1997

3302.0

Australian Bureau of Statistics

DEATHS

AUSTRALIA

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- For more information about these and related statistics, contact any ABS office. Refer to the back cover of this publication for contact details.

NOTES

ABOUT THIS ISSUE

This issue contains rates calculated using final 1991–96 estimates of the resident population based on the 1996 Census and Population and Housing.

CHANGES IN THIS ISSUE

The Australian Bureau of Statistics (ABS) has introduced automated cause of death coding in 1997, which has impacted these statistics. For details see *Causes of Death, 1997* (Cat. no. 3303.0), which is due to be released early 1999.

DATA IN THIS PUBLICATION

This publication uses death registration data except where otherwise stated.

SYMBOLS AND OTHER USAGES

ABS	Australian Bureau of Statistics
CDR	Crude death rate
HIV/AIDS	Human immuno-deficiency virus/acquired immuno-deficiency virus
IMR	Infant mortality rate
n.a.	not available
n.p.	not available for publication but included in totals where applicable
n.y.a.	not yet available
p	preliminary
r	figure or series revised since previous issue
SIDS	Sudden Infant Death Syndrome
SDR	Standardised death rate
. .	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

W. McLennan
Australian Statistician

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MAIN FEATURES

KEY FIGURES

	1987	*1997*	*Change*
	no.	no.	%
Deaths registered	117 321	129 350	10.3
Infant deaths	2 116	1 341	–36.6
	years	years	years
Expectation of life at age 0			
Males	73.1	75.6	2.5
Females	79.5	81.3	1.8
	rate	rate	%
Standardised death rate	7.6	6.2	–18.4
Infant mortality rate	8.7	5.3	–39.1

- In 1997, there were 129,400 deaths, about half the number of births, resulting in natural increase of 123,000, much greater than the net overseas migration for the year of 76,400.
- According to Australian Bureau of Statistics (ABS) population projections, sometime in the 2030s the number of deaths will exceed the number of births and natural increase will become negative.
- As the population increases and ages, the number of deaths has increased by an average of 1% per year over the last 10 years. At the same time, standardised death rates (SDRs) have fallen by an average of almost 2% per year over this period.
- In 1997, deaths of people aged 65 years and over accounted for 78% of all deaths.
- At every age, males were more likely to die than females. The largest differences were in the 15–34 years age group where male rates were three times higher than female rates.

LIFE EXPECTANCY

- A boy born in Australia in 1995–97 could expect to live for 75.6 years, while a girl born in 1995–97 could expect to live for 81.3 years. In the 25 years from 1970–72 to 1995–97, life expectancy at birth increased by 7.8 years for males, and 6.8 years for females. The gain for males was almost as large as the increase over the entire 50 years prior to 1970–72.
- Australians are among the most long-lived people in the world, with life expectancies approaching those born in Japan, Sweden, Hong Kong and Switzerland.

CAUSE OF DEATH

- In Australia in 1997, the most common causes of death were either heart disease (28%) or cancer (27%).
- External causes, which include motor vehicle accidents, falls, drowning and suicide, accounted for 6% of all deaths.

MARITAL STATUS

- Overall, married people experienced lower death rates than those who were never married, divorced or widowed.
- The highest death rates for men were experienced by those who were never married. Rates for men aged 20–69 years who had never married were two to four times higher than those who were married.
- Death rates for women had a similar pattern, but the differentials between married and never married, divorced and widowed were less marked than for men.
- Going against the trend for almost every age, death rates for men aged 27–37 years have increased over the last 15 years. This reflects an increasing proportion of men in this group who have never married.

INFANT DEATHS

- In 1997, the infant mortality rate was the lowest in Australian history, at 5.3 deaths per 1,000 live births. It has fallen by an average of almost 5% per year over the last 10 years, and is among the lowest in the world.

COUNTRY OF BIRTH

- People from the 10 largest birthplace groups have significantly lower death rates than the Australian-born population. For example, the Vietnamese have a death rate 44% below the national rate.
- New Zealand-born migrants were the only exception, with a death rate close to the national rate.

STATE DIFFERENCES

- People living in all States and Territories have similar death rates to Australia, except the Northern Territory, where the high proportion of Indigenous residents contributed to a rate 58% above the national average, and Tasmania which was 10% above the national average.
- South Australia, the State with the oldest age structure, had the highest median age at death (78.1 years). In contrast, the Northern Territory had the lowest median age at death (57 years).

DEATHS AS A COMPONENT OF POPULATION GROWTH

Deaths, together with births and net migration, form the components of population growth. 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 for the period 1987–89.

POPULATION CHANGE, Components(a)

						POPULATION INCREASE.....	
	Live births	*Deaths*	*Natural increase*	*Net overseas migration*	*Population at end of period*		
Period	'000	'000	'000	'000	'000	000(b)	%
1977	226.3	108.8	117.5	68.0	14 281.5	171.4	1.2
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
1997p	252.1	129.0	123.0	76.4	18 623.0	199.4	1.1

(a) Births and deaths are on an occurence basis.

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

The number of deaths registered in 1997 was 129,400, a 10% increase on the number of deaths registered in 1987 (117,321). This increase in the number of deaths reflected an overall increase in the population, and in particular, an increase in the numbers of older people. While the Australian population as a whole grew by 14% from 1987 to 1997, the number of persons aged 65 or over increased by 29% over the same period. Deaths of persons aged 65 and over accounted for 78% of all deaths in 1997.

Despite the ageing of the population over the last 10 years, the crude death rate (CDR) fell slightly, from 7.2 deaths per 1,000 population in 1987 to 7.0 deaths in 1997. 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)

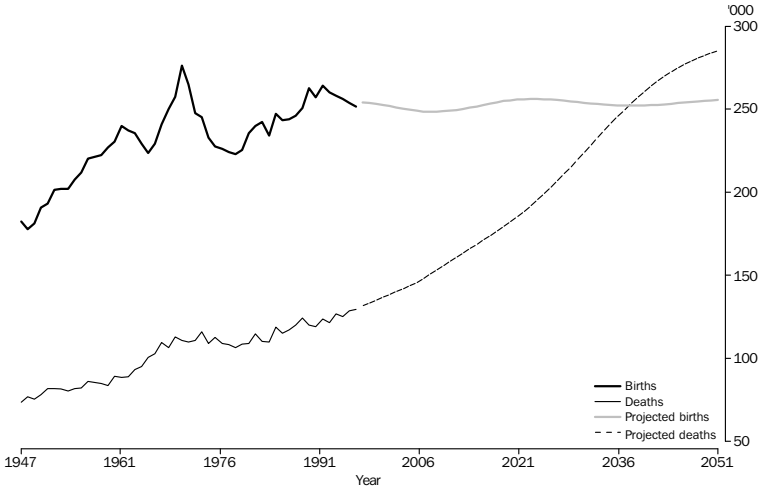
DEATHS AS A COMPONENT OF POPULATION GROWTH *continued*

(which eliminates the effect of the changing age structure of the population) was 7.6 deaths per 1,000 population in 1987, falling to 6.2 in 1997, a decline of more than 2% per year.

The number of births registered each year over the period 1987–97 has averaged 255,000, just over twice the average number of deaths registered each year over the same period (123,300). This has given an average annual level of natural increase of 131,400. While natural increase of Australia's population has been positive throughout the 20th century, the fertility rate of the population has been at a lower level than can replace the population over the long-term from 1976. Natural increase has remained positive despite the fall in fertility because the relatively young age structure of the population has meant there has been a sufficient number of women of childbearing ages to maintain a relatively high number of total births.

Conversely, 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, the gap between the number of births and deaths will decrease, and, assuming a total fertility rate of 1.75 babies per woman and net overseas migration of 70,000 per year, natural increase is projected to fall below zero sometime around the 2030s. This scenario is augmented by the ageing of the large cohort of Australians born in the late 1940s–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 relatively smaller in number. A second significant demographic impact of the ageing baby boomers is expected to occur as this group move 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.

ACTUAL AND PROJECTED(a) BIRTHS AND DEATHS, AUSTRALIA(b)



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

(b) Data prior to 1998 based on calendar year, projection data based on financial year.

REGISTRATION/OCCURRENCE OF DEATHS

Most of the analysis in this publication is based on the number of deaths which were registered in a given period, usually 1997. Because there is a delay between when a death occurs and when it is registered, 4.4% of the deaths registered in 1997 had occurred in earlier years. Deaths occurring in 1996 comprised 4.3 percentage points of these, while deaths occurring in 1995 comprised less than 0.05 percentage points.

DEATHS AS A COMPONENT OF POPULATION ESTIMATES

The ABS produce 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[1]

In 1996, with a world population of 5.8 billion, there were around 52 million deaths. This was around 2 million more than recorded in 1986. Over this 10-year period, the annual number of births worldwide ranged from 133 to 138 million giving annual growth of between 84 and 87 million or 1.6%.

Over the period from 1980–85 to 1990–95, the world crude death rate has declined from 11 to 9 deaths per 1,000 population, despite a slight increase in the average age of the world population. The crude death rates experienced in different regions vary widely and reflect differences in development and age structure of various populations. Africa had the highest CDR in the five years from 1990–95 with 14 deaths per 1,000 population. Europe, with its ageing population, had the second highest CDR in 1990–95 with 11 deaths per 1,000 population. This was followed by North America (9), Asia (8), Oceania (8) and Latin America (7).

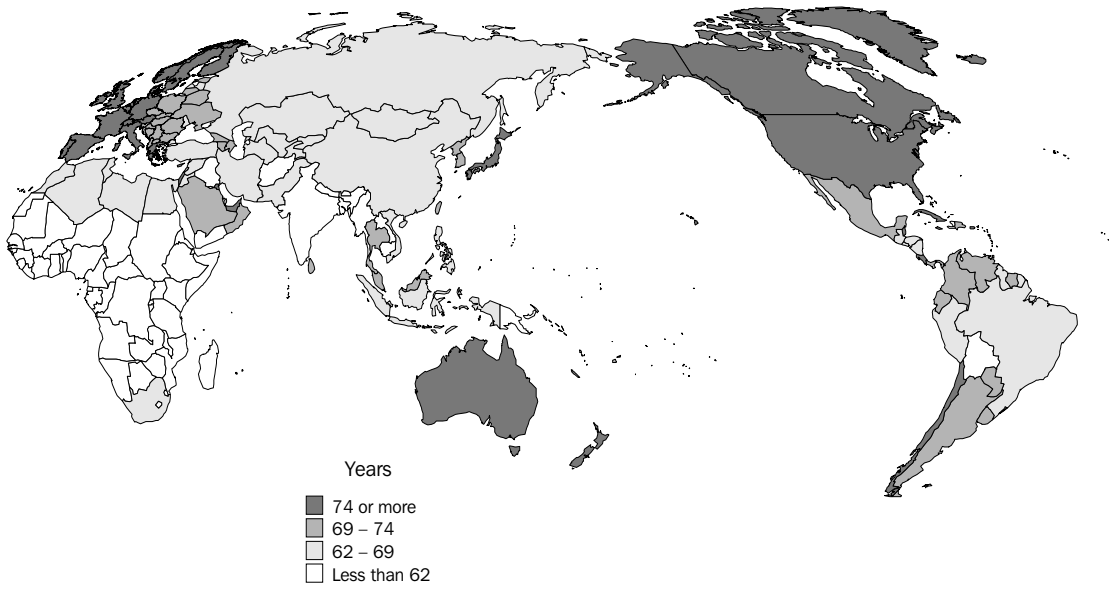
Life expectancy at birth

The high death rates in Africa appear more stark when the very young age structure of the African population is accounted for. The average life expectancy at birth in Africa was 52 years in 1990–95, although there was great variation throughout the continent. The lowest life expectancies experienced were in the Sub-Saharan countries of Sierra Leone and Rwanda where babies born in 1990–95 could only be expected to live to 34 and 23 years respectively. The highest life expectancies on the African continent were experienced in the northern African countries of Algeria and Tunisia, with babies born in 1990–95 expected to live to 67 and 68 years respectively.

Mortality in Sub-Saharan Africa has been particularly affected by the HIV/AIDS epidemic. The United Nations (1998b) estimated that HIV/AIDS had, on average, reduced life expectancy by 7 years across 29 Sub-Saharan African Countries. In Botswana, the most severely affected country, 25% of the adult population is infected by HIV/AIDS. The life expectancy of Botswanan babies born in 1990–95 of 61 years is projected to fall to 47 years in 1995–2000. In the absence of HIV/AIDS, life expectancy in Botswana would be expected to reach 67 years in 1995–2000.

[1] Data in this section are from United Nations 1998(a), *1996 Demographic Yearbook,* unless otherwise stated.

INTERNATIONAL LIFE EXPECTANCY AT BIRTH



Source: United Nations 1998b.

(a) Countries for which no data is available have been assumed to have the average life expectancy of the region.

In contrast to the life expectancy experience of Africa, some Asian and European countries have some of the highest expectations of life at birth. In Switzerland for example, a male born in 1994–95 could be expected to live 75.3 years, while a female baby could expected to live for 81.7 years. Similarly in Sweden in 1994, newborn males and females could be expected to live to 76.1 years and 81.4 years respectively. Japan has the world's highest life expectancy — 76.4 and 82.9 years for males and females respectively in 1995. Australian life expectancy, like the rest of the developed world, has continued to increase (see Feature Article – A Century of Change in Life Expectancy). In the period 1995–97 an Australian-born boy could, on average, be expected to live for 75.6 years of life, while girls could be expected to live for 81.3 years.

Infant mortality

Infant mortality rates (IMRs) are used widely as general indicators of the health and mortality of populations. The international variation in IMRs parallels the differentials seen in life expectancy described above. Sub–Saharan African countries generally have the highest IMRs in the world. Most infant deaths in Africa are from infectious and parasitic diseases (including HIV/AIDs) and from nutritional deficiencies. In 1993, Zambia had 111 infant deaths per 1,000 live births, while in 1994 Uganda had 112 infant deaths per 1,000 live births. It has been estimated that the IMR in Uganda would have been 23% lower without HIV/AIDS (US Bureau of the Census 1994).

The Australian IMR in 1997 was the lowest ever recorded with only 5.8 male and 4.9 female infant deaths per 1,000 live births. While these rates compare favourably with other developed countries, the 1995 Japanese male and female IMRs of 4.6 and 3.9 deaths per 1,000 live births indicate that further improvements may still be possible.

1.1 DEATHS: SUMMARY(a), STATES AND TERRITORIES

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Other Territories(b)*	*Australia*
					DEATHS					
Total deaths	**45,641**	**33,261**	**21,945**	**11,658**	**10,807**	**3,809**	**891**	**1,334**	**4**	**129,350**
Males	23,746	17,122	11,915	6,029	5,774	1,966	535	663	2	67,752
Females	21,895	16,139	10,030	5,629	5,033	1,843	356	671	2	61,598
Sex ratio	108.5	106.1	118.8	107.1	114.7	106.7	150.3	98.8	100.0	110.0
Aboriginal and Torres Strait Islander deaths	*n.a.*	*n.a.*	*n.a.*	*132*	*351*	*n.a.*	*458*	*4*	*n.a.*	*n.a.*
Males	n.a.	n.a.	n.a.	89	207	n.a.	242	2	n.a.	n.a.
Females	n.a.	n.a.	n.a.	43	144	n.a.	216	2	n.a.	n.a.
Standardised death rates	*6.3*	*6.2*	*6.2*	*6.1*	*6.0*	*6.8*	*9.8*	*6.0*	*n.p.*	*6.2*
Males	8.0	7.9	7.8	7.8	7.6	8.6	11.3	7.1	n.p.	7.9
Females	4.9	4.9	4.8	4.8	4.7	5.5	8.4	5.1	n.p.	4.9
Crude death rates	*7.3*	*7.2*	*6.5*	*7.9*	*6.0*	*8.0*	*4.8*	*4.3*	*n.p.*	*7.0*
Males	7.6	7.5	7.0	8.2	6.4	8.4	5.4	4.3	n.p.	7.3
Females	6.9	6.9	5.9	7.5	5.6	7.7	4.0	4.3	n.p.	6.6
Median age at death—										
Males	74.3	74.7	73.3	75.2	73.6	75.2	56.3	72.6	n.p.	74.2
Females	81.1	81.4	80.4	81.5	80.8	80.2	57.6	78.8	n.p.	81.0
Age-specific death rates—										
Age group (years)—										
Males										
0	5.4	5.1	7.0	5.6	5.5	8.4	11.6	2.3	n.p.	5.8
1-4	0.3	0.3	0.5	0.4	0.5	0.4	0.8	0.3	n.p.	0.4
5-14	0.2	0.1	0.2	0.1	0.2	0.2	0.4	0.1	n.p.	0.2
15-24	1.0	1.0	1.1	0.9	1.1	1.1	2.0	0.8	n.p.	1.0
25-34	1.3	1.3	1.3	1.3	1.4	0.9	2.3	1.2	n.p.	1.3
35-44	1.7	1.6	1.8	1.5	1.7	1.3	4.3	1.4	n.p.	1.7
45-54	3.5	3.4	3.6	3.5	3.1	3.7	6.7	2.0	n.p.	3.4
55-64	9.4	9.6	10.3	9.1	9.0	10.9	15.5	7.0	n.p.	9.6
65-74	27.9	27.1	27.1	27.7	25.9	28.8	41.4	26.2	n.p.	27.4
75-84	70.6	72.1	66.8	71.8	68.4	79.4	92.1	66.0	n.p.	70.5
85 and over	175.1	169.8	162.6	167.6	169.2	193.3	160.5	157.1	n.p.	170.6
Females										
0	4.9	4.8	4.5	3.8	5.0	4.5	13.5	5.3	n.p.	4.9
1-4	0.2	0.3	0.2	0.3	0.2	0.5	1.3	—	n.p.	0.2
5-14	0.1	0.2	0.1	0.1	0.1	0.2	0.4	—	n.p.	0.1
15-24	0.4	0.3	0.5	0.3	0.4	0.4	0.5	0.3	n.p.	0.4
25-34	0.5	0.5	0.5	0.6	0.5	0.3	1.2	0.3	n.p.	0.5
35-44	0.9	0.9	0.9	0.8	0.9	1.0	2.6	0.9	n.p.	0.9
45-54	2.1	2.1	2.3	1.8	2.1	2.1	6.0	2.5	n.p.	2.1
55-64	5.7	5.3	5.5	4.8	5.0	7.7	14.1	4.7	n.p.	5.5
65-74	15.3	15.0	14.3	15.7	14.5	18.0	27.1	15.2	n.p.	15.1
75-84	44.4	46.3	43.2	45.4	42.9	49.9	63.2	43.0	n.p.	44.9
85 and over	145.7	145.1	138.0	136.7	138.4	145.5	130.3	175.7	n.p.	143.0
Expectation of life(c)—										
Males										
Age 0	75.4	75.8	75.4	75.7	75.7	74.8	70.0	77.1	n.p.	75.6
Age 1	74.8	75.2	74.9	75.1	75.2	74.3	69.8	76.4	n.p.	75.0
Age 25	51.6	51.9	51.8	51.9	52.0	51.1	47.0	53.2	n.p.	51.8
Age 45	33.0	33.1	33.2	33.1	33.4	32.2	29.4	34.3	n.p.	33.1
Age 65	16.0	16.0	16.3	16.1	16.2	15.4	14.3	16.8	n.p.	16.1
Females										
Age 0	81.2	81.4	81.3	81.5	81.6	80.1	74.7	81.3	n.p.	81.3
Age 1	80.6	80.8	80.7	80.8	80.9	79.4	74.7	80.9	n.p.	80.7
Age 25	57.0	57.1	57.2	57.2	57.3	55.8	51.3	57.2	n.p.	57.1
Age 45	37.6	37.7	37.9	37.9	38.0	36.5	32.7	37.8	n.p.	37.7
Age 65	19.7	19.7	20.0	19.9	20.0	19.0	16.7	19.8	n.p.	19.8

See footnotes at end of table.

