



# CAUSES OF DEATH AUSTRALIA

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- For further information about these and related statistics, contact Client Services in any ABS office as shown on the back cover of this publication, or Peter Burke on Brisbane 07 3222 6069.

## NOTES

**ABOUT THIS PUBLICATION** This publication brings together statistics and indicators for deaths, including perinatal deaths registered in Australia. These statistics have been compiled from data made available to the Australian Bureau of Statistics by the Registrar of Births, Deaths and Marriages in each State and Territory.



**CHANGES IN THIS ISSUE** This issue contains an extension of an existing table, a new table and a new appendix.

Table 1.8, Underlying Cause, Indigenous People has been expanded in this issue to include Queensland data. Indigenous identifiers were introduced in Queensland death forms from 1996 and ABS considers that the 1998 data is of publishable standard.

Table 2.6, Causes of Death, Associated Causes and Underlying Cause enables readers to view multiple cause associations in an alternative way to Table 2.5.

Appendix 6, Indigenous Deaths outlines issues associated with the coverage of indigenous deaths and the ABS methodology involved in producing estimated total indigenous deaths.

Explanatory and Technical Notes have been appropriately amended to reflect the above and other minor changes made in this publication.



<b>SYMBOLS AND OTHER USAGES</b>	ABS	Australian Bureau of Statistics
	ACS	Automated Coding System
	AIDS	Acquired Immune Deficiency Syndrome
	HIV	Human Immunodeficiency Virus
	ICD	International Classification of Diseases (produced by the World Health Organisation)
	ICD-9	International Classification of Diseases Version 9
	ICD-9 CM	International Classification of Diseases Version 9 Clinically Modified
	NCHS	National Center for Health Statistics
	r	figure or series revised since previous issue
	WHO	World Health Organisation
	YPLL	Years of Potential Life Lost
	..	not applicable
	—	nil or rounded to zero

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Acting Australian Statistician

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# SECTION 1

## UNDERLYING CAUSE OF DEATH .....

### LEADING CAUSES

There were 127,202 deaths registered in 1998, a decrease of 1.7% on the corresponding figure for 1997. The 1998 total consisted of 67,073 male and 60,129 female deaths.

Malignant neoplasms, (cancer), which resulted in 27% of all deaths and ischaemic heart disease (22%) continued to be the leading causes of death in 1998. Together they accounted for nearly half of all deaths registered. The ten leading causes of death in 1998 remained unchanged from 1997 with only a slight reordering of the group.

### LEADING CAUSES OF DEATH

Cause of death and ICD code	Males	Females	Persons	Proportion of total deaths
	no.	no.	no.	%
<b>All causes</b>	<b>67 073</b>	<b>60 129</b>	<b>127 202</b>	<b>100.0</b>
Malignant neoplasms (cancer) (140–208)	19 590	14 970	34 560	27.2
Malignant neoplasms of trachea, bronchus and lung (162)	4 821	2 053	6 874	5.4
Ischaemic heart disease (410–414)	15 024	12 801	27 825	21.9
Cerebrovascular disease (stroke) (430–438)	4 812	7 170	11 982	9.4
Chronic obstructive pulmonary disease and allied conditions (including asthma, emphysema and bronchitis) (490–496)	3 628	2 486	6 114	4.8
Accidents (E800–E949)	3 168	1 652	4 820	3.8
Motor vehicle traffic accidents (E810–E819)	1 224	507	1 731	1.4
Pneumonia and influenza (480–487)	2 049	2 530	4 579	3.6
Diabetes mellitus (250)	1 424	1 327	2 751	2.2
Diseases of arteries, arterioles and capillaries (including atherosclerosis and aortic aneurysm) (440–448)	1 415	1 330	2 745	2.2
Suicide (E950–E959)	2 150	533	2 683	2.1
Hereditary and degenerative diseases of the central nervous system (330–337)	947	1 085	2 032	1.6
All other causes	12 866	14 245	27 111	21.3

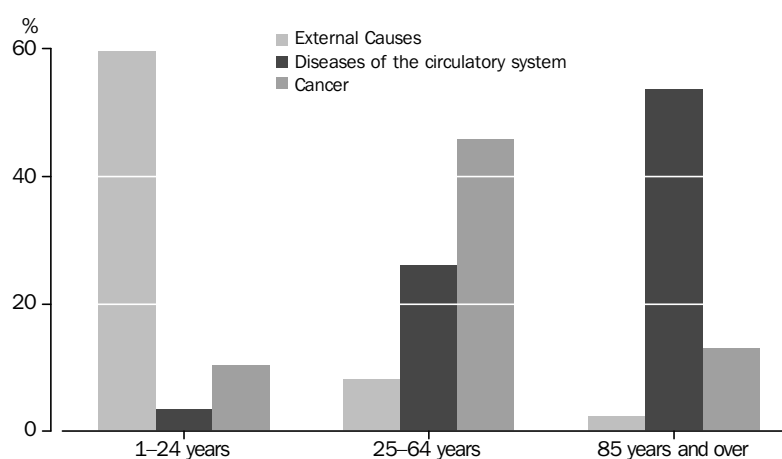
### CHANGES IN STANDARDISED DEATH RATES

While there was only a slight decrease in the total number of deaths between 1997 and 1998, the standardised death rate (see Glossary page 91 for details) for all causes continued to fall over the ten year period. The rate for all causes declined 21% from 759 per 100,000 persons in 1989 to 598 in 1998, with the male and female rate demonstrating a similar decline (see table 1.4).

## CAUSES OF DEATH BY AGE

Many causes and conditions of death tend to be age specific. A condition or event which is dominant in a specific age group may be minor when looked at in terms of the entire population. External causes (particularly accidents) are the leading causes of death in the 1–24 year age group, while diseases of the circulatory system (particularly ischaemic heart disease) account for over half the deaths among those aged 85 years and over.

DEATHS, Selected Causes By Age Group



One measurement of the effects of age specificity of diseases and conditions is Years of Potential Life Lost (YPLL). YPLL measures the extent of the 'premature mortality' caused by specific diseases and conditions compared to a lifespan of 75 years. Cancer, the leading cause of death among 25–64 year olds and accidents, the leading cause among 1–24 year olds were the largest contributors to YPLL in 1998. More detailed information on YPLL and the method of calculation is included in the Technical Note on page 89 of this publication.

In 1998 the YPLL for males was nearly double that for females. This is partly because for those causes which affect the young, such as drug dependency, accidents and suicides, male deaths far exceed female deaths. Further, for those aged 25–64 years, death rates for cancer and ischaemic heart disease are greater for men than women.

## MALIGNANT NEOPLASMS (CANCERS)

Cancers were the leading cause of death in 1998, accounting for 27% of all deaths and 30% of total YPLL. Cancer is a greater cause of premature mortality in females accounting for 40% of total YPLL, compared with 25% in males. This is partly due to the early onset of breast cancer in females and the large contribution that external causes make to YPLL in males. The types of cancers and their corresponding death rates varied by age.

## 1–14 Years

Cancer was the second leading cause of death (147 deaths) in this age group, after accidents. The leading types of cancers were leukaemia and brain cancer accounting for 1.7 deaths and 1.0 death per 100,000 persons aged 1–14 respectively.

MALIGNANT NEOPLASMS (CANCERS) *continued*

## 15–24 Years

Cancer was the fourth leading cause of death (123 deaths) in this age group, after motor vehicle traffic accidents, suicide and drug dependence. The leading type of cancer was leukaemia (1.6 deaths per 100,000 persons aged 15–24).

## 25–44 Years

Cancer was the third leading cause of death (1,285 deaths) in this age group, after accidents and suicide. Cancer of the digestive organs and peritoneum was the leading type of cancer in males (5.5 deaths per 100,000 males aged 25–44). Breast cancer was the leading type of cancer in females (8.0 deaths per 100,000 females aged 25–44). However, the age specific rate for breast cancer has declined since 1989 when it was 9.5 deaths per 100,000 females aged 25–44.

## 45–64 Years

Cancer was the leading cause of death in this age group (4,622 male and 3,660 female deaths). The leading types for males, were cancer of the digestive organs and peritoneum and cancer of the trachea, bronchus and lung. For females they were breast cancer and then cancer of the digestive organs and peritoneum. There has been a major decrease in the age specific rates for cancer of the trachea, bronchus and lung since 1989, particularly for males. The rate has decreased over the period in both the 45–54 and 55–64 year age groups (see table 1.2).

## 65–84 Years

Cancer continued to be the leading cause of death (20,466 deaths) in this age group. The leading type was cancer of the digestive organs and peritoneum and then cancer of the trachea bronchus and lung. There have been decreases in the age specific rates of all the leading cancers in the 65–74 and 75–84 year age groups since 1989 (see table 1.2).

## 85 Years and over

Cancer was the third leading cause of death (4,250 deaths) in this age group, after ischaemic heart disease and cerebrovascular disease. Prostate cancer was the leading type of cancer death in males (750.5 deaths per 100,000 males aged 85 and over). Cancer of the digestive organs and peritoneum was the leading type of cancer in females (512.9 deaths per 100,000 females aged 85 and over).

## ACCIDENTS

Accidents were the fifth leading cause of death in 1998, accounting for 4% of all deaths and 15% of all YPLL. Motor vehicle traffic accidents and accidental falls were the leading types of accidental deaths, contributing 36% and 25% respectively of this group. The standardised death rates for most types of accidents have decreased over the past ten years. Between 1989 and 1998 the standardised death rate due to motor vehicle traffic accidents has fallen from 16.8 to 9.3 deaths per 100,000 population. The corresponding falls in the standardised death rates for accidental falls and accidental drownings were 6.9 to 5.2 deaths per 100,000 and 1.9 to 1.3 deaths per 100,000.

## SUICIDES

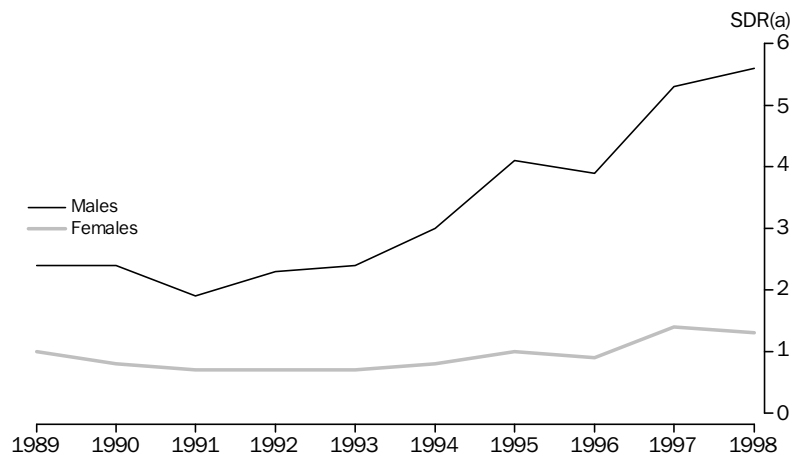
Deaths from suicide and self-inflicted injury decreased slightly to 2,683 in 1998, from the record number of 2,723 suicides in 1997. The standardised death rate decreased slightly from 1997 but was 14% above the 1989 figure. Male suicide deaths continued to outnumber female deaths by a ratio of four to one, similar to that recorded in 1997. Persons in the age range 25–44 years recorded the highest age specific rate of suicide in 1998 with a rate of 22.7, above the rate of 21.0 recorded in 1997, while the 15–24 year age group recorded a rate of 16.7, a decrease from the 1997 rate of 19.1.

Suicides are a major cause of YPLL, particularly for males where they accounted for 13% of total male YPLL in 1998.

## DRUG DEPENDENCE

The standardised death rate from drug dependence increased by 6% between 1997 and 1998. This increase was a continuation of the trend that has seen the rate approximately double between 1989 and 1998. The increase in the male rate over this period was far more marked than the corresponding increase in the female rate and hence this increase in the male rate accounted for most of the overall rise. Between 1989 and 1998 the age specific rate for males aged 15–24 increased from 3.0 to 8.6 deaths per 100,000, while the corresponding rate for females increased only marginally from 2.2 to 2.4. This pattern continued for those aged 25–44, but the difference between males and females was less marked.

## STANDARDISED DEATH RATES, Drug Dependence



(a) Per 100,000 estimated resident population.

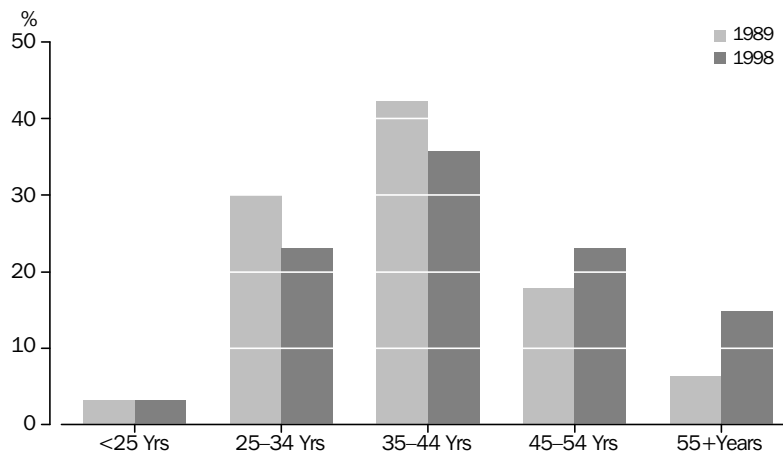


## ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

In 1998 there were 187 AIDS-related deaths, compared with 279 in 1997 and 392 in 1989. From 1989, AIDS-related deaths increased rapidly, peaking in 1994 with 764 deaths registered. Since this peak, numbers have consistently declined, possibly as a result of the introduction of antiretroviral therapy in 1996<sup>1</sup>.

Over the past ten years the age profile for AIDS-related deaths has gradually shifted with a greater proportion of these deaths now occurring in older age groups. In 1989, 24% of all AIDS-related deaths occurred in persons aged 45 years and above and this had risen to 38% in 1998.

## AIDS-RELATED DEATHS



<sup>1</sup> P. K. Correll, M. G. Law, A. M. McDonald, D. A. Cooper and J. M. Kaldor, 'HIV disease progression in Australia in the time of combination antiretroviral therapies', *Medical Journal of Australia*, vol. 169, 1998, pp. 469-472.

## 1.1 UNDERLYING CAUSE, Selected Causes

Cause of death and ICD code	NUMBER OF DEATHS.			PERCENTAGE OF ALL DEATHS OF SAME AGE AND SEX.....		
	Males	Females	Persons	Males	Females	Persons
<b>Under 1 year</b>	<b>706</b>	<b>546</b>	<b>1 252</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Congenital anomalies (740–759)	186	152	338	26.3	27.8	27.0
Congenital anomalies of nervous system (740–742)	33	21	54	4.7	3.8	4.3
Congenital anomalies of circulatory system (745–747)	53	45	98	7.5	8.2	7.8
Congenital anomalies of respiratory system (748)	21	11	32	3.0	2.0	2.6
Certain conditions originating in the perinatal period (760–779)	319	252	571	45.2	46.2	45.6
Disorders relating to short gestation and unspecified low birthweight (765)	17	12	29	2.4	2.2	2.3
Birth trauma (767)	13	17	30	1.8	3.1	2.4
Hypoxia, birth asphyxia and other respiratory conditions (768–770)	52	35	87	7.4	6.4	6.9
Infections specific to the perinatal period (771)	16	13	29	2.3	2.4	2.3
Fetal and neonatal haemorrhage (772)	8	5	13	1.1	0.9	1.0
Sudden death, cause unknown (798)	84	55	139	11.9	10.1	11.1
<b>1–14 years</b>	<b>427</b>	<b>296</b>	<b>723</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	89	58	147	20.8	19.6	20.3
Brain (191)	20	17	37	4.7	5.7	5.1
Lymphatic and haematopoietic tissue (200–208)	41	28	69	9.6	9.5	9.5
Leukaemia (204–208)	36	27	63	8.4	9.1	8.7
Diseases of the nervous system and sense organs (320–389)	42	32	74	9.8	10.8	10.2
Diseases of the circulatory system (390–459)	14	11	25	3.3	3.7	3.5
Congenital anomalies (740–759)	36	27	63	8.4	9.1	8.7
Accidents, poisonings and violence (E800–E999)	156	97	253	36.5	32.8	35.0
Motor vehicle traffic accidents (E810–E819)	62	39	101	14.5	13.2	14.0
Accidents caused by submersion, suffocation and foreign bodies (E910–E915)	34	27	61	8.0	9.1	8.4
Accidental drowning and submersion (E910)	27	22	49	6.3	7.4	6.8
<b>15–24 years</b>	<b>1 376</b>	<b>495</b>	<b>1 871</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	66	57	123	4.8	11.5	6.6
Lymphatic and haematopoietic tissue (200–208)	33	23	56	2.4	4.6	3.0
Leukaemia (204–208)	23	20	43	1.7	4.0	2.3
Drug dependence (304)	118	32	150	8.6	6.5	8.0
Diseases of the nervous system and sense organs (320–389)	44	12	56	3.2	2.4	3.0
Accidents, poisonings and violence (E800–E999)	1 008	284	1 292	73.3	57.4	69.1
Motor vehicle traffic accidents (E810–E819)	366	119	485	26.6	24.0	25.9
Suicide (E950–E959)	364	82	446	26.5	16.6	23.8
<b>25–44 years</b>	<b>4 507</b>	<b>2 016</b>	<b>6 523</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	573	712	1 285	12.7	35.3	19.7
Digestive organs and peritoneum (150–159)	159	114	273	3.5	5.7	4.2
Bone, connective tissue, skin and breast (170–175)	93	294	387	2.1	14.6	5.9
Melanoma of skin (172)	66	45	111	1.5	2.2	1.7
Female breast (174)	..	231	231	..	11.5	3.5
Brain (191)	60	52	112	1.3	2.6	1.7
Lymphatic and haematopoietic tissue (200–208)	89	81	170	2.0	4.0	2.6
Mental disorders (290–319)	425	100	525	9.4	5.0	8.0
Drug dependence (304)	365	77	442	8.1	3.8	6.8
Diseases of the circulatory system (390–459)	556	260	816	12.3	12.9	12.5
Ischaemic heart disease (410–414)	333	77	410	7.4	3.8	6.3
Acute myocardial infarction (410)	175	51	226	3.9	2.5	3.5
Diseases of the digestive system (520–579)	126	69	195	2.8	3.4	3.0
Chronic liver disease and cirrhosis (571)	87	44	131	1.9	2.2	2.0
Accidents, poisonings and violence (E800–E999)	2 277	540	2 817	50.5	26.8	43.2
Motor vehicle traffic accidents (E810–E819)	421	121	542	9.3	6.0	8.3
Suicide (E950–E959)	1 070	244	1 314	23.7	12.1	20.1

1.1 UNDERLYING CAUSE, Selected Causes *continued*

Cause of death and ICD code	NUMBER OF DEATHS.			PERCENTAGE OF ALL DEATHS OF SAME AGE AND SEX.....		
	Males	Females	Persons	Males	Females	Persons
<b>45–54 years</b>	<b>3 982</b>	<b>2 566</b>	<b>6 548</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	1 399	1 448	2 847	35.1	56.4	43.5
Digestive organs and peritoneum (150–159)	433	295	728	10.9	11.5	11.1
Colon (153)	118	113	231	3.0	4.4	3.5
Trachea, bronchus and lung (162)	301	167	468	7.6	6.5	7.1
Female breast (174)	..	471	471	..	18.4	7.2
Genitourinary organs (179–189)	104	177	281	2.6	6.9	4.3
Lymphatic and haematopoietic tissue (200–208)	144	111	255	3.6	4.3	3.9
Diseases of the circulatory system (390–459)	1 105	373	1 478	27.7	14.5	22.6
Ischaemic heart disease (410–414)	779	169	948	19.6	6.6	14.5
Acute myocardial Infarction (410)	441	112	553	11.1	4.4	8.4
Cerebrovascular disease (430–438)	127	105	232	3.2	4.1	3.5
Diseases of the respiratory system (460–519)	130	119	249	3.3	4.6	3.8
Disease of the digestive system (520–579)	222	88	310	5.6	3.4	4.7
Chronic liver disease and cirrhosis (571)	172	58	230	4.3	2.3	3.5
Accidents, poisonings and violence (E800–E999)	671	225	896	16.9	8.8	13.7
Motor vehicle traffic accidents (E810–E819)	128	54	182	3.2	2.1	2.8
Suicide (E950–E959)	314	72	386	7.9	2.8	5.9
<b>55–64 years</b>	<b>7 405</b>	<b>4 135</b>	<b>11 540</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	3 223	2 212	5 435	43.5	53.5	47.1
Digestive organs and peritoneum (150–159)	1 029	559	1 588	13.9	13.5	13.8
Colon (153)	322	225	547	4.3	5.4	4.7
Trachea, bronchus and lung (162)	881	363	1 244	11.9	8.8	10.8
Female breast (174)	..	485	485	..	11.7	4.2
Genitourinary organs (179–189)	327	289	616	4.4	7.0	5.3
Diseases of the circulatory system (390–459)	2 340	880	3 220	31.6	21.3	27.9
Ischaemic heart disease (410–414)	1 660	486	2 146	22.4	11.8	18.6
Acute myocardial infarction (410)	960	301	1 261	13.0	7.3	10.9
Cerebrovascular disease (430–438)	313	184	497	4.2	4.4	4.3
Diseases of the respiratory system (460–519)	436	289	725	5.9	7.0	6.3
Chronic obstructive pulmonary disease and allied conditions (490–496)	312	217	529	4.2	5.2	4.6
Diseases of the digestive system (520–579)	304	137	441	4.1	3.3	3.8
Accidents, poisonings and violence (E800–E999)	419	168	587	5.7	4.1	5.1
<b>65–74 years</b>	<b>16 267</b>	<b>9 627</b>	<b>25 894</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	6 432	3 796	10 228	39.5	39.4	39.5
Digestive organs and peritoneum (150–159)	1 807	1 132	2 939	11.1	11.8	11.4
Colon (153)	599	446	1 045	3.7	4.6	4.0
Trachea, bronchus and lung (162)	1 893	708	2 601	11.6	7.4	10.0
Female breast (174)	..	519	519	..	5.4	2.0
Genitourinary organs (179–189)	1 008	496	1 504	6.2	5.2	5.8
Prostate (185)	684	..	684	4.2	..	2.6
Lymphatic and haematopoietic tissue (200–208)	541	395	936	3.3	4.1	3.6
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	562	374	936	3.5	3.9	3.6
Diabetes mellitus (250)	415	281	696	2.6	2.9	2.7
Senile and presenile organic psychotic conditions (290)	52	51	103	0.3	0.5	0.4
Diseases of the nervous system and sense organs (320–389)	249	215	464	1.5	2.2	1.8
Alzheimer's disease (3310)	32	47	79	0.2	0.5	0.3
Diseases of the circulatory system (390–459)	5 984	3 283	9 267	36.8	34.1	35.8
Ischaemic heart disease (410–414)	3 937	1 781	5 718	24.2	18.5	22.1
Acute myocardial infarction (410)	2 402	1 123	3 525	14.8	..	13.6
Cerebrovascular disease (430–438)	979	775	1 754	6.0	8.1	6.8
Diseases of the respiratory system (460–519)	1 536	885	2 421	9.4	9.2	9.3
Chronic obstructive pulmonary disease and allied conditions (490–496)	1 148	684	1 832	7.1	7.1	7.1
Diseases of the digestive system (520–579)	438	295	733	2.7	3.1	2.8

