.4*	76.4	80.6	985	1.7
Gippsland	1 256	154 111	8.1	7.5*	74.4	80.2	983	0.7
Total	31 945	4 660 885	6.9	6.6*	75.0	81.7	1 016	0.5
Queensland								
Brisbane	9 748	1 574 615	6.2	6.7	74.7	80.8	1 010	1.5
Moreton	4 566	657 264	6.9	6.4*	75.4	80.5	979	0.9
Wide Bay-Burnett	1 766	230 642	7.7	6.8	73.7	80.2	926	2.5
Darling Downs	1 487	200 758	7.4	6.8	75.0	81.8	982	2.3
South West	195	25 919	7.5	8.3*	72.2	79.0	960	8.4
Fitzroy	1 080	180 474	6.0	7.6*	72.4	81.1	972	4.0
Central West	107	12 347	8.7	8.3	71.0	76.8	969	5.5
Mackay	621	124 309	5.0	7.0	69.0	79.5	984	2.9
Northern	1 230	194 958	6.3	7.7*	72.3	79.4	981	5.5
Far North	1 222	219 277	5.6	7.4*	70.6	75.4	978	11.6
North West	180	35 782	5.0	9.5*	57.0	58.0	940	20.8
Total	22 321	3 456 345	6.5	6.9	74.0	80.3	988	2.9

For footnotes, see end of table.

REGIONAL PATTERNS OF MORTALITY *continued*

Statistical Division	*Deaths, 1998* no.	*Estimated resident population June 1998(a)* no.	*Crude death rate* rate per 1,000	*Indirect standardised death rate* rate per 1,000	*Median age at death, males* years	*Median age at death, females* years	*SEIFA index of Disadvantage(b)* Index	*Indigenous population(c)* %
South Australia								
Adelaide	8 624	1 088 349	7.9	6.8	76.0	82.4	991	0.9
Outer Adelaide	730	107 729	6.8	6.0*	76.2	80.7	1 002	0.6
Yorke and Lower North	468	44 103	10.6	7.2	78.0	82.5	958	1.3
Murray Lands	556	68 450	8.1	6.9	73.5	79.4	939	2.5
South East	436	62 776	6.9	6.6	72.7	80.8	977	0.9
Eyre	237	32 968	7.2	6.4	73.5	81.8	964	5.6
Northern	630	82 919	7.6	7.9*	70.8	77.9	926	7.2
Total	11 714	1 487 294	7.9	6.8	75.4	82.0	984	1.4
Western Australia								
Perth	7 897	1 341 914	5.9	6.4*	74.4	81.3	1 020	1.4
South West	1 087	177 801	6.1	6.3*	74.5	79.7	965	1.8
Lower Great Southern	339	51 359	6.6	6.4	73.6	81.0	982	3.3
Upper Great Southern	138	19 841	7.0	6.9	74.0	83.3	1 005	4.0
Midlands	288	52 304	5.5	5.9*	71.1	79.4	980	3.6
South Eastern	247	58 391	4.2	7.7	65.7	78.0	981	8.2
Central	302	60 300	5.0	6.2	70.5	76.5	960	8.1
Pilbara	113	41 773	2.7	8.5*	61.5	53.0	995	11.6
Kimberley	177	27 716	6.4	13.7*	51.8	60.0	913	35.4
Total	10 664	1 831 399	5.8	6.5*	73.7	80.8	1 006	3.0
Tasmania								
Greater Hobart	1 578	194 974	8.1	7.5*	75.5	81.0	1 001	2.5
Southern	220	34 619	6.4	6.6	73.5	77.2	942	5.8
Northern	975	133 229	7.3	6.6	75.8	81.7	966	2.1
Mersey-Lyell	823	109 063	7.5	7.3*	73.8	80.3	945	4.2
Total	3 605	471 885	7.6	7.2*	75.0	80.9	974	3.0
Northern Territory								
Darwin	312	86 576	3.6	8.9*	56.2	63.3	1 027	8.8
Northern Territory - Balance	526	103 415	5.1	14.1*	50.1	52.3	909	37.1
Total	871	189 991	4.6	12.0*	52.3	58.2	962	24.4
Australian Capital Territory								
Canberra	1 258	308 086	4.1	6.0*	72.7	78.9	1 091	1.0
Total	1 272	308 411	4.1	6.1*	72.7	78.9	1 091	1.0
Australia	127 202	18 750 982	6.8	6.8	74.5	81.0	1 000	2.0

(a) Preliminary.

(b) Socio–Economic Indexes for Areas, 1996 Census of Population and Housing.

(c) Proportion of the population identifying as Indigenous, based on the 1996 Census of Population and Housing.

* Indicates significant difference from the Australian rate. See explanatory note 10 for more information.

2.1 DEATHS, BY AGE AND SEX, SELECTED YEARS, 1978–98

Age group (years)	*1978*	*1983*	*1988*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*
					MALES				
0	1,575	1,302	1,227	918	866	807	843	744	706
1-4	334	286	229	243	201	206	205	206	199
5-9	197	184	142	117	112	112	115	99	102
10-14	229	203	194	136	144	130	147	133	126
15-19	938	720	812	521	533	492	541	572	506
20-24	1,146	1,029	1,065	853	842	916	866	857	870
25-29	808	888	1,050	844	831	849	876	938	992
30-34	752	747	933	998	968	1,046	1,019	950	1,067
35-39	838	809	958	1,054	1,096	1,157	1,125	1,078	1,137
40-44	1,203	1,056	1,342	1,235	1,294	1,262	1,324	1,321	1,311
45-49	1,978	1,545	1,561	1,698	1,757	1,738	1,757	1,718	1,628
50-54	3,337	2,816	2,350	2,208	2,202	2,212	2,281	2,416	2,354
55-59	4,767	4,630	3,772	3,213	3,151	3,083	3,051	3,044	3,054
60-64	6,281	6,038	6,227	5,088	4,958	4,712	4,636	4,581	4,351
65-69	8,109	7,743	7,951	7,833	7,911	7,531	7,349	7,078	6,677
70-74	8,508	9,112	9,559	9,516	10,091	9,952	9,987	9,818	9,590
75-79	8,135	8,879	10,360	10,227	10,517	9,949	10,474	10,583	10,754
80-84	5,715	6,688	8,182	9,384	10,028	10,068	10,664	10,476	10,221
85 and over	5,422	5,763	7,158	8,997	9,955	10,025	10,932	11,133	11,421
Not stated	9	12	10	6	7	4	14	7	7
Total	**60,281**	**60,450**	**65,082**	**65,089**	**67,464**	**66,251**	**68,206**	**67,752**	**67,073**
					FEMALES				
0	1,158	1,025	905	673	646	642	617	597	546
1-4	242	206	199	161	160	151	146	121	148
5-9	147	100	106	86	84	93	73	86	61
10-14	143	127	92	98	104	113	106	81	87
15-19	322	226	285	216	187	214	184	221	237
20-24	325	322	351	286	255	293	228	284	258
25-29	274	314	331	250	276	289	296	320	308
30-34	382	356	391	394	352	414	364	431	374
35-39	448	479	519	561	534	494	556	553	574
40-44	662	577	707	699	740	729	713	746	760
45-49	1,065	875	930	991	1,056	1,030	1,059	1,072	1,059
50-54	1,733	1,475	1,265	1,204	1,272	1,334	1,380	1,457	1,507
55-59	2,432	2,271	2,008	1,763	1,770	1,728	1,823	1,813	1,715
60-64	3,387	3,318	3,218	2,743	2,622	2,540	2,518	2,484	2,420
65-69	4,446	4,412	4,568	4,332	4,389	4,227	4,024	3,990	3,633
70-74	5,620	6,117	6,286	6,312	6,480	6,357	6,301	6,294	5,994
75-79	7,008	7,175	8,451	8,381	8,358	8,214	8,480	8,304	8,427
80-84	7,602	7,965	9,247	10,139	10,922	10,865	11,013	11,174	10,785
85 and over	10,745	12,290	14,923	17,221	19,018	19,155	20,629	21,566	21,235
Not stated	3	4	—	—	3	—	3	4	—
Total	**48,144**	**49,634**	**54,784**	**56,510**	**59,228**	**58,882**	**60,513**	**61,598**	**60,129**

2.2 DEATHS, BY AGE AND SEX, STATES AND TERRITORIES

Age group (years)	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*OT*	*Aust.*
					MALES					
0	205	152	175	43	75	24	23	9	—	706
1-4	77	40	45	13	15	6	—	—	—	199
5-9	30	21	30	7	7	—	4	—	—	102
10-14	50	30	23	5	12	—	4	—	—	126
15-19	161	122	87	37	57	17	16	9	—	506
20-24	308	175	154	74	108	15	18	18	—	870
25-29	321	233	165	77	121	25	30	20	—	992
30-34	366	243	199	88	111	22	30	8	—	1,067
35-39	430	206	223	82	116	27	35	17	—	1,137
40-44	444	284	250	112	139	26	40	16	—	1,311
45-49	561	359	336	137	141	30	44	20	—	1,628
50-54	784	547	460	205	201	79	54	24	—	2,354
55-59	1,077	694	617	245	257	97	32	35	—	3,054
60-64	1,564	1,033	807	346	392	117	43	49	—	4,351
65-69	2,318	1,664	1,192	612	600	189	50	51	—	6,677
70-74	3,411	2,398	1,750	887	757	269	33	84	—	9,590
75-79	3,839	2,651	1,912	1,029	849	324	35	115	—	10,754
80-84	3,649	2,563	1,822	999	791	298	24	74	—	10,221
85 and over	3,923	2,989	1,988	1,096	1,001	320	10	94	—	11,421
Not stated	—	3	—	—	—	—	—	—	—	7
Total	**23,520**	**16,407**	**12,235**	**6,095**	**5,750**	**1,889**	**527**	**646**	**4**	**67,073**
					FEMALES					
0	166	131	124	30	48	10	22	15	—	546
1-4	44	37	32	10	17	5	—	3	—	148
5-9	17	15	13	6	4	—	4	—	—	61
10-14	22	23	21	8	8	3	—	—	—	87
15-19	61	48	61	23	30	4	8	—	—	237
20-24	86	62	49	9	31	5	10	6	—	258
25-29	103	70	57	26	36	6	9	—	—	308
30-34	123	93	65	27	41	8	14	3	—	374
35-39	192	119	101	54	63	22	16	6	—	574
40-44	221	197	146	60	69	21	33	13	—	760
45-49	373	235	198	88	91	32	20	22	—	1,059
50-54	496	372	280	129	133	52	23	22	—	1,507
55-59	619	414	301	143	151	45	17	25	—	1,715
60-64	841	603	459	214	178	70	31	24	—	2,420
65-69	1,271	904	685	303	302	99	26	43	—	3,633
70-74	2,228	1,479	995	535	484	177	24	72	—	5,994
75-79	3,115	2,135	1,365	787	656	257	38	74	—	8,427
80-84	3,853	2,861	1,733	1,078	845	307	13	93	—	10,785
85 and over	7,390	5,802	3,401	2,088	1,727	592	34	201	—	21,235
Not stated	—	—	—	—	—	—	—	—	—	—
Total	**21,221**	**15,600**	**10,086**	**5,619**	**4,914**	**1,716**	**344**	**626**	**3**	**60,129**

2.3 AGE-SPECIFIC DEATH RATES, BY SEX, SELECTED YEARS, 1978–98

Age group (years)	*1978*	*1983*	*1988*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*
					MALES				
0	13.7	10.5	9.7	6.9	6.5	6.1	6.5	5.8	5.5
1-4	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4
5-9	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2
10-14	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
15-19	1.4	1.1	1.1	0.8	0.8	0.8	0.8	0.9	0.8
20-24	1.9	1.5	1.6	1.2	1.2	1.3	1.2	1.2	1.3
25-29	1.4	1.4	1.5	1.2	1.2	1.2	1.2	1.3	1.3
30-34	1.3	1.2	1.4	1.4	1.3	1.4	1.4	1.3	1.5
35-39	1.9	1.4	1.5	1.5	1.6	1.6	1.5	1.5	1.5
40-44	3.0	2.3	2.3	1.9	2.0	1.9	2.0	1.9	1.9
45-49	5.0	3.9	3.4	2.9	2.8	2.7	2.7	2.6	2.5
50-54	8.4	7.3	6.0	4.8	4.6	4.5	4.4	4.3	4.0
55-59	13.8	12.2	10.1	8.4	8.0	7.6	7.3	7.0	6.8
60-64	22.2	18.9	17.2	14.2	14.0	13.3	13.1	12.7	11.8
65-69	35.2	30.8	27.2	23.7	23.8	22.5	21.8	21.0	20.0
70-74	53.1	47.8	45.0	38.0	38.3	36.9	36.2	34.9	33.5
75-79	85.2	76.9	72.4	62.6	64.4	58.7	58.3	55.7	53.6
80-84	127.6	115.8	110.9	100.7	101.8	98.1	100.8	96.6	92.9
85 and over	207.2	198.6	189.0	178.7	186.9	176.6	181.3	174.0	167.2
					FEMALES				
0	10.6	8.7	7.5	5.3	5.2	5.1	5.0	4.9	4.5
1-4	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.3
5-9	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
10-14	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
15-19	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4
20-24	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4
25-29	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
30-34	0.7	0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.5
35-39	1.0	0.9	0.8	0.8	0.8	0.7	0.8	0.7	0.8
40-44	1.8	1.3	1.2	1.1	1.1	1.1	1.1	1.1	1.1
45-49	2.9	2.3	2.1	1.7	1.8	1.7	1.7	1.7	1.6
50-54	4.5	4.0	3.4	2.8	2.8	2.8	2.8	2.7	2.6
55-59	6.9	6.1	5.5	4.7	4.6	4.4	4.5	4.3	4.0
60-64	11.0	9.7	8.7	7.6	7.3	7.1	7.1	6.8	6.5
65-69	16.7	15.1	13.9	12.2	12.4	11.9	11.3	11.3	10.4
70-74	27.9	25.2	23.5	20.8	20.4	19.7	19.3	19.2	18.2
75-79	48.0	42.5	41.1	36.4	36.7	35.2	34.8	32.5	31.5
80-84	83.0	73.6	71.7	64.1	65.3	63.0	62.4	62.4	59.9
85 and over	164.1	153.1	149.5	141.3	149.2	142.6	145.7	144.6	136.1