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

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Other Territories(b)*	*Australia*
					DEATHS					
Principal causes of death (SDR per 100,000 population)—										
Males										
Neoplasms	222	228	222	218	222	235	213	180	n.p.	223
Diseases of the circulatory system	314	299	307	315	277	354	398	312	n.p.	307
Diseases of the respiratory system	90	81	77	83	88	95	171	68	n.p.	85
Diseases of the digestive system	23	23	22	25	23	21	57	29	n.p.	23
All other diseases	94	103	87	86	96	99	209	78	n.p.	95
External causes	58	56	69	56	61	59	104	44	n.p.	60
Females										
Neoplasms	133	142	133	139	139	150	198	148	n.p.	137
Diseases of the circulatory system	208	191	198	194	170	226	303	189	n.p.	198
Diseases of the respiratory system	48	47	42	48	49	63	113	53	n.p.	48
Diseases of the digestive system	15	16	14	14	16	17	28	15	n.p.	15
All other diseases	69	76	66	66	75	74	129	78	n.p.	71
External causes	22	20	25	20	23	19	53	24	n.p.	22
					INFANT DEATHS					
Total infant deaths	**451**	**300**	**272**	**87**	**131**	**39**	**45**	**16**	**—**	**1,341**
Males	242	158	168	53	71	26	21	5	—	744
Females	209	142	104	34	60	13	24	11	—	597
Aboriginal and Torres Strait Islander infant deaths	*n.a.*	*n.a.*	*n.a.*	*5*	*20*	*n.a.*	*37*	—	*n.a.*	*n.a.*
Males	n.a.	n.a.	n.a.	3	10	n.a.	18	—	n.a.	n.a.
Females	n.a.	n.a.	n.a.	2	10	n.a.	19	—	n.a.	n.a.
Infant mortality rates	*5.2*	*4.9*	*5.8*	*4.7*	*5.3*	*6.5*	*12.5*	*3.8*	n.p.	*5.3*
Males	5.4	5.1	7.0	5.6	5.5	8.4	11.6	2.3	n.p.	5.8
Females	4.9	4.8	4.5	3.8	5.0	4.5	13.5	5.3	n.p.	4.9
Age at death—										
Males										
Under 1 day	91	53	57	24	19	9	8	1	n.p.	262
1 day and under 1 week	49	29	28	6	9	6	3	2	n.p.	132
1 week and under 1 month	28	22	21	3	11	3	3	—	n.p.	91
1 month and under 1 year	74	54	62	20	32	8	7	2	n.p.	259
Females										
Under 1 day	94	62	40	9	21	3	8	2	n.p.	239
1 day and under 1 week	36	20	17	6	8	2	2	3	n.p.	94
1 week and under 1 month	27	21	13	6	8	3	2	1	n.p.	81
1 month and under 1 year	52	39	34	13	23	5	12	5	n.p.	183

(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 data was calculated over the 3-year period 1995-97.

1.2 DEATHS: SUMMARY(a), AUSTRALIA

	1987	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*
	DEATHS						
Total deaths	**117,321**	**123,660**	**121,599**	**126,692**	**125,133**	**128,719**	**129,350**
Males	63,611	66,115	65,089	67,464	66,251	68,206	67,752
Females	53,710	57,545	56,510	59,228	58,882	60,513	61,598
Sex ratio	118.4	114.9	115.2	113.9	112.5	112.7	110.0
Standardised death rates	*7.6*	*6.9*	*6.6*	*6.7*	*6.4*	*6.4*	*6.2*
Males	9.8	8.9	8.5	8.7	8.2	8.2	7.9
Females	5.8	5.4	5.1	5.2	5.0	5.0	4.9
Crude death rates	*7.2*	*7.1*	*6.9*	*7.1*	*6.9*	*7.0*	*7.0*
Males	7.8	7.6	7.4	7.6	7.4	7.5	7.3
Females	6.6	6.6	6.4	6.6	6.5	6.6	6.6
Median age at death—							
Males	71.4	72.6	72.9	73.5	73.5	74.0	74.2
Females	78.2	79.3	79.5	80.2	80.3	80.7	81.0
Age-specific death rates—							
Age group (years)—							
Males							
0	9.9	7.9	6.9	6.5	6.1	6.5	5.8
1-4	0.5	0.4	0.3	0.4	0.4	0.4	0.4
5-14	0.3	0.2	0.5	0.2	0.2	0.2	0.2
15-24	1.3	1.0	1.2	1.0	1.0	1.0	1.0
25-34	1.3	1.3	1.4	1.3	1.3	1.3	1.3
35-44	1.8	1.7	2.3	1.8	1.8	1.7	1.7
45-54	4.7	3.9	6.5	3.6	3.5	3.4	3.4
55-64	13.9	11.9	18.8	10.8	10.3	9.9	9.6
65-74	35.4	31.3	47.7	30.2	28.9	28.3	27.4
75-84	84.9	79.9	128.1	78.5	73.6	74.1	70.5
85 and over	192.0	182.3	5.3	186.9	176.6	181.3	170.6
Females							
0	7.4	6.0	0.2	5.2	5.1	5.0	4.9
1-4	0.3	0.4	0.3	0.3	0.3	0.3	0.2
5-14	0.2	0.1	0.4	0.2	0.2	0.1	0.1
15-24	0.5	0.4	0.7	0.3	0.4	0.3	0.4
25-34	0.5	0.5	1.4	0.4	0.5	0.5	0.5
35-44	1.0	0.9	3.7	0.9	0.9	0.9	0.9
45-54	2.8	2.4	9.9	2.2	2.2	2.1	2.1
55-64	7.0	6.4	27.5	5.9	5.7	5.7	5.5
65-74	18.5	16.8	97.7	16.2	15.6	15.1	15.1
75-84	53.0	49.7	75.0	48.8	47.0	46.4	44.9
85 and over	152.2	149.6	74.5	149.2	142.6	145.7	143.0
Expectation of life(b)—							
Males							
Age 0	73.1	74.5	51.3	75.0	75.0	75.2	75.0
Age 1	72.8	74.1	32.5	74.5	74.5	74.7	74.5
Age 25	49.8	50.9	15.7	51.3	51.3	51.5	51.3
Age 45	31.0	32.1	80.9	32.5	32.5	32.8	32.5
Age 65	14.7	15.4	80.3	15.7	15.7	15.8	15.7
Females							
Age 0	79.5	80.4	56.7	80.9	80.8	81.1	80.9
Age 1	79.1	79.9	37.4	80.3	80.3	80.5	80.3
Age 25	55.6	56.3	19.5	56.7	56.7	56.9	56.7
Age 45	36.3	37.0	28.8	37.3	37.3	37.5	37.4
Age 65	18.7	19.2	40.5	19.4	19.5	19.6	19.5

See footnote at end of table.

1.2 DEATHS: SUMMARY(a), AUSTRALIA—continued

	1987	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*
				DEATHS			
Principal causes of death (SDR per 100,000population)							
Males							
Neoplasms	217	208	8	243	235	234	223
Diseases of the circulatory system	351	319	3	359	336	328	307
Diseases of the respiratory system	102	77	12	78	70	72	85
Diseases of the digestive system	43	21	8	25	24	24	23
All other diseases	83	75	26	104	101	104	95
External causes	66	52	48	59	59	61	60
Females							
Neoplasms	165	125	7	142	141	141	137
Diseases of the circulatory system	254	235	3	230	216	209	198
Diseases of the respiratory system	45	40	14	37	35	37	48
Diseases of the digestive system	17	13	4	16	16	15	15
All other diseases	70	63	70	75	74	75	71
External causes	27	16	20	21	23	21	22
				INFANT DEATHS			
Total infant deaths	**2,116**	**1,843**	**1,591**	**1,512**	**1,449**	**1,460**	**1,341**
Males	1,235	1,073	918	866	807	843	744
Females	881	770	673	646	642	617	597
Infant mortality rates	*8.7*	*7.0*	*6.1*	*5.9*	*5.7*	*5.8*	*5.3*
Males	9.9	7.9	6.9	6.5	6.1	6.5	5.8
Females	7.4	6.0	5.3	5.2	5.1	5.0	4.9
Age at death—							
Males							
Under 1 day	379	415	140	326	313	313	262
1 day and under 1 week	190	160	123	153	118	133	132
1 week and under 1 month	145	121	334	107	103	100	91
1 month and under 1 year	521	377	252	280	273	297	259
Females							
Under 1 day	298	315	104	238	241	244	239
1 day and under 1 week	140	111	77	113	97	92	94
1 week and under 1 month	98	80	240	71	85	82	81
1 month and under 1 year	345	264	240	224	219	199	183

(a) See Glossary for definitions of the terms used. (b) From 1994 onwards life expectation was calculated over 3 years ending with the year in the table heading.

1.3 DEATHS: SUMMARY(a), SELECTED COUNTRIES OF BIRTH—*continued*

	Country of birth of female deaths														
	Australia	*China*	*Former Yugoslav Republics*	*Germany*	*Greece*	*India*	*Indonesia*	*Italy*	*Lebanon*	*Malaysia*	*Nether-lands*	*New Zealand*	*UK & Ireland*	*USA*	*Viet Nam*
Deaths	**45,484**	**328**	**448**	**635**	**420**	**263**	**91**	**1,310**	**109**	**68**	**452**	**602**	**7,325**	**92**	**114**
Population '000(b)	7162.9	67.0	94.6	62.2	69.4	43.2	26.3	119.8	37.0	47.5	45.0	158.9	600.2	26.7	82.4
Death rate(c)	6.3	4.9	4.7	10.2	6.0	6.1	3.5	10.9	2.9	1.4	10.0	3.8	12.2	3.4	1.4
Median age at death	81.1	78.9	75.5	76.5	80.2	78.8	(d)	80.3	73.7	(d)	78.3	77.8	83.2	(d)	67.8
Median duration of residence	98.5	15.8	34.2	44.3	37.5	27.9	(d)	41.5	23.1	(d)	43.2	32.5	43.9	(d)	13.5
Age at death															
0	592	—	—	—	—	—	—	—	—	—	—	1	—	—	—
1-4	118	—	—	—	—	—	—	—	—	—	—	1	—	—	—
5-14	153	—	1	—	—	—	—	—	—	—	—	3	3	—	1
15-24	453	2	—	1	—	2	2	—	1	—	—	10	5	2	3
25-34	596	7	3	3	—	3	1	3	2	3	2	14	42	2	7
35-44	1,000	6	11	8	3	4	5	12	5	7	5	27	86	7	11
45-54	1,775	12	29	52	15	12	11	42	8	12	24	55	237	11	12
55-64	3,063	22	55	46	64	19	9	122	19	9	47	52	442	7	16
65-74	7,236	65	118	179	85	58	21	289	26	13	93	94	1,122	15	25
75-84	14,580	125	123	202	111	89	22	403	22	17	181	139	2,219	25	31
85 and over	15,916	89	108	144	142	76	20	439	26	7	100	206	3,169	23	8
Not stated	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Principal causes of death (proportion)															
Neoplasms	24.2	26.5	25.2	30.1	29.8	25.9	24.2	27.3	24.8	44.1	33.0	29.7	25.5	25.0	28.1
Diseases of the circulatory system	44.0	41.8	44.2	41.7	43.6	43.0	49.5	44.2	52.3	29.4	41.4	40.7	43.8	38.0	32.5
Diseases of the respiratory system	10.3	7.3	8.0	6.0	7.6	7.2	5.5	6.9	8.3	2.9	8.6	11.5	12.2	7.6	5.3
Diseases of the digestive system	3.1	4.0	2.7	2.4	1.9	2.3	4.4	3.1	0.9	4.4	2.2	2.5	3.5	4.3	4.4
All other diseases	14.4	14.3	14.5	14.3	15.2	17.9	9.9	16.0	10.1	16.2	12.6	10.8	12.4	14.1	21.1
External causes	3.9	6.1	5.4	5.5	1.9	3.8	6.6	2.4	3.7	2.9	2.2	4.8	2.6	10.9	8.8

(a) See Glossary for definitions of the terms used. (b) Estimated male or female resident population by country of birth, 1997 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.

1.3 DEATHS: SUMMARY(a), SELECTED COUNTRIES OF BIRTH—*continued*

	Country of birth of female deaths														
	Australia	*China*	*Former Yugoslav Republics*	*Germany*	*Greece*	*India*	*Indonesia*	*Italy*	*Lebanon*	*Malaysia*	*Nether-lands*	*New Zealand*	*UK & Ireland*	*USA*	*Viet Nam*
Deaths	**45,484**	**328**	**448**	**635**	**420**	**263**	**91**	**1,310**	**109**	**68**	**452**	**602**	**7,325**	**92**	**114**
Population '000(b)	7162.9	67.0	94.6	62.2	69.4	43.2	26.3	119.8	37.0	47.5	45.0	158.9	600.2	26.7	82.4
Death rate(c)	6.3	4.9	4.7	10.2	6.0	6.1	3.5	10.9	—	—	10.0	3.8	12.2	3.4	—
Median age at death	81.1	78.9	75.5	76.5	80.2	78.8	(d)	80.3	73.7	(d)	78.3	77.8	83.2	(d)	67.8
Median duration of residence	98.5	15.8	34.2	44.3	37.5	27.9	(d)	41.5	23.1	(d)	43.2	32.5	43.9	(d)	13.5
Age at death															
0	592	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1-4	118	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5-14	153	—	—	—	—	—	—	—	—	—	—	3	3	—	—
15-24	453	—	—	—	—	—	—	—	—	—	—	10	5	—	3
25-34	596	7	3	3	—	3	—	3	—	3	—	14	42	—	7
35-44	1,000	6	11	8	3	4	5	12	5	7	5	27	86	7	11
45-54	1,775	12	29	52	15	12	11	42	8	12	24	55	237	11	12
55-64	3,063	22	55	46	64	19	9	122	19	9	47	52	442	7	16
65-74	7,236	65	118	179	85	58	21	289	26	13	93	94	1,122	15	25
75-84	14,580	125	123	202	111	89	22	403	22	17	181	139	2,219	25	31
85 and over	15,916	89	108	144	142	76	20	439	26	7	100	206	3,169	23	8
Not stated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Principal causes of death (proportion)															
Neoplasms	24.2	26.5	25.2	30.1	29.8	25.9	24.2	27.3	24.8	44.1	33.0	29.7	25.5	25.0	28.1
Diseases of the circulatory system	44.0	41.8	44.2	41.7	43.6	43.0	49.5	44.2	52.3	29.4	41.4	40.7	43.8	38.0	32.5
Diseases of the respiratory system	10.3	7.3	8.0	6.0	7.6	7.2	5.5	6.9	8.3	—	8.6	11.5	12.2	7.6	5.3
Diseases of the digestive system	3.1	4.0	—	—	—	—	4.4	3.1	—	4.4	—	—	3.5	4.3	4.4
All other diseases	14.4	14.3	14.5	14.3	15.2	17.9	9.9	16.0	10.1	16.2	12.6	10.8	12.4	14.1	21.1
External causes	3.9	6.1	5.4	5.5	—	3.8	6.6	—	3.7	—	—	4.8	—	10.9	8.8

(a) See Glossary for definitions of the terms used. (b) Estimated male or female resident population by country of birth, 1994 preliminary. (c) Per 1,000 male or female estimated resident population by country ofbirth, 1994 preliminary. (d) Not statistically reliable due to the small numbers involved.

1.4 DEATHS: SUMMARY, AUSTRALIA AND SELECTED COUNTRIES

	Australia	*Canada*	*France*	*Germany*	*Greece*	*Hong Kong*	*Italy*	*Japan*	*Republic of Korea*	*Nether-lands*	*New Zealand*	*Philippines*	*Poland*	*UK*	*USA*
						MALES									
Crude death rate—															
Reference period	1997	1994	1993	1995	1995	1995	1991	1995	1995	1995	1992	1991	1994	1995	1994
Rate	7.3	7.6	9.8	10.3	10.2	5.8	10.2	8.1	6.0	8.9	8.6	5.6	10.9	10.8	9.1
Infant mortality rate—															
Reference period	1997	1994	1993	1995	n.a.	n.a.	1992	1995	n.a.	1995	n.a.	1993	1994	1995	1994
Rate	5.8	7.4	7.5	5.9	n.a.	n.a.	7.5	4.6	n.a.	6.2	n.a.	23.0	16.4	6.9	8.8
Expectation of life (years)—															
Reference period	1995-97	1992	1993	1993-95	1995	1995	1993	1995	1991	1994-95	1992-94	1991	1993	1995	1994
Age 0	75.6	74.6	73.3	73.0	75.0	76.0	74.1	76.4	67.7	74.6	73.4	63.1	67.4	74.1	72.4
Age 1	75.0	74.1	72.8	72.4	74.7	75.4	73.7	75.7	67.3	74.1	73.0	65.7	67.4	73.6	72.0
Age 25	51.8	50.9	49.7	49.1	51.4	51.9	50.4	52.4	44.5	50.7	50.1	44.5	44.2	50.2	49.1
Age 45	33.1	32.2	31.6	30.5	32.7	32.8	31.7	33.3	26.7	31.6	31.5	27.0	26.4	31.2	31.2
Age 65	16.1	15.7	15.9	14.6	16.1	16.2	15.3	16.5	12.3	14.8	15.0	12.3	12.5	14.6	15.5
Age-specific death rates (a)—															
Reference period	1997	1994	1993	1995	1995	1995	1991	1995	1995	1995	1992	1991	1994	1995	1994
0	5.8	6.9	7.3	5.9	9.0	1.1 (b)	8.7	4.6	3.2	6.2	8.4	22.3	16.3	6.8	9.0
1-4	0.4	0.4	0.4	0.3	0.2	n.a.	0.3	0.5	0.7	0.4	0.5	2.8	0.5	0.3	0.5
5-9	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.4	0.2	0.3	1.1	0.3	0.2	0.2
10-14	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.4	0.2	0.4	0.7	0.3	0.2	0.3
15-19	0.9	0.8	0.7	0.7	0.7	0.4	0.8	0.5	1.0	0.5	1.3	1.2	1.0	0.6	1.3
20-24	1.2	1.0	1.4	1.0	1.2	0.7	1.2	0.7	1.2	0.7	1.8	2.3	1.4	0.9	1.6
25-29	1.3	1.1	1.6	1.0	1.2	0.7	1.4	0.7	1.6	0.6	1.6	2.9	1.6	0.9	1.8
30-34	1.3	1.3	2.0	1.3	1.3	0.8	1.5	0.8	2.0	0.9	1.4	3.5	2.3	1.1	2.4
35-39	1.5	1.7	2.5	1.9	1.6	1.2	1.6	1.1	3.0	1.2	1.8	4.1	3.6	1.3	2.9
40-44	1.9	2.3	3.4	2.9	2.3	2.1	2.1	1.8	4.5	1.9	2.1	5.3	5.6	2.1	3.8
45-49	2.6	3.1	5.1	4.3	3.5	2.9	3.5	2.9	6.5	3.0	3.4	7.3	8.4	3.2	4.9
50-54	4.3	5.1	7.0	6.9	5.0	5.9	5.7	5.0	10.1	4.9	6.2	10.0	13.1	5.5	7.4
55-59	7.0	8.6	10.6	10.8	8.5	8.3	10.1	7.8	14.1	8.5	10.8	14.2	19.4	9.3	11.2
60-64	12.7	14.8	16.5	17.9	14.0	14.2	16.8	13.1	20.4	15.4	17.1	20.4	28.4	16.2	18.0
65-69	21.1	23.7	24.0	28.3	22.9	22.5	26.9	20.0	33.7	26.3	28.6	28.6	41.2	28.0	27.1
70-74	35.0	37.2	38.5	44.4	35.5	35.6	42.3	31.4	54.6	43.7	43.4	42.2	60.1	46.3	40.7
75-79	55.7	60.1	53.2	69.3	58.7	n.a.	66.8	54.3	91.0	73.2	69.1	65.4	89.1	72.6	60.8
80-84	96.3	96.4	99.5	115.6	103.1	74.3 (c)	114.6	94.5	189.6 (d)	118.3	113.8	123.4	136.7	115.3	97.7
85 and over	170.6	173.3	207.3	203.3	170.0	n.a.	203.5	183.2	n.a.	213.7	197.5	313.2	226.5	196.1	179.7

See footnotes at end of table.