1.1 UNDERLYING CAUSE, Selected Causes *continued*

Cause of death and ICD code	NUMBER OF DEATHS..			PERCENTAGE OF ALL DEATHS OF SAME AGE AND SEX.....		
	Males	Females	Persons	Males	Females	Persons
<b>75–84 years</b>	<b>20 975</b>	<b>19 212</b>	<b>40 187</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	5 847	4 391	10 238	27.9	22.9	25.5
Digestive organs and peritoneum (150–159)	1 518	1 431	2 949	7.2	7.4	7.3
Colon (153)	483	511	994	2.3	2.7	2.5
Trachea, bronchus and lung (162)	1 366	607	1 973	6.5	3.2	4.9
Female breast (174)	..	534	534	..	2.8	1.3
Genitourinary organs (179–189)	1 491	615	2 106	7.1	3.2	5.2
Prostate (185)	1 120	..	1 120	5.3	..	2.8
Lymphatic and haematopoietic tissue (200–208)	549	510	1 059	2.6	2.7	2.6
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	616	644	1 260	2.9	3.4	3.1
Diabetes mellitus (250)	499	478	977	2.4	2.5	2.4
Senile and presenile organic psychotic conditions (290)	166	235	401	0.8	1.2	1.0
Diseases of the nervous system and sense organs (320–389)	434	457	891	2.1	2.4	2.2
Hereditary and degenerative diseases of the central nervous system (330–337)	376	388	764	1.8	2.0	1.9
Alzheimer's disease (3310)	99	170	269	0.5	0.9	0.7
Diseases of the circulatory system (390–459)	9 179	9 208	18 387	43.8	47.9	45.8
Ischaemic heart disease (410–414)	5 435	4 650	10 085	25.9	24.2	25.1
Acute myocardial infarction (410)	3 271	2 930	6 201	15.6	15.3	15.4
Cerebrovascular disease (430–438)	1 963	2 548	4 511	9.4	13.3	11.2
Diseases of arteries, arterioles and capillaries (440–448)	560	470	1 030	2.7	2.4	2.6
Diseases of the respiratory system (460–519)	2 631	1 940	4 571	12.5	10.1	11.4
Chronic obstructive pulmonary disease and allied conditions (490–496)	1 413	934	2 347	6.7	4.9	5.8
Diseases of the digestive system (520–579)	516	650	1 166	2.5	3.4	2.9
Diseases of the genitourinary system (580–629)	493	531	1 024	2.4	2.8	2.5
Nephritis, nephrotic syndrome and nephrosis (580–589)	376	360	736	1.8	1.9	1.8
Accidents, poisonings and violence (E800–E999)	364	330	694	1.7	1.7	1.7
Accidental falls (E880–E888)	153	172	325	0.7	0.9	0.8
<b>85 years and over</b>	<b>11 421</b>	<b>21 235</b>	<b>32 656</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	1 957	2 293	4 250	17.1	10.8	13.0
Digestive organs and peritoneum (150–159)	487	812	1 299	4.3	3.8	4.0
Genitourinary organs (179–189)	662	286	948	5.8	1.3	2.9
Prostate (185)	520	..	520	4.6	..	1.6
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	267	535	802	2.3	2.5	2.5
Diabetes mellitus (250)	201	370	571	1.8	1.7	1.7
Senile and presenile organic psychotic conditions (290)	144	453	597	1.3	2.1	1.8
Hereditary and degenerative diseases of the central nervous system (330–337)	236	428	664	2.1	2.0	2.0
Alzheimer's disease (3310)	105	307	412	0.9	1.4	1.3
Diseases of the circulatory system (390–459)	5 519	11 998	17 517	48.3	56.5	53.6
Ischaemic heart disease (410–414)	2 876	5 635	8 511	25.2	26.5	26.1
Acute myocardial infarction (410)	1 647	3 112	4 759	14.4	14.7	14.6
Cerebrovascular disease (430–438)	1 341	3 468	4 809	11.7	16.3	14.7
Diseases of arteries, arterioles and capillaries (440–448)	338	602	940	3.0	2.8	2.9
Diseases of the respiratory system (460–519)	1 730	2 457	4 187	15.1	11.6	12.8
Pneumonia and influenza (480–487)	825	1 557	2 382	7.2	7.3	7.3
Chronic obstructive pulmonary disease and allied conditions (490–496)	649	513	1 162	5.7	2.4	3.6
Diseases of the digestive system (520–579)	354	721	1 075	3.1	3.4	3.3
Diseases of the genitourinary system (580–629)	394	643	1 037	3.4	3.0	3.2
Nephritis, nephrotic syndrome and nephrosis (580–589)	263	388	651	2.3	1.8	2.0
Accidents, poisonings and violence (E800–E999)	273	464	737	2.4	2.2	2.3
Accidental falls (E880–E888)	186	390	576	1.6	1.8	1.8

## 1.2 UNDERLYING CAUSE, Age-Specific Rates

Cause of death and ICD code	1989(a).....			1998(a).....		
	Males	Females	Persons	Males	Females	Persons
<b>Under 1 year</b>	<b>8.84</b>	<b>7.09</b>	<b>7.99</b>	<b>5.51</b>	<b>4.49</b>	<b>5.02</b>
Congenital anomalies (740–759)	1.98	1.95	1.97	1.45	1.25	1.35
Congenital anomalies of nervous system (740–742)	0.40	0.43	0.42	0.26	0.17	0.22
Congenital anomalies of circulatory system (745–747)	0.71	0.64	0.67	0.41	0.37	0.39
Congenital anomalies of respiratory system (748)	0.22	0.12	0.17	0.16	0.09	0.13
Certain conditions originating in the perinatal period (760–779)	3.67	3.04	3.36	2.49	2.07	2.29
Disorders relating to short gestation and unspecified low birthweight (765)	0.89	0.89	0.89	0.13	0.10	0.12
Birth trauma (767)	0.15	0.05	0.10	0.10	0.14	0.12
Hypoxia, birth asphyxia and other respiratory conditions (768–770)	1.76	1.31	1.54	0.41	0.29	0.35
Infections specific to the perinatal period (771)	0.23	0.16	0.20	0.12	0.11	0.12
Fetal and neonatal haemorrhage (772)	0.38	0.35	0.37	0.06	0.04	0.05
Sudden death, cause unknown (798)	2.35	1.37	1.87	0.66	0.45	0.56
<b>1–14 years</b>	<b>30.1</b>	<b>22.7</b>	<b>26.5</b>	<b>22.7</b>	<b>16.5</b>	<b>19.7</b>
Malignant neoplasms (140–208)	4.4	4.0	4.2	4.7	3.2	4.0
Brain (191)	1.2	1.0	1.1	1.1	0.9	1.0
Lymphatic and haematopoietic tissue (200–208)	2.0	1.9	2.0	2.2	1.6	1.9
Leukaemia (204–208)	1.7	1.9	1.8	1.9	1.5	1.7
Diseases of the nervous system and sense organs (320–389)	2.1	1.5	1.8	2.2	1.8	2.0
Diseases of the circulatory system (390–459)	0.7	0.6	0.7	0.7	0.6	0.7
Congenital anomalies (740–759)	3.0	2.7	2.8	1.9	1.5	1.7
Accidents, poisonings and violence (E800–E999)	15.4	9.7	12.7	8.3	5.4	6.9
Motor vehicle traffic accidents (E810–E819)	6.2	4.4	5.3	3.3	2.2	2.7
Accidents caused by submersion, suffocation and foreign bodies (E910–E915)	4.4	1.9	3.2	1.8	1.5	1.7
Accidental drowning and submersion (E910)	3.9	1.5	2.7	1.4	1.2	1.3
<b>15–24 years</b>	<b>121.1</b>	<b>42.6</b>	<b>82.6</b>	<b>100.5</b>	<b>37.8</b>	<b>69.9</b>
Malignant neoplasms (140–208)	6.5	4.4	5.5	4.8	4.4	4.6
Lymphatic and haematopoietic tissue (200–208)	3.1	1.6	2.3	2.4	1.8	2.1
Leukaemia (204–208)	1.9	1.3	1.6	1.7	1.5	1.6
Drug dependence (304)	3.0	2.2	2.6	8.6	2.4	5.6
Diseases of the nervous system and sense organs (320–389)	3.4	1.5	2.5	3.2	0.9	2.1
Accidents, poisonings and violence (E800–E999)	96.5	26.1	61.9	73.6	21.7	48.3
Motor vehicle traffic accidents (E810–E819)	49.2	18.0	33.9	26.7	9.1	18.1
Suicide (E950–E959)	23.9	3.4	13.8	26.6	6.3	16.7
<b>25–44 years</b>	<b>160.8</b>	<b>74.3</b>	<b>117.9</b>	<b>156.0</b>	<b>69.6</b>	<b>112.8</b>
Malignant neoplasms (140–208)	25.0	29.2	27.1	19.8	24.6	22.2
Digestive organs and peritoneum (150–159)	5.3	4.0	4.6	5.5	3.9	4.7
Bone, connective tissue, skin and breast (170–175)	5.0	11.8	8.4	3.2	10.2	6.7
Melanoma of skin (172)	2.5	1.6	2.1	2.3	1.6	1.9
Female breast (174)	..	9.5	4.7	..	8.0	4.0
Brain (191)	2.0	1.8	1.9	2.1	1.8	1.9
Lymphatic and haematopoietic tissue (200–208)	5.8	2.7	4.3	3.1	2.8	2.9
Mental disorders (290–319)	7.7	2.3	5.0	14.7	3.5	9.1
Drug dependence (304)	5.9	1.6	3.8	12.6	2.7	7.6
Diseases of the circulatory system (390–459)	24.0	9.0	16.6	19.2	9.0	14.1
Ischaemic heart disease (410–414)	13.9	2.6	8.3	11.5	2.7	7.1
Acute myocardial infarction (410)	8.5	1.8	5.1	6.1	1.8	3.9
Diseases of the digestive system (520–579)	5.4	2.4	3.9	4.4	2.4	3.4
Chronic liver disease and cirrhosis (571)	3.9	1.6	2.8	3.0	1.5	2.3
Accidents, poisonings and violence (E800–E999)	76.1	20.8	48.7	78.8	18.6	48.7
Motor vehicle traffic accidents (E810–E819)	26.5	7.7	17.1	14.6	4.2	9.4
Suicide (E950–E959)	26.4	6.8	16.7	37.0	8.4	22.7

(a) Deaths per 100,000 of the estimated mid-year population for each age group other than age under 1 year; deaths per 1,000 live births for age under 1 year. See Glossary for further explanation.

1.2 UNDERLYING CAUSE, Age-Specific Rates *continued*

Cause of death and ICD code	1989(a).....			1998(a).....		
	Males	Females	Persons	Males	Females	Persons
<b>45–54 years</b>	<b>440.1</b>	<b>262.8</b>	<b>353.7</b>	<b>319.3</b>	<b>210.2</b>	<b>265.4</b>
Malignant neoplasms (140–208)	147.6	140.5	144.1	112.2	118.6	115.4
Digestive organs and peritoneum (150–159)	43.3	28.8	36.2	34.7	24.2	29.5
Colon (153)	15.0	14.2	14.6	9.5	9.3	9.4
Trachea, bronchus and lung (162)	38.1	15.5	27.1	24.1	13.7	19.0
Female breast (174)	..	46.0	22.4	..	38.6	19.1
Genitourinary organs (179–189)	9.7	21.3	15.3	8.3	14.5	11.4
Lymphatic and haematopoietic tissue (200–208)	15.9	8.3	12.2	11.5	9.1	10.3
Diseases of the circulatory system (390–459)	150.8	55.1	104.1	88.6	30.6	59.9
Ischaemic heart disease (410–414)	115.1	27.2	72.2	62.5	13.8	38.4
Acute myocardial Infarction (410)	75.8	17.9	47.5	35.4	9.2	22.4
Cerebrovascular disease (430–438)	14.9	14.3	14.6	10.2	8.6	9.4
Diseases of the respiratory system (460–519)	17.6	14.6	16.1	10.4	9.8	10.1
Disease of the digestive system (520–579)	25.9	9.7	18.0	17.8	7.2	12.6
Chronic liver disease and cirrhosis (571)	18.6	5.3	12.1	13.8	4.8	9.3
Accidents, poisonings and violence (E800–E999)	60.6	20.1	40.8	53.8	18.4	36.3
Motor vehicle traffic accidents (E810–E999)	14.9	7.3	11.2	10.3	4.4	7.4
Suicide (E950–E959)	23.9	7.1	15.7	25.2	5.9	15.6
<b>55–64 years</b>	<b>1 325.2</b>	<b>701.8</b>	<b>1 014.4</b>	<b>908.7</b>	<b>516.0</b>	<b>714.0</b>
Malignant neoplasms (140–208)	485.9	324.5	405.5	395.5	276.0	336.3
Digestive organs and peritoneum (150–159)	147.2	81.9	114.6	126.3	69.8	98.2
Colon (153)	48.8	34.2	41.5	39.5	28.1	33.8
Trachea, bronchus and lung (162)	151.4	51.7	101.7	108.1	45.3	77.0
Female breast (174)	..	70.3	35.0	..	60.5	30.0
Genitourinary organs (179–189)	47.6	48.5	48.0	40.1	36.1	38.1
Diseases of the circulatory system (390–459)	543.7	203.8	374.2	287.2	109.8	199.2
Ischaemic heart disease (410–414)	400.5	121.0	261.1	203.7	60.6	132.8
Acute myocardial infarction (410)	279.5	89.7	184.9	117.8	37.6	78.0
Cerebrovascular disease (430–438)	61.3	45.2	53.3	38.4	23.0	30.7
Diseases of the respiratory system (460–519)	93.4	55.8	74.6	53.5	36.1	44.9
Chronic obstructive pulmonary disease and allied conditions (490–496)	72.0	46.3	59.2	38.3	27.1	32.7
Diseases of the digestive system (520–579)	58.7	24.5	41.6	37.3	17.1	27.3
Accidents, poisonings and violence (E800–E999)	61.8	27.9	44.9	51.4	21.0	36.3
<b>65–74 years</b>	<b>3 456.9</b>	<b>1 830.3</b>	<b>2 579.1</b>	<b>2 627.8</b>	<b>1 420.2</b>	<b>1 996.6</b>
Malignant neoplasms (140–208)	1 077.7	592.9	816.1	1 039.0	560.0	788.6
Digestive organs and peritoneum (150–159)	298.6	183.7	236.6	291.9	167.0	226.6
Colon (153)	91.5	68.5	79.1	96.8	65.8	80.6
Trachea, bronchus and lung (162)	345.6	95.6	210.7	305.8	104.4	200.6
Female breast (174)	..	91.8	49.6	..	76.6	40.0
Genitourinary organs (179–189)	166.8	84.8	122.5	162.8	73.2	116.0
Prostate (185)	111.1	..	51.2	110.5	..	52.7
Lymphatic and haematopoietic tissue (200–208)	84.0	51.9	66.7	87.4	58.3	72.2
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	74.0	51.1	61.6	90.8	55.2	72.2
Diabetes mellitus (250)	60.1	41.9	50.3	67.0	41.5	53.7
Senile and presenile organic psychotic conditions (290)	11.9	10.0	10.9	8.4	7.5	7.9
Diseases of the nervous system and sense organs (320–389)	50.5	35.0	42.1	40.2	31.7	35.8
Alzheimer's disease (3310)	8.9	10.2	9.6	5.2	6.9	6.1
Diseases of the circulatory system (390–459)	1 595.4	803.2	1 167.9	966.7	484.3	714.5
Ischaemic heart disease (410–414)	1 085.0	489.6	763.7	636.0	262.9	440.9
Acute myocardial infarction (410)	752.9	353.4	537.3	388.0	165.8	271.8
Cerebrovascular disease (430–438)	255.0	176.6	212.7	158.1	114.3	135.2
Diseases of the respiratory system (460–519)	350.8	151.6	243.3	248.1	130.6	186.7
Chronic obstructive pulmonary disease and allied conditions (490–496)	289.5	119.3	197.6	185.4	100.9	141.3
Diseases of the digestive system (520–579)	113.1	56.2	82.4	70.8	43.5	56.5

(a) Deaths per 100,000 of the estimated mid-year population for each age group other than age under 1 year; deaths per 1,000 live births for age under 1 year. See Glossary for further explanation.

1.2 UNDERLYING CAUSE, Age-Specific Rates *continued*

Cause of death and ICD code	1989(a).....			1998(a).....		
	Males	Females	Persons	Males	Females	Persons
<b>75–84 years</b>	<b>8 667.8</b>	<b>5 314.3</b>	<b>6 636.3</b>	<b>6 744.7</b>	<b>4 289.7</b>	<b>5 295.7</b>
Malignant neoplasms (140–208)	2 065.6	970.8	1 402.4	1 880.1	980.4	1 349.1
Digestive organs and peritoneum (150–159)	562.5	341.9	428.9	488.1	319.5	388.6
Colon (153)	187.3	128.8	151.9	155.3	114.1	131.0
Trachea, bronchus and lung (162)	510.4	101.6	262.7	439.2	135.5	260.0
Female breast (174)	..	136.3	82.5	..	119.2	70.4
Genitourinary organs (179–189)	519.3	130.8	284.0	479.4	137.3	277.5
Prostate (185)	398.5	..	157.1	360.1	..	147.6
Lymphatic and haematopoietic tissue (200–208)	192.6	106.1	140.2	176.5	113.9	139.6
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	180.3	150.3	162.1	198.1	143.8	166.0
Diabetes mellitus (250)	149.9	127.9	136.6	160.5	106.7	128.7
Senile and presenile organic psychotic conditions (290)	111.1	94.1	100.8	53.4	52.5	52.8
Diseases of the nervous system and sense organs (320–389)	175.9	111.9	137.1	139.6	102.0	117.4
Hereditary and degenerative diseases of the central nervous system (330–337)	157.4	98.1	121.5	120.9	86.6	100.7
Alzheimer's disease (3310.0)	62.2	51.6	55.8	31.8	38.0	35.4
Diseases of the circulatory system (390–459)	4 311.9	3 069.5	3 559.3	2 951.6	2 056.0	2 423.0
Ischaemic heart disease (410–414)	2 622.3	1 650.1	2 033.4	1 747.7	1 038.3	1 329.0
Acute myocardial infarction (410)	1 778.6	1 105.6	1 370.9	1 051.8	654.2	817.2
Cerebrovascular disease (430–438)	883.4	805.8	836.4	631.2	568.9	594.4
Diseases of arteries, arterioles and capillaries (440–448)	286.1	144.9	200.5	180.1	104.9	135.7
Diseases of the respiratory system (460–519)	1 055.7	382.1	647.7	846.0	433.2	602.4
Chronic obstructive pulmonary disease and allied conditions (490–496)	805.8	240.1	463.1	454.4	208.5	309.3
Diseases of the digestive system (520–579)	260.1	182.4	213.0	165.9	145.1	153.7
Diseases of the genitourinary system (580–629)	166.6	105.9	129.8	158.5	118.6	134.9
Nephritis, nephrotic syndrome and nephrosis (580–589)	119.0	81.2	96.1	120.9	80.4	97.0
Accidents, poisonings and violence (E800–E999)	175.0	104.4	132.2	117.0	73.7	91.5
Accidental falls (E880–E888)	65.7	58.2	61.2	49.2	38.4	42.8
<b>85 years and over</b>	<b>19 995.0</b>	<b>15 992.9</b>	<b>17 110.4</b>	<b>16 483.6</b>	<b>13 413.9</b>	<b>14 348.4</b>
Malignant neoplasms (140–208)	2 991.5	1 448.5	1 879.3	2 824.5	1 448.5	1 867.4
Digestive organs and peritoneum (150–159)	825.4	597.8	661.4	702.9	512.9	570.8
Genitourinary organs (179–189)	1 005.5	189.9	417.6	955.4	180.7	416.5
Prostate (185)	785.4	..	219.3	750.5	..	228.5
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	360.2	334.3	341.5	385.4	338.0	352.4
Diabetes mellitus (250)	287.6	256.8	265.4	290.1	233.7	250.9
Senile and presenile organic psychotic conditions (290)	472.7	543.6	523.8	207.8	286.2	262.3
Hereditary and degenerative diseases of the central nervous system (330–337)	380.2	278.1	306.6	340.6	270.4	291.7
Alzheimer's disease (3310.0)	180.1	187.0	185.1	151.5	193.9	181.0
Diseases of the circulatory system (390–459)	10 660.3	10 300.6	10 401.0	7 965.4	7 579.0	7 696.6
Ischaemic heart disease (410–414)	5 527.8	4 448.3	4 749.7	4 150.9	3 559.6	3 739.6
Acute myocardial infarction (410)	3 499.2	2 650.0	2 887.1	2 377.1	1 965.8	2 091.0
Cerebrovascular disease (430–438)	2 568.8	3 003.6	2 882.2	1 935.4	2 190.7	2 113.0
Diseases of arteries, arterioles and capillaries (440–448)	710.4	775.1	757.0	487.8	380.3	413.0
Diseases of the respiratory system (460–519)	2 816.4	1 260.6	1 695.0	2 496.9	1 552.1	1 839.7
Pneumonia and influenza (480–487)	850.4	679.2	727.0	1 190.7	983.5	1 046.6
Chronic obstructive pulmonary disease and allied conditions (490–496)	1 633.3	363.3	717.9	936.7	324.1	510.6
Diseases of the digestive system (520–579)	752.9	616.2	654.4	510.9	455.4	472.3
Diseases of the genitourinary system (580–629)	532.8	373.0	417.6	568.6	406.2	455.6
Nephritis, nephrotic syndrome and nephrosis (580–589)	345.2	272.3	292.6	379.6	245.1	286.0
Accidents, poisonings and violence (E800–E999)	460.2	370.1	395.3	394.0	293.1	323.8
Accidental falls (E880–E888)	315.2	308.1	310.1	268.4	246.4	253.1

(a) Deaths per 100,000 of the estimated mid-year population for each age group other than age under 1 year; deaths per 1,000 live births for age under 1 year. See Glossary for further explanation.

## 1.3 UNDERLYING CAUSE, Selected Years

Cause of death and ICD code	1989.....		1991.....		1993.....	
	Males	Females	Males	Females	Males	Females
<b>All causes</b>	<b>66 926</b>	<b>57 306</b>	<b>64 067</b>	<b>55 079</b>	<b>65 085</b>	<b>56 509</b>
Class I Infectious and parasitic diseases (001–139)	402	359	456	374	502	431
Human immunodeficiency virus (HIV) infection (042–044)(a)	383	9	558	24	689	29
Class II Neoplasms (140–239)	17 350	13 074	17 737	13 872	18 727	14 449
Malignant neoplasms (140–208)	17 201	12 943	17 576	13 709	18 479	14 212
Lip, oral cavity and pharynx (140–149)	462	168	496	208	466	203
Digestive organs and peritoneum (150–159)	4 768	3 882	4 871	3 940	5 061	3 979
Oesophagus (150)	504	270	514	276	543	273
Stomach (151)	790	510	782	496	791	447
Colon (153)	1 565	1 535	1 583	1 519	1 706	1 602
Rectum, rectosigmoid junction and anus (154)	622	379	654	473	653	477
Liver and intrahepatic bile ducts (155)	264	125	297	130	348	142
Pancreas (157)	719	677	716	656	771	705
Trachea, bronchus and lung (162)	4 666	1 570	4 560	1 722	4 552	1 828
Bone, connective tissue, skin and breast (170–175)	875	2 874	885	3 008	1 013	3 177
Melanoma of skin (172)	487	281	513	302	575	279
Breast (174, 175)	17	2 431	15	2 513	16	2 641
Genitourinary organs (179–189)	2 933	1 835	3 058	1 957	3 511	1 938
Ovary and other uterine adnexa (183)	—	650	—	728	—	713
Prostate (185)	2 014	—	2 115	—	2 544	—
Bladder (188)	493	214	484	232	538	240
Other and unspecified sites (190–199)	1 508	1 338	1 697	1 431	1 682	1 542
Brain (191)	451	361	511	381	546	387
Lymphatic and haematopoietic tissue (200–208)	1 621	1 216	1 620	1 345	1 753	1 468
Leukaemia (204–208)	642	457	631	508	653	557
Benign and unspecified neoplasms (210–239)	149	131	161	163	248	237
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	1 559	1 430	1 823	1 535	2 197	1 695
Diabetes mellitus (250)	1 004	1 111	1 113	1 175	1 278	1 290
Class IV Diseases of blood and blood-forming organs (280–289)	199	239	226	217	168	226
Class V Mental disorders (290–319)	1 000	1 157	869	1 016	1 001	1 343
Senile and presenile organic psychotic conditions (290)	509	956	473	851	555	1 161
Drug dependence (304)	202	80	166	59	211	60
Class VI Disease of the nervous system and sense organs (320–389)	1 205	1 185	1 137	1 211	1 396	1 398
Hereditary and degenerative diseases of the central nervous system (330–337)	826	903	797	924	1 039	1 065
Alzheimer's disease (3310)	269	450	294	487	368	605
Class VII Diseases of the circulatory system (390–459)	28 376	28 453	26 571	26 439	26 369	26 867
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	21 349	18 912	19 799	17 609	19 589	17 663
Rheumatic fever and rheumatic heart disease (390–398)	146	281	133	259	116	249
Hypertensive disease (401–405)	452	698	408	621	427	710
Ischaemic heart disease (410–414)	18 132	14 507	16 753	13 570	16 335	13 424
Acute myocardial infarction (410)	12 299	9 594	11 109	8 915	10 297	8 371
Diseases of pulmonary circulation and other forms of heart disease (415–429)	2 849	3 710	2 716	3 436	2 912	3 581
Heart failure (428)	1 117	1 925	1 041	1 710	1 110	1 709
Cerebrovascular disease (430–438)	5 057	7 522	4 829	7 054	4 818	7 319
Diseases of arteries, arterioles and capillaries (440–448)	1 614	1 587	1 616	1 365	1 628	1 442
Atherosclerosis (440)	343	749	312	564	307	553
Aortic aneurysm (441)	895	464	940	454	949	504

(a) See Explanatory Notes, paragraph 16 for further information.