2.4 AGE-SPECIFIC DEATH RATES, BY SEX, STATES AND TERRITORIES

Age group (years)	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*OT*	*Aust.*
					MALES					
0	4.7	4.9	7.3	4.6	5.9	7.9	12.0	4.5	n.p.	5.5
1-4	0.4	0.3	0.4	0.3	0.3	0.4	0.3	0.1	n.p.	0.4
5-9	0.1	0.1	0.2	0.1	0.1	0.1	0.4	0.1	n.p.	0.2
10-14	0.2	0.2	0.2	0.1	0.2	0.1	0.5	0.1	n.p.	0.2
15-19	0.7	0.7	0.7	0.7	0.8	1.0	2.1	0.7	n.p.	0.8
20-24	1.4	1.0	1.2	1.4	1.5	1.0	2.0	1.3	n.p.	1.3
25-29	1.3	1.3	1.2	1.4	1.6	1.6	2.9	1.5	n.p.	1.3
30-34	1.5	1.4	1.6	1.6	1.6	1.4	3.3	0.7	n.p.	1.5
35-39	1.7	1.1	1.6	1.4	1.6	1.5	3.9	1.4	n.p.	1.5
40-44	1.9	1.7	2.0	2.0	2.0	1.5	5.3	1.4	n.p.	1.9
45-49	2.6	2.3	2.7	2.6	2.1	1.8	6.5	1.7	n.p.	2.5
50-54	3.9	3.8	4.1	4.4	3.5	5.3	9.5	2.3	n.p.	4.0
55-59	7.1	6.3	7.5	6.8	6.0	8.3	8.4	5.2	n.p.	6.8
60-64	12.2	11.1	12.2	11.2	11.6	12.0	19.8	10.1	n.p.	11.8
65-69	19.7	19.5	20.4	20.9	20.3	21.1	33.7	13.5	n.p.	20.0
70-74	33.9	32.8	35.3	33.3	31.2	34.9	35.7	27.9	n.p.	33.5
75-79	53.8	52.5	54.2	54.6	51.5	60.7	72.2	54.8	n.p.	53.6
80-84	94.0	91.8	93.4	94.8	88.5	95.8	111.1	73.2	n.p.	92.9
85 and over	170.4	165.1	163.6	169.6	166.7	177.0	58.5	166.7	n.p.	167.2
					FEMALES					
0	4.0	4.5	5.4	3.3	4.0	3.4	12.7	7.6	n.p.	4.5
1-4	0.3	0.3	0.3	0.3	0.3	0.4	0.0	0.4	n.p.	0.3
5-9	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.1	n.p.	0.1
10-14	0.1	0.1	0.2	0.2	0.1	0.2	0.3	0.0	n.p.	0.1
15-19	0.3	0.3	0.5	0.5	0.5	0.2	1.2	0.2	n.p.	0.4
20-24	0.4	0.4	0.4	0.2	0.5	0.3	1.3	0.5	n.p.	0.4
25-29	0.4	0.4	0.4	0.5	0.5	0.4	0.9	0.1	n.p.	0.4
30-34	0.5	0.5	0.5	0.5	0.6	0.5	1.7	0.2	n.p.	0.5
35-39	0.8	0.6	0.7	0.9	0.9	1.2	2.0	0.5	n.p.	0.8
40-44	0.9	1.1	1.1	1.1	1.0	1.2	4.7	1.1	n.p.	1.1
45-49	1.7	1.5	1.7	1.7	1.4	1.9	3.5	1.8	n.p.	1.6
50-54	2.6	2.6	2.7	2.7	2.5	3.6	5.2	2.2	n.p.	2.6
55-59	4.2	3.8	3.8	4.0	3.8	3.9	6.4	3.8	n.p.	4.0
60-64	6.5	6.3	7.2	6.7	5.3	7.0	17.7	5.0	n.p.	6.5
65-69	10.3	10.0	11.5	9.8	10.0	10.4	22.9	10.9	n.p.	10.4
70-74	18.9	17.2	18.0	17.4	18.0	20.1	29.8	19.9	n.p.	18.2
75-79	32.6	30.8	30.3	30.6	30.4	34.7	74.1	25.8	n.p.	31.5
80-84	59.8	61.8	57.3	62.7	57.6	59.4	41.1	53.1	n.p.	59.9
85 and over	135.1	140.1	133.0	136.9	129.8	141.9	136.5	153.4	n.p.	136.1

2.5 DEATHS, BY AGE, SEX AND MARITAL STATUS

	Males						*Females*					
Age group (years)	*Never married*	*Married*	*Widowed*	*Divorced*	*Not stated*	*Total*	*Never married*	*Married*	*Widowed*	*Divorced*	*Not stated*	*Total*
0	706	—	—	—	—	706	546	—	—	—	—	546
1-4	199	—	—	—	—	199	148	—	—	—	—	148
5-9	102	—	—	—	—	102	61	—	—	—	—	61
10-14	126	—	—	—	—	126	87	—	—	—	—	87
15-19	389	—	—	—	115	506	191	—	—	—	45	237
20-24	802	30	—	—	35	870	214	25	—	4	15	258
25-29	779	136	—	24	53	992	212	81	—	7	8	308
30-34	660	279	—	71	55	1,067	156	165	3	32	18	374
35-39	547	414	4	120	52	1,137	160	306	5	69	34	574
40-44	447	579	8	202	75	1,311	146	450	19	117	28	760
45-49	351	876	19	294	88	1,628	151	643	35	183	47	1,059
50-54	413	1,421	34	399	87	2,354	160	978	70	252	47	1,507
55-59	464	1,936	67	480	107	3,054	144	1,098	173	256	44	1,715
60-64	574	2,877	218	550	132	4,351	189	1,448	461	273	49	2,420
65-69	790	4,412	604	720	151	6,677	254	1,930	1,057	342	50	3,633
70-74	995	6,446	1,178	773	198	9,590	346	2,634	2,503	440	71	5,994
75-79	830	7,120	2,055	592	157	10,754	483	2,707	4,729	444	64	8,427
80-84	717	6,056	2,981	370	97	10,221	642	2,175	7,525	374	69	10,785
85 and over	720	5,005	5,356	249	91	11,421	1,598	1,611	17,467	457	102	21,235
Not stated	—	—	—	—	6	7	—	—	—	—	—	—
Total	**10,612**	**37,589**	**12,527**	**4,846**	**1,499**	**67,073**	**5,889**	**16,252**	**34,047**	**3,250**	**691**	**60,129**

2.6 AGE-SPECIFIC DEATH RATES, BY SEX AND MARITAL STATUS

	Males					*Females*				
Age group (years)	*Never married*	*Married*	*Widowed*	*Divorced*	*Total*	*Never married*	*Married*	*Widowed*	*Divorced*	*Total*
0	5.5	—	—	—	5.5	4.5	—	—	—	4.5
1-4	0.4	—	—	—	0.4	0.3	—	—	—	0.3
5-9	0.2	—	—	—	0.2	0.1	—	—	—	0.1
10-14	0.2	—	—	—	0.2	0.1	—	—	—	0.1
15-19	0.6	—	—	—	0.8	0.3	—	—	—	0.4
20-24	1.2	0.7	—	—	1.3	0.4	0.3	—	1.3	0.4
25-29	1.6	0.6	—	1.9	1.3	0.6	0.2	—	0.3	0.4
30-34	2.5	0.7	—	2.0	1.5	0.9	0.3	1.0	0.6	0.5
35-39	3.3	0.8	2.1	2.1	1.5	1.4	0.5	0.8	0.9	0.8
40-44	4.4	1.1	2.7	2.9	1.9	2.2	0.8	2.0	1.3	1.1
45-49	5.5	1.7	4.1	3.9	2.5	3.7	1.3	2.3	2.0	1.6
50-54	9.5	3.0	5.1	5.8	4.0	6.1	2.2	2.9	3.1	2.6
55-59	16.2	5.4	7.9	10.0	6.8	8.4	3.4	4.9	4.8	4.0
60-64	24.8	9.6	17.7	16.3	11.8	14.2	5.5	8.5	7.4	6.5
65-69	36.7	16.5	30.6	28.5	20.0	19.6	8.7	12.2	12.2	10.4
70-74	57.0	28.9	41.5	46.0	33.5	26.3	15.2	20.2	22.2	18.2
75-79	75.1	48.1	63.3	66.1	53.6	41.2	26.0	33.7	37.6	31.5
80-84	127.7	83.7	104.6	101.5	92.9	68.8	50.9	61.4	70.8	59.9
85 and over	187.6	146.0	187.7	153.0	167.2	150.6	95.9	138.7	170.3	136.1

2.7 DEATHS, BY SELECTED COUNTRIES OF BIRTH(a)

	Australia	*China*	*Germany*	*Greece*	*India*	*Italy*	*Lebanon*
				MALES			
Deaths	46,979	373	674	698	274	1,955	179
Population '000(b)	7,125.8	73	60	72	50	132	40
Death rate(c)	7	5	11	10	5	15	4
Median age at death	74	75	70	71	74	74	68
Age at death							
0	699	—	—	—	—	—	—
1-4	192	—	—	—	—	—	—
5-14	205	—	—	—	—	—	—
15-24	1,195	—	4	—	8	—	3
25-34	1,711	5	7	3	7	5	11
35-44	1,872	13	16	7	8	16	13
45-54	2,750	14	69	38	22	73	19
55-64	4,938	41	119	153	25	215	25
65-74	10,915	94	223	244	69	672	54
75-84	14,757	130	162	153	86	598	40
85 and over	7,745	74	73	99	49	375	14
Not stated	—	—	—	—	—	—	—
Principal causes of death (ISDR per 100,000 population)							
Neoplasms (140-239)	222	149	209	163	116	178	122
Diseases of the circulatory system (390-459)	275	134	259	208	238	199	264
Diseases of the respiratory system (460-519)	75	48	58	34	51	47	51
Diseases of the digestive system (520-579)	22	10	20	16	24	20	11
All other diseases (remainder of 001-779)	91	54	83	62	78	87	95
External causes (800-899)	63	18	82	39	32	49	39
Total causes	748	414	705	528	536	578	569
				FEMALES			
Deaths	44,263	337	575	459	261	1,261	115
Population '000(b)	7,238	77	63	69	45	116	37
Death rate(c)	6	4	9	7	6	11	3
Median age at death	81	80	76	77	79	79	72
Age at death							
0	542	—	—	—	—	—	—
1-4	145	—	—	—	—	—	—
5-14	137	—	—	—	—	—	—
15-24	416	—	—	—	—	—	—
25-34	544	5	4	—	—	—	—
35-44	1,023	10	11	7	—	10	12
45-54	1,800	11	45	36	16	32	11
55-64	2,864	16	42	66	18	129	6
65-74	6,806	66	150	94	52	263	32
75-84	14,343	114	185	123	96	386	34
85 and over	15,642	115	138	132	75	439	17
Not stated	—	—	—	—	—	—	—
Principal causes of death (ISDR per 100,000 population)							
Neoplasms (140-239)	164	123	148	120	128	130	138
Diseases of the circulatory system (390-459)	285	150	251	197	274	214	267
Diseases of the respiratory system (460-519)	65	28	31	45	54	34	63
Diseases of the digestive system (520-579)	21	15	26	6	13	17	5
All other diseases (remainder of 001-779)	94	66	80	84	110	108	99
External causes (800-899)	25	18	31	20	17	20	19
Total causes	654	402	566	471	590	519	580

For footnotes, see end of table

2.7 DEATHS, BY SELECTED COUNTRIES OF BIRTH(a)— *continued*

	Malaysia	*Netherlands*	*New Zealand*	*Philippines*	*UK & Ireland*	*USA*	*Viet Nam*
			MALES				
Deaths	84	699	802	92	7,908	167	180
Population '000(b)	42	49	175	42	620	33	87
Death rate(c)	2	14	5	2	13	5	2
Median age at death	(d)	75	65	(d)	77	71	59
Age at death							
0	—	—	—	—	—	—	—
1-4	—	—	4	—	—	—	—
5-14	—	—	3	—	—	—	—
15-24	4	—	44	4	30	—	20
25-34	6	—	53	7	109	6	16
35-44	8	5	77	10	195	12	26
45-54	11	47	92	12	398	24	19
55-64	14	76	121	4	789	25	23
65-74	14	204	150	23	1,891	25	43
75-84	19	256	156	21	2,649	53	26
85 and over	7	107	101	9	1,844	21	6
Not stated	—	—	—	—	—	—	—
Principal causes of death (ISDR per 100,000 population)							
Neoplasms (140-239)	144	223	183	151	208	174	149
Diseases of the circulatory system (390-459)	160	221	266	155	253	244	69
Diseases of the respiratory system (460-519)	45	67	46	62	75	51	24
Diseases of the digestive system (520-579)	0	13	15	5	19	11	17
All other diseases (remainder of 001-779)	34	87	81	76	77	83	71
External causes (800-899)	37	62	77	21	57	70	38
Total causes	420	670	683	449	690	687	362
			FEMALES				
Deaths	85	448	637	116	7,165	101	144
Population '000(b)	47	44	167	73	605	29	87
Death rate(c)	2	10	4	2	12	4	2
Median age at death	(d)	78	78	64	83	75	69
Age at death							
0	—	—	—	—	—	—	—
1-4	—	—	—	—	—	—	—
5-14	—	—	—	—	—	—	—
15-24	—	—	19	—	10	3	7
25-34	3	—	16	8	40	2	8
35-44	8	—	30	11	101	4	8
45-54	7	34	62	26	235	12	17
55-64	14	40	63	13	465	9	17
65-74	19	88	75	15	1,006	16	36
75-84	23	171	151	32	2,184	26	32
85 and over	9	112	218	10	3,123	28	18
Not stated	—	—	—	—	—	—	—
Principal causes of death rate (ISDR per 100,000 population)							
Neoplasms (140-239)	145	165	173	124	171	141	125
Diseases of the circulatory system (390-459)	245	218	278	159	263	290	159
Diseases of the respiratory system (460-519)	39	39	54	32	66	58	19
Diseases of the digestive system (520-579)	13	18	22	11	23	20	3
All other diseases (remainder of 001-779)	100	66	79	59	88	96	49
External causes (800-899)	5	28	29	19	27	50	20
Total causes	525	535	639	422	637	946	276

(a) See Glossary for definitions of the terms used. (b) Estimated male or female resident population by country of birth, 1998 preliminary. (c) Per 1,000 male or female estimated resident population by country of birth, 1997 preliminary. (d) Not statistically reliable due to the small numbers involved.