	Australia	*Canada*	*France*	*Germany*	*Greece*	*Hong Kong*	*Italy*	*Japan*	*Republic of Korea*	*Nether-lands*	*New Zealand*	*Philippines*	*Poland*	*UK*	*USA*
							FEMALES								
Crude death rate—															
Reference period	1997	1994	1993	1995	1995	1995	1991	1995	1995	1995	1992	1991	1994	1995	1994
Rate	6.6	6.6	8.7	11.3	8.9	4.4	9.0	6.6	4.7	8.6	7.3	3.8	9.2	11.1	8.4
Infant mortality rate—															
Reference period	1997	1994	1993	1995	n.a.	n.a.	1992	1995	n.a.	1995	n.a.	1993	1994	1995	1994
Rate	4.9	5.9	5.4	4.6	n.a.	n.a.	5.9	3.9	n.a.	4.6	n.a.	18.0	13.8	5.4	7.2
Expectation of life (years)—															
Reference period	1995-97	1992	1993	1993-95	1995	1995	1993	1995	1991	1994-95	1992-94	1991	1993	1995	1994
Age 0	81.3	80.9	81.4	79.5	80.2	81.5	80.5	82.9	75.7	80.4	79.1	66.7	76.0	79.3	79.0
Age 1	80.7	80.4	80.9	78.9	79.8	80.8	80.1	82.2	75.4	79.8	78.6	68.7	75.9	78.8	78.5
Age 25	57.1	56.8	57.3	55.3	56.1	57.2	56.4	58.6	52.3	56.2	55.2	47.2	52.3	55.1	55.1
Age 45	37.7	37.4	38.2	36.0	36.7	37.7	37.1	39.1	33.3	36.8	36.0	29.4	33.2	32.8	36.0
Age 65	19.8	19.9	20.3	18.3	18.4	19.5	19.1	20.9	16.1	19.1	18.8	13.7	16.2	18.3	19.0
Age-specific death rates (a) —															
Reference period	1997	1994	1993	1995	1995	1995	1991	1995	1995	1995	1992	1991	1994	1995	1994
0	4.9	5.5	5.3	4.6	7.2	1.0 (b)	7.1	3.9	2.6	4.6	6.1	16.6	13.7	5.4	7.4
1-4	0.3	0.3	0.3	0.3	0.2	n.a.	0.3	0.4	0.6	0.3	0.4	2.5	0.5	0.2	0.4
5-9	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.3	0.8	0.2	0.1	0.2
10-14	0..2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.6	0.2	0.1	0.2
15-19	0..3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.5	0.2	0.5	0.7	0.4	0.3	0.4
20-24	0..3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.6	0.3	0.6	0.9	0.4	0.3	0.5
25-29	0.4	0.4	0.6	0.4	0.4	0.4	0.4	0.3	0.7	0.4	0.5	1.2	0.4	0.4	0.7
30-34	0.5	0.5	0.7	0.6	0.5	0.4	0.6	0.5	0.8	0.5	0.6	1.4	0.7	0.5	0.9
35-39	0.8	0.8	0.9	0.9	0.7	0.6	0.7	0.6	1.0	0.9	1.0	1.9	1.2	0.8	1.2
40-44	1.1	1.2	1.4	1.5	1.0	1.0	1.1	1.0	1.5	1.4	1.4	2.5	2.0	1.4	1.7
45-49	1.7	2.0	2.2	2.2	1.5	1.4	1.9	1.6	2.2	2.1	2.6	3.4	3.2	2.2	2.6
50-54	2.8	3.2	2.9	3.4	2.2	2.5	2.8	2.5	3.7	3.2	4.0	5.1	4.6	3.6	4.1
55-59	4.3	5.2	4.2	4.9	3.7	3.9	4.4	3.5	5.5	4.9	6.3	6.9	7.1	5.6	6.5
60-64	7.1	8.0	6.1	8.1	6.1	6.1	7.1	5.5	8.6	8.0	9.7	10.8	11.5	9.4	10.4
65-69	11.3	12.8	9.5	13.4	11.7	11.4	11.9	8.6	15.5	13.0	15.0	16.3	19.0	16.2	15.8
70-74	19.3	20.5	16.7	23.3	20.3	20.2	21.3	15.1	28.8	20.6	24.6	27.4	32.9	27.3	24.4
75-79	34.8	34.5	27.1	40.7	44.2	n.a.	38.1	28.1	54.2	37.5	41.5	48.5	57.2	43.6	38.0
80-84	62.4	59.2	57.8	76.5	84.9	59.2 (b)	75.2	54.1	143.4 (c)	68.7	71.2	105.0	100.2	74.4	63.7
85 and over	145.7	136.5	160.2	166.3	173.7	n.a.	168.7	128.6	n.a.	164.1	150.8	305.4	201.0	153.7	142.7

(a) Rates are the number of deaths per 1,000 population. (b) 0–4 years. (c) 80 years. (d) 80 years and over.

Source for overseas countries: United Nations 1998(a), 1996 Demographic Yearbook.

SECTION 2 NATIONAL DATA

NATIONAL REGISTRATIONS

In 1997, 129,400 deaths were registered from among Australia's 18.5 million residents, an increase of 600 on the previous year. The number of deaths in 1997 was 19% higher than those registered in 1977 (108,800) as a result of increasing numbers of older people in the population. With the continued ageing of the population, the number of deaths will rise in the future. However, while numbers of deaths are increasing, Australia's standardised death rate (SDR) has fallen steadily, from 9.1 per thousand of the standard population in 1977 to 6.2 per thousand in 1997. This represents a fall of 32%.

SEX

More male than female deaths were registered in 1997 — 67,750 compared to 61,600, or 110 male deaths for every 100 female deaths. By comparison, in 1977 this ratio was 124 male deaths for every 100 female deaths. While the number of male deaths was 12% greater than the number registered in 1977, the number of female deaths increased by 27% over the same period. Much of this increase is associated with the growing number of females in older age groups of the population. Male deaths have not increased to a similar extent and this is reflected in a more rapid decline in the male SDR compared to the female rate over this period. The difference between male and female SDRs has decreased from 5 years in 1977 to 3 years in 1997, when the SDR was 7.9 for males and 4.9 for females.

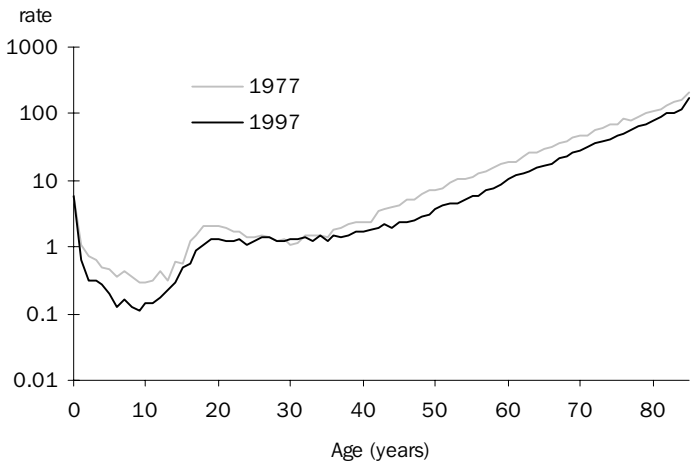
AGE AT DEATH

The median age at death in 1997 was 74.2 years for males and 81.0 years for females, an increase of 2.8 years for both groups on the median age at death for 1987. This increase reflects higher life expectancies and the ageing of the population.

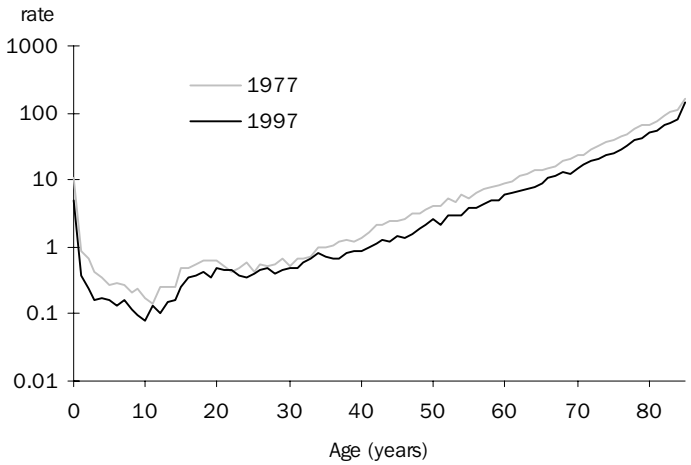
Death rates for females remained consistently lower than those for males in all age groups, with the largest differences in the 15–34 years age group where male rates were three times higher than female rates. Across these ages, the differential is actually higher than it was in 1977. This sex differential in overall death rates has resulted in an increasing proportion of females within the older age groups of the population.

Age-specific death rates declined or remained steady for all age groups over the period 1977–97. Large declines occurred in infant mortality rates for both males and females, more than halving in the last 20 years. Age-specific death rates for boys aged 5–14 years and girls aged 1–9 years declined by at least 50%, although death rates among these ages were already less than 1 per 1,000 population. In all age groups over 45 years, where deaths rates are higher, significant improvements were experienced for both males and females. Males aged 45–54 years exhibited declines of over 50%, while for females, the largest declines occurred among those aged 40–54 years.

MALE AGE-SPECIFIC DEATH RATES, 1977 and 1997



FEMALE AGE-SPECIFIC DEATH RATES, 1977 and 1997



MARITAL STATUS

Most males (57%) whose deaths were registered in 1997 were married at the time of death, indicating that they predeceased their partner. In contrast, the majority of females (57%) were widows at the time of death. One consequence of the greater longevity of women is that the number of aged widows within the Australian population is increasing. However, the proportion of females aged 75 years or more who are widows has remained unchanged for the last 10 years, at 65%.

Age-specific death rates by marital status indicate that married people experienced lower rates of death than those who were divorced, widowed or never married. Additionally, rates for men who were widowed or divorced were lower than for those who had never married. The highest death rates for men were experienced by those who had never married. Males aged 20–69 years who had never married experienced death rates two to four times higher than the rates of those who were married. For women, the pattern was similar, although the differentials between the rates for married women and those never married, divorced and widowed were smaller than for males.

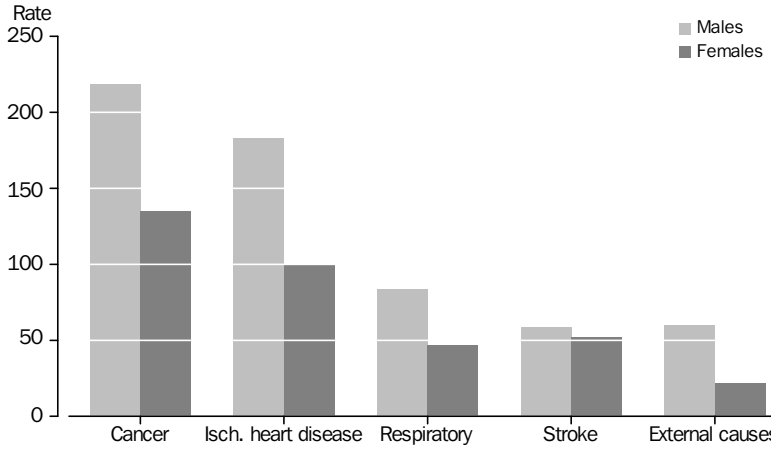
MARITAL STATUS *continued*

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.

CAUSES OF DEATH

In 1997, the main causes of death were diseases of the circulatory system (mainly ischaemic heart disease and stroke), malignant neoplasms (cancer), diseases of the respiratory system and external causes (accidents, poisonings and violence). During the last decade, ischaemic heart disease and cancer have remained the two leading causes of death. In 1991, cancer overtook ischaemic heart disease as the leading cause of death. This is a result of the long-term downward trend in the SDR for ischaemic heart disease from 282 deaths per 100,000 males in 1987 to 183 in 1997 for males and 150 to 100 for females. Over the same period, rates for cancer have declined only marginally from 239 to 219 for males and 139 to 135 for females.

CAUSES OF DEATH, Standardised Death Rates(a)



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

The relative importance of different causes of death varies with age. For those aged 1–44 years accidents are the leading cause. Malignant neoplasms are the second leading cause for these age groups except for those aged 15–24, where suicide predominates. Among people aged over 44, neoplasms and ischaemic heart disease are the main causes of death. Cerebrovascular disease increases in importance among the elderly. This is reflected in the median age at death of 85 years for this cause.

COUNTRY OF BIRTH

The overseas-born group of Australia's resident population accounted for 28% of deaths in 1997 despite making up only 23% of Australia's resident population. The main reason for this is that the overseas-born population has an older age structure than the Australian-born population.

COUNTRY OF BIRTH *continued*

Standardising death rates for the 10 largest birthplace groups against the total Australian population for age and sex reveals that people born overseas have significantly lower death rates than the Australian-born population. This holds true for both early post-World War II migrant groups such as Italy and Greece and more recent arrivals to Australia such as those from Viet Nam and China. New Zealanders living in Australia were the only group that were not significantly different from the total Australian rate. These results give strong support to the idea that migrants are, and have always been, a select group. Australia has selected them on a number of criteria, including good health. Further, migrants themselves have chosen to put themselves forward for relocation to another country, rather than stay in their own country. This alone suggests they represent a select group of the whole population.

In terms of specific causes of death, the Australian-born were consistently 5%–10% above the Australian rate. There was no significant difference between the rates for New Zealanders and the Australian total, except for diseases of the digestive system, which were 38% below the national rate, and external causes which were 22% above the national rate. Death rates for those born in the United Kingdom and Ireland fluctuated around the national rates, with diseases of the respiratory system being 7% above the national rate and diseases of the circulatory system being 8% below.

Of the countries studied, the Vietnamese had the lowest standardised rate for neoplasms and for diseases of the circulatory system, 41% and 59% below the national rate respectively. The Greek population in Australia had the lowest standardised rate for diseases of the digestive system, 52% below the national rate, while Malaysia experienced the lowest standardised rate for diseases of the respiratory system, 68% below the national rate. Death rates for external causes showed the greatest range, with those of Malaysian migrants being 76% below and those of the German-born 41% above the national rate.

LARGEST BIRTHPLACE GROUPS, Indirect Standardised Death Rates(a)

	PRINCIPLE CAUSES OF DEATH							
	Neoplasms	*Diseases of the circulatory system*	*Diseases of the digestive system*	*Diseases of the respiratory system*	*All other diseases*	*External causes*	*Total*	*Total deaths*
Birthplace	rate	rate	rate	rate	rate	rate	rate	no
Australia	198	306	23	78	44	95	745	92 982
United Kingdom and Ireland	192	260	21	76	37	82	670	1 440
New Zealand	201	272	13	72	36	111	694	15 127
Italy	160	219	19	46	39	74	562	1 088
Viet Nam	110	116	11	30	30	67	386	3 322
Greece	129	212	10	37	34	44	482	1 235
China	129	173	12	41	28	79	451	149
Germany	182	267	13	44	41	128	650	201
Philippines	137	219	11	41	25	44	471	293
Malaysia	131	160	13	23	35	22	404	686
India	132	275	23	63	47	62	618	570
Total Australia	**188**	**284**	**21**	**72**	**42**	**91**	**698**	**129 350**

(a) Indirect standardised death rate per 100,000 of the mid-year 1997 population.

2.1 DEATHS, AGE GROUPS, SEX

	Age group (years)																			
Selected years	*0*	*1-4*	*5-9*	*10-14*	*15-19*	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*70-74*	*75-79*	*80-84*	*85 and over*	*Not stated*	*Total*
MALES																					
1977	1,629	363	259	256	959	1,068	809	721	856	1,215	2,259	3,842	4,634	6,432	8,091	8,553	7,713	5,694	5,311	16	60,320
1982	1,425	313	223	263	827	1,084	893	812	859	1,090	1,728	2,954	4,742	6,069	8,338	9,531	9,162	6,823	6,145	14	63,295
1987	1,235	255	136	190	735	999	908	815	976	1,153	1,563	2,347	4,128	6,116	7,770	9,648	9,828	7,834	6,958	17	63,611
1992	1,073	220	128	127	547	865	889	982	990	1,310	1,673	2,268	3,236	5,511	8,138	9,509	10,780	9,232	8,630	7	66,115
1993	918	243	117	136	521	853	844	998	1,054	1,235	1,698	2,208	3,213	5,088	7,833	9,516	10,227	9,384	8,997	6	65,089
1994	866	201	112	144	533	842	831	968	1,096	1,294	1,757	2,202	3,151	4,958	7,911	10,091	10,517	10,028	9,955	7	67,464
1995	807	206	112	130	492	916	849	1,046	1,157	1,262	1,738	2,212	3,083	4,712	7,531	9,952	9,949	10,068	10,025	4	66,251
1996	843	205	115	147	541	866	876	1,019	1,125	1,324	1,757	2,281	3,051	4,636	7,349	9,987	10,474	10,664	10,932	14	68,206
1997	744	206	99	133	572	857	938	950	1,078	1,321	1,718	2,416	3,044	4,581	7,078	9,818	10,583	10,476	11,133	7	67,752
FEMALES																					
1977	1,192	268	166	132	348	313	314	356	476	712	1,150	1,843	2,386	3,437	4,410	5,537	7,220	7,836	10,371	3	48,470
1982	1,057	226	108	121	263	306	330	327	439	629	910	1,583	2,320	3,340	4,646	6,038	7,265	8,325	13,243	—	51,476
1987	881	156	102	89	291	315	333	353	500	672	882	1,295	2,012	3,159	4,392	6,399	8,145	8,938	14,790	6	53,710
1992	770	178	97	81	216	302	294	406	496	725	980	1,320	1,807	2,840	4,471	6,353	8,710	10,196	17,301	2	57,545
1993	673	161	86	98	216	286	250	394	561	699	991	1,204	1,763	2,743	4,332	6,312	8,381	10,139	17,221	—	56,510
1994	646	160	84	104	187	255	276	352	534	740	1,056	1,272	1,770	2,622	4,389	6,480	8,358	10,922	19,018	3	59,228
1995	642	151	93	113	214	293	289	414	494	729	1,030	1,334	1,728	2,540	4,227	6,357	8,214	10,865	19,155	—	58,882
1996	617	146	73	106	184	228	296	364	556	713	1,059	1,380	1,823	2,518	4,024	6,301	8,480	11,013	20,629	3	60,513
1997	597	121	86	81	221	284	320	431	553	746	1,072	1,457	1,813	2,484	3,990	6,294	8,304	11,174	21,566	4	61,598

2.2 AGE-SPECIFIC DEATH RATES, SEX

Selected years	Age group (years)																	
	0	*1-4*	*5-9*	*10-14*	*15-19*	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*70-74*	*75-79*	*80-84*	*85 and over*
MALES																			
1977																			
1982	11.6	0.7	0.4	0.4	1.3	1.6	1.4	1.3	1.6	2.5	4.5	7.5	12.7	19.9	33.0	51.9	82.7	124.3	215.9
1987	9.9	0.5	0.2	0.3	1.0	1.5	1.3	1.3	1.5	2.1	3.5	6.1	10.9	17.2	27.9	45.3	71.4	111.3	191.9
1992	7.9	0.4	0.2	0.2	0.8	1.2	1.3	1.4	1.5	2.0	3.0	5.1	8.6	15.2	25.0	39.7	66.5	104.5	182.3
1993	6.9	0.5	0.2	0.2	0.8	1.2	1.2	1.4	1.5	1.9	2.9	4.8	8.4	14.2	23.7	38.0	62.6	100.7	178.7
1994	6.5	0.4	0.2	0.2	0.8	1.2	1.2	1.3	1.6	2.0	2.8	4.6	8.0	14.0	23.8	38.3	64.4	101.8	186.8
1995	6.1	0.4	0.2	0.2	0.8	1.3	1.2	1.4	1.6	1.9	2.7	4.5	7.6	13.3	22.5	36.9	58.7	98.1	176.6
1996	6.5	0.4	0.2	0.2	0.8	1.2	1.2	1.4	1.5	2.0	2.7	4.4	7.3	13.1	21.8	36.2	58.3	100.7	181.3
1997	5.8	0.4	0.1	0.2	0.9	1.2	1.3	1.3	1.5	1.9	2.6	4.3	7.0	12.7	21.1	35.0	55.7	96.3	170.6
FEMALES																			
1977	10.9	0.6	0.3	0.2	0.6	0.5	0.5	0.7	1.1	1.9	3.1	4.8	7.0	11.2	17.1	28.6	50.3	86.9	166.3
1982	9.1	0.5	0.2	0.2	0.4	0.5	0.5	0.5	0.8	1.5	2.5	4.2	6.2	10.1	16.0	25.7	45.1	79.3	170.4
1987	7.4	0.3	0.2	0.1	0.4	0.5	0.5	0.5	0.8	1.3	2.1	3.5	5.5	8.6	13.9	23.9	41.0	72.2	152.2
1992	6.0	0.4	0.2	0.1	0.3	0.4	0.4	0.6	0.7	1.1	1.8	3.1	4.9	7.8	12.7	21.7	38.0	67.3	149.6
1993	5.3	0.3	0.1	0.2	0.3	0.4	0.4	0.5	0.8	1.1	1.7	2.8	4.7	7.6	12.2	20.8	36.4	64.1	141.3
1994	5.2	0.3	0.1	0.2	0.3	0.4	0.4	0.5	0.8	1.1	1.8	2.8	4.6	7.3	12.4	20.4	36.7	65.3	149.2
1995	5.1	0.3	0.1	0.2	0.3	0.4	0.4	0.6	0.7	1.1	1.7	2.8	4.4	7.1	11.9	19.7	35.2	63.0	142.6
1996	5.0	0.3	0.1	0.2	0.3	0.3	0.4	0.5	0.8	1.1	1.7	2.8	4.5	7.1	11.3	19.3	34.8	62.4	145.7
1997	4.9	0.2	0.1	0.1	0.4	0.4	0.4	0.6	0.7	1.1	1.7	2.7	4.3	6.8	11.4	19.2	32.5	62.5	143.0