1.3 UNDERLYING CAUSE, Selected Years *continued*

Cause of death and ICD code	1995.....		1997.....		1998.....	
	Males	Females	Males	Females	Males	Females
<b>All causes</b>	<b>66 246</b>	<b>58 878</b>	<b>67 752</b>	<b>61 598</b>	<b>67 073</b>	<b>60 129</b>
Class I Infectious and parasitic diseases (001–139)	577	492	839	633	752	603
Human immunodeficiency virus (HIV) infection (042–044)(a)	629	37	257	22	176	11
Class II Neoplasms (140–239)	19 425	14 942	19 571	15 316	19 861	15 212
Malignant neoplasms (140–208)	19 144	14 661	19 279	15 037	19 590	14 970
Lip, oral cavity and pharynx (140–149)	457	181	448	176	479	193
Digestive organs and peritoneum (150–159)	5 341	4 123	5 481	4 389	5 441	4 348
Oesophagus (150)	606	289	652	299	654	323
Stomach (151)	827	456	780	467	753	438
Colon (153)	1 733	1 629	1 860	1 682	1 733	1 661
Rectum, rectosigmoid junction and anus (154)	680	453	662	478	736	504
Liver and intrahepatic bile ducts (155)	387	193	436	207	427	221
Pancreas (157)	791	749	772	816	811	801
Trachea, bronchus and lung (162)	4 696	1 993	4 605	2 058	4 821	2 053
Bone, connective tissue, skin and breast (170–175)	1 038	3 190	1 005	3 161	1 031	3 130
Melanoma of skin (172)	604	327	580	333	635	345
Breast (174, 175)	26	2 629	17	2 602	16	2 542
Genitourinary organs (179–189)	3 664	2 003	3 505	1 979	3 634	1 961
Ovary and other uterine adnexa (183)	—	716	—	745	—	757
Prostate (185)	2 575	—	2 448	—	2 531	—
Bladder (188)	575	239	551	249	572	247
Other and unspecified sites (190–199)	1 756	1 586	1 869	1 624	1 866	1 613
Brain (191)	556	408	604	442	567	443
Lymphatic and haematopoietic tissue (200–208)	1 763	1 510	1 870	1 545	1 870	1 600
Leukaemia (204–208)	716	540	690	526	763	553
Benign and unspecified neoplasms (210–239)	281	281	292	279	271	242
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	2 257	1 843	1 935	1 989	1 958	1 897
Diabetes mellitus (250)	1 336	1 372	1 425	1 420	1 424	1 327
Class IV Diseases of blood and blood-forming organs (280–289)	153	195	178	212	213	225
Class V Mental disorders (290–319)	1 414	1 764	1 476	1 658	1 558	1 720
Senile and presenile organic psychotic conditions (290)	751	1 521	346	689	369	750
Drug dependence (304)	363	88	473	123	509	121
Class VI Disease of the nervous system and sense organs (320–389)	1 398	1 580	1 289	1 474	1 375	1 430
Hereditary and degenerative diseases of the central nervous system (330–337)	1 031	1 269	896	1 112	947	1 085
Alzheimer's disease (3310)	351	730	268	568	245	535
Class VII Diseases of the circulatory system (390–459)	26 258	27 144	25 717	26 924	24 746	26 051
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	19 258	17 748	18 971	17 836	18 201	17 054
Rheumatic fever and rheumatic heart disease (390–398)	125	256	125	223	87	171
Hypertensive disease (401–405)	420	681	448	687	410	730
Ischaemic heart disease (410–414)	16 131	13 478	15 565	13 486	15 024	12 801
Acute myocardial infarction (410)	9 905	8 302	9 087	8 040	8 897	7 630
Diseases of pulmonary circulation and other forms of heart disease (415–429)	2 778	3 600	3 074	3 748	2 895	3 678
Heart failure (428)	963	1 715	1 041	1 662	988	1 567
Cerebrovascular disease (430–438)	5 108	7 572	4 879	7 254	4 812	7 170
Diseases of arteries, arterioles and capillaries (440–448)	1 600	1 404	1 538	1 395	1 415	1 330
Atherosclerosis (440)	279	492	221	389	193	338
Aortic aneurysm (441)	925	527	922	583	878	551

(a) See Explanatory Notes, paragraph 16 for further information.

1.3 UNDERLYING CAUSE, Selected Years *continued*

Cause of death and ICD code	1989.....		1991.....		1993.....	
	Males	Females	Males	Females	Males	Females
Class VIII Diseases of the respiratory system (460–519)	6 366	4 245	5 372	3 534	5 468	3 777
Pneumonia and influenza (480–487)	1 062	1 242	814	993	808	855
Chronic obstructive pulmonary disease and allied conditions (490–496)	4 711	2 469	3 931	2 081	3 974	2 364
Emphysema (492)	719	289	544	237	583	305
Asthma (493)	434	530	335	415	326	451
Class IX Diseases of the digestive system (520–579)	2 299	1 945	2 092	1 971	1 938	1 821
Diseases of oesophagus, stomach and duodenum (530–537)	530	481	430	486	366	413
Ulcer of stomach and duodenum (531–533)	460	412	342	411	300	334
Chronic liver disease and cirrhosis (571)	825	284	798	296	723	266
Class X Diseases of the genitourinary system (580–629)	842	1 087	895	1 074	855	1 069
Nephritis, nephrotic syndrome and nephrosis (580–589)	571	781	588	769	657	795
Renal failure (584–586)	449	546	453	562	545	629
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	—	13	—	13	—	15
Class XII Diseases of the skin and subcutaneous tissue (680–709)	55	89	38	75	68	107
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	216	476	197	463	223	458
Arthropathies and related disorders (710–719)	158	374	130	351	142	331
Class IV Congenital anomalies (740–759)	400	373	420	358	397	342
Class XV Certain conditions originating in the perinatal period (760–779)	481	372	446	352	412	284
Class XVI Symptoms, signs and ill-defined conditions (780–799)	473	341	388	272	315	256
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	5 703	2 468	5 400	2 303	5 049	1 971
Accidents (E800–E949)	3 736	1 885	3 222	1 575	3 081	1 433
Motor vehicle traffic accidents (E810–E819)	2 000	828	1 570	651	1 384	572
Accidental falls (E880–E888)	505	609	435	495	418	438
Accidental drowning and submersion (E910)	244	70	209	60	226	62
Suicide (E950–E959)	1 658	438	1 847	513	1 687	394
Homicide (E960–E969)	210	109	207	147	210	116

1.3 UNDERLYING CAUSE, Selected Years *continued*

Cause of death and ICD code	1995.....		1997.....		1998.....	
	Males	Females	Males	Females	Males	Females
Class VIII Diseases of the respiratory system (460–519)	5 407	4 024	6 960	6 299	6 593	5 817
Pneumonia and influenza (480–487)	814	892	2 151	2 866	2 049	2 530
Chronic obstructive pulmonary disease and allied conditions (490–496)	3 884	2 504	3 830	2 627	3 628	2 486
Emphysema (492)	568	307	591	316	575	287
Asthma (493)	282	467	306	409	278	407
Class IX Diseases of the digestive system (520–579)	1 961	1 910	2 024	1 928	1 969	1 968
Diseases of oesophagus, stomach and duodenum (530–537)	368	397	295	374	323	353
Ulcer of stomach and duodenum (531–533)	280	301	206	266	225	253
Chronic liver disease and cirrhosis (571)	731	286	764	287	725	293
Class X Diseases of the genitourinary system (580–629)	947	1 126	1 090	1 362	1 117	1 433
Nephritis, nephrotic syndrome and nephrosis (580–589)	700	837	739	878	789	903
Renal failure (584–586)	608	685	634	735	668	762
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	—	24	—	11	—	7
Class XII Diseases of the skin and subcutaneous tissue (680–709)	90	160	87	116	92	145
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	201	533	193	463	197	474
Arthropathies and related disorders (710–719)	122	371	114	286	125	334
Class IV Congenital anomalies (740–759)	343	335	411	349	334	271
Class XV Certain conditions originating in the perinatal period (760–779)	384	291	336	284	325	252
Class XVI Symptoms, signs and ill-defined conditions (780–799)	278	255	253	236	369	292
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	5 153	2 260	5 393	2 344	5 614	2 332
Accidents (E800–E949)	2 980	1 600	2 935	1 617	3 168	1 652
Motor vehicle traffic accidents (E810–E819)	1 398	631	1 240	561	1 224	507
Accidental falls (E880–E888)	457	538	486	639	531	651
Accidental drowning and submersion (E910)	190	69	217	59	187	58
Suicide (E950–E959)	1 872	495	2 146	577	2 150	533
Homicide (E960–E969)	204	129	215	114	203	104

## 1.4 UNDERLYING CAUSE, Selected Years—Standardised Death Rates(a)

Cause of death and ICD code	1989.....			1991.....			1993.....		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
<b>All causes</b>	<b>980.8</b>	<b>588.9</b>	<b>758.9</b>	<b>885.1</b>	<b>537.3</b>	<b>689.3</b>	<b>852.3</b>	<b>517.1</b>	<b>663.7</b>
Class I Infectious and parasitic diseases (001–139)	5.9	3.8	4.6	6.2	3.7	4.8	6.6	3.9	5.1
Class II Neoplasms (140–239)	244.5	142.8	184.7	237.1	144.3	182.9	238.7	143.0	182.7
Malignant neoplasms (140–208)	242.4	141.4	183.0	234.8	142.7	181.0	235.4	140.9	180.1
Lip, oral cavity and pharynx (140–149)	6.1	1.8	3.8	6.3	2.1	4.1	5.5	2.0	3.7
Digestive organs and peritoneum (150–159)	67.1	41.4	52.6	64.8	40.0	51.0	64.1	38.4	49.7
Oesophagus (150)	6.8	2.8	4.7	6.7	2.8	4.6	6.8	2.6	4.5
Stomach (151)	11.5	5.4	7.9	10.6	5.0	17.9	10.2	4.3	6.8
Colon (153)	22.3	16.4	18.9	21.1	15.5	6.5	21.7	15.5	18.2
Rectum, rectosigmoid junction and anus (154)	8.7	4.1	6.1	8.6	4.8	2.5	8.3	4.6	6.2
Liver and intrahepatic bile ducts (155)	3.5	1.4	2.4	3.8	1.4	7.4	4.2	1.4	2.7
Pancreas (157)	10.0	7.2	8.5	9.6	6.7	7.9	9.7	6.8	8.1
Trachea, bronchus and lung (162)	64.0	17.5	37.7	59.6	18.3	36.3	56.8	18.5	35.3
Bone, connective tissue, skin and breast (170–175)	11.9	32.1	22.8	11.6	32.2	22.5	12.6	32.3	23.1
Melanoma of skin (172)	6.5	3.2	4.7	6.5	3.2	4.7	7.0	2.8	4.7
Breast (174, 175)	0.2	27.2	14.9	0.2	27.0	14.6	0.2	26.9	14.6
Genitourinary organs (179–189)	45.0	20.1	29.1	44.0	20.4	29.0	47.8	19.3	29.8
Ovary and other uterine adnexa (183)	..	7.3	3.9	..	7.8	4.2	..	7.2	3.9
Prostate (185)	31.7	..	12.3	31.1	..	12.2	35.1	..	13.8
Bladder (188)	7.5	2.2	4.3	6.9	2.2	4.1	7.3	2.2	4.2
Other and unspecified sites (190–199)	20.7	14.6	17.3	22.1	14.8	18.1	20.9	15.1	17.8
Brain (191)	5.7	4.1	4.9	6.3	4.2	5.2	6.4	4.1	5.2
Lymphatic and haematopoietic tissue (200–208)	22.7	13.2	17.2	21.4	13.9	17.2	22.2	14.5	17.7
Leukaemia (204–208)	9.0	4.9	6.7	8.4	5.2	6.6	8.4	5.5	6.7
Benign and unspecified neoplasms (210–239)	2.2	1.4	1.7	2.3	1.6	1.9	3.4	2.2	2.6
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	22.2	14.8	18.3	24.5	15.2	19.4	27.7	15.8	21.3
Diabetes mellitus (250)	14.9	11.4	13.0	15.8	11.5	13.2	16.8	11.9	14.0
Class IV Diseases of blood and blood-forming organs (280–289)	3.1	2.4	2.7	3.3	2.1	2.6	2.3	2.0	2.1
Class V Mental disorders (290–319)	15.4	11.2	13.3	12.8	9.2	10.9	13.7	11.2	12.6
Senile and presenile organic psychotic conditions (290)	9.2	8.9	9.1	8.0	7.4	7.7	8.5	9.3	9.1
Drug dependence (304)	2.4	1.0	1.7	1.9	0.7	1.3	2.4	0.7	1.5
Class VI Disease of the nervous system and sense organs (320–389)	18.1	12.3	14.6	16.1	11.8	13.6	18.8	12.7	15.2
Hereditary and degenerative diseases of the central nervous system (330–337)	13.1	9.1	10.6	12.0	8.7	10.0	14.6	9.3	11.4
Alzheimer's disease (3310)	4.6	4.4	4.5	4.7	4.3	4.5	5.5	5.0	5.2
Class VII Diseases of the circulatory system (390–459)	432.7	281.5	349.1	381.1	246.1	306.7	356.4	232.3	287.8
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	320.7	188.3	247.0	280.4	164.9	216.4	261.9	153.9	201.9
Rheumatic fever and rheumatic heart disease (390–398)	2.0	3.0	2.6	1.8	2.6	2.3	1.5	2.4	2.0
Hypertensive disease (401–405)	7.1	6.9	7.1	5.9	5.8	6.0	5.8	6.1	6.1
Ischaemic heart disease (410–414)	270.0	145.4	200.0	235.4	127.9	175.4	216.9	117.8	161.6
Acute myocardial infarction (410)	182.1	96.9	134.1	155.4	84.7	115.8	136.2	74.2	101.5
Diseases of pulmonary circulation and other forms of heart disease (415–429)	45.3	35.9	40.4	40.4	31.3	35.6	40.5	30.3	34.9
Heart failure (428)	19.6	18.0	18.9	17.2	15.0	15.9	16.7	13.8	15.0
Cerebrovascular disease (430–438)	81.0	73.7	77.6	72.3	64.9	68.8	67.4	62.2	65.2
Diseases of arteries, arterioles and capillaries (440–448)	25.4	15.2	19.7	23.7	12.4	17.2	22.5	12.2	16.5
Atherosclerosis (440)	6.2	6.9	6.8	5.0	4.9	5.1	4.6	4.4	4.6
Aortic aneurysm (441)	13.2	4.7	8.3	13.3	4.4	8.1	12.7	4.6	7.9

(a) Standardised death rate per 100,000 of the mid-year 1991 population.

See Glossary for further explanation.

1.4 UNDERLYING CAUSE, Selected Years—Standardised Death Rates(a) *continued*

Cause of death and ICD code	1995.....			1997.....			1998.....		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
<b>All causes</b>	<b>820.2</b>	<b>505.7</b>	<b>644.2</b>	<b>790.5</b>	<b>494.8</b>	<b>626.0</b>	<b>758.2</b>	<b>468.8</b>	<b>597.6</b>
Class I Infectious and parasitic diseases (001–139)	7.1	4.2	5.5	9.6	5.2	7.2	8.4	4.7	6.4
Class II Neoplasms (140–239)	234.9	140.8	180.2	223.3	137.1	173.6	220.1	132.6	170.0
Malignant neoplasms (140–208)	231.4	138.4	177.3	219.8	134.9	170.8	217.1	130.7	167.6
Lip, oral cavity and pharynx (140–149)	5.3	1.7	3.4	4.9	1.6	3.2	5.1	1.7	3.3
Digestive organs and peritoneum (150–159)	64.1	37.8	49.5	62.1	38.2	49.0	60.0	37.0	47.4
Oesophagus (150)	7.2	2.6	4.7	7.3	2.5	4.7	7.2	2.6	4.7
Stomach (151)	10.1	4.1	6.7	8.9	4.0	6.2	8.3	3.7	5.7
Colon (153)	20.8	15.0	17.5	21.1	14.7	17.6	19.1	14.2	16.4
Rectum, rectosigmoid junction and anus (154)	8.1	4.2	5.9	7.5	4.2	5.7	8.1	4.4	6.1
Liver and intrahepatic bile ducts (155)	4.6	1.8	3.1	4.9	1.9	3.2	4.7	1.9	3.2
Pancreas (157)	9.4	6.8	8.1	8.7	7.1	7.9	8.9	6.8	7.8
Trachea, bronchus and lung (162)	55.9	19.3	35.4	52.1	19.1	33.6	53.1	18.6	33.9
Bone, connective tissue, skin and breast (170–175)	12.3	30.9	22.2	11.3	29.3	20.8	11.3	28.0	20.1
Melanoma of skin (172)	7.1	3.2	4.9	6.4	3.1	4.6	6.9	3.0	4.8
Breast (174, 175)	0.3	25.6	13.9	0.2	24.2	13.0	0.2	22.9	12.3
Genitourinary organs (179–189)	46.7	19.0	29.3	41.6	17.6	26.8	41.5	17.0	26.6
Ovary and other uterine adnexa (183)	..	7.0	3.8	..	6.8	3.7	..	6.8	3.7
Prostate (185)	33.2	..	13.2	29.4	..	11.8	29.2	..	11.8
Bladder (188)	7.3	2.1	4.2	6.5	2.0	3.9	6.5	2.0	3.8
Other and unspecified sites (190–199)	20.8	14.9	17.6	21.0	14.4	17.4	20.4	13.9	16.9
Brain (191)	6.3	4.2	5.2	6.6	4.3	5.4	6.0	4.2	5.0
Lymphatic and haematopoietic tissue (200–208)	21.1	14.1	17.1	21.3	13.7	17.0	20.7	13.8	16.8
Leukaemia (204–208)	8.6	5.0	6.6	7.9	4.7	6.1	8.5	4.8	6.4
Benign and unspecified neoplasms (210–239)	3.5	2.4	2.9	3.5	2.3	2.7	3.1	1.9	2.4
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	27.1	16.2	21.3	22.3	16.4	19.1	21.9	15.3	18.3
Diabetes mellitus (250)	16.5	11.9	13.9	16.6	11.7	13.8	16.0	10.6	13.0
Class IV Diseases of blood and blood-forming organs (280–289)	2.0	1.6	1.8	2.1	1.6	1.8	2.5	1.7	2.0
Class V Mental disorders (290–319)	18.0	13.5	15.9	17.3	12.0	14.9	17.9	12.1	15.1
Senile and presenile organic psychotic conditions (290)	10.5	11.1	11.0	4.4	4.6	4.6	4.4	5.0	4.8
Drug dependence (304)	4.1	1.0	2.5	5.3	1.4	3.3	5.6	1.3	3.5
Class VI Disease of the nervous system and sense organs (320–389)	17.7	13.4	15.3	15.1	12.1	13.4	15.6	11.4	13.2
Hereditary and degenerative diseases of the central nervous system (330–337)	13.4	10.3	11.6	10.7	8.6	9.5	10.9	8.1	9.3
Alzheimer's disease (3310)	4.8	5.5	5.3	3.3	4.0	3.8	2.9	3.6	3.4
Class VII Diseases of the circulatory system (390–459)	333.6	217.5	269.6	305.5	200.2	247.7	283.7	187.1	230.7
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	242.6	143.2	187.6	224.0	133.4	174.1	207.5	123.2	161.1
Rheumatic fever and rheumatic heart disease (390–398)	1.5	2.3	2.0	1.5	1.9	1.7	1.0	1.5	1.2
Hypertensive disease (401–405)	5.3	5.4	5.5	5.3	5.1	5.3	4.7	5.2	5.1
Ischaemic heart disease (410–414)	202.3	109.5	150.5	183.1	101.4	137.9	170.8	92.8	127.7
Acute myocardial infarction (410)	124.1	68.3	92.8	107.0	60.9	81.5	101.1	56.0	76.1
Diseases of pulmonary circulation and other forms of heart disease (415–429)	36.0	28.2	31.9	37.0	27.3	31.8	33.6	26.1	29.5
Heart failure (428)	13.3	12.7	13.1	13.1	11.3	12.1	11.9	10.2	10.9
Cerebrovascular disease (430–438)	66.7	59.7	63.3	59.0	53.0	56.2	56.1	50.6	53.4
Diseases of arteries, arterioles and capillaries (440–448)	20.5	11.1	15.1	18.5	10.3	13.8	16.4	9.6	12.5
Atherosclerosis (440)	3.8	3.6	3.7	2.8	2.6	2.7	2.3	2.2	2.3
Aortic aneurysm (441)	11.5	4.5	7.5	10.9	4.6	7.3	10.0	4.3	6.7

(a) Standardised death rate per 100,000 of the mid-year 1991 population.

See Glossary for further explanation.

1.4 UNDERLYING CAUSE, Selected Years—Standardised Death Rates(a) *continued*

Cause of death and ICD code	1989.....			1991.....			1993.....		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Class VIII Diseases of the respiratory system (460–519)	99.7	43.3	65.0	78.2	34.2	51.5	74.6	34.6	50.3
Pneumonia and influenza (480–487)	17.9	11.8	14.2	12.7	9.0	10.5	11.4	7.2	8.9
Chronic obstructive pulmonary disease and allied conditions (490–496)	72.3	26.2	43.9	56.3	20.9	34.8	53.6	22.5	34.7
Emphysema (492)	10.8	3.1	6.1	7.7	2.4	4.5	7.6	3.0	4.9
Asthma (493)	5.9	5.8	5.8	4.4	4.3	4.3	4.1	4.4	4.3
Class IX Diseases of the digestive system (520–579)	33.6	19.7	25.9	28.9	18.9	23.5	25.1	16.4	20.5
Diseases of oesophagus, stomach and duodenum (530–537)	8.4	4.8	6.2	6.4	4.5	5.3	5.0	3.5	4.2
Ulcer of stomach and duodenum (531–533)	7.4	4.1	5.4	5.1	3.8	4.4	4.1	2.8	3.4
Chronic liver disease and cirrhosis (571)	10.4	3.2	6.7	9.7	3.3	6.3	8.4	2.8	5.5
Class X Diseases of the genitourinary system (580–629)	14.1	10.9	11.9	13.9	10.2	11.4	12.4	9.3	10.4
Nephritis, nephrotic syndrome and nephrosis (580–589)	9.5	7.8	8.3	9.3	7.3	7.9	9.6	6.9	7.8
Renal failure (584–586)	7.8	5.2	6.2	7.5	5.1	5.9	8.1	5.3	6.3
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	..	0.2	0.1	..	0.2	0.1	..	0.2	0.1
Class XII Diseases of the skin and subcutaneous tissue (680–709)	0.9	0.8	0.9	0.6	0.7	0.7	1.0	0.9	0.9
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	3.4	4.9	4.2	2.9	4.5	3.8	3.0	4.1	3.7
Class IV Congenital anomalies (740–759)	4.8	4.5	4.6	4.8	4.2	4.5	4.5	4.0	4.2
Class XV Certain conditions originating in the perinatal period (760–779)	5.6	4.6	5.1	5.0	4.2	4.6	4.7	3.4	4.0
Class XVI Symptoms, signs and ill-defined conditions (780–799)	5.9	3.8	4.9	4.7	2.9	3.8	3.8	2.6	3.2
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	71.0	27.5	48.9	64.8	24.9	44.6	59.1	20.5	39.4
Accidents (E800–E949)	47.1	20.6	33.6	39.2	16.6	27.7	36.6	14.5	25.3
Motor vehicle traffic accidents (E810–E819)	24.1	9.7	16.8	18.5	7.4	12.9	16.0	6.4	11.1
Accidental falls (E880–E888)	8.0	5.8	6.9	6.4	4.5	5.4	5.9	3.6	4.6
Accidental drowning and submersion (E910)	3.0	0.8	1.9	2.4	0.7	1.6	2.6	0.7	1.6
Suicide (E950–E959)	20.2	5.2	12.5	21.7	5.9	13.7	19.3	4.4	11.7
Homicide (E960–E969)	2.5	1.3	1.9	2.4	1.7	2.0	2.4	1.3	1.8

(a) Standardised death rate per 100,000 of the mid-year 1991 population.  
See Glossary for further explanation.