2.8 DEATHS, BY COUNTRY OF BIRTH AND DURATION OF RESIDENCE

Country of birth	Duration of residence (years) 0-4	5-9	10-19	20-29	30-39	40 and over	Not stated	Not applicable	Total	Median duration (years)
OCEANIA AND ANTARCTICA										
Australia	..	..	..	..	..	..	..	91,242	91,242	..
Fiji	23	16	31	18	5	23	17	..	133	13.1
New Zealand	113	96	309	179	104	387	251	..	1,439	23.7
Other	30	20	40	33	13	25	66	..	227	16.4
Total	*166*	*132*	*380*	*230*	*122*	*435*	*334*	*91,242*	*93,041*	*21.4*
EUROPE AND FORMER USSR										
Austria	6	—	5	11	50	191	22	..	286	44.1
Former USSR and Baltic States	37	32	50	24	71	960	99	..	1,273	49.0
Former Yugoslav Republics	46	33	64	295	336	490	84	..	1,348	36.0
Germany	20	14	52	55	199	812	97	..	1,249	44.2
Greece	20	11	26	125	418	512	45	..	1,157	38.7
Hungary	6	—	10	13	62	358	39	..	490	42.0
Ireland	13	11	38	78	106	361	60	..	667	44.8
Italy	20	17	54	167	665	2,186	107	..	3,216	44.0
Malta	—	—	11	20	107	358	26	..	524	43.8
Netherlands	11	10	32	37	153	840	64	..	1,147	44.5
Poland	6	8	58	35	140	959	94	..	1,300	48.5
United Kingdom	224	223	1,109	1,779	2,885	7,072	1,114	..	14,406	41.7
Other	27	29	84	194	222	583	116	..	1,255	40.3
Total	*437*	*392*	*1,593*	*2,833*	*5,414*	*15,682*	*1,967*	..	*28,318*	*43.3*
MIDDLE EAST AND NORTH AFRICA										
Egypt	7	4	20	54	120	193	36	..	434	39.1
Lebanon	10	12	40	110	33	60	29	..	294	27.3
Turkey	7	6	23	76	29	33	7	..	181	28.3
Other	24	8	45	55	28	47	13	..	220	26.8
Total	*48*	*30*	*128*	*295*	*210*	*333*	*85*	..	*1,129*	*30.5*
SOUTHEAST ASIA										
Indonesia	16	10	33	21	17	69	18	..	184	31.5
Malaysia	13	22	47	35	14	18	20	..	169	18.2
Philippines	17	36	86	29	9	5	26	..	208	13.1
Singapore	4	8	10	13	6	9	5	..	55	21.5
Thailand	3	5	3	3	—	—	—	..	17	9.8
Viet Nam	19	108	153	24	—	—	16	..	324	12.8
Other	9	17	64	28	22	18	9	..	167	17.9
Total	*81*	*206*	*396*	*153*	*71*	*121*	*96*	..	*1,124*	*15.5*
NORTHEAST ASIA										
China	65	98	222	87	52	115	71	..	710	16.7
Hong Kong	4	13	26	13	4	8	7	..	75	15.4
Other	24	17	27	22	—	8	37	..	137	11.7
Total	*93*	*128*	*275*	*122*	*58*	*131*	*115*	..	*922*	*15.9*
SOUTHERN ASIA										
India	26	30	73	164	72	123	47	..	535	28.3
Sri Lanka	22	31	52	51	38	28	13	..	235	22.1
Other	9	7	5	6	—	9	8	..	46	15.5
Total	*57*	*68*	*130*	*221*	*112*	*160*	*68*	..	*816*	*26.9*
THE AMERICAS										
Canada	6	4	8	21	21	61	13	..	134	40.2
Chile	—	4	24	28	3	—	7	..	68	20.4
United States of America	26	13	17	47	37	89	39	..	268	31.8
Other	16	19	37	51	17	12	12	..	164	21.5
Total	*49*	*40*	*86*	*147*	*78*	*163*	*71*	..	*634*	*27.4*
AFRICA (excluding North Africa)										
South Africa	17	17	60	57	42	74	25	..	292	26.9
Other	13	9	44	48	39	10	13	..	176	26.1
Total	*30*	*26*	*104*	*105*	*81*	*84*	*38*	..	*468*	*26.4*
Other and not stated	11	4	5	7	8	13	702	..	750	27.5
Total	**972**	**1,026**	**3,097**	**4,113**	**6,154**	**17,122**	**3,476**	**91,242**	**127,202**	**41.1**

FEATURE ARTICLE—DEATHS OF OLDER PERSONS

INTRODUCTION

In 1998, there were 98,700 deaths of older Australians (aged 65 years and over), representing 78% of all deaths. This proportion has increased from 63% in 1968, and 72% in 1988. The oldest old population (those aged 85 years and over), has experienced an even faster increase in the share of total deaths over the period. In 1998 one-quarter of all deaths were registered to persons aged 85 years and over, which was double the proportion of such deaths in 1968. By 2051, around 93% of deaths are expected to be of persons aged 65 years and over, and more than half will be of persons aged 85 years and over.

The increasing proportion of deaths occurring among older persons reflects that many more people are moving into the older age groups and, on average, people are living longer. While the total population has grown by an average of 1.5% per year from 1968 to 1998, the elderly population has grown at almost twice the rate, averaging 2.7% per year. The oldest old of the population have averaged 4.7% annual growth during the same period.

POPULATION AND DEATHS OF OLDER PERSONS, 1968–1998

		1968	*1978*	*1988*	*1998*	*2051(a)*
Proportion of estimated resident population						
65 years and over	%	8.4	9.2	10.8	12.2	25.1
85 years and over	%	0.5	0.6	0.8	1.2	4.6
Proportion of total deaths						
65 years and over	%	63.4	65.8	72.3	77.6	93.3
85 years and over	%	12.3	14.9	18.4	25.7	51.3
Standardised death rates(b)						
Males, 65 years and over	per 1,000 population	93.7	74.3	63.4	50.4	36.4
Females, 65 years and over	per 1,000 population	60.4	45.3	39.3	32.4	24.2
Persons, 65 years and over	per 1,000 population	74.2	57.2	49.1	39.7	28.9
Expectation of life						
Males, 65 years	years of life expected	n.a.	13.5	14.8	16.3	19.4
Females, 65 years	years of life expected	n.a.	17.6	18.8	20.0	22.7
Males, 85 years	years of life expected	n.a.	4.6	5.0	5.4	6.3
Females, 85 years	years of life expected	n.a.	5.6	6.2	6.5	8.1

(a) Projections are based on Series K from *Population Projections 1997–2051* (Cat. no. 3222.0).

(b) Standardised to June 1991 ERP.

LIFE EXPECTANCY OF OLDER PERSONS

The increased survivorship of the population is highlighted by the gains in expectation of life for the older population. In the early 1970s, a male turning 65 years old could expect an additional 12.2 years of life, compared to 16.3 years more years in 1998. Over the same period, female life expectancy at 65 years increased from 15.9 to 20.0 years.

LIFE EXPECTANCY OF OLDER PERSONS *continued*

These gains in life expectancy for the older population in the last 25 years exceed all the improvement made in the three-quarters of a century prior to 1971. So great has the increase in survival of older people been, that nearly 40% of all male and 50% of all female gains in life expectancy at birth over the 1971–98 period were contributed by reductions in death rates at ages 65 and over.

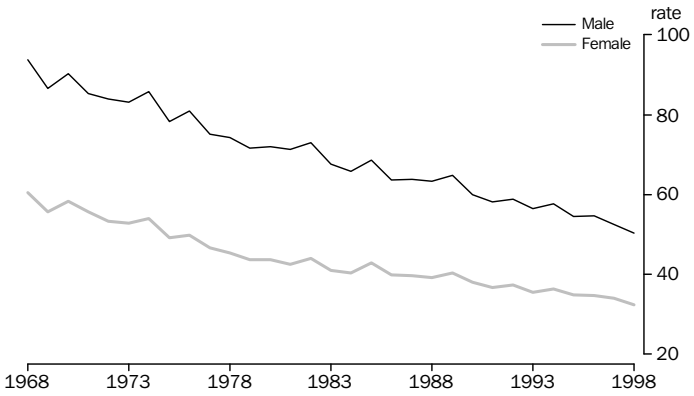
TRENDS IN DEATH RATES

Driving the increase in life expectancy of older males and females since the early 1970s has been the marked and sustained decrease in death rates of older persons. In 1968, the standardised death rate (SDR) for older persons was 74 per 1,000 population, by 1988 the rate had fallen to 49 and in 1998 the rate was 40 per 1,000 population. This represents a 2% annual average decline in death rates of older persons since 1968. Around 70% of this decline can be attributed to reductions in death rates from ischaemic heart disease and stroke, which have in turn resulted from improved medical treatments and reductions in certain risk factors (AIHW, 1999).

Sex and age

In 1998, the older male SDR was 56% higher than the corresponding female rate (50 male deaths and 32 female deaths per 1,000 respective populations). In 1968, the relative male–female differential was similar with the older male SDR 55% higher than the female SDR. Following the rapid declines of the female death rate over the 1968–78 period, the male–female SDR differential widened to 64%. Since 1988 however, the male SDR has declined slightly faster than females (2.3% per year for males, compared to 1.9% for females).

SDRs, MALES AND FEMALES 65 YEARS AND OVER, 1968–1998(a)



(a) Standardised to 1991 ERP.

The male-female differential also tends to narrow progressively with age. In 1998, males aged 65–69 years had death rates 92% higher than females at the same ages, while males aged 85 years and over had deaths rates only 23% higher than those for females. The improvement in mortality rates for older people over the last 30 years was most marked at the younger ages within this population. Death rates for those aged 65–69 years decreased by 54% (from 33 to 15 deaths per 1,000 population) between 1968 and 1998, while that for persons aged 85 and over declined by 39% (from 240 to 146 deaths per 1,000 population). Reductions in ischaemic heart disease deaths produced around

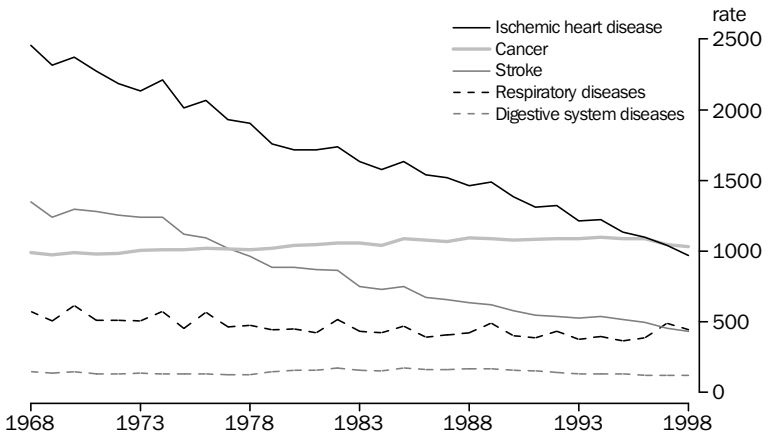
Sex and age *continued*

54% of the decline in 65–69 years deaths, with a further 20% coming from reductions in deaths from stroke. In contrast, among the oldest old population reductions in stroke deaths and ischaemic heart disease deaths have each contributed around 29% of the total decrease in death rates.

Leading causes of death

Cancer and ischaemic heart disease each accounted for a quarter of all deaths of older people in 1998. On an age standardised basis however, cancer emerged as the leading cause with 1033 deaths per 100,000 population, while ischaemic heart disease followed with 970. Cancer has been the major cause of death at ages less than 80 years, while ischaemic heart disease has been dominant at ages 80 and over. While the ischaemic heart disease SDR has declined rapidly over the 1968–98 period, the cancer SDR has actually increased slightly over the same period, despite a slight decline in the last 10 years.

LEADING CAUSES OF DEATH, SDR, PERSONS 65 YEARS AND OVER, 1968–1998(a)



(a) Deaths per 100,000 population, standardised to 1991 ERP.

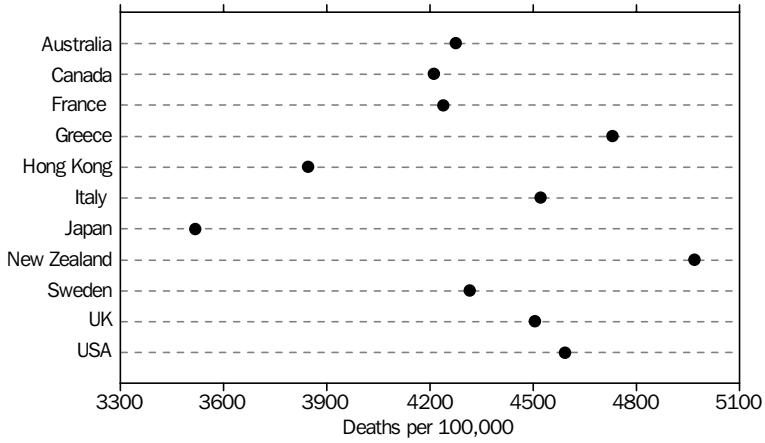
Cancer deaths have consequently increased as a proportion of all deaths from 13% in 1968 to 26% in 1998. Among older males, lung cancer has been the most common cancer-type death in 1998 with 359 deaths per 100,000 males, down from 410 deaths in 1988. This was followed by prostate cancer deaths which declined from 251 to 241 deaths per 100,000 males.

Breast cancer deaths, the most common cancer cause of death among older females declined from 116 to 99 deaths per 100,000 women over the 1988–98 period. In contrast, female lung cancer deaths have been increasing rapidly, from 21 deaths to 93 deaths per 100,000 females over the 1968–98 period. In 1998, female lung cancer overtook colon cancer as the second most common cancer-type death. Deaths from respiratory disease and stroke were the third and fourth leading causes of death for older persons in 1998, each responsible for 11% of deaths, while diseases of the digestive system was the fifth leading cause with 3% of deaths. The SDR for respiratory diseases has increased since 1988, displacing stroke as the third major cause in 1997, although much of the rise can be attributed to recent change in the method of causes of death coding (ABS, 1998b).

INTERNATIONAL COMPARISON

A comparison of SDRs among selected countries in 1996[1] shows that the Australian older population ranks in the middle order of developed countries. Japan has the lowest SDR with 3,500 deaths per 100,000 population, 18% lower than Australia's rate of 4,300. SDRs of older people were also lower in Hong Kong (3,800 deaths per 100,000 population), and Canada and France (each with 4,200 deaths per 100,000 population), and higher in the United Kingdom (4,500), the United States of America (4,600) and New Zealand (5,000).

SDRS, PERSONS AGED 65 AND OVER 1996, SELECTED COUNTRIES(a)



Source: 1997 Demographic Yearbook[1]

(a) Standardised to 1991 estimated resident population.

PROJECTIONS

The latest ABS mortality projections indicate a continuation of the declining mortality trend such that the SDRs of older persons will decline a further 27% by 2051. This would produce a gain in life expectancy of almost 3 years for 65 year olds at that time. The projected increase in life expectancy, combined with low levels of future fertility are projected to double the proportion of persons aged 65 years and over, from 12% in 1998 to around 24% in 2051. While death rates are projected to decline significantly by 2051, the number of deaths of elderly people is projected to be around 270,000 or 2.8 times higher than the number in 1998.

Increased life expectancy at older ages and the consequent increase in the size of the aged population has a number of social and economic implications. Among them are the issues of income support for the aged and their need for health resources. Mortality statistics cannot tell us if the extra years of life, can or will result in improved quality of life.

[1] Reference year is 1996 except for: Canada and USA (1995), France (1993) and New Zealand (1992). The standard population used is the 1991 Australian male and female populations aged 65 and over.

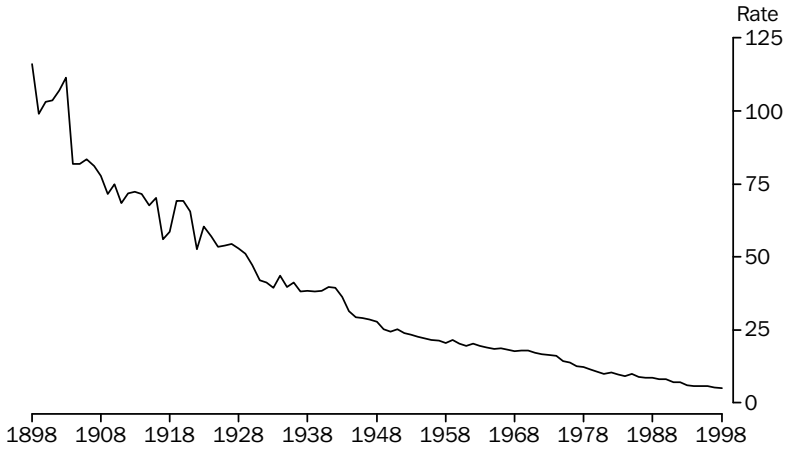
INFANT DEATHS

In 1998, 1,250 infants deaths (deaths of children less than one year of age) were registered in Australia. This was a decrease of 7% on the number registered in 1997 (1,300), and 41% on the number registered in 1988 (2,100). The 1998 infant mortality rate (IMR), of 5.0 deaths per 1,000 live births, was for the second consecutive year, the lowest ever recorded. The 1998 IMR was 5.7% lower than in 1997 (5.3 deaths per 1,000 live births), and represents an average annual decline of 5.4% from 1988 when the IMR was 8.7 deaths per 1,000 live births.