2.3 AGE AT DEATH, SEX, MARITAL STATUS

Age at death (years)	Males						Females					
	Never married	Married	Widowed	Divorced	Not stated	Total	Never married	Married	Widowed	Divorced	Not stated	Total
0	744	—	—	—	—	744	597	—	—	—	—	597
1-4	206	—	—	—	—	206	121	—	—	—	—	121
5-9	99	—	—	—	—	99	86	—	—	—	—	86
10-14	123	—	—	—	10	133	79	—	—	—	—	81
15-19	456	3	—	—	113	572	164	—	—	—	55	221
20-24	789	32	—	—	36	857	248	24	—	—	10	284
25-29	734	135	—	19	49	938	209	88	—	6	17	320
30-34	582	250	—	67	51	950	184	180	5	43	19	431
35-39	485	421	—	104	66	1,078	165	302	—	56	28	553
40-44	426	632	11	181	71	1,321	140	455	6	116	29	746
45-49	392	914	16	306	90	1,718	116	719	40	166	31	1,072
50-54	449	1,474	32	359	102	2,416	164	922	84	244	43	1,457
55-59	451	1,944	91	452	106	3,044	184	1,114	231	250	34	1,813
60-64	603	3,080	221	555	122	4,581	159	1,494	512	267	52	2,484
65-69	864	4,782	553	705	174	7,078	258	2,101	1,189	368	74	3,990
70-74	999	6,612	1,280	714	213	9,818	356	2,693	2,751	405	89	6,294
75-79	853	6,868	2,128	571	163	10,583	478	2,707	4,668	370	81	8,304
80-84	759	6,244	2,964	368	141	10,476	746	2,180	7,803	353	92	11,174
85 and over	764	4,924	5,107	228	110	11,133	1,767	1,623	17,631	400	145	21,566
Not stated	—	—	—	—	6	7	—	—	—	—	—	4
Total	**10,779**	**38,315**	**12,406**	**4,629**	**1,623**	**67,752**	**6,222**	**16,604**	**34,924**	**3,045**	**803**	**61,598**

2.4 AGE-SPECIFIC DEATH RATES, SEX, MARITAL STATUS

Age at death (years)	Males					Females				
	Never married	Married	Widowed	Divorced	Total	Never married	Married	Widowed	Divorced	Total
0	5.8	—	—	—	5.8	4.9	—	—	—	4.9
1-4	0.4	—	—	—	0.4	0.2	—	—	—	0.2
5-9	0.2	—	—	—	0.1	0.1	—	—	—	0.1
10-14	0.2	—	—	—	0.2	0.1	—	—	—	0.1
15-19	0.9	2.3	—	—	0.9	0.4	—	—	—	0.4
20-24	1.3	0.7	—	—	1.2	0.5	0.2	—	—	0.4
25-29	1.7	0.6	—	1.5	1.3	0.7	0.3	—	0.3	0.4
30-34	2.4	0.6	—	2.0	1.3	1.1	0.4	1.6	0.9	0.6
35-39	3.3	0.9	—	2.0	1.5	1.7	0.6	—	0.8	0.7
40-44	4.7	1.3	3.9	2.8	1.9	2.3	0.9	0.6	1.4	1.1
45-49	6.9	1.9	3.7	4.4	2.6	3.2	1.5	2.6	1.9	1.7
50-54	11.6	3.4	5.2	6.0	4.3	7.1	2.3	3.6	3.4	2.7
55-59	16.7	5.7	11.2	10.5	7.0	11.4	3.6	6.5	5.2	4.3
60-64	27.2	10.8	18.2	18.3	12.7	12.3	5.9	9.2	8.0	6.8
65-69	39.8	18.2	27.7	30.0	21.1	19.7	9.7	13.5	14.1	11.4
70-74	59.8	30.8	45.3	46.6	35.0	26.7	16.1	22.2	22.0	19.2
75-79	81.4	49.9	68.8	71.5	55.7	41.4	28.0	34.7	35.9	32.5
80-84	133.3	88.6	106.6	108.9	96.3	78.1	52.1	64.5	71.9	62.5
85 and over	198.6	152.1	189.1	163.2	170.6	162.9	104.5	145.8	159.9	143.0

2.5 PRINCIPAL CAUSES OF DEATH (NUMBER), SEX

Cause of death	*1987*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*
			MALES				
Neoplasms	*16,225*	*18,451*	*18,727*	*19,551*	*19,425*	*19,889*	*19,571*
Malignant neoplasms (cancer)	16,110	18,289	18,479	19,285	19,144	19,586	19,279
Trachea, bronchus and lung	4,456	4,666	4,552	4,810	4,696	4,773	4,605
Prostate	1,744	2,370	2,544	2,590	2,575	2,660	2,448
Other	115	162	248	266	281	303	292
Diseases of the circulatory system	*28,081*	*27,079*	*26,369*	*27,031*	*26,258*	*26,550*	*25,717*
Ischaemic heart disease	17,988	17,063	16,335	16,515	16,131	16,092	15,565
Other heart disease	3,149	3,148	3,254	3,327	3,127	3,421	3,406
Cerebrovascular disease (stroke)	5,075	4,860	4,818	5,260	5,108	5,205	4,879
Other	1,869	2,008	1,962	1,929	1,892	1,832	1,867
Diseases of the respiratory system	*5,316*	*5,972*	*5,468*	*5,791*	*5,407*	*5,733*	*6,960*
Chronic obstructive pulmonary disease and allied conditions	4,075	4,301	3,974	4,132	3,884	4,147	3,830
Diseases of the digestive system	*2,081*	*2,058*	*1,938*	*1,961*	*1,961*	*2,022*	*2,024*
Chronic liver disease and cirrhosis	863	807	723	728	731	768	764
Diseases of the genitourinary system	*745*	*845*	*855*	*977*	*947*	*1,001*	*1,090*
Congenital anomalies	*453*	*453*	*397*	*413*	*343*	*350*	*411*
Certain conditions originating in the perinatal period	*474*	*478*	*412*	*402*	*384*	*391*	*336*
All other diseases	4,506	5,549	5,870	6,246	6,368	6,836	6,250
External causes	*5,730*	*5,230*	*5,049*	*5,087*	*5,153*	*5,434*	*5,393*
Motor vehicle traffic accidents	1,995	1,408	1,384	1,369	1,398	1,399	1,240
Accidental falls	426	455	418	458	457	523	486
Accidental drowning and submersion	238	216	226	208	190	188	217
All other accidents	1,003	982	1,044	926	930	1,057	989
Suicide	1,773	1,820	1,687	1,830	1,872	1,931	2,146
Other	295	349	290	296	306	336	315
Total	**63,611**	**66,115**	**65,085**	**67,459**	**66,246**	**68,206**	**67,752**
			FEMALES				
Neoplasms	*12,332*	*13,954*	*14,449*	*14,652*	*14,942*	*15,363*	*15,316*
Malignant neoplasms (cancer)	12,188	13,744	14,212	14,373	14,661	15,085	15,037
Trachea, bronchus and lung	1,296	1,734	1,828	1,887	1,993	2,054	2,058
Breast	2,258	2,438	2,641	2,655	2,629	2,623	2,602
Other	144	210	237	279	281	278	279
Diseases of the circulatory system	*27,597*	*27,833*	*26,867*	*27,855*	*27,144*	*27,440*	*26,924*
Ischaemic heart disease	14,105	14,419	13,424	14,058	13,478	13,545	13,486
Other heart disease	4,064	4,247	4,239	4,353	4,270	4,446	4,350
Cerebrovascular disease (stroke)	7,493	7,126	7,319	7,578	7,572	7,601	7,254
Other	1,935	2,041	1,885	1,866	1,824	1,848	1,834
Diseases of the respiratory system	*3,175*	*4,096*	*3,777*	*4,167*	*4,024*	*4,561*	*6,299*
Chronic obstructive pulmonary disease and allied conditions	1,935	2,481	2,364	2,581	2,504	2,814	2,627
Diseases of the digestive system	*1,932*	*1,904*	*1,821*	*1,897*	*1,910*	*1,871*	*1,928*
Chronic liver disease and cirrhosis	319	295	266	319	286	305	287
Diseases of the genitourinary system	*979*	*1,016*	*1,069*	*1,133*	*1,126*	*1,243*	*1,362*
Congenital anomalies	*364*	*352*	*342*	*341*	*335*	*301*	*349*
Certain conditions originating in the perinatal period	*342*	*368*	*284*	*293*	*291*	*309*	*284*
All other diseases	4,649	5,763	5,929	6,786	6,846	7,302	6,792
External causes	*2,340*	*2,259*	*1,971*	*2,100*	*2,260*	*2,123*	*2,344*
Motor vehicle traffic accidents	788	658	572	590	631	544	561
Accidental falls	560	511	438	545	538	579	639
Accidental drowning and submersion	55	75	62	41	69	59	59
All other accidents	283	331	353	339	352	331	353
Suicide	467	474	394	428	495	462	577
Other	187	210	152	157	175	148	155
Total	**53,710**	**57,545**	**56,509**	**59,224**	**58,878**	**60,513**	**61,598**

2.6 PRINCIPAL CAUSES OF DEATH (STANDARDISED RATES(a) AND MEDIAN AGES), SEX

Cause of death	*1987*	*1992*	*1994*	*1995*	*1996*	*1997*	*median age (years)*
			MALES				
Neoplasms	*240*	*241*	*243*	*235*	*234*	*223*	*72.1*
Malignant neoplasms (cancer)	239	238	239	232	230	219	72.1
Trachea, broncus and lung	64	59	59	56	55	52	71.7
Prostate	30	34	35	33	33	29	78.4
Other	—	—	4	4	4	4	77.6
Diseases of the circulatory system	*454*	*380*	*359*	*336*	*328*	*305*	*77.2*
Ischaemic heart disease	282	235	216	203	196	183	76.1
Other heart disease	54	46	46	41	43	41	78.6
Cerebrovascular disease (stroke)	87	71	72	67	66	59	79.6
Other	32	29	26	25	23	22	78.2
Diseases of the respiratory system	*88*	*86*	*78*	*70*	*72*	*84*	*79.0*
Chronic obstructive pulmonary disease and allied conditions	66	60	54	49	51	45	76.4
Diseases of the digestive system	*32*	*28*	*25*	*24*	*24*	*23*	*71.6*
Chronic liver disease and cirrhosis	11	10	8	8	8	8	59.8
Diseases of genitourinary system	14	13	14	13	13	14	81.5
Congenital anomalies	5	5	5	4	4	5	1.0
Certain conditions originating in the perinatal period	6	5	5	4	5	4	0.5
All other diseases	70	75	81	79	83	73	72.9
External causes	*74*	*62*	*59*	*59*	*61*	*60*	*38.3*
Motor vehicle traffic accidents	25	16	16	16	16	14	31.0
Accidental falls	7	7	6	6	7	6	80.9
Accidental drowning and submersion	3	3	—	—	—	—	30.7
All other accidents	13	12	11	11	12	11	41.8
Suicide	23	21	21	21	21	23	37.5
Other	4	4	3	3	4	3	34.0
Total	**984**	**895**	**867**	**824**	**824**	**790**	**74.2**
			FEMALES				
Neoplasms	*141*	*141*	*142*	*141*	*141*	*137*	*72.9*
Malignant neoplasms (cancer)	139	139	139	138	139	135	72.8
Trachea, broncus and lung	15	18	19	19	19	19	71.6
Breast	27	25	27	26	25	24	66.4
Other	—	—	3	—	—	—	80.3
Diseases of the circulatory system	*289*	*248*	*230*	*216*	*209*	*197*	*84.1*
Ischaemic heart disease	150	130	118	109	105	100	83.5
Other heart disease	42	37	35	33	33	31	85.0
Cerebrovascular disease (stroke)	77	63	61	59	57	52	84.7
Other	20	18	15	14	14	14	83.8
Diseases of the respiratory system	*34*	*38*	*37*	*35*	*37*	*47*	*83.3*
Chronic obstructive pulmonary disease and allied conditions	22	24	24	22	24	22	77.7
Diseases of the digestive system	*21*	*18*	*16*	*16*	*15*	*15*	*81.2*
Chronic liver disease and cirrhosis	4	3	3	3	3	3	62.0
Diseases of genitourinary system	10	9	9	9	10	10	83.9
Congenital anomalies	5	4	4	4	4	4	0.9
Certain conditions originating in the perinatal period	4	4	4	4	4	4	0.5
All other diseases	50	53	59	57	58	54	81.8
External causes	*27*	*24*	*21*	*23*	*21*	*22*	*53.2*
Motor vehicle traffic accidents	10	7	7	7	6	6	38.3
Accidental falls	6	4	4	4	4	4	86.4
Accidental drowning and submersion	—	—	—	—	—	—	27.0
All other accidents	3	4	4	4	3	4	49.6
Suicide	6	5	5	5	5	6	41.1
Other	—	—	—	—	—	—	36.3
Total	**581**	**540**	**521**	**503**	**498**	**490**	**81.0**

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

2.7 DEATHS, COUNTRY OF BIRTH, DURATION OF RESIDENCE

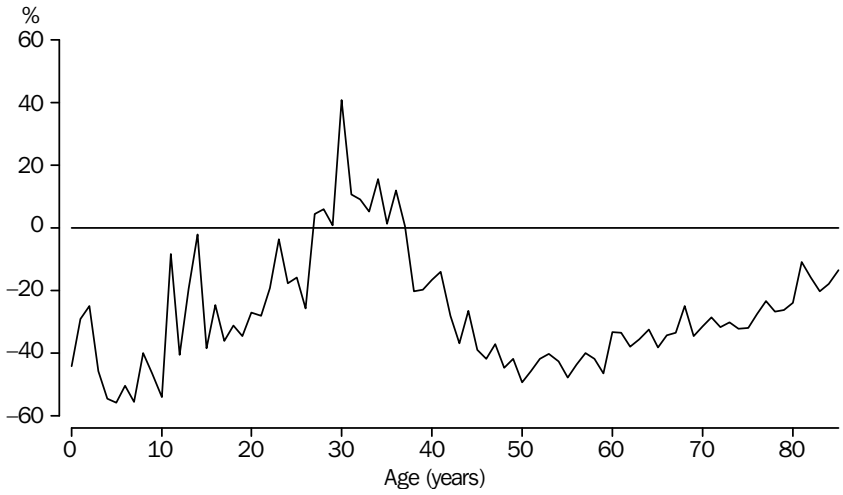
	Duration of residence (years)									
Country of birth	*0-4*	*5-9*	*10-19*	*20-29*	*30-39*	*40 and over*	*Not stated*	*Not applicable*	*Total*	*Median duration*
OCEANIA AND ANTARCTICA—										
Australia	. .	. .	. .	. .	. .	. .	. .	92,981	92,981	. .
Fiji	25	25	33	23	6	26	27	. .	165	13.9
New Zealand	108	139	241	181	118	399	254	. .	1,440	25.6
Other	26	28	45	27	12	25	75	. .	238	15.2
Total	*159*	*192*	*319*	*231*	*136*	*450*	*356*	. .	*94,824*	22.7
EUROPE AND FORMER USSR—										
Austria	4	—	4	18	45	218	29	. .	320	43.4
Former USSR and Baltic States	39	44	50	38	76	943	84	. .	1,274	48.0
Former Yugoslav Republics	44	27	43	358	350	487	79	. .	1,388	35.5
Germany	30	9	47	63	224	766	96	. .	1,235	43.4
Greece	10	17	32	133	370	487	39	. .	1,088	38.5
Hungary	8	4	17	33	77	339	43	. .	521	41.0
Ireland	10	9	35	77	116	364	69	. .	680	44.8
Italy	27	19	54	221	750	2,129	122	. .	3,322	43.0
Malta	4	—	7	23	113	309	22	. .	478	43.1
Netherlands	12	5	25	41	222	805	65	. .	1,175	43.4
Poland	18	18	56	48	107	1,036	102	. .	1,385	47.6
United Kingdom	250	303	1,006	1,867	2,781	7,132	1,108	. .	14,447	41.8
Other	36	25	100	194	234	522	117	. .	1,228	39.0
Total	*492*	*482*	*1,476*	*3,114*	*5,465*	*15,537*	*1,975*	. .	*28,541*	42.8
MIDDLE EAST AND NORTH AFRICA—										
Egypt	9	9	15	63	99	145	29	. .	369	36.6
Lebanon	17	15	33	127	34	51	28	. .	305	26.4
Turkey	8	12	19	79	23	39	14	. .	194	26.9
Other	26	23	46	67	39	54	19	. .	274	25.2
Total	*60*	*59*	*113*	*336*	*195*	*289*	*90*	. .	*1,142*	28.6
SOUTHEAST ASIA—										
Indonesia	21	8	43	18	20	54	20	. .	184	22.8
Malaysia	16	17	46	27	10	19	14	. .	149	17.0
Philippines	24	37	83	24	5	—	28	. .	201	11.8
Singapore	3	9	11	16	10	11	3	. .	63	n.p.
Thailand	3	7	5	—	—	—	8	. .	26	n.p.
Viet Nam	23	90	150	15	—	—	13	. .	293	12.5
Other	12	19	66	25	16	19	5	. .	162	16.8
Total	*102*	*187*	*404*	*127*	*61*	*106*	*91*	. .	*1,078*	15.1
NORTHEAST ASIA—										
China	73	119	217	48	56	122	51	. .	686	15.4
Hong Kong	10	16	25	11	7	19	8	. .	96	n.p.
Other	30	24	31	15	4	12	30	. .	146	10.5
Total	*113*	*159*	*273*	*74*	*67*	*153*	*89*	. .	*928*	14.6
SOUTHERN ASIA—										
India	42	26	87	156	71	154	34	. .	570	27.7
Sri Lanka	20	32	43	64	31	32	8	. .	230	23.4
Other	9	8	4	—	3	—	5	. .	33	n.p.
Total	*71*	*66*	*134*	*222*	*105*	*188*	*47*	. .	*833*	26.2
THE AMERICAS—										
Canada	6	6	14	19	21	70	17	. .	153	43.8
Chile	5	5	22	27	—	—	4	. .	65	n.p.
United States of America	14	5	35	45	37	76	44	. .	256	30.8
Other	14	7	35	50	9	21	15	. .	151	23.1
Total	*39*	*23*	*106*	*141*	*68*	*168*	*80*	. .	*625*	27.3
AFRICA (Excluding North Africa)—										
South Africa	*14*	*11*	*70*	*44*	*38*	*72*	*27*	. .	*276*	26.6
Other	7	16	37	79	25	12	10	. .	186	25.8
Total	*21*	*27*	*107*	*123*	*63*	*84*	*37*	. .	*462*	26.1
Other and not stated	52	4	16	7	8	28	802	. .	917	n.p.
Total	**1,109**	**1,199**	**2,948**	**4,375**	**6,168**	**17,003**	**3,567**	. .	**129,350**	**40.7**

FEATURE ARTICLE—THE YEARS OF LIVING DANGEROUSLY

INTRODUCTION

Over the last century, the death rate of Australia's population has been falling steadily to its current low level of 6.4 deaths per 1,000. Death rates for both males and females of almost every age have seen marked declines throughout this period. In one group of the population, however, the trend of improving mortality has been reversed in the last 15 years. Males aged between 27 and 37 years have experienced a 10% increase in death rates during the period. Between 1981 and 1996 the age-specific death rates for males aged 27–37 years increased for every age. This article examines the impact of changing marital status of males in this group on death rates.