1.4 UNDERLYING CAUSE, Selected Years—Standardised Death Rates(a) *continued*

Cause of death and ICD code	1995.....			1997.....			1998.....		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Class VIII Diseases of the respiratory system (460–519)	69.1	34.7	48.3	84.1	48.1	62.5	76.7	43.2	56.6
Pneumonia and influenza (480–487)	10.7	7.1	8.5	27.0	19.9	22.7	24.5	16.8	19.9
Chronic obstructive pulmonary disease and allied conditions (490–496)	49.2	22.5	33.0	45.3	22.2	31.4	41.5	20.5	29.0
Emphysema (492)	7.1	2.8	4.5	6.9	2.7	4.5	6.5	2.4	4.1
Asthma (493)	3.4	4.3	3.9	3.5	3.5	3.5	3.1	3.5	3.3
Class IX Diseases of the digestive system (520–579)	24.1	16.2	19.9	23.1	15.4	19.0	21.9	15.1	18.3
Diseases of oesophagus, stomach and duodenum (530–537)	4.8	3.2	3.9	3.5	2.8	3.1	3.7	2.5	3.0
Ulcer of stomach and duodenum (531–533)	3.6	2.4	2.9	2.5	2.0	2.2	2.6	1.8	2.1
Chronic liver disease and cirrhosis (571)	8.2	2.9	5.4	8.1	2.8	5.4	7.5	2.8	5.1
Class X Diseases of the genitourinary system (580–629)	12.7	9.2	10.4	13.5	10.2	11.4	13.2	10.3	11.3
Nephritis, nephrotic syndrome and nephrosis (580–589)	9.5	6.7	7.7	9.1	6.7	7.5	9.3	6.5	7.5
Renal failure (584–586)	8.4	5.3	6.4	7.9	5.3	6.3	8.0	5.3	6.3
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	..	0.3	0.1	..	0.1	0.1	..	0.1	—
Class XII Diseases of the skin and subcutaneous tissue (680–709)	1.2	1.2	1.2	1.1	0.8	0.9	1.1	1.0	1.0
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	2.5	4.6	3.7	2.3	3.7	3.1	2.2	3.7	3.1
Class IV Congenital anomalies (740–759)	3.9	3.8	3.9	4.6	4.0	4.3	3.8	3.1	3.5
Class XV Certain conditions originating in the perinatal period (760–779)	4.3	3.5	3.9	3.9	3.5	3.7	3.8	3.1	3.5
Class XVI Symptoms, signs and ill-defined conditions (780–799)	3.3	2.4	2.9	2.9	2.0	2.5	4.1	2.5	3.3
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	58.8	22.6	40.4	59.8	22.3	40.8	61.2	21.6	41.2
Accidents (E800–E949)	34.5	15.4	24.8	32.9	14.6	23.6	35.0	14.5	24.6
Motor vehicle traffic accidents (E810–E819)	15.9	6.8	11.3	13.8	6.0	9.9	13.4	5.3	9.3
Accidental falls (E880–E888)	5.9	4.1	5.0	5.9	4.5	5.2	6.2	4.4	5.2
Accidental drowning and submersion (E910)	2.1	0.8	1.4	2.3	0.6	1.5	2.0	0.6	1.3
Suicide (E950–E959)	20.9	5.4	13.0	23.5	6.1	14.6	23.1	5.6	14.3
Homicide (E960–E969)	2.3	1.4	1.8	2.3	1.2	1.8	2.2	1.1	1.6

(a) Standardised death rate per 100,000 of the mid-year 1991 population.  
See Glossary for further explanation.

## 1.5 UNDERLYING CAUSE(a), Number and Proportion

Cause of death and ICD code	NUMBER OF DEATHS.....			PERCENTAGE OF TOTAL DEATHS.....		
	Males	Females	Persons	Males	Females	Persons
<b>All causes</b>	<b>67 073</b>	<b>60 129</b>	<b>127 202</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Infectious and parasitic diseases (001–139)	752	603	1 355	1.1	1.0	1.1
Intestinal infectious diseases (001–009)	20	24	44	(b)	(b)	(b)
Tuberculosis (010–018)	24	10	34	(b)	(b)	(b)
Whooping cough (033)	—	—	—	..	..	..
Meningococcal infection (036)	14	20	34	(b)	(b)	(b)
Tetanus (037)	—	2	2	..	(b)	(b)
Septicaemia (038)	304	366	670	0.5	0.6	0.5
Smallpox (050)	—	—	—	..	..	..
Measles (055)	—	—	—	..	..	..
Malaria (084)	—	—	—	..	..	..
Malignant neoplasms (140–208)	19 590	14 970	34 560	29.2	24.9	27.2
Stomach (151)	753	438	1 191	1.1	0.7	0.9
Colon (153)	1 733	1 661	3 394	2.6	2.8	2.7
Rectum, rectosigmoid junction and anus (154)	736	504	1 240	1.1	0.8	1.0
Trachea, bronchus and lung (162)	4 821	2 053	6 874	7.2	3.4	5.4
Female breast (174)	—	2 542	2 542	..	4.2	2.0
Cervix uteri (180)	—	269	269	..	0.4	0.2
Leukaemia (204–208)	763	553	1 316	1.1	0.9	1.0
Diabetes mellitus (250)	1 424	1 327	2 751	2.1	2.2	2.2
Nutritional marasmus (261)	2	1	3	(b)	(b)	(b)
Other protein–calorie malnutrition (262, 263)	34	53	87	0.1	0.1	0.1
Anaemias (280–285)	100	115	215	0.1	0.2	0.2
Meningitis (320–322)	24	15	39	(b)	(b)	(b)
Diseases of the circulatory system (390–459)	24 746	26 051	50 797	36.9	43.3	39.9
Acute rheumatic fever (390–392)	—	3	3	..	(b)	(b)
Chronic rheumatic heart disease (393–398)	87	168	255	0.1	0.3	0.2
Hypertensive disease (401–405)	410	730	1 140	0.6	1.2	0.9
Ischaemic heart disease (410–414)	15 024	12 801	27 825	22.4	21.3	21.9
Acute myocardial infarction (410)	8 897	7 630	16 527	13.3	12.7	13.0
Cerebrovascular disease (430–438)	4 812	7 170	11 982	7.2	11.9	9.4
Atherosclerosis (440)	193	338	531	0.3	0.6	0.4
Pneumonia (480–486)	2 000	2 459	4 459	3.0	4.1	3.5
Influenza (487)	49	71	120	0.1	0.1	0.1
Bronchitis, emphysema and asthma (490–493)	1 012	806	1 818	1.5	1.3	1.4
Ulcer of stomach and duodenum (531–533)	225	253	478	0.3	0.4	0.4
Appendicitis (540–543)	8	10	18	(b)	(b)	(b)
Chronic liver disease and cirrhosis (571)	725	293	1 018	1.1	0.5	0.8
Nephritis, nephrotic syndrome and nephrosis (580–589)	789	903	1 692	1.2	1.5	1.3
Hyperplasia of prostate (600)	43	—	43	0.1	..	(b)
Abortion (630–639)	—	1	1	..	(b)	(b)
Direct obstetric deaths (640–646, 651–676)	—	6	6	..	(b)	(b)
Congenital anomalies (740–759)	334	271	605	0.5	0.5	0.5
Certain conditions originating in the perinatal period (760–779)	325	252	577	0.5	0.4	0.5
Birth trauma (767)	16	17	33	(b)	(b)	(b)
Signs, symptoms and ill-defined conditions (780–799)	369	292	661	0.6	0.5	0.5
Accidents and adverse effects (E800–E949)	3 168	1 652	4 820	4.7	2.7	3.8
Motor vehicle traffic accidents (E810–E819)	1 224	507	1 731	1.8	0.8	1.4
Accidental falls (E880–E888)	531	651	1 182	0.8	1.1	0.9
Suicide (E950–E959)	2 150	533	2 683	3.2	0.9	2.1
Homicide (E960–E969)	203	104	307	0.3	0.2	0.2

(a) The classification is based on the Mortality List of Fifty Causes recommended by the Ninth Revision (1975) of the International Classification of Diseases. See Explanatory Notes, paragraph 12.

(b) Less than 0.05.



## 1.6 UNDERLYING CAUSE, Age and State or Territory of Usual Residence

Cause of death and ICD code	NSW.....		VIC.....		QLD.....		SA.....	
	Males	Females	Males	Females	Males	Females	Males	Females
<b>Under 1 year</b>	<b>205</b>	<b>166</b>	<b>152</b>	<b>131</b>	<b>175</b>	<b>124</b>	<b>43</b>	<b>30</b>
Congenital anomalies (740–759)	44	44	42	40	56	30	7	9
Congenital anomalies of nervous system (740–742)	5	4	10	5	12	4	—	4
Congenital anomalies of circulatory system (745–747)	12	15	6	8	19	11	3	3
Congenital anomalies of respiratory system (748)	5	4	3	1	7	1	1	1
Certain conditions originating in the perinatal period (760–779)	95	79	77	60	76	62	17	14
Disorders relating to short gestation and unspecified low birthweight (765)	6	4	3	1	1	2	3	3
Hypoxia, birth asphyxia and other respiratory conditions (768–770)	17	10	12	5	19	9	—	—
Sudden death, cause unknown (798)	21	16	14	9	22	10	7	5
<b>1–14 years</b>	<b>157</b>	<b>83</b>	<b>91</b>	<b>75</b>	<b>98</b>	<b>66</b>	<b>25</b>	<b>24</b>
Malignant neoplasms (140–208)	32	15	25	17	20	12	4	7
Brain (191)	6	3	7	4	5	5	1	3
Lymphatic and haematopoietic tissue (200–208)	14	9	12	10	10	6	2	1
Diseases of the nervous system and sense organs (320–389)	14	4	11	12	10	7	2	3
Diseases of the circulatory system (390–459)	6	5	3	2	2	2	—	2
Congenital anomalies (740–759)	15	9	5	3	9	9	4	2
Accidents, poisonings and violence (E800–E999)	50	28	35	23	36	21	10	5
Motor vehicle traffic accidents (E810–E819)	18	11	15	8	16	9	6	3
Accidents caused by submersion, suffocation and foreign bodies (E910–E915)	10	10	6	7	13	3	1	1
<b>15–24 years</b>	<b>469</b>	<b>147</b>	<b>297</b>	<b>110</b>	<b>241</b>	<b>110</b>	<b>111</b>	<b>32</b>
Malignant neoplasms (140–208)	19	19	13	18	12	10	8	3
Lymphatic and haematopoietic tissue (200–208)	11	8	6	8	3	4	6	2
Drug dependence (304)	56	14	42	9	3	1	9	4
Diseases of the nervous system and sense organs (320–389)	11	2	11	2	6	1	6	2
Accidents, poisonings and violence (E800–E999)	339	75	201	62	197	66	82	13
Motor vehicle traffic accidents (E810–E819)	107	32	79	24	73	25	32	7
Suicide (E950–E959)	126	20	72	22	72	21	33	3
<b>25–44 years</b>	<b>1 561</b>	<b>639</b>	<b>966</b>	<b>479</b>	<b>837</b>	<b>369</b>	<b>359</b>	<b>167</b>
Malignant neoplasms (140–208)	194	233	144	180	110	124	41	58
Digestive organs and peritoneum (150–159)	58	37	40	34	29	19	9	8
Female breast (174)	—	71	—	60	—	37	—	26
Lymphatic and haematopoietic tissue (200–208)	26	25	23	25	19	11	13	7
Mental disorders (290–319)	204	50	125	28	28	7	31	6
Drug dependence (304)	184	39	108	23	24	3	26	5
Diseases of the circulatory system (390–459)	179	88	108	56	113	52	53	18
Ischaemic heart disease (410–414)	106	26	65	13	69	19	33	3
Acute myocardial infarction (410)	64	19	24	6	36	11	21	3
Diseases of the digestive system (520–579)	47	23	28	11	18	15	9	5
Chronic liver disease and cirrhosis (571)	35	16	20	7	9	8	7	2
Accidents, poisonings and violence (E800–E999)	762	154	451	133	456	108	181	46
Motor vehicle traffic accidents (E810–E819)	127	35	101	34	62	18	41	8
Suicide (E950–E959)	340	71	212	65	238	60	99	20
<b>45–54 years</b>	<b>1 345</b>	<b>869</b>	<b>906</b>	<b>607</b>	<b>796</b>	<b>478</b>	<b>342</b>	<b>217</b>
Malignant neoplasms (140–208)	485	488	316	371	274	269	124	120
Digestive organs and peritoneum (150–159)	150	115	99	62	82	58	37	18
Trachea, bronchus and lung (162)	110	61	61	38	67	34	21	10
Female breast (174)	—	160	—	125	—	86	—	38
Genitourinary organs (179–189)	34	57	24	49	20	28	9	16
Lymphatic and haematopoietic tissue (200–208)	49	33	40	31	18	18	19	15
Diseases of the circulatory system (390–459)	376	138	252	76	226	68	87	32
Ischaemic heart disease (410–414)	264	67	172	25	164	37	67	17
Acute myocardial infarction (410)	165	52	70	13	102	25	38	10
Cerebrovascular disease (430–438)	45	35	25	30	24	17	10	6
Diseases of the respiratory system (460–519)	40	40	26	21	27	23	15	9
Disease of the digestive system (520–579)	76	30	51	18	42	14	20	7
Chronic liver disease and cirrhosis (571)	53	22	39	11	34	10	18	3
Accidents, poisonings and violence (E800–E999)	208	71	159	48	145	52	60	20
Motor vehicle traffic accidents (E810–E819)	36	16	31	17	25	11	10	3
Suicide (E950–E959)	91	24	76	11	75	16	31	8

1.6 UNDERLYING CAUSE, Age and State or Territory of Usual Residence *continued*

Cause of death and ICD code	WA.....		TAS.....		NT.....		ACT.....	
	Males	Females	Males	Females	Males	Females	Males	Females
<b>Under 1 year</b>	<b>75</b>	<b>48</b>	<b>24</b>	<b>10</b>	<b>23</b>	<b>22</b>	<b>9</b>	<b>15</b>
Congenital anomalies (740–759)	21	11	7	3	4	9	5	6
Congenital anomalies of nervous system (740–742)	4	2	—	1	1	1	1	—
Congenital anomalies of circulatory system (745–747)	6	4	3	1	2	2	2	1
Congenital anomalies of respiratory system (748)	2	1	2	—	1	1	—	2
Certain conditions originating in the perinatal period (760–779)	26	16	13	6	11	9	4	6
Disorders relating to short gestation and unspecified low birthweight (765)	2	—	1	—	1	2	—	—
Hypoxia, birth asphyxia and other respiratory conditions (768–770)	2	5	—	3	1	—	1	3
Sudden death, cause unknown (798)	14	13	2	—	4	1	—	1
<b>1–14 years</b>	<b>34</b>	<b>29</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>6</b>	<b>3</b>	<b>4</b>
Malignant neoplasms (140–208)	6	4	—	3	1	—	1	—
Brain (191)	1	1	—	1	—	—	—	—
Lymphatic and haematopoietic tissue (200–208)	2	1	—	1	1	—	—	—
Diseases of the nervous system and sense organs (320–389)	4	4	1	1	—	—	—	1
Diseases of the circulatory system (390–459)	1	—	—	—	2	—	—	—
Congenital anomalies (740–759)	2	3	1	—	—	—	—	1
Accidents, poisonings and violence (E800–E999)	15	12	5	3	5	4	—	1
Motor vehicle traffic accidents (E810–E819)	5	6	—	—	2	1	—	1
Accidents caused by submersion, suffocation and foreign bodies (E910–E915)	2	3	—	—	2	3	—	—
<b>15–24 years</b>	<b>165</b>	<b>61</b>	<b>32</b>	<b>9</b>	<b>34</b>	<b>18</b>	<b>27</b>	<b>8</b>
Malignant neoplasms (140–208)	12	5	—	—	1	1	1	1
Lymphatic and haematopoietic tissue (200–208)	7	1	—	—	—	—	—	—
Drug dependence (304)	4	4	2	—	1	—	1	—
Diseases of the nervous system and sense organs (320–389)	4	2	3	1	1	1	2	1
Accidents, poisonings and violence (E800–E999)	119	42	23	7	27	15	20	4
Motor vehicle traffic accidents (E810–E819)	43	17	10	5	9	7	13	2
Suicide (E950–E959)	44	11	4	—	8	4	5	1
<b>25–44 years</b>	<b>487</b>	<b>209</b>	<b>100</b>	<b>57</b>	<b>135</b>	<b>72</b>	<b>61</b>	<b>23</b>
Malignant neoplasms (140–208)	54	76	15	24	6	8	9	8
Digestive organs and peritoneum (150–159)	14	11	6	2	1	1	2	2
Female breast (174)	—	24	—	9	—	2	—	2
Lymphatic and haematopoietic tissue (200–208)	6	6	1	4	—	1	1	2
Mental disorders (290–319)	19	4	4	1	11	3	3	1
Drug dependence (304)	9	4	4	1	7	1	3	1
Diseases of the circulatory system (390–459)	59	20	11	6	23	16	10	4
Ischaemic heart disease (410–414)	37	3	5	2	10	9	8	2
Acute myocardial infarction (410)	16	3	2	2	5	5	7	2
Diseases of the digestive system (520–579)	12	9	5	1	6	5	1	—
Chronic liver disease and cirrhosis (571)	7	6	4	1	5	4	—	—
Accidents, poisonings and violence (E800–E999)	281	63	48	11	68	20	29	5
Motor vehicle traffic accidents (E810–E819)	49	13	5	2	30	9	6	2
Suicide (E950–E959)	125	22	25	3	20	2	11	1
<b>45–54 years</b>	<b>342</b>	<b>224</b>	<b>109</b>	<b>84</b>	<b>98</b>	<b>43</b>	<b>44</b>	<b>44</b>
Malignant neoplasms (140–208)	131	121	32	38	21	10	16	31
Digestive organs and peritoneum (150–159)	41	22	13	11	6	2	5	7
Trachea, bronchus and lung (162)	23	10	7	6	7	4	5	4
Female breast (174)	—	42	—	12	—	—	—	8
Genitourinary organs (179–189)	12	14	3	4	1	2	1	7
Lymphatic and haematopoietic tissue (200–208)	15	9	2	4	—	—	1	1
Diseases of the circulatory system (390–459)	81	31	42	15	36	9	5	4
Ischaemic heart disease (410–414)	59	13	32	5	18	5	3	—
Acute myocardial infarction (410)	32	6	23	3	10	3	1	—
Cerebrovascular disease (430–438)	11	8	5	5	7	2	—	2
Diseases of the respiratory system (460–519)	12	13	2	6	7	5	1	2
Disease of the digestive system (520–579)	15	10	7	4	7	2	4	3
Chronic liver disease and cirrhosis (571)	14	7	5	2	6	—	3	3
Accidents, poisonings and violence (E800–E999)	59	17	14	9	14	6	12	2
Motor vehicle traffic accidents (E810–E819)	15	5	2	—	7	—	2	2
Suicide (E950–E959)	24	8	7	4	4	1	6	—

1.6 UNDERLYING CAUSE, Age and State or Territory of Usual Residence *continued*

Cause of death and ICD code	NSW.....		VIC.....		QLD.....		SA.....	
	Males	Females	Males	Females	Males	Females	Males	Females
<b>55–64 years</b>	<b>2 641</b>	<b>1 460</b>	<b>1 727</b>	<b>1 017</b>	<b>1 424</b>	<b>760</b>	<b>591</b>	<b>357</b>
Malignant neoplasms (140–208)	1 113	761	793	563	635	408	248	189
Digestive organs and peritoneum (150–159)	358	192	258	145	191	97	77	49
Colon (153)	126	77	76	62	55	42	27	20
Trachea, bronchus and lung (162)	287	122	223	105	185	74	73	24
Female breast (174)	—	161	—	124	—	94	—	43
Genitourinary organs (179–189)	114	101	84	68	63	54	29	28
Diseases of the circulatory system (390–459)	881	304	513	201	424	165	190	89
Ischaemic heart disease (410–414)	643	185	346	96	302	97	137	54
Acute myocardial infarction (410)	373	113	200	55	190	63	81	36
Cerebrovascular disease (430–438)	109	63	71	47	53	31	24	16
Diseases of the respiratory system (460–519)	155	114	80	67	103	56	42	19
Chronic obstructive pulmonary disease and allied conditions (490–496)	103	87	58	50	81	46	32	11
Diseases of the digestive system (520–579)	118	56	59	33	53	15	29	14
Accidents, poisonings and violence (E800–E999)	142	70	98	34	81	27	31	17
<b>65–74 years</b>	<b>5 729</b>	<b>3 499</b>	<b>4 062</b>	<b>2 383</b>	<b>2 942</b>	<b>1 680</b>	<b>1 499</b>	<b>838</b>
Malignant neoplasms (140–208)	2 248	1 382	1 674	1 000	1 144	611	560	338
Digestive organs and peritoneum (150–159)	592	390	510	314	313	184	157	105
Colon (153)	194	162	178	121	116	81	40	38
Trachea, bronchus and lung (162)	671	280	481	180	325	105	161	52
Female breast (174)	—	196	—	144	—	78	—	46
Genitourinary organs (179–189)	365	181	271	126	176	73	87	45
Lymphatic and haematopoietic tissue (200–208)	190	141	140	98	106	70	54	36
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	165	116	178	112	97	68	63	21
Diabetes mellitus (250)	122	81	132	85	73	55	42	15
Senile and presenile organic psychotic conditions (290)	22	16	15	14	6	13	5	1
Alzheimer's disease (3310)	12	19	5	9	9	7	2	2
Diseases of the circulatory system (390–459)	2 134	1 210	1 440	764	1 106	619	569	301
Ischaemic heart disease (410–414)	1 378	648	946	395	754	359	379	176
Acute myocardial infarction (410)	855	398	554	238	478	237	215	117
Cerebrovascular disease (430–438)	371	298	232	181	179	131	83	74
Diseases of the respiratory system (460–519)	545	340	330	200	320	149	140	68
Chronic obstructive pulmonary disease and allied conditions (490–496)	413	270	254	157	249	115	92	47
Diseases of the digestive system (520–579)	155	109	115	75	70	50	47	25
<b>75–84 years</b>	<b>7 488</b>	<b>6 968</b>	<b>5 214</b>	<b>4 996</b>	<b>3 734</b>	<b>3 098</b>	<b>2 028</b>	<b>1 865</b>
Malignant neoplasms (140–208)	2 015	1 561	1 498	1 166	1 088	691	525	422
Digestive organs and peritoneum (150–159)	510	490	414	398	285	229	134	138
Colon (153)	164	160	137	135	102	96	24	56
Trachea, bronchus and lung (162)	488	223	320	154	258	85	139	51
Female breast (174)	—	183	—	144	—	91	—	55
Genitourinary organs (179–189)	499	239	414	159	284	86	122	58
Prostate (185)	371	—	302	—	224	—	96	—
Lymphatic and haematopoietic tissue (200–208)	181	186	139	130	99	84	54	61
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	180	171	191	228	109	108	72	70
Diabetes mellitus (250)	145	127	157	161	88	84	57	54
Senile and presenile organic psychotic conditions (290)	54	88	52	65	37	32	7	12
Diseases of the nervous system and sense organs (320–389)	162	181	110	127	60	56	28	29
Hereditary and degenerative diseases of the central nervous system (330–337)	138	153	97	106	55	50	23	22
Alzheimer's disease (3310)	43	72	21	43	12	18	2	10
Diseases of the circulatory system (390–459)	3 385	3 459	2 185	2 286	1 650	1 533	911	891
Ischaemic heart disease (410–414)	1 976	1 738	1 266	1 139	1 057	826	545	454
Acute myocardial infarction (410)	1 181	1 069	734	706	675	541	327	308
Cerebrovascular disease (430–438)	752	949	462	641	321	416	195	230
Diseases of arteries, arterioles and capillaries (440–448)	223	181	110	112	106	83	52	39
Diseases of the respiratory system (460–519)	948	686	661	492	434	291	267	227
Chronic obstructive pulmonary disease and allied conditions (490–496)	473	324	412	269	234	136	126	81
Diseases of the digestive system (520–579)	176	222	128	170	92	115	58	65