South Australia had the lowest IMR (4.0) in 1998 while the Northern Territory's IMR of 12.4 was the highest of the States and Territories. Queensland, Tasmania, the Northern Territory and the ACT all had IMRs above the national level (of 5.0 deaths per 1,000 live births) in 1998, whilst the IMR of Western Australia matched the national level. Compared to 1988, the largest decrease in the IMR (53%, from 9.2 to 4.3) occurred in New South Wales, whilst the smallest decrease in the IMR (24%, from 8.4 to 6.4) occurred in Queensland.

In the last 100 years, Australia's infant mortality has declined by 96%. In 1898, 1 in 9 infants born did not survive till their first birthday (IMR of 116), however today, only 1 in 200 infants born will not survive their first year of life (IMR of 5.0). The early decline in infant mortality has been linked to improvements in public sanitation and health education. Later declines may be a consequence of the introduction of universal health insurance (Medicare) and improvements in medical technology, such as neonatal intensive care units (Taylor et al, 1998).

INFANT MORTALITY RATE, 1898—1998



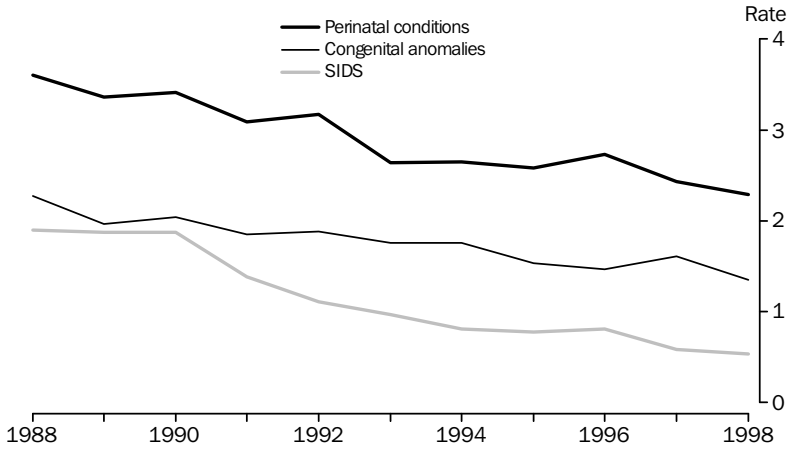
SEX

In 1998, male infant deaths (710) outnumbered female infant deaths (550) by 29%. However as male births outnumbered female births by 5% the difference in the IMR was 22%, with 5.5 male and 4.5 female deaths per 1,000 live births. In the last twenty years the male IMR has been consistently higher than the female IMR (by between 18% and 33%), reflecting the greater vulnerability of male infants to death (Waldron, 1983).

LEADING CAUSES OF INFANT DEATHS

In 1998 the leading cause of infant deaths was the group of conditions classified as 'certain conditions originating in the perinatal period'. This group of causes (which includes disorders relating to short gestation, birth trauma and respiratory distress) was responsible for 570 deaths or 46% of the total infant deaths. Congenital anomalies were responsible for 27% (340) of infant deaths, while sudden infant death syndrome (SIDS) was responsible for 11% (130) of all infant deaths. In contrast, deaths as a result of SIDS were responsible for 22% of all infant deaths in 1988.

LEADING CAUSES OF INFANT DEATHS(a)



(a) Per 1,000 live births.

AGE AT DEATH

In 1998, 34% of all infant deaths occurred within the first day from birth, with a further 33% of all infant deaths occurring in the remainder of the neonatal period (first four weeks of life). Between 1988 and 1998, infant deaths have declined by 41% from 2,130 to 1,250 deaths. Reductions in deaths that occurred between one month and one year of age contributed 49% of the decline, while reductions in deaths that occurred within the first day after birth contributed 34% of the decline.

Reductions in infant deaths at different ages have resulted from declines in particular causes of death within each age group. Since 1988, reductions in deaths due to 'certain conditions originating in the perinatal period' have contributed 76% of the decline of deaths of infants less than one day old, and 56% of the decline in deaths of infants between one and six days old.

Between 1988 and 1998, reductions in deaths due to congenital anomalies contributed 97% of the decline in deaths of infants between one week and one month of age. However this was offset by a 32% increase in deaths due to 'certain conditions originating in the perinatal period' for infants between one week and one month of age. In the last decade, reductions in SIDS deaths have contributed 75% of the decline in deaths of infants aged between one month and one year of life.

3.1 INFANT DEATH, AGE AT DEATH, SEX

	Neonatal-under four weeks						
	Early neonatal						
Selected years	*Under one day*	*One day to six days*	*Total under one week*	*Late neonatal-one week and under four weeks*	*Total neonatal-under four weeks*	*Post neonatal-four weeks and under one year*	*Total under one year*
			MALES				
1978	673	250	923	145	1,068	507	1,575
1983	469	207	676	123	799	503	1,302
1988	425	199	624	117	741	486	1,227
1993	321	140	461	123	584	334	918
1994	326	153	479	107	586	280	866
1995	313	118	431	103	534	273	807
1996	313	133	446	100	546	297	843
1997	262	132	394	91	485	259	744
1998	228	132	360	114	474	232	706
			FEMALES				
1978	456	218	674	92	766	392	1,158
1983	386	160	546	118	664	361	1,025
1988	297	142	439	115	554	351	905
1993	252	104	356	77	433	240	673
1994	238	113	351	71	422	224	646
1995	241	97	338	85	423	219	642
1996	244	92	336	82	418	199	617
1997	239	94	333	81	414	183	597
1998	198	83	281	87	368	178	546
			PERSONS				
1978	1,129	468	1,597	237	1,834	899	2,733
1983	855	367	1,222	241	1,463	864	2,327
1988	722	341	1,063	232	1,295	837	2,132
1993	573	244	817	200	1,017	574	1,591
1994	564	266	830	178	1,008	504	1,512
1995	554	215	769	188	957	492	1,449
1996	557	225	782	182	964	496	1,460
1997	501	226	727	172	899	442	1,341
1998	426	215	641	201	842	410	1,252

3.2 INFANT MORTALITY RATES(a), AGE AT DEATH

	Neonatal-under four weeks						
	Early neonatal						
Selected years	*Under one day*	*One day to six days*	*Total under one week*	*Late neonatal-one week and under four weeks*	*Total neonatal-under four weeks*	*Post neonatal-four weeks and under one year*	*Total under one year*
				MALES			
1978	5.9	2.2	8.0	1.3	9.3	4.4	13.7
1983	3.8	1.7	5.4	1.0	6.4	4.0	10.5
1988	3.4	1.6	4.9	0.9	5.9	3.9	9.7
1993	2.4	1.0	3.5	0.9	4.4	2.5	6.9
1994	2.5	1.2	3.6	0.8	4.4	2.1	6.5
1995	2.4	0.9	3.3	0.8	4.1	2.1	6.1
1996	2.4	1.0	3.4	0.8	4.2	2.3	6.5
1997	2.0	1.0	3.1	0.7	3.8	2.0	5.8
1998	1.8	1.0	2.8	0.9	3.7	1.8	5.5
				FEMALES			
1978	4.2	2.0	6.2	0.8	7.0	3.6	10.6
1983	3.3	1.4	4.6	1.0	5.6	3.1	8.7
1987	2.5	1.2	3.7	1.0	4.6	2.9	7.5
1993	2.0	0.8	2.8	0.6	3.4	1.9	5.3
1994	1.9	0.9	2.8	0.6	3.4	1.8	5.2
1995	1.9	0.8	2.7	0.7	3.4	1.8	5.1
1996	2.0	0.7	2.7	0.7	3.4	1.6	5.0
1997	1.9	0.8	2.7	0.7	3.4	1.5	4.9
1998	1.6	0.7	2.3	0.7	3.0	1.5	4.5
				PERSONS			
1978	5.0	2.1	7.1	1.1	8.2	4.0	12.2
1983	3.5	1.5	5.0	1.0	6.0	3.6	9.6
1988	2.9	1.4	4.3	0.9	5.3	3.4	8.7
1993	2.2	0.9	3.1	0.8	3.9	2.2	6.1
1994	2.2	1.0	3.2	0.7	3.9	2.0	5.9
1995	2.2	0.8	3.0	0.7	3.7	1.9	5.7
1996	2.2	0.9	3.1	0.7	3.8	2.0	5.8
1997	2.0	0.9	2.9	0.7	3.6	1.8	5.3
1998	1.7	0.9	2.6	0.8	3.4	1.6	5.0

(a) Per 1,000 live births

3.3 INFANT DEATHS, NUMBERS REGISTERED, STATES AND TERRITORIES

Selected years	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Other Territories*	*Aust.*
1978	1,018	610	439	219	231	102	56	58	. .	2,733
1983	827	543	417	183	179	80	57	41	. .	2,327
1988	775	486	339	152	214	65	66	35	. .	2,132
1993	552	347	327	104	147	40	55	19	. .	1,591
1994	551	327	289	92	140	51	41	21	—	1,512
1995	498	308	293	112	129	38	50	21	—	1,449
1996	499	308	304	94	160	29	41	25	—	1,460
1997	451	300	272	87	131	39	45	16	—	1,341
1998	371	283	299	73	123	34	45	24	—	1,252

3.4 INFANT MORTALITY RATES(a), STATES AND TERRITORIES

Selected years	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Other Territories*	*Aust.*
1978	13.0	10.4	12.7	11.8	11.2	14.9	20.7	13.8	. .	12.2
1983	9.9	9.1	9.9	9.2	7.8	11.3	18.2	9.9	. .	9.6
1988	9.2	7.8	8.4	7.9	8.5	9.6	19.2	8.1	. .	8.7
1993	6.2	5.4	7.0	5.2	5.9	5.9	15.3	4.3	. .	6.1
1994	6.3	5.1	6.2	4.7	5.6	7.5	11.3	4.7	—	5.9
1995	5.7	4.9	6.3	5.8	5.1	5.8	13.3	4.8	—	5.7
1996	5.8	5.0	6.4	4.9	6.5	4.5	11.5	5.7	—	5.8
1997	5.2	4.9	5.8	4.7	5.3	6.5	12.5	3.8	—	5.3
1998	4.3	4.7	6.4	4.0	5.0	5.7	12.4	6.0	—	5.0

(a) Per 1,000 live births.

3.5 INFANT DEATHS, BY AGE AT DEATH, SEX, STATES AND TERRITORIES

State or Territory of usual residence	Neonatal-under four weeks: Early neonatal: Under one day	Early neonatal: One day to six days	Early neonatal: Total under one week	Late neonatal-one week and under four weeks	Total neonatal-under four weeks	Post neonatal-four weeks and under one year	Total under one year
			MALES				
New South Wales	75	39	114	28	142	63	205
Victoria	54	31	85	24	109	43	152
Queensland	52	34	86	35	121	54	175
South Australia	11	6	17	8	25	18	43
Western Australia	17	12	29	10	39	36	75
Tasmania	5	7	12	3	15	9	24
Northern Territories	9	—	9	6	15	8	23
Australian Capital Territory	5	3	8	—	8	—	9
Other Territories	—	—	—	—	—	—	—
Australia	**228**	**132**	**360**	**114**	**474**	**232**	**706**
			FEMALES				
New South Wales	57	26	83	30	113	53	166
Victoria	48	25	73	18	91	40	131
Queensland	52	17	69	19	88	36	124
South Australia	13	—	15	4	19	11	30
Western Australia	8	8	16	10	26	22	48
Tasmania	4	—	4	—	6	4	10
Northern Territories	9	4	13	—	14	8	22
Australian Capital Territory	7	—	8	3	11	4	15
Other Territories	—	—	—	—	—	—	—
Australia	**198**	**83**	**281**	**87**	**368**	**178**	**546**

3.6 INFANT MORTALITY RATES(a), AGE AT DEATH, STATES AND TERRITORIES

State or Territory of usual residence	Neonatal-under four weeks: Early neonatal: Under one day	Early neonatal: One day to six days	Early neonatal: Total under one week	Late neonatal-one week and under four weeks	Total neonatal-under four weeks	Post neonatal-four weeks and under one year	Total under one year
New South Wales	1.5	0.8	2.3	0.7	3.0	1.4	4.3
Victoria	1.7	0.9	2.6	0.7	3.3	1.4	4.7
Queensland	2.2	1.1	3.3	1.1	4.4	1.9	6.4
South Australia	1.3	0.4	1.8	0.7	2.4	1.6	4.0
Western Australia	1.0	0.8	1.8	0.8	2.6	2.3	5.0
Tasmania	1.5	1.2	2.7	0.8	3.5	2.2	5.7
Northern Territories	4.9	1.1	6.0	1.9	8.0	4.4	12.4
Australian Capital Territory	3.0	1.0	4.0	0.8	4.8	1.3	6.0
Other Territories	—	—	—	—	—	—	—
Australia	**1.7**	**0.9**	**2.6**	**0.8**	**3.4**	**1.6**	**5.0**

(a) Per 1,000 live births.

SECTION 4 DEATHS OF ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE

INTRODUCTION

There were 2,100 deaths registered in 1998 where the deceased person was identified as being Aboriginal or Torres Strait Islander (Indigenous). Although it is considered likely that most Indigenous deaths are registered, a significant proportion are not registered as 'Indigenous'. Therefore, the 2,100 registered Indigenous deaths is an underestimate of the true number of such deaths. The issue and extent of undercoverage of Indigenous deaths is addressed later in this section and summarised in table 4.1.

INDIGENOUS MORTALITY[1]

Overall in 1998, at least three times more Indigenous deaths occurred than would have been expected if the age-specific death rates of the total population were experienced throughout the Indigenous population (standardised mortality ratio (SMR) of 2.9). It is likely that all of the SMRs presented in this section underestimate the true extent of Indigenous excess mortality due to the coverage limitations referred to above.

AGE AT DEATH

A high proportion of Indigenous deaths in 1998 were of young people. The median age at death for Indigenous people was 50 years in 1998, around 27 years less than the median age at death (77 years) of all persons. Indigenous males had a median age at death of 46 years, 9 years less than Indigenous females (55 years).

One-quarter of Indigenous males and 10% of Indigenous females do not survive to age 45 according to the Indigenous experimental life tables (Section 5) for the 1991–96 period. Contrasting this, only 5% of total males and 2% of total females would die before age 45 according to the 1996–98 Australian life tables. This disparity is also reflected in significantly lower life expectancy among Indigenous people. Indigenous males born in 1991–96 could be expected to live 57 years, 19 years less than life expectancy for total males (76 years), while Indigenous females could be expected to live 62 years, around 20 years less than the life expectancy for all females (82 years).

INFANT DEATHS

The 1998 Indigenous infant mortality rate (IMR) was 15.2 deaths per 1,000 live births, at least 2.5 times more than the total (for Queensland, South Australia, Western Australia and the Northern Territory) IMR of 5.7, and at least three times higher than the Australian rate (5.0).

[1] The Indigenous deaths referred to in the following sections comprise deaths of Indigenous people usually resident in Queensland, South Australia, Western Australia and the Northern Territory. Total deaths are from the total populations of these States.