CHANGES IN MALE MORTALITY, 1981–96



Changing patterns of marital status

Over the last 15 years there has been quite a substantial change in the social structure of the population. People are choosing to enter registered marriages at increasingly older ages, and a smaller proportion of the population marry. This is evidenced by increases in the median age at first marriage, from 24.4 years to 27.6 years for males between 1981 and 1996. Estimates for 1997 show that 56% of males will marry, compared to 69% in 1981, an 18% decline in 15 years.

These changes have had a marked effect on males aged between 27 and 37 years. Of Australia's estimated resident population (ERP) in 1981, 18% of this group were never married, while 77% were married and 5% were divorced. By 1996, the proportion of the ERP in this age group who were never married had doubled, the proportion married had fallen to 59%, while the proportion divorced was almost unchanged.

It is well documented that the risk of mortality varies according to a person's marital status, although the reasons for this have been debated for many years (Lillard & Panis, 1996). In general, those who are married are much less likely to die than those who are never married. This is borne out in the death rates for males aged 27–37 in 1981 and 1996, but with an interesting variation.

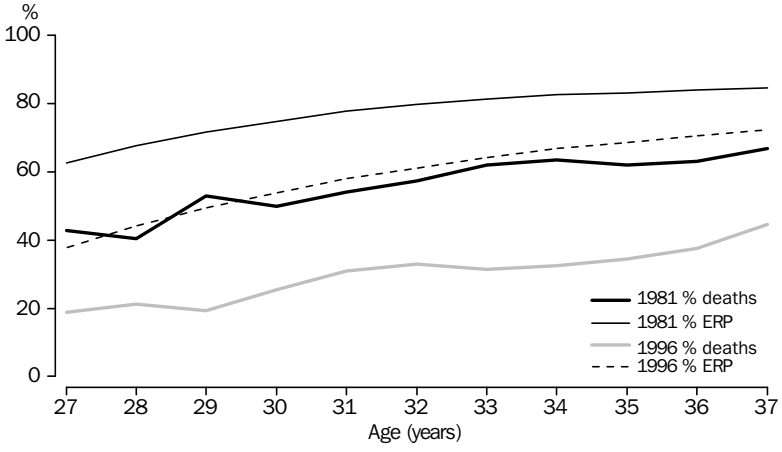
MARITAL STATUS OF MALES AGED 27–37 YEARS

	Never married	*Married*	*Widowed*	*Divorced*	*Total*
	%	%	%	%	%
1981					
ERP	18.3	77.0	0.2	4.5	100
Deaths	34.4	56.1	0.9	8.6	100
1996					
ERP	36.0	59.1	0.2	4.8	100
Deaths	62.9	30.5	0.2	6.3	100

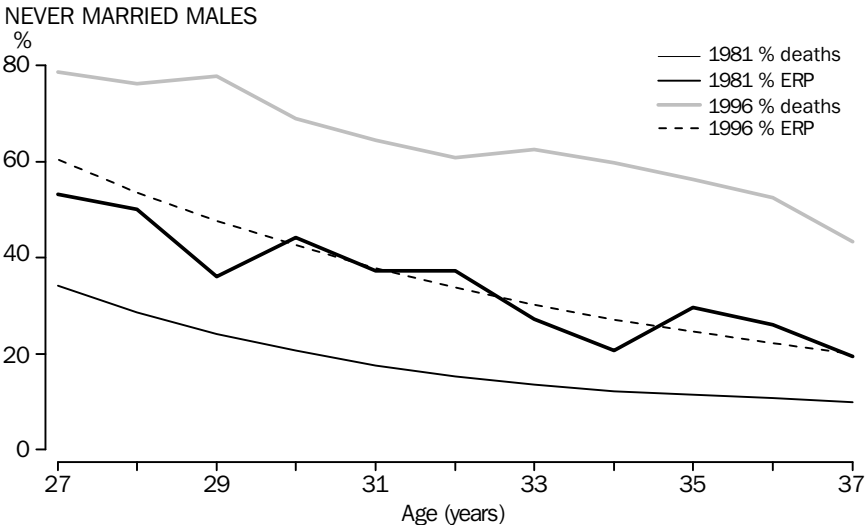
Married and never married males

For both 1981 and 1996 the proportion of deaths occurring to married males was lower than the proportion of married males in each age group. However, the difference in 1996 was greater than in 1981. This suggests that marriage had an even greater protective effect in 1996 than in 1981. Conversely, the proportion of deaths occurring to males who had never married was higher than the proportion in the population. But in 1996 the relative risk of a man who had never married dying was even greater than in 1981. One possible explanation of this was that because the married population was smaller in 1996 (a maximum of 72% for 37 year-old males compared to 85% for 37 year-olds in 1981) it is therefore more selective. Males who either experience poor health or have a greater tendency to live dangerously, thus experiencing a greater risk of dying, are less likely to find a partner. Consequently they remain in the never married group, pushing up its death rates, and are not part of the married group, forcing its rate down.

MARRIED MALES



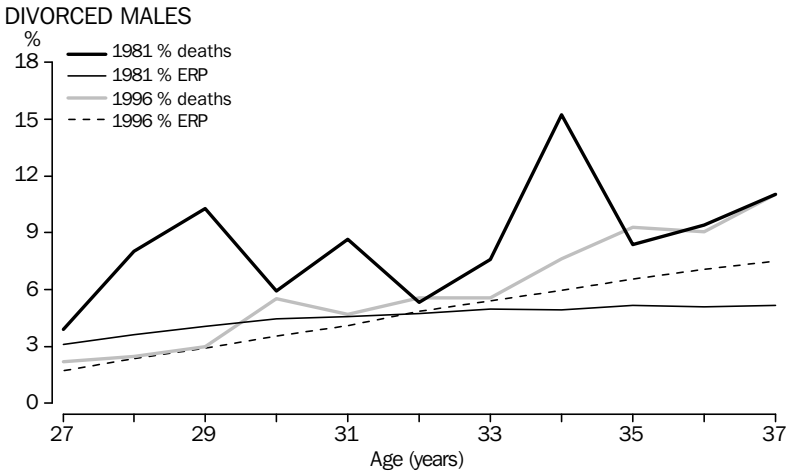
Because never married and married males make up the greatest proportion of the male population in these age groups, it follows that the death rates experienced by these groups will have a greater impact on overall death rates than those who are divorced or widowed. However, the importance of married death rates has fallen during the last 15 years, while the impact of never married deaths rates has increased.



Divorced males

There is a general perception that the proportion of divorced males in the population is increasing and that they have a relatively high risk of dying. However, a comparison between 1981 and 1996 reveals rather a different picture. In the 27–37 years age group as a whole, the proportion of divorced males has not changed (5%). However, the pattern for individual ages reveals a slightly lower proportion in younger years in 1996s compared to 1981, reflecting later marriage and so a reduced possibility of divorce. Over age 32 years, the proportion of divorced males in the population in 1996 rises above the 1981 levels. Further, while the proportion of divorced males in the population levelled off after about age 30 in 1986, in 1996 it increased steadily throughout the ages 30–37.

It appears that the relative risk of death for divorced males has fallen over the last 15 years, since by 1996 the proportion of divorced males who died in these ages had fallen to a level almost the same as the proportion of divorced males in the population. It is important to note that deaths of divorced males make up a very small component of total deaths of males in these ages, reaching a maximum of 11% for 37 year-olds in both 1981 and 1996.



SECTION 3 STATE AND TERRITORY DATA

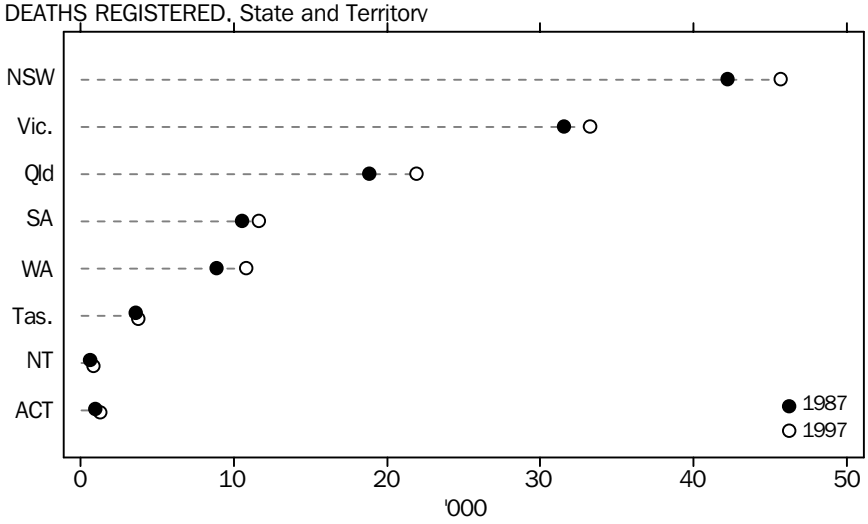
LEADING STATE CONTRIBUTIONS

The three most populous eastern States accounted for more than three-quarters of all registered deaths in 1997. Of the total of 129,400 deaths registered in Australia in 1997, 35% (45,600) were from New South Wales, 26% (33,300) were from Victoria and 17% (21,900) were from Queensland.

INCREASE IN DEATHS

The number of deaths registered throughout Australia in 1997 was around 10% higher than in 1987. However, there was wide variation in the increase among the States and Territories. The two Territories recorded the largest percentage increases in deaths over the last 10 years, with the number of deaths in the Northern Territory and the Australian Capital Territory increasing by 32% and 34% respectively. While the Northern Territory and the Australian Capital Territory populations have grown by 18% and 17% respectively (the third and fourth fastest in Australia), the considerable increase in deaths may also be partly attributed to the volatility of annual death numbers from the relatively small Territory populations.

DEATHS REGISTERED, State and Territory



The fastest growing State populations of Western Australia and Queensland had the third and fourth highest percentage increases in deaths with 22% and 16% respectively. Tasmania and Victoria had the lowest percentage increases in deaths with 5% each over the ten years to 1997. While South Australia has had the second slowest rate of population growth (following Tasmania), the relatively old South Australian population has contributed to an 11% increase in deaths over the period.

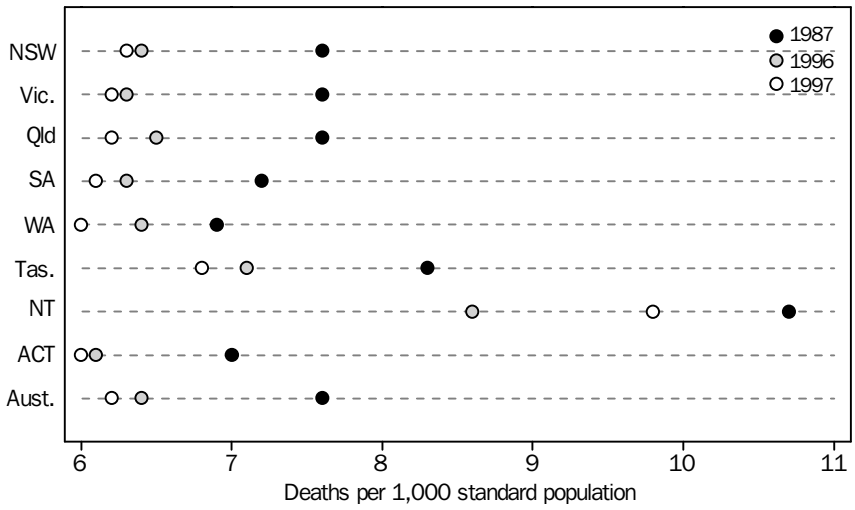
SEX

There were 110 male deaths for every 100 female deaths throughout Australia in 1997. The Australian Capital Territory had the lowest sex ratio with 99 male deaths per 100 female deaths, while the Northern Territory had the highest with 150 male deaths per 100 female deaths. However, this is partly due to the Northern Territory's high population sex ratio which has 112 males for every 100 females, compared to 99 males per 100 females for Australia overall. Queensland and Western Australia had the second and third highest sex ratios with 119 and 115 male deaths for every 100 female deaths respectively.

STANDARDISED DEATH RATES

In 1997, the standardised death rate (SDR) for all of Australia was 6.2 deaths per 1,000 standard population. This represents a decline of 3% on the 1996 level (6.4) and an 18% decline on the 1987 level (7.6). All States and Territories except the Northern Territory have contributed to the decline in the SDR from 1996 to 1997. The male SDR in the Northern Territory increased by 10%, while the female SDR increased by 24%, producing a SDR of 9.8, which is 58% above the national rate. Tasmania was the only other State or Territory to have a SDR differing significantly from the national rate in 1997, with a SDR of 6.8, 10% higher than for the total Australian rate. The Australian Capital Territory had the lowest SDR with 6.0 deaths per 1,000 standard population.

STANDARDISED DEATH RATES



AGE AT DEATH

The median age of all deaths for Australia was 77.2 years (74.2 years for males and 81 years for females). The median age at death in the Northern Territory was around 20 years less than for Australia, with a male median age of 56.3 years and a female median age of 57.3 years. The significantly lower age at death in the Northern Territory is due to the combination of the younger age structure of the population, and the high mortality of the Indigenous population who comprise around 28% of the total population.

South Australia had the highest overall median age at death (78.1 years) with male and female median ages of 75.2 years and 81.4 years respectively. This reflects the slightly older population of South Australia compared to all other States and Territories.

EXPECTATION OF LIFE

Male expectation of life at birth was highest in the Australian Capital Territory where a male born in 1995–97 could be expected to live to 77.1 years, 1.5 years more than the national level of 75.6 years. Female life expectancy at birth was highest in Western Australia where a female born in 1995–97 could be expected to live to 81.6 years, 0.3 years higher than the national level of 81.3 years. Reflecting the high mortality of the relatively large Indigenous population, the Northern Territory had the lowest life expectancy, with male and female respective life expectancies 5.6 and 6.6 years lower than the national life expectancies.

CAUSES OF DEATH

Nationally, circulatory diseases were the leading causes of death (responsible for 41% of all deaths). South Australia and Tasmania had the highest proportion of circulatory disease deaths with 42%, while the lowest proportion of circulatory disease deaths was in the Northern Territory (29%), reflecting the young population. On a standardised basis however, death rates for circulatory system diseases were highest in the Northern Territory, where the respective male and female rates were 30% and 53% higher than the national male and female rates. Tasmania had the second highest SDRs for circulatory diseases with males and females 15% and 14% higher than the national level. The lowest SDRs for circulatory diseases were experienced in Western Australia where the respective male and female death rates were 10% and 14% lower than national rates.

Neoplasms (cancers) were the second leading cause of death throughout Australia, with 27% of all deaths. Only the Northern Territory differed significantly from this proportion, with just 19% of all deaths ascribed to neoplasms. While the Australian Capital Territory had the lowest male SDR for neoplasms (19% below the national level), Northern Territory males had the second lowest. This was 4% lower than the national rate, and was the only leading cause for which Northern Territory males had a lower SDR than the national rate. By contrast, Northern Territory females had the highest female neoplasm SDR in Australia, 45% higher than the national rate. The lowest female SDRs for neoplasms were recorded in New South Wales and Queensland, both 3% lower than the national rate.

Respiratory diseases were the third leading cause of death in 1997, with 10% of all deaths nationally. The male respiratory disease (mostly pneumonia) SDR in the Northern Territory was double the national rate, while the female SDR was 2.4 times greater than the national rate. The lowest male SDR for respiratory diseases was recorded in the Australian Capital Territory (20% lower than the national level), while Queensland had the lowest female rate (13% below the national rate).

External causes of death were responsible for 6% of all deaths registered in 1997. While these deaths made up 5% of the total deaths in Victoria, South Australia and Tasmania, external causes comprised 16% of deaths in the Northern Territory. The Northern Territory also had the highest SDRs for external causes, with the male and female respective rates 53% and 141% higher than the national rates. The lowest male SDR for external causes was recorded in the Australian Capital Territory (27% lower than the national level), while Tasmania had the lowest female rate (14% below the national rate).

3.1 DEATHS: NUMBER REGISTERED, SEX

Selected years	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Other Territories*	*Australia*
					MALES					
1977	22,044	16,211	9,414	5,305	4,519	1,896	504	427	. .	60,320
1982	23,086	16,554	10,446	5,757	4,719	1,896	366	471	. .	63,295
1987	22,611	16,714	10,522	5,754	5,058	1,968	450	534	. .	63,611
1992	23,969	16,816	11,174	5,812	5,352	1,939	475	578	. .	66,115
1993	22,925	16,389	11,058	6,015	5,632	1,965	469	632	. .	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
					FEMALES					
1977	18,427	13,331	6,930	4,459	3,354	1,407	260	302	. .	48,470
1982	19,441	14,140	7,564	4,691	3,482	1,548	196	414	. .	51,476
1987	19,578	14,835	8,339	4,777	3,822	1,669	226	464	. .	53,710
1992	20,832	15,135	9,322	5,113	4,546	1,800	301	496	. .	57,545
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
					PERSONS					
1977	40,471	29,542	16,344	9,764	7,873	3,303	764	729	. .	108,790
1982	42,527	30,694	18,010	10,448	8,201	3,444	562	885	. .	114,771
1987	42,189	31,549	18,861	10,531	8,880	3,637	676	998	. .	117,321
1992	44,801	31,951	20,496	10,925	9,898	3,739	776	1,074	. .	123,660
1993	43,069	31,197	19,972	11,528	10,316	3,637	765	1,110	. .	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

3.2 STANDARDISED DEATH RATES, SEX

Selected years	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Other Territories*	*Australia*
					MALES					
1977	12.3	12.1	11.8	11.4	11.4	13.1	22.6	9.9	. .	12.0
1982	11.6	11.3	11.4	11.0	10.2	11.6	13.3	10.0	. .	11.3
1987	9.9	9.9	9.8	9.6	9.2	10.6	13.7	8.6	. .	9.8
1992	9.3	8.8	8.8	8.5	8.4	9.4	12.6	7.5	. .	9.0
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	8.0	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	7.6	8.6	11.3	7.1	n.p.	7.9
					FEMALES					
1977	7.4	7.1	6.9	6.8	6.9	7.3	16.3	6.4	. .	7.1
1982	6.8	6.5	6.3	6.2	5.8	6.9	9.2	6.8	. .	6.5
1987	5.9	5.9	5.8	5.4	5.2	6.5	7.9	5.8	. .	5.8
1992	5.5	5.3	5.4	5.1	5.1	6.1	9.4	4.9	. .	5.4
1993	5.2	5.1	5.0	5.3	5.1	5.6	8.2	4.4	n.p.	5.1
1994	5.2	5.2	5.2	5.1	5.0	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	4.9	4.9	4.8	4.8	4.7	5.5	8.4	5.1	n.p.	4.9
					PERSONS					
1977	9.3	9.0	8.9	8.6	8.8	9.5	19.3	7.9	. .	9.1
1982	8.8	8.5	8.6	8.3	7.8	8.9	11.3	8.2	. .	8.6
1987	7.6	7.6	7.6	7.2	6.9	8.3	10.7	7.0	. .	7.6
1992	7.1	6.8	6.9	6.6	6.5	7.6	10.9	6.0	. .	6.9
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	9.8	6.0	n.p.	6.2