1.6 UNDERLYING CAUSE, Age and State or Territory of Usual Residence *continued*

Cause of death and ICD code	WA.....		TAS.....		NT.....		ACT.....	
	Males	Females	Males	Females	Males	Females	Males	Females
<b>55–64 years</b>	<b>649</b>	<b>329</b>	<b>214</b>	<b>115</b>	<b>75</b>	<b>48</b>	<b>84</b>	<b>49</b>
Malignant neoplasms (140–208)	288	189	91	63	19	14	36	25
Digestive organs and peritoneum (150–159)	105	47	25	22	6	4	9	3
Colon (153)	26	15	8	5	2	3	2	1
Trachea, bronchus and lung (162)	64	27	36	8	7	1	6	2
Female breast (174)	—	41	—	11	—	2	—	9
Genitourinary organs (179–189)	22	22	9	6	2	3	4	7
Diseases of the circulatory system (390–459)	206	68	70	29	28	14	28	10
Ischaemic heart disease (410–414)	146	29	48	16	20	6	18	3
Acute myocardial infarction (410)	72	19	29	10	6	2	9	3
Cerebrovascular disease (430–438)	32	18	15	4	4	2	5	3
Diseases of the respiratory system (460–519)	32	20	11	5	7	6	6	2
Chronic obstructive pulmonary disease and allied conditions (490–496)	21	13	8	3	6	5	3	2
Diseases of the digestive system (520–579)	31	10	9	5	3	3	2	1
Accidents, poisonings and violence (E800–E999)	41	12	13	4	9	—	4	4
<b>65–74 years</b>	<b>1 357</b>	<b>786</b>	<b>458</b>	<b>276</b>	<b>83</b>	<b>50</b>	<b>135</b>	<b>115</b>
Malignant neoplasms (140–208)	542	300	176	103	28	11	60	51
Digestive organs and peritoneum (150–159)	158	91	50	34	3	2	24	12
Colon (153)	36	27	23	10	2	1	10	6
Trachea, bronchus and lung (162)	168	66	57	13	13	2	17	10
Female breast (174)	—	28	—	14	—	3	—	10
Genitourinary organs (179–189)	67	43	29	17	3	2	10	9
Lymphatic and haematopoietic tissue (200–208)	33	35	17	11	—	—	1	4
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	46	40	7	9	5	4	1	4
Diabetes mellitus (250)	34	31	7	6	4	4	1	4
Senile and presenile organic psychotic conditions (290)	3	5	—	—	—	1	1	1
Alzheimer's disease (3310)	2	5	2	4	—	—	—	1
Diseases of the circulatory system (390–459)	498	263	168	91	27	11	40	24
Ischaemic heart disease (410–414)	325	142	114	45	18	3	22	13
Acute myocardial infarction (410)	208	93	68	28	11	2	12	10
Cerebrovascular disease (430–438)	76	53	26	28	4	4	7	6
Diseases of the respiratory system (460–519)	115	70	56	31	13	13	17	14
Chronic obstructive pulmonary disease and allied conditions (490–496)	77	51	43	24	8	8	12	12
Diseases of the digestive system (520–579)	36	21	8	8	—	2	7	5
<b>75–84 years</b>	<b>1 640</b>	<b>1 501</b>	<b>622</b>	<b>564</b>	<b>59</b>	<b>51</b>	<b>189</b>	<b>167</b>
Malignant neoplasms (140–208)	480	370	171	126	11	14	59	41
Digestive organs and peritoneum (150–159)	126	122	39	35	2	6	8	13
Colon (153)	43	45	10	14	1	1	2	4
Trachea, bronchus and lung (162)	106	59	35	24	3	2	17	9
Female breast (174)	—	42	—	11	—	1	—	7
Genitourinary organs (179–189)	102	50	53	18	2	3	15	2
Prostate (185)	71	—	44	—	1	—	11	—
Lymphatic and haematopoietic tissue (200–208)	53	28	19	14	—	1	4	6
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	43	47	14	11	2	3	5	5
Diabetes mellitus (250)	34	40	12	6	2	2	4	3
Senile and presenile organic psychotic conditions (290)	9	32	6	5	—	—	1	1
Diseases of the nervous system and sense organs (320–389)	50	45	15	13	2	1	7	5
Hereditary and degenerative diseases of the central nervous system (330–337)	41	38	13	13	2	1	7	5
Alzheimer's disease (3310)	17	20	3	6	—	—	1	1
Diseases of the circulatory system (390–459)	666	667	283	274	23	18	76	79
Ischaemic heart disease (410–414)	382	326	147	123	12	8	50	35
Acute myocardial infarction (410)	229	208	85	69	7	5	33	24
Cerebrovascular disease (430–438)	146	191	68	84	5	6	14	31
Diseases of arteries, arterioles and capillaries (440–448)	38	33	24	17	2	—	5	5
Diseases of the respiratory system (460–519)	214	150	81	71	7	6	18	17
Chronic obstructive pulmonary disease and allied conditions (490–496)	100	72	53	38	5	4	9	10
Diseases of the digestive system (520–579)	42	54	9	18	5	1	6	5

1.6 UNDERLYING CAUSE, Age and State or Territory of Usual Residence *continued*

Cause of death and ICD code	NSW.....		VIC.....		QLD.....		SA.....	
	Males	Females	Males	Females	Males	Females	Males	Females
<b>85 years and over</b>	<b>3 923</b>	<b>7 390</b>	<b>2 989</b>	<b>5 802</b>	<b>1 988</b>	<b>3 401</b>	<b>1 096</b>	<b>2 088</b>
Malignant neoplasms (140–208)	683	739	549	632	326	398	172	228
Digestive organs and peritoneum (150–159)	168	270	145	224	73	123	45	85
Genitourinary organs (179–189)	236	86	194	78	103	65	55	23
Diabetes mellitus (250)	58	107	77	141	28	51	14	29
Senile and presenile organic psychotic conditions (290)	51	146	34	129	32	85	2	21
Alzheimer's disease (3310)	53	126	21	72	12	40	4	19
Diseases of the circulatory system (390–459)	1 914	4 324	1 392	3 134	999	1 955	521	1 162
Ischaemic heart disease (410–414)	958	1 972	721	1 449	545	1 015	283	569
Acute myocardial infarction (410)	537	1 081	395	813	341	575	164	316
Cerebrovascular disease (430–438)	486	1 325	321	853	249	560	111	311
Diseases of arteries, arterioles and capillaries (440–448)	118	193	81	175	61	97	38	49
Diseases of the respiratory system (460–519)	590	861	447	688	304	341	184	289
Chronic obstructive pulmonary disease and allied conditions (490–496)	226	179	193	166	105	67	44	47
Diseases of the digestive system (520–579)	110	220	96	198	61	131	44	74
Diseases of the genitourinary system (580–629)	120	210	120	214	59	87	42	64
<b>All ages(a)</b>	<b>23 520</b>	<b>21 221</b>	<b>16 407</b>	<b>15 600</b>	<b>12 235</b>	<b>10 086</b>	<b>6 095</b>	<b>5 619</b>
Class I Infectious and parasitic diseases (001–139)	325	243	161	147	119	69	68	62
Class II Neoplasms (140–239)	6 880	5 290	5 077	4 017	3 658	2 565	1 717	1 385
Malignant neoplasms (140–208)	6 790	5 200	5 013	3 948	3 609	2 523	1 683	1 365
Trachea, bronchus and lung (162)	1 693	758	1 189	537	900	322	426	155
Melanoma of skin (172)	240	110	140	88	141	81	42	25
Female breast (174)	—	856	—	686	—	442	—	240
Genitourinary organs (179–189)	1 266	700	1 002	501	651	325	303	174
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	573	541	618	611	356	326	201	165
Diabetes mellitus (250)	413	358	455	434	264	233	139	111
Class IV Diseases of blood and blood-forming organs (280–289)	83	61	54	80	33	39	23	25
Class V Mental disorders (290–319)	632	581	426	503	207	259	127	148
Senile and presenile organic psychotic conditions (290)	132	254	102	211	76	132	14	34
Class VI Disease of the nervous system and sense organs (320–389)	487	513	342	387	225	213	109	109
Alzheimer's disease (3310)	112	223	48	126	34	66	11	32
Class VII Diseases of the circulatory system (390–459)	8 893	9 543	5 907	6 522	4 529	4 408	2 331	2 497
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	6 475	6 196	4 387	4 287	3 362	2 910	1 731	1 692
Ischaemic heart disease (410–414)	5 327	4 636	3 517	3 117	2 891	2 355	1 444	1 273
Acute myocardial infarction (410)	3 176	2 732	1 977	1 831	1 822	1 452	846	790
Cerebrovascular disease (430–438)	1 792	2 706	1 125	1 769	845	1 174	433	642
Class VIII Diseases of the respiratory system (460–519)	2 321	2 081	1 565	1 489	1 211	885	658	625
Pneumonia and influenza (480–487)	725	865	425	652	379	375	256	318
Chronic obstructive pulmonary disease and allied conditions (490–496)	1 251	904	937	666	694	392	303	199
Class IX Disease of the digestive system (520–579)	686	664	477	506	339	342	208	190
Chronic liver disease and cirrhosis (571)	254	108	167	63	120	45	77	30
Class X Diseases of the genitourinary system (580–629)	365	526	311	411	185	223	103	113
Nephritis, nephrotic syndrome and nephrosis (580–589)	274	345	225	254	110	135	70	69
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	—	4	—	1	—	1	—	—
Class XII Diseases of the skin and subcutaneous tissue (680–709)	36	65	15	37	15	19	10	13
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	72	152	58	134	31	93	18	40
Class XIV Congenital anomalies (740–759)	94	80	80	70	84	55	19	20
Class XV Certain conditions originating in the perinatal period (760–779)	98	79	77	60	78	62	18	14
Class XVI Symptoms, signs and ill-defined conditions (780–799)	64	69	65	66	76	56	29	22
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	1 911	729	1 174	559	1 089	471	456	191
Motor vehicle traffic accidents (E810–E819)	375	156	295	123	203	84	111	50
Accidental falls (E880–E888)	202	215	110	170	112	131	26	48
Suicide (E950–E959)	705	157	446	133	454	125	199	45

(a) Including age not stated.

1.6 UNDERLYING CAUSE, Age and State or Territory of Usual Residence *continued*

Cause of death and ICD code	WA.....		TAS.....		NT.....		ACT.....	
	Males	Females	Males	Females	Males	Females	Males	Females
<b>85 years and over</b>	<b>1 001</b>	<b>1 727</b>	<b>320</b>	<b>592</b>	<b>10</b>	<b>34</b>	<b>94</b>	<b>201</b>
Malignant neoplasms (140–208)	159	202	51	60	3	4	14	30
Digestive organs and peritoneum (150–159)	39	79	14	22	—	2	3	7
Genitourinary organs (179–189)	51	20	17	9	1	1	5	4
Diabetes mellitus (250)	16	28	7	8	1	2	—	4
Senile and presenile organic psychotic conditions (290)	22	52	2	16	—	—	1	4
Alzheimer's disease (3310)	13	39	1	9	1	1	—	1
Diseases of the circulatory system (390–459)	476	954	164	344	1	22	52	103
Ischaemic heart disease (410–414)	263	433	82	149	1	8	23	40
Acute myocardial infarction (410)	161	235	38	70	1	3	10	19
Cerebrovascular disease (430–438)	117	295	42	91	—	3	15	30
Diseases of arteries, arterioles and capillaries (440–448)	25	56	9	20	—	3	6	9
Diseases of the respiratory system (460–519)	145	180	47	67	2	3	11	28
Chronic obstructive pulmonary disease and allied conditions (490–496)	56	36	19	11	1	2	5	5
Diseases of the digestive system (520–579)	29	70	10	21	—	—	4	7
Diseases of the genitourinary system (580–629)	41	44	8	17	1	—	3	7
<b>All ages(a)</b>	<b>5750</b>	<b>4 914</b>	<b>1 889</b>	<b>1 716</b>	<b>527</b>	<b>344</b>	<b>646</b>	<b>626</b>
Class I Infectious and parasitic diseases (001–139)	46	55	11	15	12	7	10	5
Class II Neoplasms (140–239)	1 693	1 281	543	422	92	63	201	188
Malignant neoplasms (140–208)	1 673	1 267	536	417	90	62	196	187
Trachea, bronchus and lung (162)	393	187	142	56	30	9	48	29
Melanoma of skin (172)	55	30	10	6	2	1	5	4
Female breast (174)	—	209	—	62	—	8	—	39
Genitourinary organs (179–189)	256	160	111	59	9	13	36	29
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	149	166	36	36	16	31	9	20
Diabetes mellitus (250)	104	124	32	25	12	25	5	16
Class IV Diseases of blood and blood-forming organs (280–289)	10	14	4	4	—	—	6	2
Class V Mental disorders (290–319)	106	161	32	43	17	6	11	19
Senile and presenile organic psychotic conditions (290)	34	90	8	22	—	1	3	6
Class VI Disease of the nervous system and sense organs (320–389)	141	138	44	47	12	7	15	16
Alzheimer's disease (3310)	32	64	6	20	1	1	1	3
Class VII Diseases of the circulatory system (390–459)	1 994	2 007	739	759	140	90	211	224
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	1 463	1 297	525	481	110	61	147	129
Ischaemic heart disease (410–414)	1 213	947	428	340	79	39	124	93
Acute myocardial infarction (410)	718	565	245	182	40	20	72	58
Cerebrovascular disease (430–438)	393	572	157	215	24	19	42	73
Class VIII Diseases of the respiratory system (460–519)	532	449	199	182	52	42	54	64
Pneumonia and influenza (480–487)	179	194	56	83	20	16	9	27
Chronic obstructive pulmonary disease and allied conditions (490–496)	263	187	124	84	24	25	31	29
Class IX Disease of the digestive system (520–579)	165	175	48	57	22	13	24	21
Chronic liver disease and cirrhosis (571)	64	29	18	6	14	5	11	7
Class X Diseases of the genitourinary system (580–629)	104	95	33	34	5	14	11	17
Nephritis, nephrotic syndrome and nephrosis (580–589)	73	57	24	23	4	9	9	11
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	—	1	—	—	—	—	—	—
Class XII Diseases of the skin and subcutaneous tissue (680–709)	12	8	3	3	1	—	—	—
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	14	34	3	13	—	1	1	7
Class XIV Congenital anomalies (740–759)	35	22	11	7	5	9	6	8
Class XV Certain conditions originating in the perinatal period (760–779)	26	16	13	6	11	9	4	6
Class XVI Symptoms, signs and ill-defined conditions (780–799)	93	49	33	24	6	3	3	3
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	630	243	137	64	136	49	80	26
Motor vehicle traffic accidents (E810–E819)	139	58	22	10	56	17	23	9
Accidental falls (E880–E888)	49	58	15	17	9	5	8	7
Suicide (E950–E959)	234	53	49	10	35	7	28	3

(a) Including age not stated.

## 1.7 UNDERLYING CAUSE, Standardised Death Rates(a)

<i>Cause of death and ICD code</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>
1989				
<b>All causes</b>	<b>776.0</b>	<b>749.0</b>	<b>767.5</b>	<b>740.1</b>
Malignant neoplasms (140–208)	181.5	189.6	179.8	178.1
Trachea, bronchus and lung (162)	38.0	38.4	36.5	33.7
Diabetes mellitus (250)	10.5	18.0	11.3	12.4
Senile and presenile organic psychotic conditions (290)	8.1	10.9	8.6	7.8
Diseases of the nervous system and sense organs (320–389)	14.2	15.9	13.8	11.2
Hereditary and degenerative diseases of the central nervous system (330–337)	10.5	11.7	9.6	8.7
Diseases of the circulatory system (390–459)	367.4	330.5	354.0	351.8
Ischaemic heart disease (410–414)	205.0	188.5	212.2	205.9
Acute myocardial infarction (410)	137.4	120.5	145.4	146.4
Cerebrovascular disease (430–438)	87.4	69.7	74.2	75.5
Diseases of arteries, arterioles and capillaries (440–448)	19.8	19.8	18.9	21.7
Diseases of the respiratory system (460–519)	65.8	62.1	67.1	66.7
Pneumonia and influenza (480–487)	12.3	11.9	13.9	23.7
Chronic obstructive pulmonary disease and allied conditions (490–496)	45.9	43.5	46.1	37.2
Diseases of the digestive system (520–579)	25.0	25.9	27.8	25.0
Accidents (E800–E949)	33.9	34.4	34.5	29.7
Motor vehicle traffic accidents (E810–E819)	15.9	19.7	15.4	15.0
Suicide (E950–E959)	11.8	11.5	14.8	14.1
1998				
<b>All causes</b>	<b>600.9</b>	<b>582.2</b>	<b>608.0</b>	<b>599.8</b>
Malignant neoplasms (140–208)	166.1	169.7	171.1	163.7
Trachea, bronchus and lung (162)	34.4	33.3	34.8	31.7
Diabetes mellitus (250)	10.3	16.2	13.7	12.8
Senile and presenile organic psychotic conditions (290)	4.8	5.2	5.3	2.2
Diseases of the nervous system and sense organs (320–389)	13.3	13.4	11.9	11.9
Hereditary and degenerative diseases of the central nervous system (330–337)	9.6	9.6	8.5	6.8
Diseases of the circulatory system (390–459)	238.7	217.2	237.8	234.2
Ischaemic heart disease (410–414)	130.5	117.2	140.5	133.5
Acute myocardial infarction (410)	77.7	67.4	88.0	80.7
Cerebrovascular disease (430–438)	57.1	49.7	52.9	50.8
Diseases of arteries, arterioles and capillaries (440–448)	12.7	11.5	13.6	11.8
Diseases of the respiratory system (460–519)	57.2	53.3	56.3	61.7
Pneumonia and influenza (480–487)	19.7	17.6	19.4	26.3
Chronic obstructive pulmonary disease and allied conditions (490–496)	29.0	29.1	30.3	25.7
Diseases of the digestive system (520–579)	18.1	17.6	18.3	20.1
Accidents (E800–E949)	24.4	22.0	23.9	22.6
Motor vehicle traffic accidents (E810–E819)	8.4	9.0	8.4	10.7
Suicide (E950–E959)	13.5	12.3	16.8	16.4

(a) Standardised death rate per 100,000 of the mid-year 1991 population.  
See Glossary for further explanation.

1.7 UNDERLYING CAUSE, Standardised Death Rates(a) *continued*

<i>Cause of death and ICD code</i>	WA	Tas.	NT	ACT
1989				
<b>All causes</b>	<b>694.3</b>	<b>808.4</b>	<b>1 097.1</b>	<b>637.7</b>
Malignant neoplasms (140–208)	182.5	190.1	183.4	146.2
Trachea, bronchus and lung (162)	39.9	41.5	42.6	31.9
Diabetes mellitus (250)	11.2	11.1	27.3	8.5
Senile and presenile organic psychotic conditions (290)	8.8	13.7	19.6	3.5
Diseases of the nervous system and sense organs (320–389)	18.7	12.0	15.4	8.9
Hereditary and degenerative diseases of the central nervous system (330–337)	13.7	8.3	7.5	5.0
Diseases of the circulatory system (390–459)	308.1	383.8	357.0	290.8
Ischaemic heart disease (410–414)	181.1	214.7	197.9	166.8
Acute myocardial infarction (410)	123.3	149.3	101.7	102.8
Cerebrovascular disease (430–438)	70.7	81.7	57.6	57.1
Diseases of arteries, arterioles and capillaries (440–448)	16.2	27.5	11.1	20.1
Diseases of the respiratory system (460–519)	57.7	69.4	194.3	69.6
Pneumonia and influenza (480–487)	15.6	21.5	33.4	15.5
Chronic obstructive pulmonary disease and allied conditions (490–496)	36.4	45.5	119.5	41.2
Diseases of the digestive system (520–579)	25.3	27.8	45.6	30.7
Accidents (E800–E949)	28.6	38.8	66.8	23.3
Motor vehicle traffic accidents (E810–E819)	14.7	17.3	31.2	11.2
Suicide (E950–E959)	12.0	13.2	23.1	13.4
1998				
<b>All causes</b>	<b>579.0</b>	<b>629.6</b>	<b>887.6</b>	<b>538.4</b>
Malignant neoplasms (140–208)	164.3	171.9	187.5	160.3
Trachea, bronchus and lung (162)	33.4	36.1	46.7	33.1
Diabetes mellitus (250)	12.5	9.8	42.8	8.9
Senile and presenile organic psychotic conditions (290)	6.2	4.6	1.7	4.2
Diseases of the nervous system and sense organs (320–389)	15.1	16.4	18.8	13.0
Hereditary and degenerative diseases of the central nervous system (330–337)	10.7	11.3	12.9	10.2
Diseases of the circulatory system (390–459)	213.7	250.4	282.5	193.2
Ischaemic heart disease (410–414)	116.5	130.1	140.4	96.0
Acute myocardial infarction (410)	69.5	73.2	73.8	57.3
Cerebrovascular disease (430–438)	50.6	61.3	57.6	51.5
Diseases of arteries, arterioles and capillaries (440–448)	11.4	15.7	14.7	17.9
Diseases of the respiratory system (460–519)	52.8	64.3	112.1	53.4
Pneumonia and influenza (480–487)	19.1	22.3	37.2	16.6
Chronic obstructive pulmonary disease and allied conditions (490–496)	25.0	36.5	67.8	27.4
Diseases of the digestive system (520–579)	18.2	18.1	33.6	19.1
Accidents (E800–E949)	29.5	26.5	83.0	25.3
Motor vehicle traffic accidents (E810–E819)	11.0	7.1	41.6	9.9
Suicide (E950–E959)	15.8	12.1	22.5	10.2

(a) Standardised death rate per 100,000 of the mid-year 1991 population.  
See Glossary for further explanation.