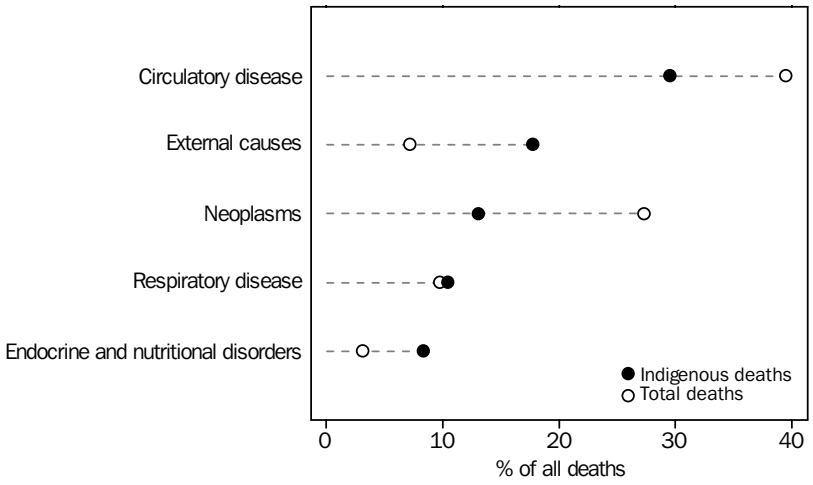
INFANT DEATHS *continued*

The statistical coverage of Indigenous births throughout Australia has similar deficiencies as the deaths collection, although the level of births coverage is estimated to be around 104% on 1991 based expectancies and 90% on the 1996 based expectancies (ABS, 1999). Given that the level of estimated Indigenous births coverage is higher than the deaths coverage on both 1991 and 1996 Census projection bases, the Indigenous IMR presented here may be considered a conservative estimate.

CAUSES OF DEATH

The high mortality of the Indigenous population is evident through all leading causes of death. The particular causes most affecting the Indigenous population differ from the total population, reflecting the different health experience of Indigenous Australians. For example, external causes of death contributed a far greater proportion of Indigenous deaths, and deaths from diabetes, pneumonia and influenza occurred at a rate many times higher than in the total population.

LEADING CAUSES OF DEATH



The leading cause of death among the Indigenous population was diseases of the circulatory system, which was responsible for 30% of all Indigenous deaths in 1998. Although circulatory diseases were also the leading cause of death among the total population with 39% of all deaths, the Indigenous population had more than three times as many deaths from circulatory diseases as would have been expected if the age-specific rates of the total population prevailed in the Indigenous population (SMR of 3.1). Heart disease was responsible for 78% of the Indigenous circulatory disease deaths, while cerebrovascular disease (stroke) deaths was responsible for 17%. The median age of Indigenous deaths from circulatory diseases was 60.3 years, compared to 81.0 years for the total population.

CAUSES OF DEATH *continued*

External causes (accidents, poisoning or violence) were the second leading cause of death among the Indigenous population in 1998, accounting for almost 18% of all Indigenous deaths. In contrast, external causes were the fourth leading cause among the total population in 1998 with 7% of all deaths. Deaths from external causes were at least three times higher than would be expected if the Indigenous population experienced the same age-specific rates as the total population. Suicide accounted for 31% of Indigenous external causes of death, while motor vehicle traffic accidents accounted for 28%. The median age at death for external causes of Indigenous people was 29.0 years, ten years less than the median age at death for external causes of the total population.

LEADING CAUSES OF INDIGENOUS DEATH

Cause of death	*Indigenous deaths* no.	*Total deaths* no.	*Indigenous median age at death* years	*Total median age at death* years	*Indigenous SMR(a)* rate
Diseases of the circulatory system (390–459)	447	17 996	60.3	81.0	3.1
External causes (800–999)	269	3 265	29.0	39.5	3.0
Neoplasms (140–239)	198	12 454	60.4	72.4	1.5
Diseases of the respiratory system (460–519)	158	4 454	58.4	80.7	4.2
Endocrine, nutritional, and metabolic diseases and immunity disorders (240–279)	126	1 410	56.9	75.2	8.4
Diseases of the digestive system (520–579)	61	1 454	46.5	77.8	4.3
Diseases of the genitourinary system (580-629)	38	842	62.5	82.6	5.9
Mental disorders (290–319)	35	1 031	37.0	84.0	3.2
All causes	**1 513**	**45 570**	**50.2**	**77.0**	**2.9**

(a) Standardised to the total population of Queensland, South Australia, Western Australia and the Northern Territory population at June 1998.

Neoplasms (cancer) were the third leading cause of death, accounting for 13% of Indigenous deaths. Malignant neoplasms of the digestive system and malignant neoplasms of the respiratory system together accounted for half of all neoplasm deaths. Although neoplasm deaths were higher among Indigenous population than the total population, the differential was less than for all other leading causes (SMR of 1.5).

Diseases of the respiratory system were responsible for 10% of all Indigenous deaths in 1998, with pneumonia and influenza accounting for half of these. The Indigenous population had more than four times as many deaths from respiratory diseases as would have been expected if the age-specific rates of the total population prevailed in the Indigenous population (SMR of 4.2). The median age of death was 58.4 years, more than twenty years less than for the total population.

Endocrine and nutritional disorders accounted for 8% of Indigenous deaths, 85% of which were from diabetes. The Indigenous population had more than eight times the number of deaths for this cause than would have been expected from the age-specific death rates for the total population, indicating the impact of diabetes on the Indigenous population.

CAUSES OF DEATH *continued*

The fifth leading cause of death among Indigenous people was diseases of the digestive system, which was responsible for 4% of deaths. Two-thirds of these deaths were from chronic liver disease and cirrhosis. Indigenous mortality from diseases of the digestive system was more than 4 times higher than expected if the Indigenous population had experienced the age-specific rates of the total population.

PROPENSITY TO IDENTIFY AS INDIGENOUS

The undercoverage of Indigenous deaths is affected by the extent to which people are identified as Indigenous. There are several different forms on which Indigenous origin is asked. These forms include the Census and other Australian Bureau of Statistics (ABS) collections, and administrative forms such as birth and death certificates. Due to a number of factors, the results of this question are not always consistent. For example, there were about 52,000 people who identified as Indigenous in the 1996 Census, but had not identified as such in the 1991 Census. The likelihood that a person will identify, or be identified, as Indigenous on a specific form is known as their propensity to identify as Indigenous. Propensity to identify as Indigenous can be thought of as the proportion of the total, unknown, number of Indigenous people who identify as such on a specific form.

Propensity to identify is determined by a range of factors, including who completes the form (e.g. the person in question, a relative, or an official); the perception of how the information will be used; education programs about identifying as Indigenous; and emotional reaction to identifying as Indigenous.

There are three estimates of the number of Indigenous deaths reproduced in table 4.1. Each is based on a different collection, with a different propensity to identify as Indigenous:

- 1991 Census-based projections: These data are estimated using mortality levels based on 1986–91 Indigenous life tables, and the Indigenous population based on the 1991 Census. These are published in *Experimental Projections of the Aboriginal and Torres Strait Islander Population, 30 June 1991–30 June 2001* (Cat. no. 3231.0).
- 1996 Census-based estimates and projections: Estimates prior to 1996 are derived by backdating estimates of the 1996 Indigenous population. The level of mortality is based on the 1991–96 experimental life tables published in *Experimental Projections of the Aboriginal and Torres Strait Islander Population, 30 June 1996–30 June 2006* (Cat. no. 3231.0). They are also included in Section 5 of this publication. The 1998 projection data assumes no change in mortality and no increase in propensity to identify from 1996.
- Death registrations: This publication is based on the registration of deaths by each State and Territories' Registrar of Births, Deaths and Marriages.

Propensity to identify in the Census can be seen as a social issue, primarily reflecting the social attitude Indigenous people have about making what amounts to public statements about their heritage. Propensity to identify on death certificates is considerably lower than in the Census because the person completing the death certificate (usually a funeral director or doctor) may not know if the deceased is of Indigenous origin, and may be reluctant or unable to ask relatives.

PROPENSITY TO IDENTIFY AS INDIGENOUS *continued*

The difference in the propensity to identify between the Census and the death certificates represents a problem with data quality, indicating that the number of registered Indigenous deaths is an undercount of the true number.

NUMBERS OF DEATHS—COVERAGE

The total number of Indigenous deaths registered in 1998 (2,100) is around 92% of the number expected from the 1991 Census-based experimental projections, and 61% of the number of deaths expected from the 1996 Census-based experimental projections (see table 4.1). This represents an improvement of around 25% on the registration coverage estimated in 1997. The variation between the estimated 1991 and 1996 Census-based coverages can be primarily attributed to two factors: the change in propensity to identify as Indigenous on census forms between the 1991 and 1996 Censuses, and the method used to estimate the death rates applied in the projections. In particular, the method used to estimate the death rates is very sensitive to the inputs used so that the resulting projected deaths are quite volatile. Given this volatility, and the experimental nature of the base populations, the estimates of coverage in table 4.1 are only indicative. For example, the 378 Indigenous deaths registered in Western Australia in 1998 have an estimated coverage of 95% using 1991 Census-based projections and 74% using 1996 Census-based projections. Therefore, actual coverage of death registrations is likely to lie within the 74%–95% range, although possibly outside it. Given this uncertainty, over-precise analysis based on either death registrations or projected deaths should be avoided.

While overall there was considerably better coverage in 1998 than in the past, there is a high degree of variability in the coverage among the States and Territories. Prior to 1998, only South Australia, Western Australia and the Northern Territory had a relatively high level of coverage. In 1998, Queensland's coverage of Indigenous deaths approached the level of coverage in the areas with traditionally high coverage, following the introduction of a new *Death Information Form* in 1996–97 which included an Indigenous question. New South Wales and Victorian coverage have also improved markedly from previous years, although they remain relatively low. While Tasmania has not provided adequate Indigenous deaths data to date, it is expected that a new *Notice of Death* form will help address this problem when it is introduced in 2000. The ongoing efforts to improve the level of identification on death certificates (such as improved form design and awareness raising) should see further improvement in the coverage of Indigenous death registrations.

In this chapter the number of deaths registered of usual residents in each State and Territory has been published (Table 4.1). However, because of the data quality issues described above, more detailed breakdowns of Indigenous deaths are provided only for Queensland, South Australia, Western Australia and the Northern Territory. Together these States are estimated to have 97% of Indigenous deaths registered from the expected deaths in the 1991 Census-based projections, and 72% covered from the expected deaths in the 1996 Census-based projections.

DELAY IN REGISTRATION

All data in this chapter are based on period of registration, i.e. those deaths that were registered in 1998, regardless of when they occurred. One reason this has been done is because of the delay in registration for some deaths. The allowable time to register a death varies between States and Territories, usually either 28 or 60 days after the death.

Of all the deaths registered in 1998, only 1% were registered more than two months after death, and less than 0.1% more than 12 months after the death. However, 10% of Indigenous deaths registered in 1998 were registered more than two months after the death, and 1.2% more than 12 months after.

4.1 DEATHS OF INDIGENOUS PEOPLE, SUMMARY

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.(a)*
DEATHS REGISTERED AS INDIGENOUS									
1988	206	39	6	106	322	—	479	—	1,158
1989	189	29	3	139	329	3	422	—	1,115
1990	201	42	4	118	322	—	393	—	1,082
1991	206	50	—	135	401	3	412	—	1,208
1992	165	53	—	107	346	5	397	—	1,074
1993	194	50	—	111	386	6	376	9	1,134
1994	207	50	—	123	377	3	380	10	1,153
1995	224	50	—	121	384	3	387	9	1,182
1996	177	49	258	118	370	—	328	5	1,306
1997	88	93	531	132	351	5	458	4	1,662
1998	462	123	593	127	378	13	415	3	2,114
EXPECTED INDIGENOUS DEATHS (1991 Census-based experimental projections)(b)									
1993	501	109	587	121	377	52	364	8	2,120
1994	509	111	595	124	382	52	368	9	2,152
1995	518	113	604	126	385	54	374	10	2,185
1996	528	114	613	128	390	56	379	10	2,220
1997	537	116	623	131	394	57	386	11	2,257
1998	547	118	634	133	400	59	391	11	2,293
EXPECTED INDIGENOUS DEATHS (1996 Census-based experimental estimates and projections)(c)									
1993	901	202	862	178	477	115	434	15	3,191
1994	916	206	874	183	484	115	439	16	3,239
1995	932	209	887	186	488	119	446	18	3,289
1996	950	211	900	189	494	124	452	18	3,341
1997	966	215	915	193	499	126	460	20	3,394
1998	984	219	936	199	509	130	471	21	3,469
ESTIMATED COVERAGE OF INDIGENOUS DEATHS (1991 Census-based expectancies) (%)									
1993	39	46	—	92	102	12	103	113	53
1994	41	45	—	99	99	6	103	111	54
1995	43	44	—	96	100	6	103	90	54
1996	34	43	42	92	95	—	87	50	59
1997	16	80	85	101	89	9	119	36	74
1998	84	104	94	95	95	22	106	27	92
ESTIMATED COVERAGE OF INDIGENOUS DEATHS (1996 Census-based expectancies) (%)									
1993	22	25	—	62	81	5	87	62	36
1994	23	24	—	67	78	3	87	61	36
1995	24	24	—	65	79	3	87	50	36
1996	19	23	29	63	75	—	73	28	39
1997	9	43	58	68	70	4	100	20	49
1998	47	56	63	64	74	10	88	14	61

(a) Includes 'Other Territories' from 1993.
(b) Source: ABS, *Experimental Projections of the Aboriginal and Torres Strait Islander Population, 30 June 1991–30 June 2001* (Cat. no. 3231.0), medium series.
(c) Source: 1992–96 estimates from *Experimental Estimates of the Aboriginal and Torres Strait Islander Population,1991–1996* (Cat. no. 3230.0). 1997 and 1998 projections from *Experimental Projections of the Aboriginal and Torres Strait Islander Population, 30 June 1996–30 June 2006* (Cat. no. 3231.0).

4.2 INDIGENOUS AND TOTAL REGISTERED DEATHS, SELECTED DETAILS, QUEENSLAND(a)

Selected details	Indigenous persons			Non-Indigenous persons	All persons
	Males	Females	Persons		
Total deaths	**349**	**244**	**593**	**21,728**	**22,321**
Age at death (years)					
0	27	15	42	257	299
1-14	12	6	18	146	164
15-24	32	7	39	312	351
25-34	46	20	66	420	486
35-44	47	27	74	646	720
45-54	53	31	84	1,190	1,274
55-64	53	47	100	2,084	2,184
65 and over	79	91	170	16,673	16,843
Not stated	—	—	—	—	—
Median age at death (years)	47.0	59.4	52.1	77.0	76.6
Standardised mortality ratio (SMR)(b)	2.6	2.5	2.5	n.a.	1.0
Principal causes of death					
Infectious and parasitic diseases (001–139)	8	4	12	176	188
Neoplasms (140–239)	48	40	88	6,135	6,223
Malignant neoplasms (140–208)	46	39	85	6,047	6,132
Other (remainder of 140–239)	—	—	3	88	91
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	32	27	59	623	682
Diabetes mellitus (250)	31	24	55	442	497
Other (remainder of 240–279)	—	3	4	181	185
Mental disorders (290–319)	—	5	7	459	466
Diseases of the circulatory system (390–459)	91	100	191	8,746	8,937
Ischaemic heart disease (410–414)	65	57	122	5,124	5,246
Other heart disease (393–398, 402, 404, 415, 416, 420–429)	11	18	29	997	1,026
Cerebrovascular disease (stroke) (430–438)	10	20	30	1,989	2,019
Other (remainder of 390–459)	5	5	10	636	646
Diseases of the respiratory system (460-519)	29	13	42	2,054	2,096
Diseases of the digestive system (520–579)	10	9	19	662	681
Diseases of the genitourinary system (580–629)	7	4	11	397	408
Congenital anomalies (740–759)	6	4	10	129	139
Certain conditions originating in the perinatal period (760–779)	17	6	23	117	140
External causes (800–999)	83	19	102	1,458	1,560
Motor vehicle traffic accidents (810–819)	12	4	16	271	287
Suicide (950–959)	39	5	44	535	579
Other external causes (remainder of 800–999)	32	10	42	652	694

(a) 1998 coverage of Indigenous deaths in Queensland has been estimated at 94% on 1991 Census based projections and 63% on 1996 Census-based projections. See Table 4.1.