3.3 AGE AT DEATH, SEX

Age group (years)	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Other Territories*	*Australia*
					MALES					
0	242	158	168	53	71	26	21	5	—	744
1-4	62	41	47	17	25	5	6	3	—	206
5-9	37	17	19	9	11	—	3	—	—	99
10-14	48	30	25	6	14	5	3	—	—	133
15-19	170	126	127	44	74	15	6	10	—	572
20-24	290	213	169	49	76	21	27	12	—	857
25-29	318	235	173	56	97	18	22	19	—	938
30-34	332	219	163	86	103	12	23	12	—	950
35-39	351	237	221	78	107	26	38	20	—	1,078
40-44	468	308	254	95	130	21	31	14	—	1,321
45-49	593	396	332	129	160	42	46	20	—	1,718
50-54	814	588	471	207	206	72	35	23	—	2,416
55-59	1,012	782	580	229	269	96	35	41	—	3,044
60-64	1,571	1,135	898	364	392	132	52	37	—	4,581
65-69	2,504	1,775	1,281	609	599	194	47	68	—	7,078
70-74	3,567	2,473	1,619	937	781	284	51	106	—	9,818
75-79	3,782	2,694	1,828	1,007	796	338	40	98	—	10,583
80-84	3,703	2,761	1,680	1,034	867	317	23	90	—	10,476
85 and over	3,878	2,931	1,860	1,020	996	340	26	82	—	11,133
Not stated	4	3	—	—	—	—	—	—	—	7
Total	**23,746**	**17,122**	**11,915**	**6,029**	**5,774**	**1,966**	**535**	**663**	**—**	**67,752**
					FEMALES					
0	209	142	104	34	60	13	24	11	—	597
1-4	38	31	17	12	8	6	9	—	—	121
5-9	29	28	15	5	3	4	—	—	—	86
10-14	22	22	19	5	6	—	4	—	—	81
15-19	72	41	50	11	30	8	5	4	—	221
20-24	92	59	71	23	27	6	3	3	—	284
25-29	101	69	68	31	34	5	8	4	—	320
30-34	160	96	72	39	39	6	14	5	—	431
35-39	170	126	105	46	58	15	20	13	—	553
40-44	252	193	132	50	69	21	18	11	—	746
45-49	356	265	197	75	97	24	31	27	—	1,072
50-54	489	340	298	102	134	39	28	27	—	1,457
55-59	642	439	339	127	153	73	20	20	—	1,813
60-64	900	619	413	191	204	89	38	30	—	2,484
65-69	1,427	1,015	639	397	319	118	23	51	—	3,990
70-74	2,287	1,637	987	583	497	212	28	63	—	6,294
75-79	2,911	2,216	1,349	790	658	269	32	78	—	8,304
80-84	3,985	2,978	1,792	1,101	849	345	18	106	—	11,174
85 and over	7,750	5,823	3,363	2,007	1,787	588	31	217	—	21,566
Not stated	3	—	—	—	—	—	—	—	—	4
Total	**21,895**	**16,139**	**10,030**	**5,629**	**5,033**	**1,843**	**356**	**671**	**—**	**61,598**

3.4 AGE-SPECIFIC DEATH RATES, SEX

Age group	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Other Territories*	*Australia*
					MALES					
0	5.4	5.1	7.0	5.6	5.5	8.4	11.6	2.3	n.p.	5.8
1-4	0.3	0.3	0.5	0.4	0.5	0.4	0.8	0.3	n.p.	0.4
5-9	0.2	0.1	0.1	0.2	0.2	0.1	0.3	0.1	n.p.	0.1
10-14	0.2	0.2	0.2	0.1	0.2	0.3	0.4	0.2	n.p.	0.2
15-19	0.8	0.8	1.0	0.9	1.1	0.9	0.8	0.8	n.p.	0.9
20-24	1.3	1.2	1.3	0.9	1.1	1.3	2.9	0.8	n.p.	1.2
25-29	1.3	1.3	1.3	1.0	1.3	1.1	2.2	1.4	n.p.	1.3
30-34	1.4	1.2	1.3	1.6	1.5	0.7	2.5	1.0	n.p.	1.3
35-39	1.4	1.3	1.7	1.3	1.5	1.4	4.4	1.6	n.p.	1.5
40-44	2.0	1.8	2.0	1.7	1.9	1.2	4.1	1.2	n.p.	1.9
45-49	2.7	2.5	2.7	2.5	2.4	2.5	6.9	1.7	n.p.	2.6
50-54	4.3	4.3	4.5	4.6	3.8	5.1	6.5	2.4	n.p.	4.3
55-59	6.8	7.3	7.3	6.6	6.5	8.4	9.8	6.3	n.p.	7.0
60-64	12.5	12.5	14.0	12.0	12.0	13.8	25.7	8.1	n.p.	12.7
65-69	21.1	20.7	21.9	20.6	20.3	21.6	31.9	18.5	n.p.	21.1
70-74	35.9	34.6	33.4	35.7	32.9	37.3	57.2	35.8	n.p.	35.0
75-79	55.7	56.5	54.4	56.0	52.0	65.3	87.9	51.3	n.p.	55.7
80-84	96.9	98.7	88.8	98.9	96.5	103.0	100.4	96.1	n.p.	96.3
85 and over	175.1	169.8	162.6	167.6	169.2	193.3	160.5	157.1	n.p.	170.6
					FEMALES					
0	4.9	4.8	4.5	3.8	5.0	4.5	13.5	5.3	n.p.	4.9
1-4	0.2	0.3	0.2	0.3	0.2	0.5	1.3	0.0	n.p.	0.2
5-9	0.1	0.2	0.1	0.1	0.0	0.2	0.2	0.0	n.p.	0.1
10-14	0.1	0.1	0.2	0.1	0.1	0.1	0.6	0.1	n.p.	0.1
15-19	0.3	0.3	0.4	0.2	0.5	0.5	0.8	0.3	n.p.	0.4
20-24	0.4	0.3	0.6	0.5	0.4	0.4	0.4	0.2	n.p.	0.4
25-29	0.4	0.4	0.5	0.6	0.5	0.3	0.8	0.3	n.p.	0.4
30-34	0.7	0.5	0.6	0.7	0.6	0.3	1.7	0.4	n.p.	0.6
35-39	0.7	0.7	0.8	0.8	0.8	0.8	2.6	1.0	n.p.	0.7
40-44	1.1	1.1	1.1	0.9	1.0	1.2	2.6	0.9	n.p.	1.1
45-49	1.7	1.7	1.7	1.4	1.5	1.5	5.4	2.2	n.p.	1.7
50-54	2.7	2.5	3.0	2.3	2.7	2.8	6.8	2.9	n.p.	2.7
55-59	4.4	4.1	4.5	3.6	3.9	6.5	8.0	3.2	n.p.	4.3
60-64	7.1	6.6	6.6	6.1	6.3	9.1	23.6	6.6	n.p.	6.8
65-69	11.4	11.2	10.7	12.7	10.6	12.5	20.7	13.0	n.p.	11.4
70-74	19.5	19.1	18.2	18.8	18.8	24.0	36.2	17.5	n.p.	19.2
75-79	31.8	33.7	31.4	32.2	32.3	37.5	64.8	30.0	n.p.	32.5
80-84	62.6	64.1	60.5	64.3	57.5	67.3	60.6	63.0	n.p.	62.5
85 and over	145.6	145.1	138.0	136.7	138.4	145.5	130.3	175.7	n.p.	143.0

3.5 DEATHS: STATE OR TERRITORY OF USUAL RESIDENCE, STATE OR TERRITORY OF REGISTRATION

State or Territory of usual residence	*State or Territory of registration*								
	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
New South Wales	44,842	233	305	38	10	10	7	196	45,641
Victoria	203	32,916	67	36	17	6	11	5	33,261
Queensland	202	32	21,682	7	6	5	8	3	21,945
South Australia	35	39	14	11,539	7	—	21	3	11,658
Western Australia	12	12	8	—	10,759	6	7	—	10,807
Tasmania	7	28	12	—	—	3,757	—	—	3,809
Northern Territory	4	3	6	29	3	—	846	—	891
Australian Capital Territory	60	6	4	3	—	—	—	1,261	1,334
Other Territories	—	—	—	—	3	—	—	—	4
Australia	**45,366**	**33,269**	**22,098**	**11,655**	**10,807**	**3,784**	**900**	**1,471**	**129,350**

3.6 DEATHS REGISTERED, YEAR OF OCCURRENCE(a)

Year of occurrence	*State or Territory of registration*								
	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
Before 1989	3	3	4	—	—	—	—	—	12
1989	—	—	—	—	—	—	—	—	3
1990	—	—	—	—	—	—	—	—	—
1991	—	—	—	—	—	—	—	—	—
1992	—	—	—	—	—	—	—	—	3
1993	—	3	5	—	—	—	—	—	8
1994	—	4	7	—	—	—	—	—	18
1995	3	17	19	—	5	—	3	—	47
1996	1,550	1,592	1,329	421	345	136	138	72	5,583
1997	43,805	31,648	20,732	11,232	10,453	3,648	756	1,398	123,672
Total	**45,366**	**33,269**	**22,098**	**11,655**	**10,807**	**3,784**	**900**	**1,471**	**129,350**

(a) See paragraph 2 of the Explanatory Notes.

SECTION 4 INFANT DEATHS

INFANT DEATHS

In 1997, there were a total of 1,300 deaths of children under one year of age registered in Australia. This was 8% less than the number registered in 1996 (1,500), and 46% less than the number registered in 1987 (2,500). Reflecting the fall in the number of infant deaths was a decline in the infant mortality rate (IMR). In 1997 the IMR was the lowest ever in Australia with 5.3 deaths per 1,000 live births. The 1997 IMR was 8.6% lower than for 1996 (5.8 deaths per 1,000 live births), and represents an average annual decline of 4.8% from 1987 when the IMR was 8.7 deaths per 1,000 live births.

LEADING CAUSES OF INFANT DEATH

The leading cause of death for infants in 1997 was the group of conditions known 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 613 deaths or 46% of the total infant deaths. Congenital anomalies were responsible for 30% of infant deaths, while sudden infant death syndrome (SIDS) was responsible for 11% of all deaths.

AGE AT DEATH

In 1997, 38% of all infant deaths occurred within the first day from birth, and more than two-thirds (67%) of all infant deaths occurred in the neonatal period (first four weeks of life). Reductions in deaths of neonates has contributed 46% of the total decline in infant mortality from 1987 to 1997. In the previous ten-year period (1977–87), reductions in neonatal mortality contributed 95% of the total decline in infant deaths. The dominance of the neonatal period to the overall reduction in infant deaths in the period 1977–87 resulted from two significant changes in the cause of death among infants. The most dramatic change was the fall in deaths due to 'certain conditions of the perinatal period' (most of which occur within the first week of birth). The second factor was the increase in the IMR from SIDS, which usually occurs in the post-neonatal period. The decline of SIDS in the period 1987–97 has largely contributed to the halving of the mortality rate among post-neonates over this time.

SEX

In 1997, there were 744 male infant deaths registered, 25% higher than the number of female infant deaths (597). Because there were 6% more male births registered however, the IMR sex differential was 18%, with 5.8 male and 4.9 female deaths per 1,000 live births. Historically, males have always had higher IMRs than females, reflecting the greater inherent vulnerability of males to most causes of infant death (Waldron 1983).

STATE AND TERRITORY

The two Territories marked the extremes of infant mortality in Australia in 1997, with the Australian Capital Territory recording the lowest IMR (3.8), and the Northern Territory the highest with 12.5 infant deaths per 1,000 live births. While the IMR of the Northern Territory was significantly greater than the national rate of 5.3, the IMRs of the remaining States and the Australian Capital Territory did not differ significantly from the national level.

4.1 INFANT DEATHS: AGE AT DEATH

Selected years	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				
1977	656	304	960	163	1,123	506	1,629
1982	524	235	759	153	912	513	1,425
1987	379	190	569	145	714	521	1,235
1992	415	160	575	121	696	377	1,073
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
			FEMALES				
1977	489	224	713	130	843	349	1,192
1982	381	188	569	128	697	360	1,057
1987	298	140	438	98	536	345	881
1992	315	111	426	80	506	264	770
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
			PERSONS				
1977	1,145	528	1,673	293	1,966	855	2,821
1982	905	423	1,328	281	1,609	873	2,482
1987	677	330	1,007	243	1,250	866	2,116
1992	730	271	1,001	201	1,202	641	1,843
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

4.2 INFANT MORTALITY RATES(a): AGE AT DEATH

Selected years	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				
1977	5.6	2.6	8.2	1.4	9.6	4.3	14.0
1982	4.3	1.9	6.2	1.2	7.4	4.2	11.6
1987	3.0	1.5	4.5	1.2	5.7	4.2	9.9
1992	3.1	1.2	4.2	0.9	5.1	2.8	7.9
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
			FEMALES				
1977	4.5	2.0	6.5	1.2	7.7	3.2	10.9
1982	3.3	1.6	4.9	1.1	6.0	3.1	9.1
1987	2.5	1.2	3.7	0.8	4.5	2.9	7.4
1992	2.5	0.9	3.3	0.6	3.9	2.1	6.0
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
			PERSONS				
1977	5.1	2.3	7.4	1.3	8.7	3.8	12.5
1982	3.8	1.8	5.5	1.2	6.7	3.6	10.3
1987	2.8	1.4	4.1	1.0	5.1	3.6	8.7
1992	2.8	1.0	3.8	0.8	4.6	2.4	7.0
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

(a) Per 1,000 live births.

4.3 INFANT DEATHS: NUMBER REGISTERED

Selected years	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Other Territories*	*Aust.*
1977	953	653	478	221	251	99	107	59	. .	2,821
1982	851	623	425	216	208	59	58	42	. .	2,482
1987	1,177	687	529	274	273	79	63	68	. .	3,150
1992	688	366	365	117	175	46	58	28	. .	1,843
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

4.4 INFANT MORTALITY RATES(a)

Selected years	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Other Territories*	*Aust.*
1977	12.2	11.0	13.7	11.5	12.2	14.7	41.8	12.7	. .	12.5
1982	10.1	10.4	10.5	11.3	9.3	8.4	19.9	10.2	. .	10.3
1987	8.5	8.1	9.3	8.6	8.4	10.0	15.6	9.0	. .	8.7
1992	7.4	5.6	7.9	6.1	7.0	6.6	15.5	6.3	. .	7.0
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

(a) Per 1,000 live births.

4.5 AGE AT DEATH

Age at death	Neonatal-under four weeks						
	Early neonatal						
	Under one day	One day and under one week	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	91	49	140	28	168	74	242
Victoria	53	29	82	22	104	54	158
Queensland	57	28	85	21	106	62	168
South Australia	24	6	30	3	33	20	53
Western Australia	19	9	28	11	39	32	71
Tasmania	9	6	15	3	18	8	26
Northern Territory	8	3	11	3	14	7	21
Australian Capital Territory	—	—	3	—	3	—	5
Other Territories	—	—	—	—	—	—	—
Australia	**262**	**132**	**394**	**91**	**485**	**259**	**744**
	FEMALES						
New South Wales	94	36	130	27	157	52	209
Victoria	62	20	82	21	103	39	142
Queensland	40	17	57	13	70	34	104
South Australia	9	6	15	6	21	13	34
Western Australia	21	8	29	8	37	23	60
Tasmania	3	—	5	3	8	5	13
Northern Territory	8	—	10	—	12	12	24
Australian Capital Territory	—	3	5	—	6	5	11
Other Territories	—	—	—	—	—	—	—
Australia	**239**	**94**	**333**	**81**	**414**	**183**	**597**

4.6 INFANT MORTALITY RATES, AGE AT DEATH

Age at death	Neonatal-under four weeks						
	Early neonatal						
	Under one day	One day and under one week	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	2.1	1.0	3.1	0.6	3.7	1.4	5.2
Victoria	1.9	0.8	2.7	0.7	3.4	1.5	4.9
Queensland	2.1	1.0	3.0	0.7	3.7	2.0	5.8
South Australia	1.8	0.7	2.5	0.5	2.9	1.8	4.7
Western Australia	1.6	0.7	2.3	0.8	3.1	2.2	5.3
Tasmania	2.0	1.3	3.3	1.0	4.3	2.2	6.5
Northern Territory	4.5	1.4	5.9	1.4	7.2	5.3	12.5
Australian Capital Territory	0.7	1.2	1.9	0.2	2.1	1.7	3.8
Other Territories	—	—	—	—	—	—	—
Australia	**2.0**	**0.9**	**2.9**	**0.7**	**3.6**	**1.8**	**5.3**

PROPENSITY TO IDENTIFY AS INDIGENOUS

In 1997 there were 1,700 deaths registered where Indigenous origin of the deceased person was identified. While it is considered likely that virtually all Indigenous deaths are registered, a significant proportion are not registered as Indigenous. Therefore, the 1,700 registered Indigenous deaths is an underestimate of the true number of such deaths.

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. This variation in whether a person identifies, or is identified, as Indigenous on a specific form is known as the 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 5.1. 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* (ABS 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* (ABS Cat. no. 3231.0). The 1997 projection data assumes no change in mortality and no increase in propensity to identify after 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.

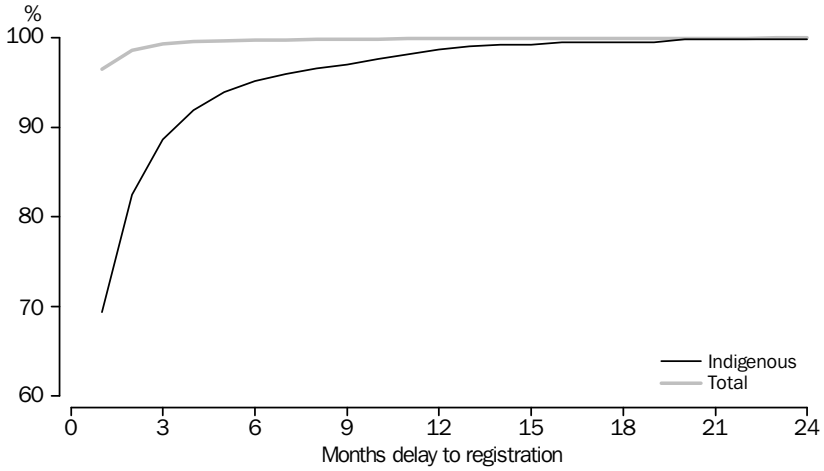
PROPENSITY TO IDENTIFY AS INDIGENOUS *continued*

The mismatch of the degree of identification propensity 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.

DELAY IN REGISTRATION

All data in this chapter are based on period of registration, i.e. those deaths that were registered in 1997, 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 1997, only 1% were registered more than two months after death, and less than 0.1% more than 12 months after the death. However, 17% of Indigenous deaths registered in 1997 were registered more than two months after the death, and 1.3% more than 12 months after.

ESTIMATED PROPORTION OF DEATHS REGISTERED WITHIN SPECIFIED PERIOD(a)



(a) Based on the delay between occurrence and registration of all deaths registered in 1997.

NUMBERS OF DEATHS: COVERAGE

The total number of Indigenous deaths registered in 1997 (1,700) is around three-quarters of the number expected from the 1991 Census based experimental projections, and half the number of deaths expected from the 1996 Census based experimental projections (see table 5.1). The variation between the estimated 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 5.1 are only indicative. For example, the 130 Indigenous deaths registered in South Australia in 1997 have an estimated coverage of 101% using 1991 Census based projections and 68% using 1996 Census based projections. Therefore, actual coverage of death registrations is likely to lie within the 70%–100% 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 than in the past, there is a high degree of variability in the coverage among the States and Territories.

NUMBERS OF DEATHS: COVERAGE *continued*

South Australia, Western Australia and the Northern Territory had the highest level of coverage in 1997, as they have in previous years. The Northern Territory's exceptionally high level partially results from a backlog of registrations that were cleared in 1997. The decline in New South Wales deaths reflects a technical issue. Queensland introduced a new *Death Information Form* in 1996 which included an Indigenous question. However, this new form was not used extensively until 1997. While Tasmania has not provided adequate Indigenous deaths data to date, it is expected that a new *Notice of Death* form will address this problem when it is introduced in 1999. The ongoing efforts to improve the level of identification on death certificates (such as improved form design and awareness raising) should see a continued improvement in the coverage of Indigenous death registrations.

In this chapter the number of deaths registered in each State and Territory has been published (table 5.1). However, because of the data quality issues described above, more detailed breakdowns of Indigenous deaths are provided only for South Australia, Western Australia and the Northern Territory.

INFANT DEATHS

There were 120 Indigenous infant deaths registered in 1997, around the same level as in 1996. However, this number is an underestimate of the actual level for the reasons outlined above. While the 'actual' number of Indigenous infant deaths cannot be known, an estimate of the infant mortality rate (IMR) can be derived. However, because of the uncertainty of both births and deaths registration coverage, these IMRs may only be used to give an indication of the incidence of infant deaths.

South Australia had the lowest Indigenous IMR in 1997, with 8.5 deaths per 1,000 live births, around 80% higher than the South Australian total IMR of 4.7. Western Australia had an Indigenous IMR of 13.6 deaths per 1,000 live births, two and a half times the Western Australian total IMR of 5.3. The Northern Territory had an IMR of 29.4, over twice the Northern Territory total IMR, and more than five times the national IMR.

CAUSE OF DEATH[1]

In 1997, the leading cause of death among the Indigenous population was diseases of the circulatory system, which were responsible for 31% of all Indigenous deaths. Circulatory diseases were also the leading cause of death among the total population with 41% of all deaths. Heart disease was responsible for 74% of the Indigenous circulatory disease deaths, while cerebrovascular disease (stroke) was responsible for 22%. The median age of Indigenous deaths from circulatory diseases was 59.6 years, compared to 81.1 years for the total population.