## 1.8 UNDERLYING CAUSE, Indigenous People and State or Territory of Usual Residence(a)

Cause of death and ICD code	INDIGENOUS.....				NON-INDIGENOUS DEATHS....			
	Males	Females	Persons	Proportion of total deaths	Males	Females	Persons	Proportion of total deaths
	no.	no.		%	no.	no.		%
QUEENSLAND								
<b>All causes</b>	<b>349</b>	<b>244</b>	<b>593</b>	<b>100.0</b>	<b>11 886</b>	<b>9 842</b>	<b>21 728</b>	<b>100.0</b>
Malignant neoplasms (140–208)	46	39	85	14.3	3 563	2 484	6 047	27.8
Digestive organs and peritoneum (150–159)	11	5	16	2.7	962	706	1 668	7.7
Trachea, bronchus and lung (162)	11	7	18	3.0	889	315	1 204	5.5
Diabetes mellitus (250)	31	24	55	9.3	233	209	442	2.0
Mental disorders (290–319)	2	5	7	1.2	205	254	459	2.1
Diseases of the circulatory system (390–459)	91	100	191	32.2	4 438	4 308	8 746	40.3
Ischaemic heart disease (410–414)	65	57	122	20.6	2 826	2 298	5 124	23.6
Cerebrovascular disease (430–438)	10	20	30	5.1	835	1 154	1 989	9.2
Diseases of the respiratory system (460–519)	29	13	42	7.1	1 182	872	2 054	9.5
Pneumonia and influenza (480–487)	12	4	16	2.7	367	371	738	3.4
Chronic obstructive pulmonary disease and allied conditions (490–496)	16	5	21	3.5	678	387	1 065	4.9
Diseases of the digestive system (520–579)	10	9	19	3.2	329	333	662	3.0
Chronic liver disease and cirrhosis (571)	8	6	14	2.4	112	39	151	0.7
Congenital anomalies (740–759)	6	4	10	1.7	78	51	129	0.6
Certain conditions originating in the perinatal period (760–779)	17	6	23	3.9	61	56	117	0.5
All other medical conditions (remainder of 001–799)	34	25	59	9.9	791	823	1 614	7.4
Accidents, poisonings and violence (E800–E999)	83	19	102	17.2	1 006	452	1 458	6.7
Motor vehicle traffic accidents (E810–E819)	12	4	16	2.7	191	80	271	1.2
Suicide (E950–E959)	39	5	44	7.4	415	120	535	2.5
Homicide (E960–E969))	12	4	16	2.7	26	22	48	0.2
Other external causes (remainder of E800–E999)	20	6	26	4.4	374	230	604	2.8
SOUTH AUSTRALIA								
<b>All causes</b>	<b>74</b>	<b>53</b>	<b>127</b>	<b>100.0</b>	<b>6 021</b>	<b>5 566</b>	<b>11 587</b>	<b>100.0</b>
Malignant neoplasms (140–208)	8	9	17	13.4	1 675	1 356	3 031	26.2
Digestive organs and peritoneum (150–159)	4	3	7	5.5	455	401	856	7.4
Trachea, bronchus and lung (162)	1	3	4	3.1	425	152	577	5.0
Diabetes mellitus (250)	4	3	7	5.5	135	108	243	2.1
Mental disorders (290–319)	5	—	5	3.9	122	148	270	2.3
Diseases of the circulatory system (390–459)	20	15	35	27.6	2 311	2 482	4 793	41.4
Ischaemic heart disease (410–414)	13	9	22	17.3	1 431	1 264	2 695	23.3
Cerebrovascular disease (430–438)	2	5	7	5.5	431	637	1 068	9.2
Diseases of the respiratory system (460–519)	5	9	14	11.0	653	616	1 269	11.0
Pneumonia and influenza (480–487)	2	5	7	5.5	254	313	567	4.9
Chronic obstructive pulmonary disease and allied conditions (490–496)	—	3	3	2.4	303	196	499	4.3
Diseases of the digestive system (520–579)	4	4	8	6.3	204	186	390	3.4
Chronic liver disease and cirrhosis (571)	2	2	4	3.1	75	28	103	0.9
Congenital anomalies (740–759)	—	2	2	1.6	19	18	37	0.3
Certain conditions originating in the perinatal period (760–779)	—	—	—	..	18	14	32	0.3
All other medical conditions (remainder of 001–799)	9	3	12	9.4	447	455	902	7.8
Accidents, poisonings and violence (E800–E999)	19	8	27	21.3	437	183	620	5.4
Motor vehicle traffic accidents (E810–E819)	4	2	6	4.7	107	48	155	1.3
Suicide (E950–E959)	7	2	9	7.1	192	43	235	2.0
Homicide (E960–E969))	—	2	2	1.6	17	10	27	0.2
Other external causes (remainder of E800–E999)	8	2	10	7.9	121	82	203	1.8

(a) Only these States and Territories have Indigenous death registration data considered to be of publishable standard. See Explanatory Notes, paragraph 21 for further explanation.

## 1.8 UNDERLYING CAUSE, Indigenous People and State or Territory of Usual Residence(a)

Cause of death and ICD code	INDIGENOUS.....				NON-INDIGENOUS DEATHS.....			
	Males	Females	Persons	Proportion of total deaths	Males	Females	Persons	Proportion of total deaths
	no.	no.	no.	%	no.	no.	no.	%
WESTERN AUSTRALIA								
<b>All causes</b>	<b>230</b>	<b>148</b>	<b>378</b>	<b>100.0</b>	<b>5 520</b>	<b>4 766</b>	<b>10 286</b>	<b>100.0</b>
Malignant neoplasms (140–208)	24	21	45	11.9	1 649	1 246	2 895	28.1
Digestive organs and peritoneum (150–159)	9	6	15	4.0	476	366	842	8.2
Trachea, bronchus and lung (162)	4	3	7	1.9	389	184	573	5.6
Diabetes mellitus (250)	8	12	20	5.3	96	112	208	2.0
Mental disorders (290–319)	9	6	15	4.0	97	155	252	2.4
Diseases of the circulatory system (390–459)	61	45	106	28.0	1 933	1 962	3 895	37.9
Ischaemic heart disease (410–414)	44	21	65	17.2	1 169	926	2 095	20.4
Cerebrovascular disease (430–438)	10	9	19	5.0	383	563	946	9.2
Diseases of the respiratory system (460–519)	23	18	41	10.8	509	431	940	9.1
Pneumonia and influenza (480–487)	10	11	21	5.6	169	183	352	3.4
Chronic obstructive pulmonary disease and allied conditions (490–496)	10	6	16	4.2	253	181	434	4.2
Diseases of the digestive system (520–579)	8	9	17	4.5	157	166	323	3.1
Chronic liver disease and cirrhosis (571)	4	7	11	2.9	60	22	82	0.8
Congenital anomalies (740–759)	2	—	2	0.5	33	22	55	0.5
Certain conditions originating in the perinatal period (760–779)	5	1	6	1.6	21	15	36	0.3
All other medical conditions (remainder of 001–799)	41	21	62	16.4	444	429	873	8.5
Accidents, poisonings and violence (E800–E999)	49	15	64	16.9	581	228	809	7.9
Motor vehicle traffic accidents (E810–E819)	16	7	23	6.1	123	51	174	1.7
Suicide (E950–E959)	18	2	20	5.3	216	51	267	2.6
Homicide (E960–E969)	1	3	4	1.1	13	11	24	0.2
Other external causes (remainder of E800–E999)	14	3	17	4.5	229	115	344	3.3
NORTHERN TERRITORY								
<b>All causes</b>	<b>229</b>	<b>186</b>	<b>415</b>	<b>100.0</b>	<b>298</b>	<b>158</b>	<b>456</b>	<b>100.0</b>
Malignant neoplasms (140–208)	27	19	46	11.1	63	43	106	23.2
Digestive organs and peritoneum (150–159)	5	8	13	3.1	13	10	23	5.0
Trachea, bronchus and lung (162)	10	1	11	2.7	20	8	28	6.1
Diabetes mellitus (250)	8	17	25	6.0	4	8	12	2.6
Mental disorders (290–319)	3	5	8	1.9	14	1	15	3.3
Diseases of the circulatory system (390–459)	68	47	115	27.7	72	43	115	25.2
Ischaemic heart disease (410–414)	36	21	57	13.7	43	18	61	13.4
Cerebrovascular disease (430–438)	13	8	21	5.1	11	11	22	4.8
Diseases of the respiratory system (460–519)	33	28	61	14.7	19	14	33	7.2
Pneumonia and influenza (480–487)	16	14	30	7.2	4	2	6	1.3
Chronic obstructive pulmonary disease and allied conditions (490–496)	12	13	25	6.0	12	12	24	5.3
Diseases of the digestive system (520–579)	11	6	17	4.1	11	7	18	3.9
Chronic liver disease and cirrhosis (571)	9	2	11	2.7	5	3	8	1.8
Congenital anomalies (740–759)	3	6	9	2.2	2	3	5	1.1
Certain conditions originating in the perinatal period (760–779)	4	6	10	2.4	7	3	10	2.2
All other medical conditions (remainder of 001–799)	23	25	48	11.6	19	14	33	7.2
Accidents, poisonings and violence (E800–E999)	49	27	76	18.3	87	22	109	23.9
Motor vehicle traffic accidents (E810–E819)	23	7	30	7.2	33	10	43	9.4
Suicide (E950–E959)	8	3	11	2.7	27	4	31	6.8
Homicide (E960–E969)	3	7	10	2.4	2	—	2	0.4
Other external causes (remainder of E800–E999)	15	10	25	6.0	25	8	33	7.2

(a) Only these States and Territories have Indigenous death registration data considered to be of publishable standard. See Explanatory Notes, paragraph 21 for further explanation.

## SECTION 2

## MULTIPLE CAUSE OF DEATH .....

### INTRODUCTION

Multiple causes of death include all causes and conditions reported on the death certificate (see glossary page 92 for further details). Deaths which occur due to external causes (accidents poisoning and violence) are classified according to the event leading to fatal injury (eg accidental fall). Multiple cause data for external causes include the nature of injury or poisoning, as well as any other conditions reported on the death certificate.

For the 127,202 deaths registered in 1998, there were 363,895 causes (this included 16,560 injuries) giving a mean 2.9 causes per death. The overall mean number of causes per death for males (2.9) and females (2.8) was similar. However, the mean number of causes of death did vary according to the age of the deceased (see table 2.1).

### NUMBERS OF CAUSES

In 1998 in about 19% of deaths an underlying cause of death only was recorded. The most commonly recorded number of causes was two (28% of total deaths) while six or more causes were registered in 6% of deaths. These proportions were similar to those reported in 1997.

#### DEATHS, Number of Causes Reported

Number of causes	Deaths	Proportion of total deaths 1998	Proportion of total deaths 1997
	no.	%	%
1	23 536	18.5	18.1
2	35 615	28.0	28.9
3	31 960	25.1	25.2
4	19 181	15.1	15.3
5	9 702	7.6	7.3
6 or more	7 208	5.7	5.2
<b>Total</b>	<b>127 202</b>	<b>100.0</b>	<b>100.0</b>

### LEADING MULTIPLE CAUSES

Causes of death are usually ranked according to the number of times they were mentioned as underlying causes. Multiple cause data allows deaths to be ranked according to the number of times they were recorded on all death certificates, as in the table below. For deaths attributed to accidents, poisonings and violence, any mention of nature of injury was not included as a cause for this comparison as these are not considered as possible underlying causes of death.

LEADING MULTIPLE CAUSES *continued*

In 1998, the leading three underlying causes (malignant neoplasms, Ischaemic heart disease and cerebrovascular disease) were also the three leading multiple causes of death. The causes with higher multiple cause than underlying cause rankings were generally reported as contributory causes (e.g. hypertensive disease). Hypertensive disease ranked 15th as an underlying cause compared with being ranked 6th as a multiple cause. Hypertensive disease was often recorded as a contributory cause where other circulatory diseases were the underlying cause (see table 2.6).

## LEADING MULTIPLE CAUSES OF DEATH

Cause of death and ICD code	Multiple cause.....			Underlying cause	
	no.	%	rank	%	rank
Malignant neoplasms (140–208)	50 720	14.6	1	27.2	1
Malignant neoplasms of trachea bronchus and lung (162)	7 440	2.1	..	5.4	..
Ischaemic heart disease (410–414)	48 767	14.0	2	21.9	2
Cerebrovascular disease (430–438)	21 450	6.2	3	9.4	3
Pneumonia and influenza (480–487)	15 576	4.5	4	3.6	6
Chronic obstructive pulmonary diseases and allied conditions (490–496)	14 316	4.1	5	4.8	4
Hypertensive diseases (401–405)	12 147	3.5	6	0.9	15
Nephritis, nephrotic syndrome and nephrosis (580–589)	11 062	3.2	7	1.3	12
Accidents and adverse effects (E800–E949)	10 736	3.1	8	3.8	5
Diabetes Mellitus (250)	9 580	2.8	9	2.2	7
Diseases of arteries, arterioles and capillaries (440–448)	9 290	2.7	10	2.2	8
<b>All causes(a)</b>	<b>347 335</b>	<b>100.0</b>	<b>..</b>	<b>100.0</b>	<b>..</b>

(a) Nature of injury has been excluded.

## CAUSE ASSOCIATIONS OF THE THREE LEADING CAUSES

## Malignant neoplasms

In 1998 malignant neoplasms (cancers) were the leading cause of death (34,560 deaths). It was reported as the only cause in 35% of these deaths. The most common contributory causes recorded with cancer were pneumonia and influenza (reported in 8% of all cancer deaths), ischaemic heart disease and chronic obstructive pulmonary disease and allied conditions (each reported in 6% of all cancer deaths) (see table 2.5).

However, cancer was reported in a further 4,617 deaths as a contributory cause (see table 2.6). Cancer acted as a contributory cause in 7% of deaths where chronic obstructive pulmonary disease and allied conditions were the underlying cause (see table 2.5).

### Ischaemic heart disease

In 1998 ischaemic heart disease was the second leading cause of death (27,825 deaths). It was reported as the only cause in 12% of these deaths. The two most common contributory causes reported with ischaemic heart disease were heart failure (reported in 19% of ischaemic heart disease deaths) and hypertensive disease (reported in 16% of all ischaemic heart disease deaths).

Ischaemic heart disease was reported in a further 10,112 deaths as a contributory cause. Ischaemic heart disease acted as a contributory cause in 54% of deaths where diabetes was the underlying cause.

### Cerebrovascular disease

In 1998 cerebrovascular disease was the third leading cause of death (11,982 deaths). It was reported as the only cause in 20% of these deaths. The most common contributory causes reported with cerebrovascular disease were hypertensive disease (reported in 22% of cerebrovascular disease deaths), diseases of the arteries, arterioles and capillaries, and pneumonia and influenza (each reported in 12% of cerebrovascular disease deaths).

Cerebrovascular disease was reported in a further 7,716 deaths as a contributory cause. Cerebrovascular disease acted as a contributory cause in 21% of deaths where diabetes was the underlying cause.

## EXTERNAL CAUSES OF DEATH

In 1998, there were 7,946 deaths due to external causes, with 25,678 multiple causes (including type of accidents) reported for these deaths. This gave an average of 3.2 causes for each death, similar to the corresponding average of 3.1 recorded in 1997.

For the deaths due to external causes there were 11,705 injuries and of these 3,175 occurred as a result of motor vehicle traffic accidents. Around 21% of injuries in motor vehicle accidents involved intracranial injuries, while fractures accounted for 20% and internal injuries of the chest, abdomen and pelvis a further 19%. These patterns of injury were similar for males and females (see table 2.7).

Fractures were the most common injury recorded in accidental falls, being present in more than 49% of cases. Intracranial injuries were also associated with accidental falls, occurring in 18% of cases. These intracranial injuries were more common in males than females, while the reverse was true for fractures.

## 2.1 DISTRIBUTION OF DEATHS, Number of Causes Per Death and Age

## NUMBER OF CAUSES PER DEATH .....

Age group (years)	Mean conditions per death	Total deaths	Total	1	2	3	4	5	6 or more
	no.	no.	%	%	%	%	%	%	%
MALES									
<b>All ages(a)</b>	<b>2.9</b>	<b>67 073</b>	<b>100.0</b>	<b>18.1</b>	<b>28.1</b>	<b>24.8</b>	<b>15.1</b>	<b>7.9</b>	<b>5.9</b>
Under 1	2.8	706	100.0	23.2	25.8	24.1	11.9	7.5	7.5
1-14	2.7	427	100.0	17.6	39.8	21.1	10.3	6.3	4.9
15-24	2.8	1 376	100.0	7.6	48.4	22.5	11.3	5.0	5.3
25-34	2.8	2 059	100.0	10.1	44.9	20.6	12.5	6.3	5.5
35-44	2.7	2 448	100.0	18.1	37.6	20.8	12.1	5.6	5.8
45-54	2.6	3 982	100.0	26.4	30.4	20.4	11.4	6.1	5.3
55-64	2.7	7 405	100.0	25.7	27.6	22.5	12.5	6.9	4.8
65-74	2.9	16 267	100.0	19.9	26.2	23.3	15.7	8.3	6.7
75-84	3.0	20 975	100.0	16.0	25.6	26.7	16.7	8.9	6.1
85 and over	3.0	11 421	100.0	14.2	27.2	28.2	16.6	8.1	5.6
FEMALES									
<b>All ages(a)</b>	<b>2.8</b>	<b>60 129</b>	<b>100.0</b>	<b>18.9</b>	<b>27.8</b>	<b>25.5</b>	<b>15.0</b>	<b>7.3</b>	<b>5.4</b>
Under 1	2.7	546	100.0	24.4	27.1	24.7	12.5	6.0	5.3
1-14	2.7	296	100.0	15.5	41.2	22.6	11.5	5.1	4.1
15-24	2.8	495	100.0	13.3	41.4	22.2	11.1	4.4	7.5
25-34	2.8	682	100.0	21.4	32.3	19.6	12.3	7.6	6.7
35-44	2.6	1 334	100.0	27.3	29.9	18.2	12.0	6.7	5.8
45-54	2.5	2 566	100.0	31.6	26.6	19.6	11.6	5.6	5.0
55-64	2.6	4 135	100.0	28.5	26.6	20.7	11.8	6.6	5.9
65-74	2.9	9 627	100.0	21.5	25.6	23.0	15.8	7.7	6.4
75-84	2.9	19 212	100.0	17.1	26.5	27.0	15.8	7.9	5.7
85 and over	2.8	21 235	100.0	15.4	29.8	27.8	15.4	7.1	4.5
PERSONS									
<b>All ages(a)</b>	<b>2.9</b>	<b>127 202</b>	<b>100.0</b>	<b>18.5</b>	<b>28.0</b>	<b>25.1</b>	<b>15.1</b>	<b>7.6</b>	<b>5.7</b>
Under 1	2.8	1 252	100.0	23.7	26.4	24.4	12.1	6.9	6.5
1-14	2.7	723	100.0	16.7	40.4	21.7	10.8	5.8	4.6
15-24	2.8	1 871	100.0	9.1	46.6	22.4	11.2	4.9	5.9
25-34	2.8	2 741	100.0	12.9	41.8	20.4	12.5	6.6	5.8
35-44	2.7	3 782	100.0	21.3	34.9	19.9	12.1	6.0	5.8
45-54	2.6	6 548	100.0	28.5	28.9	20.1	11.4	5.9	5.2
55-64	2.6	11 540	100.0	26.7	27.2	21.9	12.2	6.8	5.2
65-74	2.9	25 894	100.0	20.5	26.0	23.2	15.7	8.1	6.6
75-84	3.0	40 187	100.0	16.5	26.0	26.9	16.3	8.4	5.9
85 and over	2.9	32 656	100.0	15.0	28.9	28.0	15.8	7.5	4.9

(a) Including age not stated.

## 2.2 UNDERLYING AND NUMBER OF CAUSES OF DEATH REPORTED(a)

Underlying cause of death and ICD code	REPORTED WITH.....					Mean number of causes
	Reported alone	One other cause	Two other causes	Three other causes	Four or more other causes	
MALES						
<b>All causes</b>	<b>12 167</b>	<b>18 870</b>	<b>16 601</b>	<b>10 149</b>	<b>9 286</b>	<b>2.7</b>
Class I Infectious and parasitic diseases (001–139)	99	162	189	135	167	3.3
Class II Neoplasms (140–239)	6 559	5 460	3 951	2 179	1 712	2.4
Malignant neoplasms (140–208)	6 517	5 401	3 883	2 132	1 657	2.4
Lip, oral cavity and pharynx (140–149)	168	124	89	46	52	2.4
Digestive organs and peritoneum (150–159)	2 000	1 444	1 072	524	401	2.3
Oesophagus (150)	225	195	143	54	37	2.2
Stomach (151)	322	183	130	70	48	2.1
Colon (153)	635	441	351	173	133	2.3
Rectum, rectosigmoid junction and anus (154)	250	187	156	76	67	2.4
Liver and intrahepatic bile ducts (155)	122	125	83	53	44	2.5
Pancreas (157)	342	227	142	62	38	2.1
Trachea, bronchus and lung (162)	1 471	1 428	971	557	394	2.4
Bone, connective tissue, skin and breast (170–175)	355	290	220	94	72	2.3
Melanoma of skin (172)	252	174	123	48	38	2.1
Breast (174, 175)	5	4	3	2	2	2.6
Genitourinary organs (179–189)	1 108	1 007	740	447	332	2.5
Ovary and other uterine adnexa (183)	—	—	—	—	—	..
Prostate (185)	770	727	523	291	220	2.4
Bladder (188)	156	148	107	96	65	2.7
Other and unspecified sites (190–199)	686	526	332	186	136	2.3
Brain (191)	310	151	72	22	12	1.7
Lymphatic and haematopoietic tissue (200–208)	556	449	376	252	237	2.6
Leukaemia (204–208)	180	202	150	114	117	2.8
Benign and unspecified neoplasms (210–239)	42	59	68	47	55	3.1
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	46	277	627	488	520	3.7
Diabetes mellitus (250)	20	196	481	362	365	3.7
Class IV Diseases of blood and blood-forming organs (280–289)	25	44	68	39	37	3.2
Class V Mental disorders (290–319)	169	336	493	270	290	2.7
Senile and presenile organic psychotic conditions (290)	57	127	115	44	26	2.6
Drug dependence (304)	36	9	189	121	154	2.4
Class VI Disease of the nervous system and sense organs (320–389)	238	441	344	193	159	2.7
Hereditary and degenerative diseases of the central nervous system (330–337)	164	348	224	127	84	2.6
Alzheimer's disease (3310)	34	111	58	26	16	2.5
Class VII Diseases of the circulatory system (390–459)	3 526	6 556	6 919	4 267	3 478	3.0
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	2 332	4 702	5 229	3 306	2 632	3.0
Rheumatic fever and rheumatic heart disease (390–398)	5	12	23	29	18	3.6
Hypertensive disease (401–405)	51	135	98	60	66	3.0
Ischaemic heart disease (410–414)	1 958	3 912	4 343	2 687	2 124	3.0
Acute myocardial infarction (410)	784	2 631	2 753	1 572	1 157	3.0
Diseases of pulmonary circulation and other forms of heart disease (415–429)	337	713	817	562	466	3.1
Cerebrovascular disease (430–438)	889	1 432	1 271	675	545	2.8
Diseases of arteries, arterioles and capillaries (440–448)	285	328	343	224	235	2.9
Atherosclerosis (440)	9	59	69	27	29	3.1
Aortic aneurysm (441)	267	227	188	104	92	2.5

(a) Excludes injury codes (ICD codes N800–N999).

2.2 UNDERLYING AND NUMBER OF CAUSES OF DEATH REPORTED(a) *continued*

Underlying cause of death and ICD code	REPORTED WITH.....					Mean number of causes
	Reported alone	One other cause	Two other causes	Three other causes	Four or more other causes	
Class VIII Diseases of the respiratory system (460–519)	864	1 862	1 836	1 088	943	3.0
Pneumonia and influenza (480–487)	421	613	485	290	240	2.7
Chronic obstructive pulmonary disease and allied conditions (490–496)	313	1 020	1 094	657	544	3.1
Emphysema (492)	41	170	188	104	72	3.0
Asthma (493)	52	80	86	39	21	2.7
Class IX Diseases of the digestive system (520–579)	138	383	515	399	534	3.5
Diseases of oesophagus, stomach and duodenum (530–537)	31	65	77	65	85	3.4
Ulcer of stomach and duodenum (531–533)	30	53	60	34	48	3.1
Chronic liver disease and cirrhosis (571)	54	180	192	142	157	3.4
Class X Diseases of the genitourinary system (580–629)	51	199	312	225	330	3.7
Nephritis, nephrotic syndrome and nephrosis (580–589)	48	151	223	156	211	3.6
Renal failure (584–586)	46	134	195	119	174	3.5
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	—	—	—	—	—	..
Class XII Diseases of the skin and subcutaneous tissue (680–709)	1	18	21	20	32	3.9
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	4	23	43	54	73	4.0
Arthropathies and related disorders (710–719)	3	14	27	34	47	4.0
Class IV Congenital anomalies (740–759)	43	81	95	59	56	3.1
Class XV Certain conditions originating in the perinatal period (760–779)	28	76	92	55	74	3.4
Class XVI Symptoms, signs and ill-defined conditions (780–799)	336	26	4	2	1	1.1
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	40	2 926	1 092	676	880	1.6
Accidents (E800–E949)	34	1 290	632	485	727	1.8
Motor vehicle traffic accidents (E810–E819)	28	604	250	145	197	1.3
Accidental falls (E880–E888)	—	61	83	115	272	3.1
Accidental drowning and submersion (E910)	—	132	34	17	4	1.4
Suicide (E950–E959)	2	1 470	398	162	118	1.4
Homicide (E960–E969)	4	124	38	19	18	1.3

(a) Excludes injury codes (ICD codes N800–N999).