(b) SMR is equal to the observed deaths divided by the expected deaths if the Indigenous population experienced the age and sex specific rates for the total Queensland population in 1998. The Indigenous population used for the SMR is the Indigenous population from the *Experimental Projections of the Aboriginal and Torres Strait Islander Population, 30 June 1996–30 June 2006* (Cat. no. 3231.0), low series.

4.2 INDIGENOUS AND TOTAL REGISTERED DEATHS, SELECTED DETAILS, SOUTH AUSTRALIA(a)

	Indigenous persons			*Non-Indigenous persons*	*All persons*
Selected details	*Males*	*Females*	*Persons*		
Total deaths	**74**	**53**	**127**	**11,587**	**11,714**
Age at death (years)					
0	—	—	3	70	73
1-14	—	3	4	45	49
15-24	9	—	11	132	143
25-34	13	3	16	202	218
35-44	14	8	22	286	308
45-54	8	10	18	541	559
55-64	8	10	18	930	948
65 and over	20	15	35	9,379	9,414
Not stated	—	—	—	—	—
Median age at death (years)	44.5	53.0	47.7	78.6	78.4
Standardised mortality ratio (SMR)(b)	2.7	2.7	2.7	n.a.	1.0
Principal causes of death					
Infectious and parasitic diseases (001–139)	—	—	—	129	130
Neoplasms (140–239)	9	9	18	3,084	3,102
Malignant neoplasms (140–208)	8	9	17	3,031	3,048
Other (remainder of 140–239)	—	—	—	53	54
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	5	3	8	358	366
Diabetes mellitus (250)	4	3	7	243	250
Other (remainder of 240–279)	—	—	—	115	116
Mental disorders (290–319)	5	—	5	270	275
Diseases of the circulatory system (390–459)	20	15	35	4,793	4,828
Ischaemic heart disease (410–414)	13	9	22	2,695	2,717
Other heart disease (393–398, 402, 404, 415, 416, 420–429)	3	—	4	702	706
Cerebrovascular disease (stroke) (430–438)	—	5	7	1,068	1,075
Other (remainder of 390–459)	5	—	6	1,030	1,036
Diseases of the respiratory system (460-519)	5	9	14	1,269	1,283
Diseases of the digestive system (520–579)	4	4	8	390	398
Diseases of the genitourinary system (580–629)	—	—	—	215	216
Congenital anomalies (740–759)	—	—	—	37	39
Certain conditions originating in the perinatal period (760–779)	—	—	—	32	32
External causes (800–999)	19	8	27	620	647
Motor vehicle traffic accidents (810–819)	4	—	6	155	161
Suicide (950–959)	7	—	9	235	244
Other external causes (remainder of 800–999)	8	4	12	230	242

(a) 1998 coverage of Indigenous deaths in South Australia has been estimated at 95% on 1991 Census based projections and 64% on 1996 Census-based projections. See Table 4.1.

(b) SMR is equal to the observed deaths divided by the expected deaths if the Indigenous population experienced the age and sex specific rates for the total South Australia population in 1998. The Indigenous population used for the SMR is the Indigenous population from the *Experimental Projections of the Aboriginal and Torres Strait Islander Population, 30 June 1996–30 June 2006* (Cat. no. 3231.0), low series.

4.2 INDIGENOUS AND TOTAL REGISTERED DEATHS, SELECTED DETAILS, WESTERN AUSTRALIA(a)

	Indigenous persons			*Non-Indigenous*	
Selected details	*Males*	*Females*	*Persons*	*persons*	*All persons*
Total deaths	**230**	**148**	**378**	**10,286**	**10,664**
Age at death (years)					
0	16	9	25	98	123
1-14	—	4	6	57	63
15-24	23	11	34	192	226
25-34	31	12	43	266	309
35-44	43	18	61	326	387
45-54	25	16	41	525	566
55-64	31	24	55	923	978
65 and over	59	54	113	7,899	8,012
Not stated	—	—	—	—	—
Median age at death (years)	45.5	57.5	51.3	77.3	76.9
Standardised mortality ratio (SMR)(b)	3.2	2.9	3.1	n.a.	1.0
Principal causes of death					
Infectious and parasitic diseases (001–139)	—	—	—	100	101
Neoplasms (140–239)	24	21	45	2,929	2,974
Malignant neoplasms (140–208)	24	21	45	2,895	2,940
Other (remainder of 140–239)	—	—	—	34	34
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	15	13	28	287	315
Diabetes mellitus (250)	8	12	20	208	228
Other (remainder of 240–279)	7	—	8	79	87
Mental disorders (290–319)	9	6	15	252	267
Diseases of the circulatory system (390–459)	61	45	106	3,895	4,001
Ischaemic heart disease (410–414)	44	21	65	2,095	2,160
Other heart disease (393–398, 402, 404, 415, 416, 420–429)	6	14	20	580	600
Cerebrovascular disease (stroke) (430–438)	10	9	19	946	965
Other (remainder of 390–459)	—	—	—	274	276
Diseases of the respiratory system (460-519)	23	18	41	940	981
Diseases of the digestive system (520–579)	8	9	17	323	340
Diseases of the genitourinary system (580–629)	4	7	11	188	199
Congenital anomalies (740–759)	—	—	—	55	57
Certain conditions originating in the perinatal period (760–779)	5	—	6	36	42
External causes (800–999)	49	15	64	809	873
Motor vehicle traffic accidents (810–819)	16	7	23	174	197
Suicide (950–959)	18	—	20	267	287
Other external causes (remainder of 800–999)	15	6	21	368	389

(a) 1998 coverage of Indigenous deaths in Western Australia has been estimated at 95% on 1991 Census based projections and 74% on 1996 Census-based projections. See Table 4.1.

(b) SMR is equal to the observed deaths divided by the expected deaths if the Indigenous population experienced the age and sex specific rates for the total Western Australia population in 1998. The Indigenous population used for the SMR is the Indigenous population from the *Experimental Projections of the Aboriginal and Torres Strait Islander Population, 30 June 1996–30 June 2006* (Cat. no. 3231.0), low series.

4.2 INDIGENOUS AND TOTAL REGISTERED DEATHS, SELECTED DETAILS, NORTHERN TERRITORY(a)

	Indigenous persons			*Non-Indigenous persons*	*All persons*
Selected details	*Males*	*Females*	*Persons*		
Total deaths	**229**	**186**	**415**	**456**	**871**
Age at death (years)					
0	13	16	29	16	45
1-14	8	3	11	5	16
15-24	18	11	29	23	52
25-34	26	16	42	41	83
35-44	47	33	80	44	124
45-54	42	29	71	70	141
55-64	28	28	56	67	123
65 and over	47	50	97	190	287
Not stated	—	—	—	—	—
Median age at death (years)	45.6	49.8	46.7	61.0	53.6
Standardised mortality ratio (SMR)(b)	2.1	2.0	2.0	n.a.	1.0
Principal causes of death					
Infectious and parasitic diseases (001–139)	6	5	11	8	19
Neoplasms (140–239)	27	20	47	108	155
Malignant neoplasms (140–208)	27	19	46	106	152
Other (remainder of 140–239)	—	—	—	—	3
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	9	22	31	16	47
Diabetes mellitus (250)	8	17	25	12	37
Other (remainder of 240–279)	—	5	6	4	10
Mental disorders (290–319)	3	5	8	15	23
Diseases of the circulatory system (390–459)	68	47	115	115	230
Ischaemic heart disease (410–414)	36	21	57	61	118
Other heart disease (393–398, 402, 404, 415, 416, 420–429)	18	12	30	23	53
Cerebrovascular disease (stroke) (430–438)	13	8	21	22	43
Other (remainder of 390–459)	—	6	7	9	16
Diseases of the respiratory system (460-519)	33	28	61	33	94
Diseases of the digestive system (520–579)	11	6	17	18	35
Diseases of the genitourinary system (580–629)	5	10	15	4	19
Congenital anomalies (740–759)	3	6	9	5	14
Certain conditions originating in the perinatal period (760–779)	4	6	10	10	20
External causes (800–999)	49	27	76	109	185
Motor vehicle traffic accidents (810–819)	23	7	30	43	73
Suicide (950–959)	8	3	11	31	42
Other external causes (remainder of 800–999)	18	17	35	35	70

(a) 1998 coverage of Indigenous deaths in Northern Territory has been estimated at 106% on 1991 Census based projections and 88% on 1996 Census-based projections. See Table 4.1.

(b) SMR is equal to the observed deaths divided by the expected deaths if the Indigenous population experienced the age and sex specific rates for the total Northern Territory population in 1998. The Indigenous population used for the SMR is the Indigenous population from the *Experimental Projections of the Aboriginal and Torres Strait Islander Population, 30 June 1996–30 June 2006* (Cat. no. 3231.0), low series.

SECTION 5 LIFE TABLES

THE LIFE TABLE

A life table is a statistical model used to show the levels of mortality of a population at different ages. In its simplest form, a life table is generated from age-specific mortality rates and the resulting values are used to measure mortality, survivorship and life expectancy. However, it is a powerful tool with many applications beyond the measurement of mortality.

The life tables in this publication are current or period life tables, based on mortality rates for a short period of time during which mortality has remained much the same. Mortality rates for both the Australian and State life tables are based on 1996–98 data, while Indigenous life tables are based on the five-year period of 1991–96.

Life tables may be complete or abridged, depending on the age interval used in their compilation. Complete life tables such as those for Australia and the Indigenous population contain data by single years of age, while abridged life tables contain data for five-year age groups. Life tables are presented separately for each sex.

The life table depicts the mortality experience of a hypothetical group of newborn babies throughout their entire lifetime. It is based on the assumption that this group is subject to the age-specific mortality rates of the reference period. Typically this hypothetical group is 100,000 in size.

To construct a life table, data on population, deaths and births are needed. Mortality rates have been smoothed to avoid fluctuations in the data. The life tables presented here contain four columns of interrelated information. These functions are:

q_x — the mortality rate. The probability of dying between exact ages x and $x+1$. All other functions of the life table are derived from q_x;

l_x — the number of survivors to exact age x;

L_x — the number of person-years that would be lived within the age interval x and $x+1$;

e^0_x — life expectancy. The average remaining lifetime (in years) for persons who survive to exact age x.

5.1 AUSTRALIAN LIFE TABLE—1996–98

MALES

Age	*lx*	*qx*	*Lx*	*e°x*	*Age*	*lx*	*qx*	*Lx*	*e°x*
0	100,000	0.00595	99,484	75.86	50	93,865	0.00345	93,705	28.80
1	99,405	0.00057	99,374	75.31	51	93,540	0.00381	93,365	27.90
2	99,349	0.00039	99,328	74.36	52	93,184	0.00422	92,991	27.01
3	99,310	0.00030	99,295	73.38	53	92,791	0.00468	92,577	26.12
4	99,280	0.00024	99,268	72.41	54	92,357	0.00521	92,120	25.24
5	99,257	0.00019	99,247	71.42	55	91,875	0.00581	91,613	24.37
6	99,238	0.00016	99,230	70.44	56	91,341	0.00648	91,050	23.51
7	99,222	0.00014	99,215	69.45	57	90,749	0.00724	90,427	22.66
8	99,208	0.00014	99,201	68.46	58	90,093	0.00808	89,735	21.82
9	99,194	0.00014	99,188	67.47	59	89,365	0.00901	88,969	20.99
10	99,181	0.00014	99,174	66.48	60	88,560	0.01004	88,122	20.18
11	99,167	0.00015	99,159	65.49	61	87,671	0.01117	87,189	19.38
12	99,151	0.00017	99,143	64.50	62	86,691	0.01243	86,161	18.59
13	99,134	0.00021	99,124	63.51	63	85,614	0.01381	85,031	17.82
14	99,114	0.00029	99,100	62.52	64	84,431	0.01535	83,793	17.06
15	99,085	0.00043	99,065	61.54	65	83,135	0.01704	82,438	16.32
16	99,042	0.00061	99,014	60.56	66	81,719	0.01891	80,957	15.60
17	98,982	0.00081	98,944	59.60	67	80,174	0.02097	79,345	14.89
18	98,903	0.00099	98,855	58.65	68	78,492	0.02323	77,593	14.19
19	98,805	0.00113	98,750	57.71	69	76,669	0.02571	75,696	13.52
20	98,693	0.00121	98,634	56.77	70	74,697	0.02843	73,649	12.86
21	98,574	0.00125	98,512	55.84	71	72,574	0.03138	71,448	12.23
22	98,451	0.00125	98,389	54.91	72	70,297	0.03459	69,094	11.60
23	98,327	0.00125	98,266	53.98	73	67,865	0.03808	66,586	11.00
24	98,204	0.00125	98,143	53.04	74	65,281	0.04191	63,925	10.42
25	98,081	0.00126	98,020	52.11	75	62,545	0.04616	61,113	9.85
26	97,957	0.00128	97,895	51.17	76	59,657	0.05090	58,151	9.30
27	97,832	0.00129	97,769	50.24	77	56,621	0.05619	55,042	8.78
28	97,706	0.00131	97,642	49.30	78	53,439	0.06211	51,791	8.27
29	97,578	0.00132	97,513	48.37	79	50,120	0.06870	48,408	7.78
30	97,449	0.00134	97,383	47.43	80	46,677	0.07599	44,911	7.32
31	97,318	0.00136	97,252	46.49	81	43,130	0.08399	41,323	6.88
32	97,186	0.00138	97,119	45.56	82	39,507	0.09270	37,678	6.47
33	97,052	0.00140	96,984	44.62	83	35,845	0.10211	34,013	6.08
34	96,915	0.00143	96,846	43.68	84	32,185	0.11224	30,373	5.71
35	96,777	0.00146	96,707	42.74	85	28,572	0.12308	26,804	5.37
36	96,636	0.00149	96,564	41.80	86	25,055	0.13463	23,355	5.05
37	96,492	0.00153	96,418	40.87	87	21,682	0.14687	20,072	4.76
38	96,344	0.00158	96,268	39.93	88	18,498	0.15980	16,999	4.49
39	96,192	0.00164	96,114	38.99	89	15,542	0.17329	14,172	4.26
40	96,034	0.00170	95,953	38.05	90	12,848	0.18683	11,623	4.05
41	95,871	0.00178	95,786	37.12	91	10,448	0.19984	9,377	3.86
42	95,700	0.00188	95,611	36.18	92	8,360	0.21173	7,449	3.71
43	95,520	0.00199	95,426	35.25	93	6,590	0.22229	5,833	3.57
44	95,331	0.00211	95,231	34.32	94	5,125	0.23064	4,512	3.45
45	95,129	0.00226	95,023	33.39	95	3,943	0.23770	3,456	3.34
46	94,914	0.00244	94,799	32.47	96	3,006	0.24543	2,622	3.24
47	94,682	0.00264	94,559	31.54	97	2,268	0.25383	1,968	3.13
48	94,432	0.00288	94,298	30.63	98	1,692	0.26164	1,461	3.03
49	94,161	0.00314	94,015	29.71	99	1,250	0.26960	1,073	2.94

l*x* number of persons at exact age *x*
q*x* proportion dying between exact age *x* and exact age *x* + 1
L*x* number of persons surviving at age *x* last birthday
e°*x* expectation of life at exact age *x*