External causes of death (accidents, poisoning or violence) were the second leading cause of death among the Indigenous population in 1997, accounting for almost 14% of all Indigenous deaths. In contrast, external causes were the fourth leading cause among the total population in 1997 with 6% of all deaths.

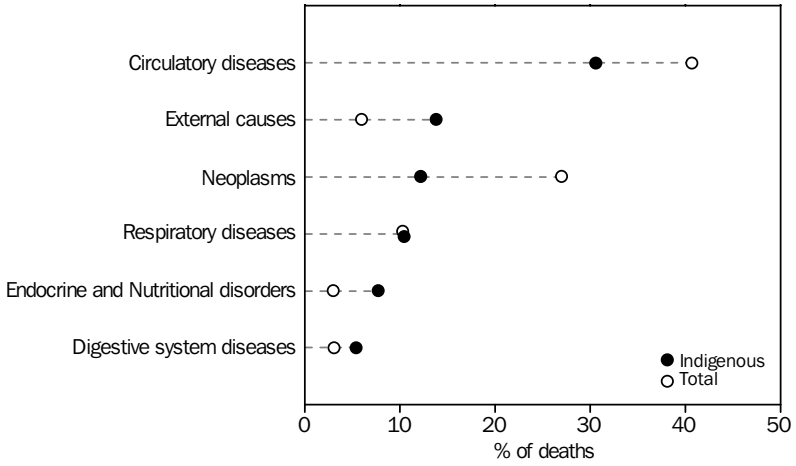
[1] Indigenous deaths in this section comprise South Australia, Western Australia and the Northern Territory. Total deaths are for all of Australia.

CAUSE OF DEATH, *continued*

Motor vehicle accident deaths comprised 36% of Indigenous external causes of death, while other accidents comprised 28%. Suicide was the third largest contributor within the external causes category with 20% of these deaths. The median age at death for external causes of Indigenous people was 31.5 years, ten years less than the median age at death for external causes of the total population.

More males than females died from external causes among the Indigenous population, with 160 male deaths occurring for every 100 female deaths. Among the total population however, the sex ratio for external causes of death is significantly higher, with 230 males for every 100 female deaths. This indicates the relatively higher risk of death from external causes among Indigenous females than females of the total population, compared to their respective male counterparts.

SELECTED CAUSES OF DEATH



Neoplasms (cancer) were the third leading cause of death, accounting for 12% of Indigenous deaths. Malignant neoplasms of the digestive system and malignant neoplasms of the respiratory system together accounted for almost 60% of all neoplasm deaths.

Respiratory diseases were responsible for 11% of all Indigenous deaths in 1997, with pneumonia accounting for half of these. The median age at death for respiratory diseases among the Indigenous population was 61.9 years in 1997, almost 20 years less than the median age death for the total population.

Endocrine and nutritional disorders accounted for 8% of Indigenous deaths with diabetes mellitus making up 92% of these deaths. This makes diabetes mellitus responsible for 7% of all Indigenous deaths, compared to just 2% of deaths in the total population.

5.1 DEATHS OF INDIGENOUS PEOPLE, SUMMARY

	NSW	*Vic.*	*Qld(a)(b)*	*SA*	*WA*	*Tas.(c)*	*NT*	*ACT*	*Aust.(d)*
REGISTERED DEATHS									
1987	199	16	—	68	309	—	280	—	874
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(e)	93	531	132	351	5	458(f)	4	1,662
PROJECTED DEATHS (1991 CENSUS BASED)(g)									
1992	492	107	578	120	374	50	360	8	2,090
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
ESTIMATED AND PROJECTED DEATHS (1996 CENSUS BASED)(h)									
1992	885	198	849	177	474	111	429	15	3,146
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	3,397
ESTIMATED COVERAGE BASED ON 1991 CENSUS BASED (%)									
1992	34	50	—	89	93	10	110	—	51
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
ESTIMATED COVERAGE BASED ON 1996 CENSUS BASED (%)									
1992	19	27	—	61	73	5	93	—	34
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	1	73	28	39
1997	9	43	58	68	70	4	100	20	49

(a) Queensland introduced an improved Death Information Form in 1996 to capture Indigenous origin. Although the penetration of this new form increased in 1997 from 1996, it was only used for around 80% of deaths throughout the State in 1997.
(b) Queensland data prior to 1996 is sourced from other States and Territories, i.e. these are deaths of Indigenous people who usually reside in Queensland but whose deaths occurred and were registered elsewhere in Australia.
(c) Tasmanian data is sourced from other States and Territories as in (b) above.
(d) Includes 'Other Territories' from 1993.
(e) The decline in the number of New South Wales registered Indigenous deaths in 1997 is the result of a technical issue.
(f) A relatively high number of Northern Territory registered Indigenous deaths in 1997, following a relatively low number in 1996, reflects the clearing of a backlog of death registrations in 1997.
(g) Source: ABS, *Experimental Projections of the Aboriginal and Torres Strait Islander Population, 30 June 1991–30 June 2001* (ABS Cat. no. 3231.0), medium series.
(h) Source: 1992–96 estimates derived from ABS, *Experimental Estimates of the Aboriginal and Torres Strait Islander Population, 1991–1996* (ABS Cat. no. 3230.0). 1997 projection from ABS, *Experimental Projections of the Aboriginal and Torres Strait Islander Population, 30 June 1996–30 June 2001* (ABS Cat. no. 3231.0).

5.2 INDIGENOUS AND TOTAL DEATHS, SELECTED DETAILS, SOUTH AUSTRALIA

	Indigenous persons			*Non-Indigenous persons*	*All persons*
Selected details	*Males*	*Females*	*Persons*		
Total deaths	**89**	**43**	**132**	**11,526**	**11,658**
Age at death (years) —					
0	3	—	5	82	87
1-14	3	—	4	50	54
15-24	5	—	6	121	127
25-34	18	5	23	189	212
35-44	11	6	17	252	269
45-54	12	11	23	490	513
55-64	12	—	14	897	911
65 and over	25	15	40	9,445	9,485
Not stated	—	—	—	—	—
Median age at death (years)	50.2	52.5	50.8	78.3	78.1
Principal causes of death —					
Infectious and parasitic diseases	4	—	4	122	126
Neoplasms —	9	4	13	3,121	3,134
Endocrine, nutritional and metabolic diseases and immunity disorders —	5	8	13	365	378
Diabetes mellitus	5	5	10	275	285
Other	3	5	8	109	117
Mental disorders	8	—	9	233	242
Diseases of the circulatory system —	21	13	34	4,896	4,930
Ischaemic heart disease	11	7	18	2,663	2,681
Other heart disease	4	—	6	759	765
Cerebrovascular disease (stroke)	6	—	7	1,146	1,153
Other	—	3	3	328	331
Diseases of the respiratory system	9	6	15	1,232	1,247
Diseases of the digestive system	7	—	9	354	363
Diseases of the genitourinary system	—	—	3	223	226
Congenital anomalies	—	—	—	57	58
Certain conditions originating in the perinatal period	—	—	—	38	40
External causes —	19	6	25	555	580
Motor vehicle traffic accidents	6	3	9	127	136
Suicide	5	—	6	191	197
Other external causes	8	—	10	237	247

5.2 INDIGENOUS AND TOTAL DEATHS, SELECTED DETAILS, WESTERN AUSTRALIA *continued*

Selected details	*Indigenous persons*			*Non-Indigenous persons*	*All persons*
	Males	*Females*	*Persons*		
Total deaths	**207**	**144**	**351**	**10,456**	**10,807**
Age at death (years) —					
0	10	10	20	111	131
1-14	10	3	13	54	67
15-24	11	7	18	189	207
25-34	25	8	33	240	273
35-44	36	20	56	308	364
45-54	28	20	48	549	597
55-64	42	25	67	951	1,018
65 and over	45	50	95	8,054	8,149
Not stated	—	—	—	—	—
Median age at death (years)	48.6	57.7	51.4	77.2	76.8
Principal causes of death —					
Infectious and parasitic diseases	3	—	4	106	110
Neoplasms —	32	15	47	2,991	3,038
Endocrine, nutritional and metabolic diseases and immunity disorders —	8	20	28	317	345
Diabetes mellitus	7	19	26	231	257
Other	—	3	5	111	116
Mental disorders	8	6	14	284	298
Diseases of the circulatory system —	69	38	107	3,847	3,954
Ischaemic heart disease	41	14	55	2,096	2,151
Other heart disease	15	13	28	537	565
Cerebrovascular disease (stroke)	11	8	19	942	961
Other	—	3	5	272	277
Diseases of the respiratory system	19	15	34	1,140	1,174
Diseases of the digestive system	13	8	21	326	347
Diseases of the genitourinary system	5	5	10	200	210
Congenital anomalies	4	—	6	67	73
Certain conditions originating in the perinatal period	3	5	8	44	52
External causes —	30	19	49	709	758
Motor vehicle traffic accidents	10	6	16	183	199
Suicide	5	4	9	246	255
Other external causes	15	9	24	280	304

5.2 INDIGENOUS AND TOTAL DEATHS, SELECTED DETAILS, NORTHERN TERRITORY *continued*

Selected details	*Indigenous persons*			*Non-Indigenous persons*	*All persons*
	Males	*Females*	*Persons*		
Total deaths	**242**	**216**	**458**	**433**	**891**
Age at death (years) —					
0	18	19	37	8	45
1-14	7	12	19	8	27
15-24	18	6	24	17	41
25-34	24	16	40	27	67
35-44	35	26	61	46	107
45-54	45	38	83	57	140
55-64	35	39	74	71	145
65 and over	60	60	120	199	319
Not stated	—	—	—	—	—
Median age at death (years)	49.0	52.3	50.0	62.9	56.8
Principal causes of death —					
Infectious and parasitic diseases	8	7	15	6	21
Neoplasms —	22	33	55	117	172
Endocrine, nutritional and metabolic diseases and immunity disorders —	19	12	31	6	37
Diabetes mellitus	18	12	30	3	33
Other	—	4	5	12	17
Mental disorders	4	4	8	11	19
Diseases of the circulatory system —	84	63	147	110	257
Ischaemic heart disease	39	22	61	58	119
Other heart disease	22	22	44	12	56
Cerebrovascular disease (stroke)	21	16	37	30	67
Other	—	3	5	10	15
Diseases of the respiratory system	23	27	50	44	94
Diseases of the digestive system	9	12	21	18	39
Diseases of the genitourinary system	5	8	13	5	18
Congenital anomalies	6	7	13	5	18
Certain conditions originating in the perinatal period	10	6	16	3	19
External causes —	31	25	56	90	146
Motor vehicle traffic accidents	14	8	22	25	47
Suicide	9	—	11	27	38
Other external causes	8	15	23	38	61

SECTION 6 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 1995–97 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 for 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:

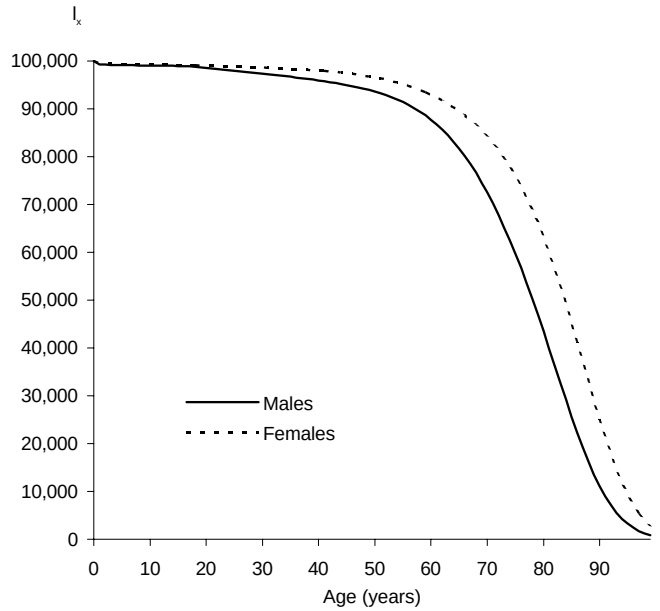
q_x — the mortality rate. The probability of dying between exact ages x and $x+1$. All other functions of the life table are derived from q_x.

l_x — the number of survivors to exact age x.

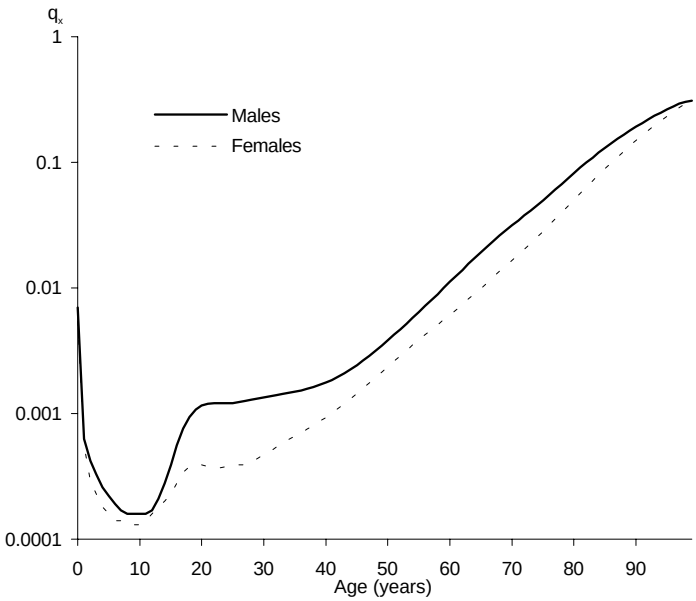
L_x — the number of person-years that would be lived within the age interval x and $x+1$.

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

l_x FROM LIFE TABLE FOR AUSTRALIAN MALES AND FEMALES



Log q_x FROM LIFE TABLE FOR AUSTRALIAN MALES AND FEMALES



6.1 AUSTRALIAN LIFE TABLE, 1995–97

Males

Age	*lx*	*qx*	*Lx*	*e°x*	*Age*	*lx*	*qx*	*Lx*	*e°x*
0	100,000	0.00610	99,471	75.57	50	93,791	0.00356	93,626	28.53
1	99,390	0.00053	99,361	75.04	51	93,456	0.00392	93,276	27.63
2	99,337	0.00040	99,316	74.08	52	93,090	0.00434	92,891	26.74
3	99,298	0.00031	99,282	73.11	53	92,686	0.00481	92,466	25.85
4	99,267	0.00024	99,255	72.13	54	92,240	0.00535	91,997	24.98
5	99,244	0.00019	99,234	71.15	55	91,746	0.00597	91,477	24.11
6	99,225	0.00017	99,216	70.16	56	91,198	0.00666	90,900	23.25
7	99,208	0.00016	99,200	69.17	57	90,591	0.00745	90,259	22.40
8	99,193	0.00015	99,185	68.18	58	89,916	0.00832	89,548	21.57
9	99,178	0.00015	99,170	67.19	59	89,168	0.00930	88,760	20.74
10	99,163	0.00015	99,156	66.20	60	88,338	0.01039	87,887	19.93
11	99,148	0.00015	99,141	65.21	61	87,421	0.01159	86,922	19.14
12	99,133	0.00017	99,125	64.22	62	86,407	0.01292	85,858	18.36
13	99,116	0.00022	99,106	63.23	63	85,291	0.01438	84,688	17.59
14	99,095	0.00029	99,081	62.25	64	84,065	0.01600	83,402	16.84
15	99,066	0.00041	99,047	61.26	65	82,720	0.01778	81,995	16.10
16	99,025	0.00058	98,998	60.29	66	81,250	0.01973	80,459	15.39
17	98,968	0.00082	98,929	59.32	67	79,647	0.02186	78,788	14.69
18	98,887	0.00106	98,836	58.37	68	77,906	0.02419	76,975	14.00
19	98,782	0.00118	98,724	57.43	69	76,021	0.02673	75,017	13.34
20	98,665	0.00120	98,606	56.50	70	73,989	0.02948	72,911	12.69
21	98,547	0.00121	98,487	55.57	71	71,808	0.03246	70,655	12.06
22	98,427	0.00123	98,367	54.63	72	69,477	0.03568	68,249	11.45
23	98,306	0.00125	98,245	53.70	73	66,997	0.03916	65,698	10.85
24	98,183	0.00125	98,122	52.77	74	64,374	0.04298	63,002	10.27
25	98,060	0.00125	97,999	51.83	75	61,607	0.04724	60,163	9.71
26	97,938	0.00126	97,876	50.90	76	58,696	0.05202	57,182	9.17
27	97,815	0.00127	97,753	49.96	77	55,643	0.05741	54,058	8.65
28	97,691	0.00129	97,628	49.02	78	52,449	0.06349	50,795	8.14
29	97,565	0.00131	97,501	48.09	79	49,119	0.07034	47,401	7.66
30	97,437	0.00133	97,372	47.15	80	45,664	0.07794	43,892	7.20
31	97,307	0.00135	97,241	46.21	81	42,105	0.08627	40,293	6.77
32	97,175	0.00137	97,109	45.27	82	38,473	0.09533	36,640	6.36
33	97,042	0.00140	96,974	44.33	83	34,805	0.10507	32,974	5.98
34	96,906	0.00143	96,837	43.40	84	31,148	0.11548	29,343	5.62
35	96,768	0.00146	96,697	42.46	85	27,551	0.12653	25,797	5.29
36	96,626	0.00150	96,554	41.52	86	24,065	0.13819	22,387	4.98
37	96,482	0.00154	96,408	40.58	87	20,740	0.15044	19,161	4.70
38	96,333	0.00159	96,257	39.64	88	17,620	0.16323	16,160	4.45
39	96,180	0.00165	96,101	38.70	89	14,744	0.17645	13,419	4.22
40	96,021	0.00173	95,939	37.77	90	12,142	0.18960	10,965	4.01
41	95,855	0.00181	95,769	36.83	91	9,840	0.20212	8,819	3.84
42	95,681	0.00192	95,590	35.90	92	7,851	0.21351	6,987	3.69
43	95,498	0.00203	95,402	34.97	93	6,175	0.22326	5,462	3.56
44	95,304	0.00217	95,201	34.04	94	4,796	0.23092	4,221	3.44
45	95,097	0.00233	94,987	33.11	95	3,689	0.23769	3,233	3.33
46	94,875	0.00252	94,757	32.19	96	2,812	0.24606	2,452	3.22
47	94,636	0.00273	94,508	31.27	97	2,120	0.25420	1,839	3.11
48	94,377	0.00297	94,239	30.35	98	1,581	0.26247	1,364	3.01
49	94,096	0.00325	93,946	29.44	99	1,166	0.27087	1,001	2.92

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* complete expectation of life at exact age *x*