2.2 UNDERLYING AND NUMBER OF CAUSES OF DEATH REPORTED(a) *continued*

Underlying cause of death and ICD code	REPORTED WITH.....					Mean number of causes
	Reported alone	One other cause	Two other causes	Three other causes	Four or more other causes	
FEMALES						
<b>All causes</b>	<b>11 369</b>	<b>16 745</b>	<b>15 359</b>	<b>9 032</b>	<b>7 624</b>	<b>2.7</b>
Class I Infectious and parasitic diseases (001–139)	55	147	149	123	129	3.3
Class II Neoplasms (140–239)	5 604	4 141	2 867	1 508	1 092	2.3
Malignant neoplasms (140–208)	5 563	4 084	2 805	1 468	1 050	2.3
Lip, oral cavity and pharynx (140–149)	70	43	38	19	23	2.5
Digestive organs and peritoneum (150–159)	1 696	1 184	779	395	294	2.2
Oesophagus (150)	125	89	60	25	24	2.2
Stomach (151)	205	110	78	25	20	2.0
Colon (153)	601	479	303	162	116	2.3
Rectum, rectosigmoid junction and anus (154)	192	147	83	47	35	2.2
Liver and intrahepatic bile ducts (155)	79	58	41	25	18	2.4
Pancreas (157)	367	194	130	71	39	2.0
Trachea, bronchus and lung (162)	722	590	380	235	126	2.3
Bone, connective tissue, skin and breast (170–175)	1 220	867	553	285	205	2.2
Melanoma of skin (172)	146	104	49	28	18	2.1
Breast (174, 175)	1 000	695	446	235	166	2.2
Genitourinary organs (179–189)	745	512	387	183	134	2.2
Ovary and other uterine adnexa (183)	338	192	131	56	40	2.0
Prostate (185)	—	—	—	—	—	..
Bladder (188)	74	73	53	26	21	2.4
Other and unspecified sites (190–199)	580	461	303	153	116	2.3
Brain (191)	265	94	54	17	13	1.7
Lymphatic and haematopoietic tissue (200–208)	504	409	353	189	145	2.5
Leukaemia (204–208)	136	147	132	80	58	2.6
Benign and unspecified neoplasms (210–239)	41	57	62	40	42	2.9
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	43	270	623	487	474	3.7
Diabetes mellitus (250)	20	180	451	353	323	3.7
Class IV Diseases of blood and blood-forming organs (280–289)	28	55	52	42	48	3.2
Class V Mental disorders (290–319)	241	625	431	247	176	2.6
Senile and presenile organic psychotic conditions (290)	136	293	182	89	50	2.5
Drug dependence (304)	4	2	32	33	50	2.7
Class VI Disease of the nervous system and sense organs (320–389)	291	480	381	166	112	2.5
Hereditary and degenerative diseases of the central nervous system (330–337)	236	393	291	103	62	2.4
Alzheimer's disease (3310)	120	197	145	43	30	2.4
Class VII Diseases of the circulatory system (390–459)	3 543	7 306	7 657	4 318	3 227	2.9
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	1 833	4 531	5 250	3 084	2 356	3.0
Rheumatic fever and rheumatic heart disease (390–398)	7	27	56	38	43	3.6
Hypertensive disease (401–405)	122	209	193	109	97	2.8
Ischaemic heart disease (410–414)	1 239	3 329	4 071	2 375	1 787	3.1
Acute myocardial infarction (410)	743	2 172	2 475	1 336	904	3.0
Diseases of pulmonary circulation and other forms of heart disease (415–429)	507	1 042	1 019	621	489	2.9
Cerebrovascular disease (430–438)	1 456	2 295	1 907	927	585	2.6
Diseases of arteries, arterioles and capillaries (440–448)	209	354	361	212	194	2.9
Atherosclerosis (440)	44	108	105	47	34	2.8
Aortic aneurysm (441)	151	162	117	64	57	2.5

(a) Excludes injury codes (ICD codes N800–N999).

2.2 UNDERLYING AND NUMBER OF CAUSES OF DEATH REPORTED(a) *continued*

Underlying cause of death and ICD code	REPORTED WITH.....					Mean number of causes
	Reported alone	One other cause	Two other causes	Three other causes	Four or more other causes	
Class VIII Diseases of the respiratory system (460–519)	971	1 907	1 501	832	606	2.7
Pneumonia and influenza (480–487)	570	955	578	263	164	2.4
Chronic obstructive pulmonary disease and allied conditions (490–496)	262	712	724	448	340	3.0
Emphysema (492)	23	100	85	45	34	2.9
Asthma (493)	90	112	100	61	44	2.7
Class IX Diseases of the digestive system (520–579)	176	381	504	375	532	3.5
Diseases of oesophagus, stomach and duodenum (530–537)	42	74	92	69	76	3.3
Ulcer of stomach and duodenum (531–533)	39	65	63	44	42	3.0
Chronic liver disease and cirrhosis (571)	21	78	71	56	67	3.4
Class X Diseases of the genitourinary system (580–629)	77	285	409	296	366	3.5
Nephritis, nephrotic syndrome and nephrosis (580–589)	71	205	249	170	208	3.4
Renal failure (584–586)	69	177	220	132	164	3.3
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	4	2	1	—	—	1.6
Class XII Diseases of the skin and subcutaneous tissue (680–709)	3	25	39	37	41	3.7
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	9	72	129	131	133	3.8
Arthropathies and related disorders (710–719)	8	52	89	96	89	3.7
Class IV Congenital anomalies (740–759)	25	71	84	47	44	3.1
Class XV Certain conditions originating in the perinatal period (760–779)	31	78	75	39	29	2.9
Class XVI Symptoms, signs and ill-defined conditions (780–799)	246	36	8	2	—	1.2
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	22	864	449	382	615	2.1
Accidents (E800–E949)	15	490	304	300	543	2.3
Motor vehicle traffic accidents (E810–E819)	13	278	99	46	71	1.2
Accidental falls (E880–E888)	—	30	108	187	326	3.2
Accidental drowning and submersion (E910)	—	42	8	6	2	1.4
Suicide (E950–E959)	2	298	111	60	62	1.5
Homicide (E960–E969)	5	59	21	15	4	1.2

(a) Excludes injury codes (ICD codes N800–N999).

2.2 UNDERLYING AND NUMBER OF CAUSES OF DEATH REPORTED(a) *continued*

Underlying cause of death and ICD code	REPORTED WITH.....					
	Reported alone	One other cause	Two other causes	Three other causes	Four or more other causes	Mean number of causes
PERSONS						
<b>All causes</b>	<b>23 536</b>	<b>35 615</b>	<b>31 960</b>	<b>19 181</b>	<b>16 910</b>	<b>2.7</b>
Class I Infectious and parasitic diseases (001–139)	154	309	338	258	296	3.3
Class II Neoplasms (140–239)	12 163	9 601	6 818	3 687	2 804	2.3
Malignant neoplasms (140–208)	12 080	9 485	6 688	3 600	2 707	2.3
Lip, oral cavity and pharynx (140–149)	238	167	127	65	75	2.4
Digestive organs and peritoneum (150–159)	3 696	2 628	1 851	919	695	2.2
Oesophagus (150)	350	284	203	79	61	2.2
Stomach (151)	527	293	208	95	68	2.1
Colon (153)	1 236	920	654	335	249	2.3
Rectum, rectosigmoid junction and anus (154)	442	334	239	123	102	2.3
Liver and intrahepatic bile ducts (155)	201	183	124	78	62	2.5
Pancreas (157)	709	421	272	133	77	2.1
Trachea, bronchus and lung (162)	2 193	2 018	1 351	792	520	2.4
Bone, connective tissue, skin and breast (170–175)	1 575	1 157	773	379	277	2.2
Melanoma of skin (172)	398	278	172	76	56	2.1
Breast (174, 175)	1 005	699	449	237	168	2.2
Genitourinary organs (179–189)	1 853	1 519	1 127	630	466	2.4
Ovary and other uterine adnexa (183)	338	192	131	56	40	2.0
Prostate (185)	770	727	523	291	220	2.4
Bladder (188)	230	221	160	122	86	2.6
Other and unspecified sites (190–199)	1 266	987	635	339	252	2.3
Brain (191)	575	245	126	39	25	1.7
Lymphatic and haematopoietic tissue (200–208)	1 060	858	729	441	382	2.5
Leukaemia (204–208)	316	349	282	194	175	2.7
Benign and unspecified neoplasms (210–239)	83	116	130	87	97	3.0
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	89	547	1 250	975	994	3.7
Diabetes mellitus (250)	40	376	932	715	688	3.7
Class IV Diseases of blood and blood-forming organs (280–289)	53	99	120	81	85	3.2
Class V Mental disorders (290–319)	410	961	924	517	466	2.7
Senile and presenile organic psychotic conditions (290)	193	420	297	133	76	2.5
Drug dependence (304)	40	11	221	154	204	2.5
Class VI Disease of the nervous system and sense organs (320–389)	529	921	725	359	271	2.6
Hereditary and degenerative diseases of the central nervous system (330–337)	400	741	515	230	146	2.5
Alzheimer's disease (3310)	154	308	203	69	46	2.4
Class VII Diseases of the circulatory system (390–459)	7 069	13 862	14 576	8 585	6 705	2.9
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	4 165	9 233	10 479	6 390	4 988	3.0
Rheumatic fever and rheumatic heart disease (390–398)	12	39	79	67	61	3.6
Hypertensive disease (401–405)	173	344	291	169	163	2.9
Ischaemic heart disease (410–414)	3 197	7 241	8 414	5 062	3 911	3.0
Acute myocardial infarction (410)	1 527	4 803	5 228	2 908	2 061	3.0
Diseases of pulmonary circulation and other forms of heart disease (415–429)	844	1 755	1 836	1 183	955	3.0
Cerebrovascular disease (430–438)	2 345	3 727	3 178	1 602	1 130	2.7
Diseases of arteries, arterioles and capillaries (440–448)	494	682	704	436	429	2.9
Atherosclerosis (440)	53	167	174	74	63	2.9
Aortic aneurysm (441)	418	389	305	168	149	2.5

(a) Excludes injury codes (ICD codes N800–N999).

2.2 UNDERLYING AND NUMBER OF CAUSES OF DEATH REPORTED(a) *continued*

Underlying cause of death and ICD code	REPORTED WITH.....					Mean number of causes
	Reported alone	One other cause	Two other causes	Three other causes	Four or more other causes	
Class VIII Diseases of the respiratory system (460–519)	1 835	3 769	3 337	1 920	1 549	2.9
Pneumonia and influenza (480–487)	991	1 568	1 063	553	404	2.6
Chronic obstructive pulmonary disease and allied conditions (490–496)	575	1 732	1 818	1 105	884	3.1
Emphysema (492)	64	270	273	149	106	3.0
Asthma (493)	142	192	186	100	65	2.7
Class IX Diseases of the digestive system (520–579)	314	764	1 019	774	1 066	3.5
Diseases of oesophagus, stomach and duodenum (530–537)	73	139	169	134	161	3.4
Ulcer of stomach and duodenum (531–533)	69	118	123	78	90	3.1
Chronic liver disease and cirrhosis (571)	75	258	263	198	224	3.4
Class X Diseases of the genitourinary system (580–629)	128	484	721	521	696	3.6
Nephritis, nephrotic syndrome and nephrosis (580–589)	119	356	472	326	419	3.5
Renal failure (584–586)	115	311	415	251	338	3.4
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	4	2	1	—	—	1.6
Class XII Diseases of the skin and subcutaneous tissue (680–709)	4	43	60	57	73	3.8
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	13	95	172	185	206	3.8
Arthropathies and related disorders (710–719)	11	66	116	130	136	3.8
Class IV Congenital anomalies (740–759)	68	152	179	106	100	3.1
Class XV Certain conditions originating in the perinatal period (760–779)	59	154	167	94	103	3.2
Class XVI Symptoms, signs and ill-defined conditions (780–799)	582	62	12	4	1	1.1
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	62	3 790	1 541	1 058	1 495	1.8
Accidents (E800–E949)	49	1 780	936	785	1 270	2.0
Motor vehicle traffic accidents (E810–E819)	41	882	349	191	268	1.3
Accidental falls (E880–E888)	—	91	191	302	598	3.2
Accidental drowning and submersion (E910)	—	174	42	23	6	1.4
Suicide (E950–E959)	4	1 768	509	222	180	1.4
Homicide (E960–E969)	9	183	59	34	22	1.3

(a) Excludes injury codes (ICD codes N800–N999).

## 2.3 UNDERLYING AND MULTIPLE CAUSES OF DEATH, Numbers and Ratio

Cause of death and ICD code	UNDERLYING CAUSE.....			MULTIPLE CAUSE(a).....			RATIO(b)
	Males	Females	Persons	Males	Females	Persons	Persons
<b>All causes</b>	<b>67 073</b>	<b>60 129</b>	<b>127 202</b>	<b>182 466</b>	<b>164 869</b>	<b>347 335</b>	<b>2.7</b>
Class I Infectious and parasitic diseases (001–139)	752	603	1 355	3 953	3 450	7 403	5.5
Class II Neoplasms (140–239)	19 861	15 212	35 073	29 644	22 301	51 945	1.5
Malignant neoplasms (140–208)	19 590	14 970	34 560	28 983	21 737	50 720	1.5
Lip, oral cavity and pharynx (140–149)	479	193	672	592	241	833	1.2
Digestive organs and peritoneum (150–159)	5 441	4 348	9 789	6 233	4 865	11 098	1.1
Oesophagus (150)	654	323	977	724	358	1 082	1.1
Stomach (151)	753	438	1 191	836	476	1 312	1.1
Colon (153)	1 733	1 661	3 394	2 017	1 856	3 873	1.1
Rectum, rectosigmoid junction and anus (154)	736	504	1 240	851	567	1 418	1.1
Liver and intrahepatic bile ducts (155)	427	221	648	489	250	739	1.1
Pancreas (157)	811	801	1 612	863	837	1 700	1.1
Trachea, bronchus and lung (162)	4 821	2 053	6 874	5 247	2 193	7 440	1.1
Bone, connective tissue, skin and breast (170–175)	1 031	3 130	4 161	1 287	3 918	5 205	1.3
Melanoma of skin (172)	635	345	980	711	406	1 117	1.1
Breast (174, 175)	16	2 542	2 558	25	3 184	3 209	1.3
Genitourinary organs (179–189)	3 634	1 961	5 595	5 224	2 313	7 537	1.3
Ovary and other uterine adnexa (183)	—	757	757	—	814	814	1.1
Prostate (185)	2 531	—	2 531	3 758	—	3 758	1.5
Bladder (188)	572	247	819	829	326	1 155	1.4
Other and unspecified sites (190–199)	1 866	1 613	3 479	7 481	6 197	13 678	3.9
Brain (191)	567	443	1 010	594	464	1 058	1.0
Lymphatic and haematopoietic tissue (200–208)	1 870	1 600	3 470	2 370	1 914	4 284	1.2
Leukaemia (204–208)	763	553	1 316	989	685	1 674	1.3
Benign and unspecified neoplasms (210–239)	271	242	513	661	564	1 225	2.4
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	1 958	1 897	3 855	7 922	7 652	15 574	4.0
Diabetes mellitus (250)	1 424	1 327	2 751	5 108	4 472	9 580	3.5
Class IV Diseases of blood and blood-forming organs (280–289)	213	225	438	1 778	1 749	3 527	8.1
Class V Mental disorders (290–319)	1 558	1 720	3 278	6 959	6 473	13 432	4.1
Senile and presenile organic psychotic conditions (290)	369	750	1 119	1 086	1 919	3 005	2.7
Drug dependence (304)	509	121	630	608	151	759	1.2
Class VI Disease of the nervous system and sense organs (320–389)	1 375	1 430	2 805	4 439	4 328	8 767	3.1
Hereditary and degenerative diseases of the central nervous system (330–337)	947	1 085	2 032	2 295	2 452	4 747	2.3
Alzheimer's disease (331.0)	245	535	780	601	1 163	1 764	2.3
Class VII Diseases of the circulatory system (390–459)	24 746	26 051	50 797	67 442	66 862	134 304	2.6
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	18 201	17 054	35 255	47 667	43 183	90 850	2.6
Rheumatic fever and rheumatic heart disease (390–398)	87	171	258	218	346	564	2.2
Hypertensive disease (401–405)	410	730	1 140	5 266	6 881	12 147	10.7
Ischaemic heart disease (410–414)	15 024	12 801	27 825	27 009	21 758	48 767	1.8
Acute myocardial infarction (410)	8 897	7 630	16 527	10 555	8 952	19 507	1.2
Diseases of pulmonary circulation and other forms of heart disease (415–429)	2 895	3 678	6 573	19 940	20 390	40 330	6.1
Heart failure (428)	988	1 567	2 555	7 366	9 015	16 381	6.4
Cerebrovascular disease (430–438)	4 812	7 170	11 982	9 259	12 191	21 450	1.8
Diseases of arteries, arterioles and capillaries (440–448)	1 415	1 330	2 745	4 834	4 456	9 290	3.4
Atherosclerosis (440)	193	338	531	2 199	2 446	4 645	8.7
Aortic aneurysm (441)	878	551	1 429	1 209	731	1 940	1.4

(a) Deaths where the cause was ever reported. See Glossary for further information.

(b) Ratio of multiple (underlying and contributory) to underlying cause.

Excludes injury codes (ICD codes N800–N999).

2.3 UNDERLYING AND MULTIPLE CAUSES OF DEATH, Numbers and Ratio *continued*

Cause of death and ICD code	UNDERLYING CAUSE.....			MULTIPLE CAUSE(a).....			RATIO(b)
	Males	Females	Persons	Males	Females	Persons	Persons
Class VIII Diseases of the respiratory system (460–519)	6 593	5 817	12 410	23 052	18 751	41 803	3.4
Pneumonia and influenza (480–487)	2 049	2 530	4 579	7 951	7 625	15 576	3.4
Chronic obstructive pulmonary disease and allied conditions (490–496)	3 628	2 486	6 114	8 810	5 506	14 316	2.3
Emphysema (492)	575	287	862	1 288	553	1 841	2.1
Asthma (493)	278	407	685	716	1 058	1 774	2.6
Class IX Diseases of the digestive system (520–579)	1 969	1 968	3 937	7 012	6 359	13 371	3.4
Diseases of oesophagus, stomach and duodenum (530–537)	323	353	676	1 147	1 042	2 189	3.2
Ulcer of stomach and duodenum (531–533)	225	253	478	726	630	1 356	2.8
Chronic liver disease and cirrhosis (571)	725	293	1 018	1 353	541	1 894	1.9
Class X Diseases of the genitourinary system (580–629)	1 117	1 433	2 550	7 604	7 023	14 627	5.7
Nephritis, nephrotic syndrome and nephrosis (580–589)	789	903	1 692	5 951	5 111	11 062	6.5
Renal failure (584–586)	668	762	1 430	5 703	4 842	10 545	7.4
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	—	7	7	—	7	7	1.0
Class XII Diseases of the skin and subcutaneous tissue (680–709)	92	145	237	510	663	1 173	4.9
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	197	474	671	1 326	2 822	4 148	6.2
Arthropathies and related disorders (710–719)	125	334	459	667	1 444	2 111	4.6
Class IV Congenital anomalies (740–759)	334	271	605	650	501	1 151	1.9
Class XV Certain conditions originating in the perinatal period (760–779)	325	252	577	1 207	860	2 067	3.6
Class XVI Symptoms, signs and ill-defined conditions (780–799)(c)	369	292	661	10 087	9 979	20 066	30.4
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	5 614	2 332	7 946	8 881	5 089	13 970	1.8
Accidents (E800–E949)	3 168	1 652	4 820	6 363	4 373	10 736	2.2
Motor vehicle traffic accidents (E810–E819)	1 224	507	1 731	1 240	514	1 754	1.0
Accidental falls (E880–E888)	531	651	1 182	1 016	1 485	2 501	2.1
Accidental drowning and submersion (E910)	187	58	245	200	66	266	1.1
Suicide (E950–E959)	2 150	533	2 683	2 198	560	2 758	1.0
Homicide (E960–E969)	203	104	307	210	106	316	1.0

(a) Deaths where the cause was ever reported. See Glossary for further information.

Excludes injury codes (ICD codes N800–N999).

(b) Ratio of multiple (underlying and contributory) to underlying cause.

(c) Coding rules only allow this cause category to be the underlying cause when no other specific cause is recorded on the death certificate.

## 2.4 UNDERLYING AND MULTIPLE CAUSES OF DEATH, Crude Death Rates(a)

Cause of death and ICD code	UNDERLYING CAUSE.....			MULTIPLE CAUSE(b).....		
	Males	Females	Persons	Males	Females	Persons
<b>All causes(c)</b>	<b>718.9</b>	<b>638.2</b>	<b>678.4</b>	<b>718.9</b>	<b>638.2</b>	<b>678.4</b>
Class I Infectious and parasitic diseases (001–139)	8.1	6.4	7.2	42.4	36.6	39.5
Class II Neoplasms (140–239)	212.9	161.5	187.0	317.7	236.7	277.0
Malignant neoplasms (140–208)	210.0	158.9	184.3	310.6	230.7	270.5
Lip, oral cavity and pharynx (140–149)	5.1	2.0	3.6	6.3	2.6	4.4
Digestive organs and peritoneum (150–159)	58.3	46.2	52.2	66.8	51.6	59.2
Oesophagus (150)	7.0	3.4	5.2	7.8	3.8	5.8
Stomach (151)	8.1	4.6	6.4	9.0	5.1	7.0
Colon (153)	18.6	17.6	18.1	21.6	19.7	20.7
Rectum, rectosigmoid junction and anus (154)	7.9	5.3	6.6	9.1	6.0	7.6
Liver and intrahepatic bile ducts (155)	4.6	2.3	3.5	5.2	2.7	3.9
Pancreas (157)	8.7	8.5	8.6	9.2	8.9	9.1
Trachea, bronchus and lung (162)	51.7	21.8	36.7	56.2	23.3	39.7
Bone, connective tissue, skin and breast (170–175)	11.1	33.2	22.2	13.8	41.6	27.8
Melanoma of skin (172)	6.8	3.7	5.2	7.6	4.3	6.0
Breast (174, 175)	0.2	27.0	13.6	0.3	33.8	17.1
Genitourinary organs (179–189)	39.0	20.8	29.8	56.0	24.6	40.2
Ovary and other uterine adnexa (183)	..	8.0	4.0	..	8.6	4.3
Prostate (185)	27.1	..	13.5	40.3	..	20.0
Bladder (188)	6.1	2.6	4.4	8.9	3.5	6.2
Other and unspecified sites (190–199)	20.0	17.1	18.6	80.2	65.8	72.9
Brain (191)	6.1	4.7	5.4	6.4	4.9	5.6
Lymphatic and haematopoietic tissue (200–208)	20.0	17.0	18.5	25.4	20.3	22.8
Leukaemia (204–208)	8.2	5.9	7.0	10.6	7.3	8.9
Benign and unspecified neoplasms (210–239)	2.9	2.6	2.7	7.1	6.0	6.5
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	21.0	20.1	20.6	84.9	81.2	83.1
Diabetes mellitus (250)	15.3	14.1	14.7	54.7	47.5	51.1
Class IV Diseases of blood and blood-forming organs (280–289)	2.3	2.4	2.3	19.1	18.6	18.8
Class V Mental disorders (290–319)	16.7	18.3	17.5	74.6	68.7	71.6
Senile and presenile organic psychotic conditions (290)	4.0	8.0	6.0	11.6	20.4	16.0
Drug dependence (304)	5.5	1.3	3.4	6.5	1.6	4.0
Class VI Diseases of the nervous system and sense organs (320–389)	14.7	15.2	15.0	47.6	45.9	46.8
Hereditary and degenerative diseases of the central nervous system (330–337)	10.2	11.5	10.8	24.6	26.0	25.3
Alzheimer's disease (3310)	2.6	5.7	4.2	6.4	12.3	9.4
Class VII Diseases of the circulatory system (390–459)	265.2	276.5	270.9	722.9	709.7	716.3
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	195.1	181.0	188.0	510.9	458.4	484.5
Rheumatic fever and rheumatic heart disease (390–398)	0.9	1.8	1.4	2.3	3.7	3.0
Hypertensive disease (401–405)	4.4	7.7	6.1	56.4	73.0	64.8
Ischaemic heart disease (410–414)	161.0	135.9	148.4	289.5	230.9	260.1
Acute myocardial infarction (410)	95.4	81.0	88.1	113.1	95.0	104.0
Diseases of pulmonary circulation and other forms of heart disease (415–429)	31.0	39.0	35.1	213.7	216.4	215.1
Heart failure (428)	10.6	16.6	13.6	79.0	95.7	87.4
Cerebrovascular disease (430–438)	51.6	76.1	63.9	99.2	129.4	114.4
Diseases of arteries, arterioles and capillaries (440–448)	15.2	14.1	14.6	51.8	47.3	49.5
Atherosclerosis (440)	2.1	3.6	2.8	23.6	26.0	24.8
Aortic aneurysm (441)	9.4	5.8	7.6	13.0	7.8	10.3

(a) Rates are expressed per 100,000 estimated mid year population.