5.1 AUSTRALIAN LIFE TABLE—1996–98—*continued*

Age	*lx*	*qx*	*Lx*	$e^{o}x$	*Age*	*lx*	*qx*	*Lx*	$e^{o}x$
				FEMALES					
0	100,000	0.00481	99,578	81.52	50	96,736	0.00224	96,630	33.25
1	99,519	0.00045	99,495	80.91	51	96,520	0.00247	96,402	32.32
2	99,475	0.00026	99,459	79.95	52	96,281	0.00272	96,152	31.40
3	99,449	0.00022	99,438	78.97	53	96,019	0.00300	95,878	30.48
4	99,428	0.00018	99,419	77.99	54	95,731	0.00330	95,576	29.57
5	99,410	0.00015	99,403	77.00	55	95,416	0.00362	95,245	28.67
6	99,396	0.00012	99,389	76.01	56	95,070	0.00398	94,883	27.77
7	99,384	0.00011	99,378	75.02	57	94,691	0.00436	94,488	26.88
8	99,373	0.00010	99,368	74.03	58	94,278	0.00478	94,057	26.00
9	99,363	0.00010	99,358	73.04	59	93,828	0.00522	93,587	25.12
10	99,353	0.00011	99,347	72.04	60	93,338	0.00572	93,075	24.25
11	99,342	0.00012	99,336	71.05	61	92,805	0.00626	92,518	23.39
12	99,330	0.00013	99,324	70.06	62	92,224	0.00685	91,913	22.53
13	99,317	0.00016	99,309	69.07	63	91,592	0.00750	91,254	21.68
14	99,301	0.00020	99,291	68.08	64	90,905	0.00823	90,536	20.84
15	99,281	0.00025	99,269	67.09	65	90,156	0.00905	89,754	20.01
16	99,256	0.00030	99,242	66.11	66	89,340	0.00998	88,901	19.19
17	99,227	0.00034	99,210	65.13	67	88,449	0.01102	87,969	18.38
18	99,193	0.00037	99,175	64.15	68	87,474	0.01220	86,948	17.58
19	99,156	0.00039	99,137	63.17	69	86,407	0.01352	85,831	16.79
20	99,117	0.00039	99,098	62.20	70	85,238	0.01501	84,608	16.01
21	99,078	0.00039	99,059	61.22	71	83,958	0.01668	83,269	15.25
22	99,040	0.00038	99,021	60.25	72	82,558	0.01857	81,803	14.50
23	99,003	0.00037	98,985	59.27	73	81,024	0.02074	80,197	13.76
24	98,966	0.00037	98,948	58.29	74	79,344	0.02321	78,437	13.04
25	98,929	0.00038	98,911	57.31	75	77,502	0.02605	76,508	12.34
26	98,892	0.00040	98,872	56.33	76	75,483	0.02929	74,394	11.66
27	98,853	0.00041	98,832	55.36	77	73,272	0.03298	72,081	10.99
28	98,812	0.00043	98,791	54.38	78	70,855	0.03716	69,557	10.35
29	98,770	0.00045	98,748	53.40	79	68,222	0.04187	66,813	9.73
30	98,725	0.00048	98,701	52.43	80	65,366	0.04714	63,844	9.13
31	98,677	0.00051	98,652	51.45	81	62,285	0.05303	60,652	8.56
32	98,627	0.00055	98,600	50.48	82	58,982	0.05964	57,240	8.01
33	98,573	0.00058	98,544	49.50	83	55,464	0.06707	53,620	7.49
34	98,515	0.00062	98,485	48.53	84	51,744	0.07543	49,807	6.99
35	98,454	0.00066	98,422	47.56	85	47,841	0.08482	45,823	6.52
36	98,390	0.00070	98,356	46.59	86	43,783	0.09532	41,704	6.08
37	98,321	0.00074	98,285	45.63	87	39,610	0.10696	37,494	5.66
38	98,248	0.00079	98,210	44.66	88	35,373	0.11959	33,254	5.28
39	98,170	0.00085	98,129	43.69	89	31,143	0.13301	29,061	4.93
40	98,087	0.00091	98,043	42.73	90	27,000	0.14704	24,997	4.61
41	97,998	0.00098	97,950	41.77	91	23,030	0.16149	21,147	4.32
42	97,901	0.00107	97,850	40.81	92	19,311	0.17618	17,581	4.06
43	97,797	0.00116	97,741	39.85	93	15,909	0.19099	14,358	3.82
44	97,683	0.00127	97,622	38.90	94	12,870	0.20547	11,515	3.61
45	97,559	0.00139	97,493	37.95	95	10,226	0.21923	9,072	3.41
46	97,424	0.00152	97,351	37.00	96	7,984	0.23243	7,025	3.24
47	97,276	0.00168	97,195	36.06	97	6,128	0.24567	5,348	3.07
48	97,113	0.00184	97,024	35.12	98	4,623	0.25949	3,999	2.91
49	96,933	0.00203	96,836	34.18	99	3,423	0.27383	2,934	2.76

l*x* number of persons at exact age *x*
q*x* proportion dying between exact age *x* and exact age *x* + 1
L*x* number of persons surviving at age *x* last birthday
$e^{o}x$ expectation of life at exact age *x*

5.2 EXPERIMENTAL LIFE TABLE OF ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE—1991–96

MALES

Age	*lx*	*qx*	*Lx*	*e°x*	*Age*	*lx*	*qx*	*Lx*	*e°x*
0	100,000	0.02572	98,071	56.87	50	68,762	0.02373	67,946	17.60
1	97,428	0.00274	97,268	57.37	51	67,130	0.02531	66,281	17.01
2	97,161	0.00134	97,096	56.52	52	65,431	0.02699	64,548	16.44
3	97,031	0.00094	96,985	55.60	53	63,666	0.02878	62,750	15.88
4	96,940	0.00067	96,907	54.65	54	61,833	0.03067	60,885	15.34
5	96,875	0.00049	96,851	53.69	55	59,937	0.03269	58,957	14.81
6	96,827	0.00042	96,807	52.71	56	57,978	0.03482	56,968	14.29
7	96,786	0.00040	96,767	51.74	57	55,959	0.03706	54,922	13.79
8	96,747	0.00040	96,728	50.76	58	53,885	0.03944	52,823	13.30
9	96,708	0.00040	96,689	49.78	59	51,760	0.04193	50,675	12.83
10	96,669	0.00042	96,649	48.80	60	49,590	0.04456	48,485	12.37
11	96,628	0.00047	96,606	47.82	61	47,380	0.04733	46,259	11.92
12	96,583	0.00054	96,557	46.84	62	45,138	0.05022	44,004	11.49
13	96,531	0.00065	96,500	45.86	63	42,871	0.05326	41,729	11.07
14	96,469	0.00085	96,428	44.89	64	40,587	0.05644	39,442	10.66
15	96,387	0.00123	96,328	43.93	65	38,297	0.05976	37,153	10.27
16	96,269	0.00203	96,171	42.98	66	36,008	0.06323	34,870	9.89
17	96,073	0.00271	95,943	42.07	67	33,732	0.06685	32,604	9.53
18	95,813	0.00320	95,660	41.18	68	31,477	0.07062	30,365	9.17
19	95,507	0.00365	95,333	40.31	69	29,254	0.07454	28,164	8.83
20	95,158	0.00408	94,964	39.46	70	27,073	0.07862	26,009	8.50
21	94,770	0.00447	94,558	38.62	71	24,945	0.08285	23,912	8.19
22	94,346	0.00485	94,118	37.79	72	22,878	0.08725	21,880	7.88
23	93,889	0.00521	93,645	36.97	73	20,882	0.09181	19,924	7.59
24	93,400	0.00555	93,141	36.16	74	18,965	0.09652	18,050	7.30
25	92,882	0.00588	92,609	35.36	75	17,134	0.10141	16,266	7.03
26	92,335	0.00621	92,049	34.57	76	15,397	0.10646	14,577	6.77
27	91,762	0.00654	91,462	33.78	77	13,758	0.11167	12,990	6.51
28	91,161	0.00688	90,848	33.00	78	12,222	0.11705	11,506	6.27
29	90,535	0.00722	90,208	32.23	79	10,791	0.12260	10,130	6.04
30	89,881	0.00757	89,541	31.46	80	9,468	0.12831	8,861	5.81
31	89,201	0.00794	88,847	30.69	81	8,253	0.13420	7,699	5.59
32	88,493	0.00833	88,125	29.93	82	7,146	0.14025	6,645	5.38
33	87,756	0.00874	87,372	29.18	83	6,143	0.14648	5,694	5.18
34	86,989	0.00919	86,589	28.43	84	5,244	0.15287	4,843	4.98
35	86,190	0.00967	85,773	27.69	85	4,442	0.15943	4,088	4.79
36	85,356	0.01018	84,922	26.96	86	3,734	0.16615	3,424	4.60
37	84,487	0.01074	84,033	26.23	87	3,113	0.17305	2,844	4.42
38	83,579	0.01135	83,105	25.51	88	2,575	0.18011	2,343	4.24
39	82,631	0.01200	82,135	24.80	89	2,111	0.18734	1,913	4.06
40	81,639	0.01271	81,120	24.09	90	1,715	0.19474	1,548	3.88
41	80,601	0.01348	80,058	23.40	91	1,381	0.20229	1,242	3.69
42	79,515	0.01431	78,946	22.71	92	1,102	0.21001	986	3.50
43	78,377	0.01521	77,780	22.03	93	871	0.21789	776	3.30
44	77,184	0.01618	76,560	21.36	94	681	0.22593	604	3.08
45	75,935	0.01723	75,281	20.71	95	527	0.23413	465	2.84
46	74,627	0.01835	73,942	20.06	96	404	0.24248	355	2.55
47	73,257	0.01956	72,540	19.43	97	306	0.25098	267	2.21
48	71,824	0.02086	71,075	18.81	98	229	0.25964	199	1.78
49	70,326	0.02224	69,544	18.20	99	170	0.26844	147	1.23

l*x* number of persons at exact age *x*
q*x* proportion dying between exact age *x* and exact age *x* + 1
L*x* number of persons surviving at age *x* last birthday
e°*x* expectation of life at exact age *x*

5.2 EXPERIMENTAL LIFE TABLE OF ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE—1991–96—*continued*

FEMALES

Age	*lx*	*qx*	*Lx*	$e^{o}x$	*Age*	*lx*	*qx*	*Lx*	$e^{o}x$
0	100,000	0.02282	98,289	61.66	50	76,870	0.01786	76,184	20.19
1	97,718	0.00199	97,601	62.10	51	75,497	0.01917	74,774	19.55
2	97,523	0.00094	97,477	61.22	52	74,050	0.02057	73,289	18.92
3	97,432	0.00066	97,399	60.28	53	72,527	0.02205	71,728	18.31
4	97,367	0.00048	97,344	59.32	54	70,928	0.02363	70,090	17.71
5	97,320	0.00037	97,302	58.34	55	69,252	0.02529	68,376	17.13
6	97,284	0.00033	97,268	57.37	56	67,501	0.02706	66,587	16.56
7	97,252	0.00031	97,237	56.38	57	65,674	0.02892	64,725	16.01
8	97,222	0.00031	97,207	55.40	58	63,775	0.03088	62,791	15.47
9	97,192	0.00031	97,177	54.42	59	61,806	0.03294	60,788	14.94
10	97,162	0.00032	97,146	53.44	60	59,770	0.03510	58,721	14.44
11	97,131	0.00035	97,114	52.45	61	57,672	0.03737	56,595	13.94
12	97,097	0.00039	97,078	51.47	62	55,517	0.03974	54,414	13.47
13	97,059	0.00046	97,036	50.49	63	53,311	0.04223	52,185	13.00
14	97,014	0.00059	96,985	49.51	64	51,060	0.04482	49,915	12.55
15	96,956	0.00083	96,916	48.54	65	48,771	0.04752	47,612	12.12
16	96,876	0.00130	96,813	47.58	66	46,454	0.05033	45,285	11.70
17	96,749	0.00176	96,664	46.64	67	44,116	0.05326	42,941	11.29
18	96,579	0.00209	96,478	45.73	68	41,766	0.05629	40,591	10.90
19	96,377	0.00238	96,262	44.82	69	39,415	0.05944	38,244	10.52
20	96,148	0.00264	96,021	43.93	70	37,072	0.06270	35,910	10.15
21	95,894	0.00288	95,756	43.04	71	34,748	0.06608	33,600	9.80
22	95,618	0.00311	95,469	42.16	72	32,451	0.06957	31,323	9.46
23	95,320	0.00333	95,161	41.29	73	30,194	0.07317	29,089	9.13
24	95,002	0.00354	94,834	40.43	74	27,985	0.07689	26,909	8.81
25	94,666	0.00375	94,488	39.57	75	25,833	0.08071	24,790	8.50
26	94,311	0.00396	94,124	38.72	76	23,748	0.08465	22,743	8.20
27	93,938	0.00416	93,742	37.87	77	21,738	0.08870	20,773	7.91
28	93,547	0.00438	93,342	37.03	78	19,809	0.09286	18,890	7.64
29	93,137	0.00461	92,922	36.19	79	17,970	0.09713	17,097	7.37
30	92,708	0.00485	92,483	35.35	80	16,225	0.10150	15,401	7.10
31	92,258	0.00510	92,023	34.52	81	14,578	0.10599	13,805	6.85
32	91,788	0.00538	91,541	33.70	82	13,033	0.11057	12,312	6.60
33	91,294	0.00569	91,034	32.88	83	11,592	0.11527	10,924	6.36
34	90,775	0.00602	90,502	32.06	84	10,255	0.12006	9,640	6.13
35	90,229	0.00638	89,941	31.25	85	9,024	0.12496	8,460	5.89
36	89,653	0.00677	89,349	30.45	86	7,897	0.12996	7,383	5.66
37	89,046	0.00721	88,725	29.66	87	6,870	0.13506	6,406	5.44
38	88,404	0.00769	88,064	28.87	88	5,942	0.14026	5,526	5.21
39	87,724	0.00821	87,364	28.09	89	5,109	0.14556	4,737	4.97
40	87,004	0.00878	86,622	27.31	90	4,365	0.15096	4,036	4.74
41	86,241	0.00940	85,835	26.55	91	3,706	0.15646	3,416	4.49
42	85,430	0.01008	84,999	25.80	92	3,126	0.16206	2,873	4.23
43	84,569	0.01081	84,112	25.06	93	2,620	0.16776	2,400	3.95
44	83,655	0.01161	83,169	24.33	94	2,180	0.17357	1,991	3.65
45	82,683	0.01247	82,168	23.61	95	1,802	0.17947	1,640	3.31
46	81,652	0.01340	81,105	22.90	96	1,478	0.18548	1,341	2.92
47	80,558	0.01440	79,978	22.20	97	1,204	0.19161	1,089	2.48
48	79,398	0.01547	78,784	21.52	98	973	0.19759	877	1.94
49	78,169	0.01663	77,520	20.85	99	781	0.23239	701	1.30

l*x* number of persons at exact age *x*
q*x* proportion dying between exact age *x* and exact age *x* + 1
L*x* number of persons surviving at age *x* last birthday
$e^{o}x$ expectation of life at exact age *x*