6.1 AUSTRALIAN LIFE TABLE, 1995–97—*continued*

Females

Age	*lx*	*qx*	*Lx*	*e°x*	*Age*	*lx*	*qx*	*Lx*	*e°x*
0	100,000	0.00502	99,560	81.27	50	96,702	0.00226	96,594	33.01
1	99,498	0.00049	99,471	80.68	51	96,483	0.00250	96,364	32.09
2	99,449	0.00026	99,433	79.71	52	96,241	0.00276	96,110	31.17
3	99,423	0.00022	99,412	78.74	53	95,975	0.00305	95,831	30.25
4	99,402	0.00018	99,392	77.75	54	95,682	0.00337	95,524	29.34
5	99,384	0.00015	99,376	76.77	55	95,360	0.00371	95,186	28.44
6	99,369	0.00013	99,362	75.78	56	95,007	0.00408	94,816	27.55
7	99,356	0.00012	99,349	74.79	57	94,619	0.00448	94,410	26.66
8	99,343	0.00012	99,337	73.80	58	94,195	0.00492	93,967	25.77
9	99,331	0.00012	99,325	72.81	59	93,732	0.00539	93,483	24.90
10	99,319	0.00013	99,313	71.81	60	93,227	0.00590	92,956	24.03
11	99,306	0.00014	99,299	70.82	61	92,676	0.00647	92,381	23.17
12	99,292	0.00015	99,285	69.83	62	92,077	0.00709	91,755	22.32
13	99,278	0.00016	99,270	68.84	63	91,424	0.00778	91,073	21.47
14	99,261	0.00019	99,252	67.86	64	90,713	0.00854	90,331	20.64
15	99,242	0.00023	99,232	66.87	65	89,938	0.00939	89,522	19.81
16	99,220	0.00028	99,206	65.88	66	89,094	0.01035	88,639	18.99
17	99,192	0.00033	99,176	64.90	67	88,171	0.01144	87,674	18.19
18	99,160	0.00037	99,142	63.92	68	87,163	0.01265	86,620	17.39
19	99,123	0.00039	99,104	62.95	69	86,060	0.01402	85,466	16.61
20	99,084	0.00040	99,065	61.97	70	84,853	0.01556	84,203	15.84
21	99,045	0.00039	99,026	61.00	71	83,533	0.01727	82,822	15.08
22	99,006	0.00038	98,988	60.02	72	82,090	0.01922	81,313	14.34
23	98,969	0.00037	98,950	59.04	73	80,512	0.02144	79,662	13.61
24	98,932	0.00037	98,914	58.06	74	78,786	0.02398	77,856	12.89
25	98,895	0.00038	98,876	57.08	75	76,897	0.02688	75,879	12.20
26	98,857	0.00040	98,838	56.11	76	74,830	0.03019	73,717	11.52
27	98,818	0.00041	98,798	55.13	77	72,571	0.03396	71,356	10.86
28	98,777	0.00043	98,756	54.15	78	70,106	0.03822	68,785	10.23
29	98,735	0.00046	98,712	53.17	79	67,427	0.04302	65,995	9.61
30	98,689	0.00049	98,666	52.20	80	64,527	0.04839	62,984	9.02
31	98,641	0.00052	98,616	51.22	81	61,404	0.05438	59,753	8.46
32	98,590	0.00055	98,564	50.25	82	58,065	0.06110	56,308	7.91
33	98,536	0.00058	98,508	49.28	83	54,518	0.06864	52,662	7.40
34	98,479	0.00062	98,448	48.31	84	50,776	0.07710	48,831	6.90
35	98,418	0.00066	98,386	47.33	85	46,861	0.08659	44,842	6.44
36	98,353	0.00070	98,319	46.37	86	42,803	0.09718	40,730	6.00
37	98,285	0.00074	98,249	45.40	87	38,644	0.10890	36,541	5.59
38	98,212	0.00079	98,174	44.43	88	34,435	0.12160	32,337	5.22
39	98,135	0.00084	98,094	43.47	89	30,248	0.13510	28,193	4.87
40	98,052	0.00091	98,008	42.50	90	26,162	0.14920	24,191	4.55
41	97,963	0.00098	97,916	41.54	91	22,258	0.16373	20,412	4.26
42	97,867	0.00106	97,816	40.58	92	18,614	0.17852	16,924	4.00
43	97,764	0.00116	97,708	39.62	93	15,291	0.19341	13,781	3.77
44	97,651	0.00126	97,590	38.67	94	12,334	0.20824	11,017	3.55
45	97,527	0.00139	97,461	37.72	95	9,765	0.22279	8,645	3.36
46	97,392	0.00152	97,319	36.77	96	7,590	0.23685	6,660	3.18
47	97,244	0.00168	97,163	35.82	97	5,792	0.25021	5,040	3.02
48	97,080	0.00185	96,992	34.88	98	4,343	0.26268	3,749	2.87
49	96,900	0.00205	96,803	33.95	99	3,202	0.27830	2,737	2.72

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* complete expectation of life at exact age *x*

6.2 EXPECTATION OF LIFE AND LIFE TABLE DEATH RATES(a), AUSTRALIA

	Age (years)										
Selected years	*0*	*1*	*10*	*20*	*30*	*40*	*50*	*60*	*70*	*80*	*Life table death rate*
						MALES					
1977	69.99	69.98	61.31	51.81	42.56	33.17	28.66	16.67	10.50	6.11	14.29
1982	71.25	71.08	62.39	52.83	43.57	34.12	25.13	17.18	10.74	6.21	14.04
1987	73.06	72.78	64.01	54.38	45.08	35.64	26.49	18.31	11.57	6.65	13.69
1992	74.47	74.06	65.24	55.53	46.17	36.76	27.54	19.10	12.11	6.93	13.43
1993	74.99	74.50	65.70	55.98	46.60	37.20	27.97	19.49	12.38	7.03	13.34
1994	75.00	74.53	65.70	56.00	46.60	37.21	27.99	19.43	12.29	6.95	13.33
1993-95	74.95	74.48	65.66	55.94	46.57	37.19	27.97	19.45	12.35	6.99	13.34
1994-96	75.22	74.70	65.86	56.15	46.79	37.41	28.18	19.62	12.45	7.04	13.29
1995-97	75.57	75.04	66.20	56.50	47.15	37.77	28.53	19.93	12.69	7.20	13.18
						FEMALES					
1977	76.94	76.78	68.05	58.29	48.57	38.98	29.81	21.29	13.69	7.68	13.00
1982	78.24	77.96	69.18	59.36	49.63	39.95	30.64	21.98	14.26	8.01	12.78
1987	79.53	79.12	70.29	60.47	50.74	41.05	31.66	22.84	14.90	8.51	12.57
1992	80.41	79.89	71.06	61.21	51.45	41.75	32.30	23.38	15.29	8.69	12.44
1993	80.86	80.28	71.44	61.60	51.82	42.13	32.65	23.68	15.55	8.86	12.37
1994	80.94	80.36	71.91	62.04	52.25	42.52	33.03	24.01	15.70	8.80	12.35
1993-95	80.84	80.28	71.43	61.59	51.81	42.11	32.64	23.68	15.56	8.85	12.37
1994-96	81.05	80.46	71.60	61.76	51.98	42.28	32.80	23.83	15.67	8.92	12.34
1995-97	81.27	80.68	71.81	61.97	52.20	42.50	33.01	24.03	15.84	9.02	12.29

(a) Based on Annual Life Tables calculated by the Australian Statistician until 1994. Since 1995 the life tables have been produced as a joint venture between the Australian Bureau of Statistics and the Australian Government Actuary. See paragraph 11 of the Explanatory Notes for more information.

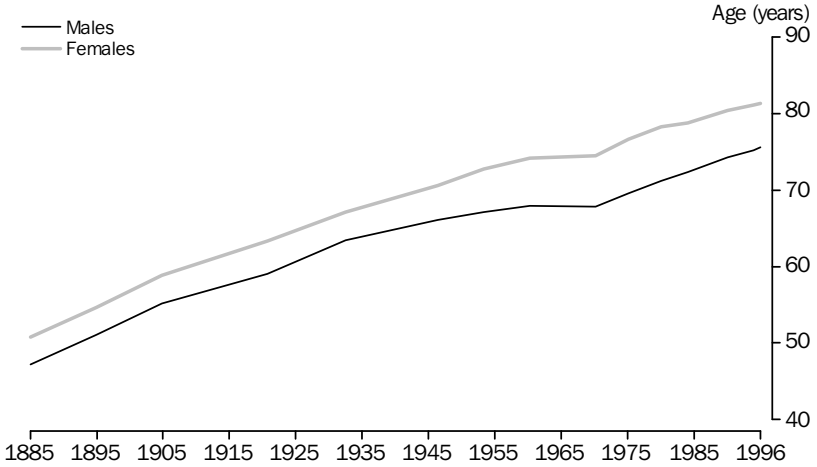
FEATURE ARTICLE — A CENTURY OF CHANGE IN LIFE EXPECTANCY

EXPECTATION OF LIFE AT BIRTH

This article examines the age-group contributions to increases in expectation of life at birth for males and females throughout the period 1881–90 to 1995–97, with particular emphasis on the period since 1920–22, (for which comparable cause of death data has been compiled (d'Espaignet et al. 1991)). This analysis uses the technique described by Pollard (1989).

Life expectancy at birth provides a single indicator of the prevailing level of mortality in the population for a given period. According to the 1995–97 Australian life table, a baby boy in this period could expected to live, on average, to age 75.6 years while a baby girl could expect to live to 81.3 years. These respective life expectancies are amongst the highest in the world and represent considerable decreases in mortality over the last century. Between the period when the first Australian life table was produced in 1881–90 and the latest life table (1995–97), life expectancy at birth has increased by 29 years for males and 32 years for females.

LIFE EXPECTANCY AT BIRTH



Overall, reductions in infant and child mortality (aged less than 5 years) have been the most significant contributor to the increase in life expectancy at birth, with around 43% of male and 38% of the female life expectancy gained over the period from 1881–90 to 1995–97. Each other five-year age group contributed less than 5% to the total gain in life expectancy for both males and females. However, the pattern of age group contribution to increases in life expectancy over the period has not been uniform. Rather, two distinct patterns of age contribution have prevailed, with the transition between patterns occurring at different times for males and females. The first pattern is characterised by the major contribution of declines in infant and child mortality, and occurred in the period prior to 1946–48 for females, and in the period prior to 1970–72 for males. The second pattern is characterised by the increased contribution of mortality declines of the population aged 50 years and over. For females this second phase has occurred since 1946–48, while for males, the transition occurred after 1970–72.

EXPECTATION OF LIFE AT BIRTH, *continued*

The reduction in mortality up to around the 1960s has been largely attributed to general socioeconomic advances, with the attendant improvements in sanitation, health education, the quality of the food and water supply, and advances in medicine. The decrease in overall mortality since 1971 has been attributed to a combination of behavioural changes (such as decreased smoking, improved diets and increased physical activity) (Jain 1994) and advances in medical technology such as the introduction of blood pressure lowering drugs, improved acute medical care and the development of surgical interventions such as coronary by-pass operations (Dobson 1987).

1920–22 to 1946–48

Between 1920–22 and 1946–48, male and female life expectancy at birth gained 6.9 and 7.3 years respectively. Reductions in the mortality of infants and children contributed 55% of the male increase and 45% of the female increase. Mortality reductions in the 45 years and over ages contributed only 9% of male and 16% of female life expectancy at birth between 1920–22 and 1946–48, while mortality declines of 25–44 year olds contributed 21% to the gain in life expectancy at birth for both males and females .

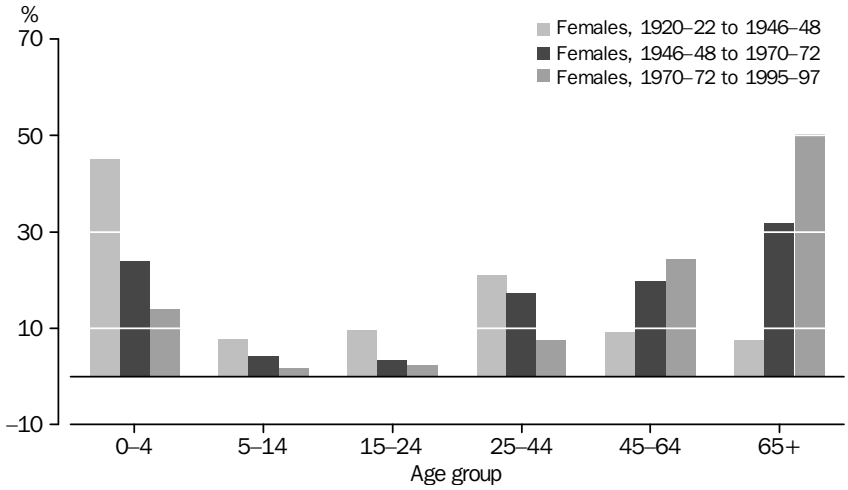
In terms of the major groups of causes of death, reductions in infectious and parasitic disease mortality contributed most to the significant improvements in life expectancy over the period. Decreasing mortality from infectious and parasitic diseases of infants and children alone contributed 29% (2 years) to the overall gain in male life expectancy and 24% (1.8 years) to the overall gains in female life expectancy. The decrease in infectious and parasitic disease mortality of 25–44 year olds also contributed 9% (8 months) to the gains in male life expectancy and 7% (6 months) to female life expectancy.

1946–48 to 1970–72

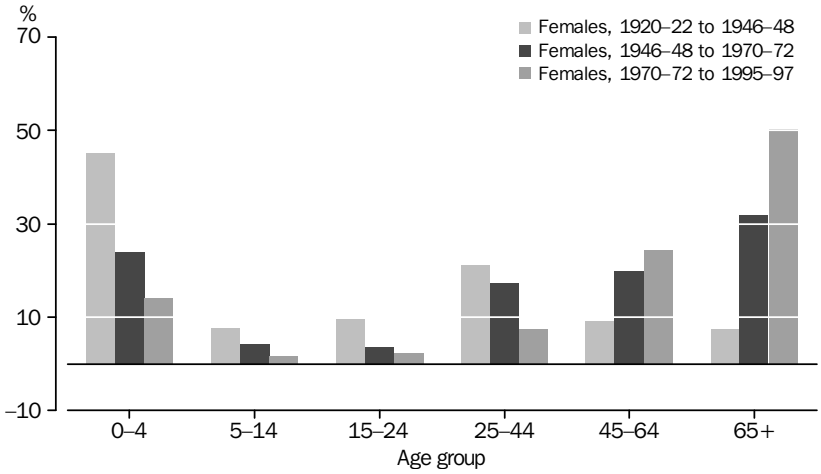
The quarter century between 1946–48 and 1970–72 produced only relatively small gain in life expectancy for women (3.9 years) and even smaller gain for men (1.7 years). However, while the male mortality decline produced much the same pattern as occurred prior to 1946–48, the female pattern of mortality decline underwent a significant transition. For the first time, a reduction in the mortality of females aged 45 and over made a greater contribution to life expectancy at birth than the mortality decline of children and infants. A decline in circulatory disease mortality (mainly heart disease and stroke) was the largest contributor to the life expectancy gains achieved by women aged 45–74, while a decrease in mortality from respiratory diseases was the major contributor for women aged over 75 years.

While females aged 45 years and over contributed more than 50% to the increased life expectancy over the period, males aged 45 years and over contributed just 16%. The mortality rates of males aged 75–84 actually increased under the influence of rising death rates from circulatory diseases and neoplasms (cancer). Males aged 15–24 also made a negative contribution to increased life expectancy over the period. This was caused by the 57% increase in mortality from external causes (mainly motor vehicle accidents) over the period.

CONTRIBUTION TO INCREASED LIFE EXPECTANCY AT BIRTH, Males



CONTRIBUTION TO INCREASED LIFE EXPECTANCY AT BIRTH, Females



1970–72 to 1995–97

In the 25 years from 1970–72 to 1995–97, life expectancy at birth increased by 7.8 years for males, and 6.8 years for females. The gain for males was almost as large as the increase achieved over the entire 50 years prior to 1970–72. While much of the gain could be considered merely a 'catchup' following the slow advances from 1946–48, the gains represent a significant shift in male mortality. The pattern of age contribution to increased male life expectancy at birth mirrored that established by females 25 years earlier. Declines in mortality of males aged 45 years and over contributed 73% to the increase in life expectancy, while reductions in infant/child mortality contributed only 15% to the gain in life expectancy. Declines of circulatory disease mortality of males aged 45–64 years contributed 25% (2 years) to the total gain in life expectancy, and that of males aged 65 years and over contributed 35% (2.7 years) to the total gain.

The trend in female age contribution to the increased life expectancy over the period 1970–72 to 1995–97 may be seen as a consolidation of the pattern established over the previous 25 years, with mortality declines of females aged 45 years and over contributing three-quarters of the total gain in life expectancy.

1970–72 TO 1995–97 *continued*

While the mortality declines of two male age groups 45–64 years and 65 years and over contributed relatively similar proportions (35% and 38% respectively) to the total improvement made, declines in mortality of females aged over 65 years have contributed twice as much as females aged 45–64 (50% and 24%). This difference is accounted for by the fact that male mortality rates at ages 45–64 years were around 1.9 times higher than the rates for females, which has given greater scope for absolute declines in mortality rates in these ages.

1996–2051

If the mortality declines experienced from 1967 to 1996 were to continue into the future, females born in 2051 could be expected to live to 86.6 years (5.3 years more than in 1995–97). Males born in 2051 could be expected to live to 82.5 years (a gain of 6.9 years on the 1995–97 level). The major age group contributing to these gains in life expectancy are expected to be the 45 years and older age group, producing around three-quarters of the total life expectancy gain for both males and females (*Population Projections, 1997 to 2051,* (ABS Cat. no. 3222.0)).

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	%
1986	92.8	1992	94.3
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

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 3.5 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 Autralia.

DEATHS OF AUSTRALIAN INDIGENOUS PEOPLE

7 This publication includes a section on Indigenous deaths. Data for 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* (ABS Cat. no. 3303.0).

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

CAUSES OF DEATH

10 Data concerning causes of death are classified according to the 9th Revision of the World Health Organisation's International Classification of Diseases.

AUSTRALIAN LIFE TABLES

11 The 1995–97 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

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

13 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

14 Other ABS publications which may be of interest to users include:
Australian Demographic Statistics (ABS Cat. no. 3101.0) — issued quarterly
Australian Demographic Trends (ABS Cat. no. 3102.0) — issued irregularly
Births, Australia (ABS Cat. no. 3301.0) — issued annually
Causes of Death, Australia (ABS Cat. no. 3303.0) — issued annually
Perinatal Deaths, Australia (ABS Cat. no. 3304.0) — issued annually to 1993
Population Projections (ABS Cat. no. 3222.0) based on preliminary estimated resident population at 30 June 1997.

RELATED PUBLICATIONS *continued*

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

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

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

18 For more information about related unpublished statistics or data concepts contact Paul Atyeo on Canberra 02 6252 7612.

ADDITIONAL STATISTICS AVAILABLE

19 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 could be 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 at a specified age per 1,000 of the estimated resident population of the same at 30 June. The infant mortality rate is used for the age-specific 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 given.

Country of birth The classification of countries in this publication is the Australian Standard Classification of Countries for Social Statistics. For more detailed information refer to the ABS publication *Australian Standard Classification of Countries for Social Statistics* (ABS Cat. no. 1269.0) Revision 1.03.

Crude death rate The crude death rate is the number of deaths registered during the calendar year, per 1,000 of estimated resident population at 30 June of that year. For years prior to 1994, the crude death rate is based on the mean estimated resident population for the calendar year.

Estimated resident population Estimated resident population data are quarterly 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 quarterly adjustment (intercensal discrepancy) to ensure that the total intercensal increase agrees with the difference between the estimated resident populations 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.

The concept of estimated resident population 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 in a reference year.

Death rates shown in this publication for the years since 1974 are calculated using estimates of resident population. A description of the conceptual basis of the estimated resident population is contained in *Infromation Paper: Demographic Estimates—Concepts, Sources and Methods* (ABS Cat. no. 3228.0). Revised population estimates are shown in *Australian Demographic Statistics* (ABS Cat. no. 3101.0) (issued quarterly).

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

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

Infant death An infant death is the death of a live born child who died when less than one year old.

Infant mortality rate The infant mortality rate is the number of deaths of children under one-year of age per 1,000 live births.

Intercensal discrepancy After each Census, estimates of the preceding intercensal periods are provided by incorporating an additional quarterly adjustment to ensure that the total intercensal increase agrees with the difference between the estimated resident populations at the two respective Census dates. For a detailed description see *Population Estimates: Concepts, Sources and Methods, 1995* (ABS Cat. no. 3228.0).

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 or 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 ABS, registered marital status and social marital status. They are different personal characteristics and are independent variables with separate classifications. Marital status used in this publication is registered marital status which refers to formally registered marriages for which the partners hold a marriage certificate.

Median value The median value (age, duration) 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 The excess of births over deaths.

Neonatal death A neonatal death is the death within 28 days of birth of any child weighing at least 500 grams at birth (or of at least 22 weeks gestation, if birthweight was unavailable).

Sex ratio The sex ratio of deaths is the number of male deaths per 100 female deaths.

Standardised death rate (SDR) Two methods are used in the calculation of standardised death rates (SDRs):

- Direct method — expressed per 1,000 persons, unless otherwise indicated, as in the SDRs for cause of death, where the rate is expressed per 100,000 persons. It is the overall death rate that would have prevailed in a standard population if it had experienced at each age the death rates of the population being studied. The standard population used in these calculations is all persons in the 1991 Australian population. The direct method is used for State, Territory and Australia rates, except where they are compared to Indigenous indirect standardised rates.
- Indirect method — expressed per 1,000 persons. The indirect method is used to calculate rates for small populations of deaths and is used in this publication to calculate SDRs for Indigenous deaths. This is calculated by initially applying a standard set of age-specific rates (those for persons in the 1991 Australian population) to the population under study, and comparing the actual number of deaths with the number expected assuming that these standard death rates applied. The SDR for the population under study is then calculated by multiplying the crude death rate of the standard population by the ratio of actual deaths to expected deaths.

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 the age-specific birth 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 fertiliy 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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