5.3 EXPECTATION OF LIFE, AUSTRALIA(a)

	Age (years)									
Selected years	*0*	*1*	*10*	*20*	*30*	*40*	*50*	*60*	*70*	*80*
					MALES					
1978	70.24	70.21	61.50	51.99	42.77	33.37	24.51	16.73	10.52	6.13
1983	72.13	71.89	63.16	53.55	44.26	34.77	25.70	17.72	11.18	6.45
1988	73.10	72.82	64.02	54.43	45.20	35.79	26.66	18.39	11.62	6.75
1993	74.99	74.50	65.70	55.98	46.60	37.20	27.97	19.49	12.38	7.03
1994	75.00	74.53	65.70	56.00	46.60	37.21	27.99	19.43	12.29	6.95
1993-95	74.95	74.48	65.66	55.94	46.57	37.19	27.97	19.45	12.35	6.99
1994-96	75.22	74.70	65.86	56.15	46.79	37.41	28.18	19.62	12.45	7.04
1995-97	75.57	75.04	66.20	56.50	47.15	37.77	28.53	19.93	12.69	7.20
1996-98	75.86	75.31	66.48	56.77	47.43	38.05	28.80	20.18	12.86	7.32
					FEMALES					
1978	77.19	77.02	68.26	58.49	48.77	39.16	29.94	21.40	13.78	7.64
1983	78.76	78.45	69.65	59.82	50.09	40.41	31.06	22.37	14.59	8.28
1988	79.51	79.11	70.31	60.49	50.77	41.09	31.70	22.87	14.94	8.52
1993	80.86	80.28	71.44	61.60	51.82	42.13	32.65	23.68	15.55	8.86
1994	80.94	80.36	71.91	62.04	52.25	42.52	33.03	24.01	15.70	8.80
1993-95	80.84	80.28	71.43	61.59	51.81	42.11	32.64	23.68	15.56	8.85
1994-96	81.05	80.46	71.60	61.76	51.98	42.28	32.80	23.83	15.67	8.92
1995-97	81.27	80.68	71.81	61.79	52.20	42.50	33.01	24.03	15.84	9.02
1996-98	81.52	80.91	72.04	62.20	52.43	42.73	33.25	24.25	16.01	9.13

(a) Based on Annual Life Tables calculated by the Australian Statistician until 1994. From 1995 the life tables have been produced as a joint venture between the Australian Bureau of Statistics and the Australian Government Actuary. See paragraph 12 of the Explanatory Notes for more information.

EXPLANATORY NOTES

INTRODUCTION

1 The registration of deaths is the responsibility of the individual State and Territory Registrars and is based on information supplied by a relative or other person acquainted with the deceased, or an official of the institution where the death occurred, and on information supplied by a medical practitioner as to the cause of death. This information is supplied to the Australian Bureau of Statistics (ABS) by individual Registrars for compilation into the aggregate statistics in this publication.

2 In the main, statistics in this publication refer to deaths registered by the State and Territory Registrars during the calendar year shown. There is usually an interval between the occurrence and registration of a death and, as a result of delays in registration, some deaths occurring in one year are not registered until the following year or even later.

DEATHS REGISTERED IN THE SAME YEAR AS THEY OCCURRED

Year	*%*	*Year*	*%*
1987	93.5	1993	94.8
1988	92.9	1994	95.6
1989	93.8	1995	95.2
1990	92.8	1996	95.2
1991	93.6	1997	95.6
1992	94.3	1998	96.0

3 For deaths data, cell values less than three have been suppressed to assist in the preservation of confidentiality of information.

STATES AND TERRITORIES

4 Statistics for States and Territories have been compiled and presented in respect of the State or Territory of usual residence of the deceased, regardless of where in Australia the death occurred and was registered.

5 Table 1.6 shows the number of deaths cross-classified by State or Territory of usual residence and State or Territory of registration.

6 Following the 1992 amendments to the Acts Interpretation Act to include the Indian Ocean Territories of Christmas Island and Cocos (Keeling) Islands as part of geographic Australia, population estimates commencing with September quarter 1993 include estimates for these two Territories. To reflect this change, another category of the State and Territory level has been created, known as Other Territories. Other Territories include Jervis Bay Territory, previously included with the Australian Capital Territory, as well as Christmas Island and the Cocos (Keeling) Islands, previously excluded from population estimates for Australia. Before 1997, cause of death data do not include deaths of persons usually resident in Other Territories. From 1997, cause of death data for residents of Other Territories are included in the total for Australia.

DEATHS OF AUSTRALIAN INDIGENOUS PEOPLE

7 This publication includes a section on Indigenous deaths. Data for Queensland, South Australia, Western Australia and the Northern Territory are regarded as being of sufficient quality to publish.

EXCLUSIONS

8 Figures in this publication do not include fetal deaths (stillbirths). Statistics on fetal deaths are given in *Causes of Death, Australia* (Cat. no. 3303.0).

9 Deaths of Australian residents which took place outside Australia are not included in the statistics.

STATISTICAL SIGNIFICANCE

10 ISDRs that are statistically different from the national estimate at 5% confidence level have been have one star marked against them. Statistical significance was calculated for the indirect standardised death rates (ISDRs) using the Z statistic at the 95% level. Z is given by:

$$Z = \frac{ISDR^i - M}{SE(ISDR^i)}$$

where $ISDR^i$ is the indirect standardised death rate for the Statistical Division i, M is the crude death rate of the standard population. SE is the standard error of the ISDR and is given by:

$$SE(ISDR) = \frac{ISDR}{(d)^{0.5}}$$

where d = number of deaths in the reference population.

If the Z statistic exceeds +/– 1.96 then the observed ISDR for the reference population is regarded as statistically significant at 5% level of significance and hence significantly different from the national estimate.

CAUSES OF DEATH

11 Data concerning causes of death are classified according to the 9th Revision of the World Health Organisation's International Classification of Diseases (ICD-9). The bracketed numbers given in the cause of death tables refer to the ICD-9 codes associated with particular causes.

AUSTRALIAN LIFE TABLES

12 The 1996–98 life tables are produced jointly by the ABS and the Office of the Australian Government Actuary. The tables differ from those published prior to the 1995 edition of this bulletin in a number of important respects. Firstly, they are based on three years of population and deaths data. This is designed to reduce the impact of year-to-year statistical variations, particularly at younger ages where there is a small number of deaths and at very old ages where the population at risk is small. Secondly, the population and deaths data are based on Australian residents who are physically present in Australia over the three-year period i.e. Australian residents temporarily overseas are excluded. Thirdly, they have been actuarially graduated on the same principles as those used for the quinquennial Australian life tables prepared by the Australian Government Actuary. Life tables for States and Territories are produced on the same principles as these tables and are available on request.

TIME SERIES

13 Time series data from 1901 to 1995 is available in the 1995 issue of *Deaths, Australia* (Cat. no. 3302.0) and in *Australian Demographic Trends, 1997* (Cat. no. 3102.0).

14 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated: without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the *Census and Statistics Act 1905*.

RELATED PUBLICATIONS

15 Other ABS publications which may be of interest to users include:
Australian Demographic Statistics (Cat. no. 3101.0) — issued quarterly
Australian Demographic Trends (Cat. no. 3102.0) — issued irregularly
Births, Australia (Cat. no. 3301.0) — issued annually
Causes of Death, Australia (Cat. no. 3303.0) — issued annually
Perinatal Deaths, Australia (Cat. no. 3304.0) — issued annually to 1993
Population Projections 1997–2051(Cat. no. 3222.0)
Experimental Projections of the Aboriginal and Torres Strait Islander Population (Cat no. 3231.0) — issued irregularly.

16 A compendium of all demographic data for each State and Territory has been released in State or Territory specific publications, *Demography* (Cat. nos 3311.1–8). These publications are released each year for each State or Territory and contain a variety of demographic data.

17 From 1994 detailed State and Territory data for deaths and causes of death are available in *Causes of Death, Australia* (Cat. no. 3301.0). For the years 1990 to 1993 inclusive, additional data on deaths for each State are available in *Deaths* (Cat. nos 3312.1–6).

18 Current publications produced by the ABS are listed in the *Catalogue of Publications and Products* (Cat. no. 1101.0). The ABS also issues, on Tuesdays and Fridays, a *Release Advice* (Cat. no. 1105.0) which lists publications to be released in the next few days. Both are available form any ABS office.

19 As well as the statistics included in this and related publications, additional information is available from the ABS Website at http://www.abs.gov.au and accessing Themes/Demography.

ADDITIONAL STATISTICS AVAILABLE

20 The ABS can also make available information which is not published. The following table lists the characteristics processed by the ABS for deaths registered. Generally, a charge is made for providing unpublished information.

CHARACTERISTICS OF DEATH REGISTRATIONS

Characteristic(a)	*Notes on coverage and quality*
Related to the death	
Date of death	Day, month and year
Date of registration	Month and year available for all States
Cause of death	Multiple cause of death introduced in 1997
State of registration	
Usual residence at death	Available for statistical local area
Hospital	SA and WA only
Related to the person	
Age	
Sex	
Date of birth	NSW, NT, ACT, SA and WA.
Marital status	
Occupation	Poor quality
Date of marriage	WA and NT only
Age at marriage	Not available in Vic.; age at last marriage for Tas. For other States is either first or subsequent marriage
Number of children	
Birthplace	
Duration of residence in Australia	Relates to overseas-born population
Indigenous origin	Variable quality
Additional flags	Drowning, cancer, maternal death, tuberculosis, drug related (smoking, alcohol, other drug or combination), AIDS, asthma, diabetes and asbestosis.

(a) State or Territory of registration, not of usual residence. Available nationally unless otherwise stated.

GLOSSARY

Age-specific death rate Age-specific death rates are the number of deaths registered (or occurred) during the calendar year at a specified age per 1,000 of the estimated resident population of the same age at mid-point of the year (30 June). The infant mortality rate is used for the age-specific death rate for children under one year of age. Pro rata adjustment is made in respect of deaths for which the age of the deceased is not given.

Country of birth The classification of countries is the Australian Standard Classification of Countries for Social Statistics (ASCCSS). For more detailed information refer to the Australian Standard Classification of Countries for Social Statistics (ASCCSS) (Cat. no. 1269.0).

Recent political developments in Europe and the former USSR have resulted in a number of changes to the ASCCSS. These changes have affected some categories and are detailed in Revisions 1.02 and 1.03 of the ASCCSS

Crude death rate The crude death rate is the number of deaths registered during the calendar year per 1,000 estimated resident population at 30 June. For years prior to 1992, the crude death rate was based on the mean estimated resident population for the calendar year.

Death For the purposes of the Vitals and Causes of Death collections conducted by the ABS, a death refers to any death which occurs in, or en route to Australia and is registered with a State or Territory Registry of Births, Deaths and Marriages.

Estimated resident population Estimated resident population (ERP) are estimates of the Australian population obtained by adding to the estimated population at the beginning of each period the components of natural increase (on a usual residence basis) and net overseas migration. For the States and Territories, account is also taken of estimated interstate movements involving a change of usual residence. After each census, estimates for the preceding intercensal period are revised by incorporating an additional adjustment (intercensal discrepancy) to ensure that the total intercensal increase agrees with the difference between the ERPs at the two respective census dates.

Estimates of the resident population are based on adjusted (for underenumeration) census counts by place of usual residence, to which are added the number of Australian residents estimated to have been temporarily overseas at the time of the Census. Overseas visitors in Australia are excluded from this calculation.

The concept of ERP links people to a place of usual residence within Australia. Usual residence is that place where each person has lived or intends to live for six months or more from the reference date for data collection.

Indigenous origin Persons who identify as being of Aboriginal or Torres Strait origin.

Indigenous death The death of a person who is identified as being of Aboriginal or Torres Strait Islander origin on the death information form.

Infant death An infant death is the death of a live-born child who dies before completing his/her first birthday.

Infant mortality rate The number of deaths of children under one year of age in a calendar year per 1,000 live births in the same calendar year.

Intercensal discrepancy Intercensal discrepancy is the difference between two estimates of a census year population, the first based on the latest census and the second arrived at by updating the previous census date estimate with intercensal components of population change which take account of information available from the latest census. It is caused by errors in the start and/or finish population estimates and/or in estimates of births, deaths or migration in the intervening period which cannot be attributed to a particular source.

Life expectancy Life expectancy refers to the average number of additional years a person of a given age and sex might expect to live if the age-specific death rates of the given period continued throughout his/her lifetime.

Life table death rate The life table death rate represents the annual number deaths (per 1,000 population) that would occur based on the death rates and population structure of the life table.

Marital status Two separate concepts are measured by the Australian Bureau of Statistics. These are registered marital status and social marital status. They have different personal characteristics and are independent variables with separate classifications. Marital status relates to registered marital status which refers to formally registered marriages or divorces for which the partners hold a certificate. Four categories of marital status are identified: never married, married, widowed and divorced.

Median value For any distribution the median value (age, duration, interval) is that value which divides the relevant population into two equal parts, half falling below the value, and half exceeding it. Where the value for a particular record has not been stated, that record is excluded from the calculation.

Natural Increase Excess of births over deaths.

Neonatal death For neonatal deaths a birthweight and period of gestation criterion apply:

- A neonatal death is the death within 28 days of birth of a child weighing at least 500 grams at delivery (or of at least 22 weeks gestation, if birthweight was unavailable) who after delivery, breathes or shows any evidence of life such as a heartbeat.
- A neonatal death is the death within 28 days of birth of a child weighing at least 400 grams at delivery (or of at least 20 weeks gestation, if birthweight was unavailable) who after delivery, breathes or shows any evidence of life such as a heartbeat.

Wherever used, the definition adopted is indicated.

Sex ratio The sex ratio relates to the number of males per 100 females. The sex ratio is defined for total population, at birth, at death and among age groups by appropriately selecting the numerator and denominator of the ratio.

Standardised death rate (SDR) Standardised death rates enable the comparison of death rates between populations with different age structures by relating them to a standard population. The ABS standard populations relate to the years ending in 1 (eg 1991). The current standard population is all persons in the 1991 Australian population. They are expressed per 1,000 or 100,000 persons. There are two methods of calculating standardised death rates:

- The *direct method*—this is used when the populations under study are large and the age-specific death rates are reliable. It is the overall death rate that would have prevailed in the standard population if it had experienced at each age the death rates of the population under study.
- The *indirect method*—this is used when the populations under study are small and the age-specific death rates are unreliable or not known. It is an adjustment to the crude death rate of the standard population to account for the variation between the actual number of deaths in the population under study and the number of deaths which would have occurred if the population under study had experienced the age-specific death rates of the standard population.

Wherever used, the definition adopted is indicated.

Standardised mortality ratio (SMR) The ratio of the actual number of deaths in the population under study and the number of deaths which would have occurred if the population under study had experienced the age-specific death rates of the standard population. (see also - Standardised death rate, *The indirect method*).

State or Territory of registration State or Territory of registration refers to the State or Territory in which the death was registered.

State or Territory of usual residence Refers to the State or Territory of usual residence of the population in estimated resident population and to the State or Territory of usual residence of the deceased.

Total fertility rate The sum of age-specific fertility rates (live births at each age of mother per female population of that age). It represents the number of children a woman would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life.

Year of occurrence Data presented on year of occurrence basis relate to the date the death occurred.

Year of registration Data presented on year of registration basis relate to the date the death was registered.

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