(c) Rates are based on total deaths.

(b) Deaths where the cause was ever reported. See Glossary for further information. Excludes injury codes (ICD codes N800–N999).

2.4 UNDERLYING AND MULTIPLE CAUSES OF DEATH, Crude Death Rates(a) *continued*

Cause of death and ICD code	UNDERLYING CAUSE.....			MULTIPLE CAUSE(b).....		
	Males	Females	Persons	Males	Females	Persons
Class VIII Diseases of the respiratory system (460–519)	70.7	61.7	66.2	247.1	199.0	222.9
Pneumonia and influenza (480–487)	22.0	26.9	24.4	85.2	80.9	83.1
Chronic obstructive pulmonary disease and allied conditions (490–496)	38.9	26.4	32.6	94.4	58.4	76.3
Emphysema (492)	6.2	3.0	4.6	13.8	5.9	9.8
Asthma (493)	3.0	4.3	3.7	7.7	11.2	9.5
Class IX Diseases of the digestive system (520–579)	21.1	20.9	21.0	75.2	67.5	71.3
Diseases of oesophagus, stomach and duodenum (530–537)	3.5	3.7	3.6	12.3	11.1	11.7
Ulcer of stomach and duodenum (531–533)	2.4	2.7	2.5	7.8	6.7	7.2
Chronic liver disease and cirrhosis (571)	7.8	3.1	5.4	14.5	5.7	10.1
Class X Diseases of the genitourinary system (580–629)	12.0	15.2	13.6	81.5	74.5	78.0
Nephritis, nephrotic syndrome and nephrosis (580–589)	8.5	9.6	9.0	63.8	54.3	59.0
Renal failure (584–586)	7.2	8.1	7.6	61.1	51.4	56.2
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	..	0.1	—	..	0.1	—
Class XII Diseases of the skin and subcutaneous tissue (680–709)	1.0	1.5	1.3	5.5	7.0	6.3
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	2.1	5.0	3.6	14.2	30.0	22.1
Arthropathies and related disorders (710–719)	1.3	3.5	2.4	7.1	15.3	11.3
Class IV Congenital anomalies (740–759)	3.6	2.9	3.2	7.0	5.3	6.1
Class XV Certain conditions originating in the perinatal period (760–779)	3.5	2.7	3.1	12.9	9.1	11.0
Class XVI Symptoms, signs and ill-defined conditions (780–799)(c)	4.0	3.1	3.5	108.1	105.9	107.0
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	60.2	24.8	42.4	95.2	54.0	74.5
Accidents (E800–E949)	34.0	17.5	25.7	68.2	46.4	57.3
Motor vehicle traffic accidents (E810–E819)	13.1	5.4	9.2	13.3	5.5	9.4
Accidental falls (E880–E888)	5.7	6.9	6.3	10.9	15.8	13.3
Accidental drowning and submersion (E910)	2.0	0.6	1.3	2.1	0.7	1.4
Suicide (E950–E959)	23.0	5.7	14.3	23.6	5.9	14.7
Homicide (E960–E969)	2.2	1.1	1.6	2.3	1.1	1.7

(a) Rates are expressed per 100,000 estimated midyear population.

(b) Deaths where the cause was ever reported. See Glossary for further information. Excludes injury codes (ICD codes N800–N999).

(c) Coding rules only allow this cause category to be the underlying cause when no other specific cause is recorded on the death certificate.



## 2.5 CAUSES OF DEATH, Underlying Cause and Most Common Associated Causes

Underlying cause/associated cause and ICD code	Males.....		Females.....		Persons.....	
	no.	%	no.	%	no.	%
Malignant neoplasms (140–208)	19 590	100.0	14 970	100.0	34 560	100.0
Reported alone	6 517	33.3	5 563	37.2	12 080	35.0
Reported with						
Diabetes mellitus (250)	817	4.2	484	3.2	1 301	3.8
Ischaemic heart disease (410–414)	1 359	6.9	741	4.9	2 100	6.1
Heart failure (428)	681	3.5	578	3.9	1 259	3.6
Pneumonia and influenza (480–487)	1 694	8.6	1 013	6.8	2 707	7.8
Chronic obstructive pulmonary disease and allied conditions (490–496)	1 443	7.4	572	3.8	2 015	5.8
Nephritis, nephrotic syndrome and nephrosis (580–589)	1 001	5.1	564	3.8	1 565	4.5
Diabetes mellitus (250)	1 424	100.0	1 327	100.0	2 751	100.0
Reported alone	20	1.4	20	1.5	40	1.5
Reported with						
Hypertensive disease (401–405)	292	20.5	330	24.9	622	22.6
Ischaemic heart disease (410–414)	824	57.9	661	49.8	1 485	54.0
Heart failure (428)	230	16.2	258	19.4	488	17.7
Cerebrovascular disease (430–438)	301	21.1	271	20.4	572	20.8
Pneumonia and influenza (480–487)	98	6.9	91	6.9	189	6.9
Nephritis, nephrotic syndrome and nephrosis (580–589)	270	19.0	273	20.6	543	19.7
Hereditary and degenerative diseases of the central nervous system (330–337)	947	100.0	1 085	100.0	2 032	100.0
Reported alone	164	17.3	236	21.8	400	19.7
Reported with						
Ischaemic heart disease (410–414)	75	7.9	65	6.0	140	6.9
Cerebrovascular disease (430–438)	77	8.1	94	8.7	171	8.4
Pneumonia and influenza (480–487)	238	25.1	227	20.9	465	22.9
Ischaemic heart disease (410–414)	15 024	100.0	12 801	100.0	27 825	100.0
Reported alone	1 958	13.0	1 239	9.7	3 197	11.5
Reported with						
Malignant neoplasms (140–208)	1 035	6.9	538	4.2	1 573	5.7
Diabetes mellitus (250)	1 366	9.1	1 130	8.8	2 496	9.0
Hypertensive disease (401–405)	2 117	14.1	2 342	18.3	4 459	16.0
Heart failure (428)	2 480	16.5	2 927	22.9	5 407	19.4
Cerebrovascular disease (430–438)	1 097	7.3	1 184	9.2	2 281	8.2
Diseases of arteries, arterioles and capillaries (440–448)	1 543	10.3	1 234	9.6	2 777	10.0
Pneumonia and influenza (480–487)	573	3.8	541	4.2	1 114	4.0
Chronic obstructive pulmonary disease and allied conditions (490–496)	1 716	11.4	1 037	8.1	2 753	9.9
Nephritis, nephrotic syndrome and nephrosis (580–589)	1 018	6.8	798	6.2	1 816	6.5
Heart failure (428)	988	100.0	1 567	100.0	2 555	100.0
Reported alone	120	12.1	244	15.6	364	14.2
Reported with						
Cerebrovascular disease (430–438)	84	8.5	141	9.0	225	8.8
Pneumonia and influenza (480–487)	219	22.2	327	20.9	546	21.4
Chronic obstructive pulmonary disease and allied conditions (490–496)	184	18.6	179	11.4	363	14.2
Nephritis, nephrotic syndrome and nephrosis (580–589)	179	18.1	217	13.8	396	15.5
Cerebrovascular disease (430–438)	4 812	100.0	7 170	100.0	11 982	100.0
Reported alone	889	18.5	1 456	20.3	2 345	19.6
Reported with						
Hypertensive disease (401–405)	922	19.2	1 653	23.1	2 575	21.5
Ischaemic heart disease (410–414)	494	10.3	599	8.4	1 093	9.1
Diseases of arteries, arterioles and capillaries (440–448)	585	12.2	876	12.2	1 461	12.2
Pneumonia and influenza (480–487)	639	13.3	746	10.4	1 385	11.6

2.5 CAUSES OF DEATH, Underlying Cause and Most Common Associated Causes *continued*

<i>Underlying cause/associated cause and ICD code</i>	<i>Males.....</i>		<i>Females.....</i>		<i>Persons.....</i>	
	<i>no.</i>	<i>%</i>	<i>no.</i>	<i>%</i>	<i>no.</i>	<i>%</i>
Diseases of arteries, arterioles and capillaries (440–448)	1 415	100.0	1 330	100.0	2 745	100.0
Reported alone	285	20.1	209	15.7	494	18.0
Reported with						
Hypertensive disease (401–405)	142	10.0	157	11.8	299	10.9
Ischaemic heart disease (410–414)	297	21.0	165	12.4	462	16.8
Heart failure (428)	151	10.7	204	15.3	355	12.9
Cerebrovascular disease (430–438)	96	6.8	115	8.6	211	7.7
Chronic obstructive pulmonary disease and allied conditions (490–496)	140	9.9	76	5.7	216	7.9
Nephritis, nephrotic syndrome and nephrosis (580–589)	189	13.4	165	12.4	354	12.9
Pneumonia and influenza (480–487)	2 049	100.0	2 530	100.0	4 579	100.0
Reported alone	421	20.5	570	22.5	991	21.6
Reported with						
Malignant neoplasms (140–208)	174	8.5	100	4.0	274	6.0
Hereditary and degenerative diseases of the central nervous system (330–337)	137	6.7	132	5.2	269	5.9
Ischaemic heart disease (410–414)	286	14.0	305	12.1	591	12.9
Heart failure (428)	258	12.6	331	13.1	589	12.9
Cerebrovascular disease (430–438)	208	10.2	243	9.6	451	9.8
Chronic obstructive pulmonary disease and allied conditions (490–496)	183	8.9	104	4.1	287	6.3
Nephritis, nephrotic syndrome and nephrosis (580–589)	198	9.7	130	5.1	328	7.2
Chronic obstructive pulmonary disease and allied conditions (490–496)	3 628	100.0	2 486	100.0	6 114	100.0
Reported alone	313	8.6	262	10.5	575	9.4
Reported with						
Malignant neoplasms (140–208)	325	9.0	108	4.3	433	7.1
Hypertensive disease (401–405)	165	4.5	141	5.7	306	5.0
Ischaemic heart disease (410–414)	634	17.5	348	14.0	982	16.1
Heart failure (428)	651	17.9	474	19.1	1 125	18.4
Cerebrovascular disease (430–438)	179	4.9	116	4.7	295	4.8
Pneumonia and influenza (480–487)	1 074	29.6	668	26.9	1 742	28.5
Nephritis, nephrotic syndrome and nephrosis (580–589)	198	5.5	117	4.7	315	5.2
Nephritis, nephrotic syndrome and nephrosis (580–589)	789	100.0	903	100.0	1 692	100.0
Reported alone	48	6.1	71	7.9	119	7.0
Reported with						
Diabetes (250)	56	7.1	59	6.5	115	6.8
Ischaemic heart disease (410–414)	212	26.9	180	19.9	392	23.2
Heart failure (428)	221	28.0	227	25.1	448	26.5
Cerebrovascular disease (430–438)	63	8.0	82	9.1	145	8.6
Pneumonia and influenza (480–487)	105	13.3	82	9.1	187	11.1
Chronic obstructive pulmonary disease and allied conditions (490–496)	70	8.9	47	5.2	117	6.9

## 2.6 CAUSES OF DEATH, Multiple Causes and Underlying Cause

Multiple cause/underlying cause and ICD code	Males.....		Females.....		Persons.....	
	no.	%	no.	%	no.	%
Septicaemia (038)	2 775	100.0	2 781	100.0	5 556	100.0
Reported as underlying cause	304	11.0	366	13.2	670	12.1
Reported in association with an underlying cause of						
Malignant neoplasms (140–208)	626	22.6	442	15.9	1 068	19.2
Diabetes mellitus (250)	119	4.3	129	4.6	248	4.5
Ischaemic heart disease (410–414)	133	4.8	139	5.0	272	4.9
Cerebrovascular disease (430–438)	119	4.3	130	4.7	249	4.5
Pneumonia and influenza (480–487)	185	6.7	150	5.4	335	6.0
Malignant neoplasms (140–208)	22 468	100.0	16 709	100.0	39 177	100.0
Reported as underlying cause	19 590	87.2	14 970	89.6	34 560	88.2
Reported in association with an underlying cause of						
Ischaemic heart disease (410–414)	1 035	4.6	538	3.2	1 573	4.0
Cerebrovascular disease (430–438)	317	1.4	235	1.4	552	1.4
Diabetes mellitus (250)	5 036	100.0	4 418	100.0	9 454	100.0
Reported as underlying cause	1 424	28.3	1 327	30.0	2 751	29.1
Reported in association with an underlying cause of						
Malignant neoplasms (140–208)	817	16.2	484	11.0	1 301	13.8
Ischaemic heart disease (410–414)	1 366	27.1	1 130	25.6	2 496	26.4
Cerebrovascular disease (430–438)	355	7.0	432	9.8	787	8.3
Hereditary and degenerative diseases of the central nervous system (330–337)	2 234	100.0	2 415	100.0	4 649	100.0
Reported as underlying cause	947	42.4	1 085	44.9	2 032	43.7
Reported in association with an underlying cause of						
Ischaemic heart disease (410–414)	293	13.1	300	12.4	593	12.8
Cerebrovascular disease (430–438)	212	9.5	290	12.0	502	10.8
Pneumonia and influenza (480–487)	137	6.1	132	5.5	269	5.8
Hypertensive disease (401–405)	5 261	100.0	6 870	100.0	12 131	100.0
Reported as underlying cause	410	7.8	730	10.6	1 140	9.4
Reported in association with an underlying cause of						
Malignant neoplasms (140–208)	593	11.3	543	7.9	1 136	9.4
Diabetes mellitus (250)	292	5.6	330	4.8	622	5.1
Ischaemic heart disease (410–414)	2 117	40.2	2 342	34.1	4 459	36.8
Cerebrovascular disease (430–438)	922	17.5	1 653	24.1	2 575	21.2
Ischaemic heart disease (410–414)	20 750	100.0	17 187	100.0	37 937	100.0
Reported as underlying cause	15 024	72.4	12 801	74.5	27 825	73.3
Reported in association with an underlying cause of						
Malignant neoplasms (140–208)	1 359	6.5	741	4.3	2 100	5.5
Diabetes mellitus (250)	824	4.0	661	3.8	1 485	3.9
Cerebrovascular disease (430–438)	494	2.4	599	3.5	1 093	2.9
Chronic obstructive pulmonary disease and allied conditions (490–496)	634	3.1	348	2.0	982	2.6
Heart failure (428)	7 338	100.0	8 986	100.0	16 324	100.0
Reported as underlying cause	988	13.5	1 567	17.4	2 555	15.7
Reported in association with an underlying cause of						
Malignant neoplasms (140–208)	681	9.3	578	6.4	1 259	7.7
Ischaemic heart disease (410–414)	2 480	33.8	2 927	32.6	5 407	33.1
Cerebrovascular disease (430–438)	232	3.2	442	4.9	674	4.1
Pneumonia and influenza (480–487)	258	3.5	331	3.7	589	3.6
Chronic obstructive pulmonary disease and allied conditions (490–496)	651	8.9	474	5.3	1 125	6.9
Cerebrovascular disease (430–438)	8 573	100.0	11 125	100.0	19 698	100.0
Reported as underlying cause	4 812	56.1	7 170	64.4	11 982	60.8
Reported in association with an underlying cause of						
Malignant neoplasms (140–208)	724	8.4	484	4.4	1 208	6.1
Diabetes mellitus (250)	301	3.5	271	2.4	572	2.9
Ischaemic heart disease (410–414)	1 097	12.8	1 184	10.6	2 281	11.6
Pneumonia and influenza (480–487)	208	2.4	243	2.2	451	2.3

2.6 CAUSES OF DEATH, Multiple Causes and Underlying Cause *continued*

<i>Multiple cause/underlying cause and ICD code</i>	<i>Males.....</i>		<i>Females.....</i>		<i>Persons.....</i>	
	<i>no.</i>	<i>%</i>	<i>no.</i>	<i>%</i>	<i>no.</i>	<i>%</i>
Diseases of arteries, arterioles and capillaries (440–448)	4 603	100.0	4 244	100.0	8 847	100.0
Reported as underlying cause	1 415	30.7	1 330	31.3	2 745	31.0
Reported in association with an underlying cause of						
Malignant neoplasms (140–208)	254	5.5	101	2.4	355	4.0
Ischaemic heart disease (410–414)	1 543	33.5	1 234	29.1	2 777	31.4
Cerebrovascular disease (430–438)	585	12.7	876	20.6	1 461	16.5
Pneumonia and influenza (480–487)	7 947	100.0	7 623	100.0	15 570	100.0
Reported as underlying cause	2 049	25.8	2 530	33.2	4 579	29.4
Reported in association with an underlying cause of						
Malignant neoplasms (140–208)	1 694	21.3	1 013	13.3	2 707	17.4
Hereditary and degenerative diseases of the central nervous system (330–337)	238	3.0	227	3.0	465	3.0
Ischaemic heart disease (410–414)	573	7.2	541	7.1	1 114	7.2
Heart failure (428)	219	2.8	327	4.3	546	3.5
Cerebrovascular disease (430–438)	639	8.0	746	9.8	1 385	8.9
Chronic obstructive pulmonary disease and allied conditions (490–496)	1 074	13.5	668	8.8	1 742	11.2
Chronic obstructive pulmonary disease and allied conditions (490–496)	8 733	100.0	5 422	100.0	14 155	100.0
Reported as underlying cause	3 628	41.5	2 486	45.9	6 114	43.2
Reported in association with an underlying cause of						
Malignant neoplasms (140–208)	1 443	16.5	572	10.5	2 015	14.2
Ischaemic heart disease (410–414)	1 716	19.6	1 037	19.1	2 753	19.4
Cerebrovascular disease (430–438)	302	3.5	232	4.3	534	3.8
Nephritis, nephrotic syndrome and nephrosis (580–589)	5 304	100.0	4 560	100.0	9 864	100.0
Reported as underlying cause	789	14.9	903	19.8	1 692	17.2
Reported in association with an underlying cause of						
Malignant neoplasms (140–208)	1 001	18.9	564	12.4	1 565	15.9
Diabetes (250)	270	5.1	273	6.0	543	5.5
Ischaemic heart disease (410–414)	1 018	19.2	798	17.5	1 816	18.4
Heart failure (428)	179	3.4	217	4.8	396	4.0
Diseases of arteries, arterioles and capillaries (440–448)	189	3.6	165	3.6	354	3.6
Pneumonia and influenza (480–487)	198	3.7	130	2.9	328	3.3

## 2.7 NATURE OF INJURY, By External Cause

ACCIDENTS.....							
<i>Nature of injury or poisoning and ICD code</i>	<i>Motor vehicle traffic accidents (E810–E819)</i>	<i>Accidental poisoning (E850–E869)</i>	<i>Accidental falls (E880–E888)</i>	<i>Accidents caused by fire and flames (E890–E899)</i>	<i>Accidental drowning and submersion (E910)</i>	<i>Other</i>	<i>Total</i>
MALES							
	%	%	%	%	%	%	%
<b>Total injuries (N800–N999)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Fractures (N800–N829)	20.6	—	42.5	—	1.0	8.4	17.7
Intracranial injury, excluding those with skull fracture (N850–N854)	21.4	0.3	24.4	—	2.0	13.2	16.1
Internal injury of chest, abdomen and pelvis (N860–N869)	19.4	—	2.9	—	0.5	13.5	11.6
Open wound (N870–N897)	1.3	—	0.5	—	—	3.2	1.2
Burns (N940–N949)	0.9	—	0.1	44.7	—	1.6	1.6
Certain traumatic complications and unspecified injuries (N958–N959)	28.2	0.1	14.6	8.7	—	16.8	18.2
Poisoning by drugs, medicaments and biological substances (N960–N979)	0.2	81.1	0.4	—	0.5	0.4	12.4
Toxic effects of substances chiefly non-medical as to source (N980–N989)	0.4	14.8	0.4	43.7	0.5	1.3	3.6
Other and unspecified effects of external causes (N990–N995)	0.6	0.3	0.5	—	95.4	18.5	7.4
	no.	no.	no.	no.	no.	no.	no.
Total injuries	2 294	777	855	103	197	957	5 183
FEMALES							
	%	%	%	%	%	%	%
<b>Total injuries (N800–N999)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Fractures (N800–N829)	19.5	0.3	54.9	—	—	2.4	28.2
Intracranial injury, excluding those with skull fracture (N850–N854)	20.1	0.7	12.0	—	—	10.6	12.7
Internal injury of chest, abdomen and pelvis (N860–N869)	19.5	—	1.1	1.9	—	5.1	7.6
Open wound (N870–N897)	1.4	—	0.5	—	—	2.7	1.0
Burns (N940–N949)	0.5	0.3	0.1	33.3	—	4.1	1.4
Certain traumatic complications and unspecified injuries (N958–N959)	31.8	—	15.1	5.6	—	13.0	18.2
Poisoning by drugs, medicaments and biological substances (N960–N979)	0.3	83.3	0.2	—	3.2	0.3	10.1
Toxic effects of substances chiefly non-medical as to source (N980–N989)	0.2	11.8	—	55.6	3.2	1.4	2.8
Other and unspecified effects of external causes (N990–N995)	0.6	1.0	0.4	—	93.5	15.1	4.4
	no.	no.	no.	no.	no.	no.	no.
Total injuries	881	306	1 015	54	62	292	2 610

2.7 NATURE OF INJURY, By External Cause *continued*

INTENTIONAL INJURY AND OTHER.....					
<i>Nature of injury or poisoning and ICD code</i>	<i>Suicide (E950–E959)</i>	<i>Homicide (E960–E969)</i>	<i>Other</i>	<i>Total</i>	<i>External causes</i>
MALES					
	%	%	%	%	%
<b>Total injuries (N800–N999)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Fractures (N800–N829)	1.7	2.8	3.6	1.9	12.0
Intracranial injury, excluding those with skull fracture (N850–N854)	3.6	26.2	4.3	5.8	12.3
Internal injury of chest, abdomen and pelvis (N860–N869)	1.8	12.1	5.0	2.9	8.4
Open wound (N870–N897)	9.0	36.5	12.2	11.7	5.1
Burns (N940–N949)	0.5	1.1	2.2	0.6	1.3
Certain traumatic complications and unspecified injuries (N958–N959)	7.1	6.4	3.6	6.9	14.1
Poisoning by drugs, medicaments and biological substances (N960–N979)	10.7	1.4	46.8	11.5	12.1
Toxic effects of substances chiefly non-medical as to source (N980–N989)	21.5	1.8	11.5	19.2	9.2
Other and unspecified effects of external causes (N996–N999)	42.8	5.3	7.9	37.5	18.4
	no.	no.	no.	no.	no.
Total injuries	2 533	282	139	2 954	8 137
FEMALES					
	%	%	%	%	%
<b>Total injuries (N800–N999)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Fractures (N800–N829)	1.5	3.5	6.0	2.1	21.2
Intracranial injury, excluding those with skull fracture (N850–N854)	1.5	18.8	3.0	4.2	10.4
Internal injury of chest, abdomen and pelvis (N860–N869)	0.8	5.6	3.0	1.7	6.0
Open wound (N870–N897)	4.3	38.2	3.0	9.3	3.2
Burns (N940–N949)	1.2	2.1	—	1.3	1.3
Certain traumatic complications and unspecified injuries (N958–N959)	7.1	11.8	6.0	7.7	15.4
Poisoning by drugs, medicaments and biological substances (N960–N979)	38.6	1.4	65.7	34.9	16.7
Toxic effects of substances chiefly non-medical as to source (N980–N989)	15.9	3.5	6.0	13.4	5.7
Other and unspecified effects of external causes (N996–N999)	28.1	12.5	6.0	24.2	9.7
	no.	no.	no.	no.	no.
Total injuries	747	144	67	958	3 568

2.7 NATURE OF INJURY, By External Cause *continued*

ACCIDENTS.....							
<i>Nature of injury or poisoning and ICD code</i>	<i>Motor vehicle traffic accidents (E810–E819)</i>	<i>Accidental poisoning (E850–E869)</i>	<i>Accidental falls (E880–E888)</i>	<i>Accidents caused by fire and flames (E890–E899)</i>	<i>Accidental drowning and submersion (E910)</i>	<i>Other</i>	<i>Total</i>
PERSONS							
	%	%	%	%	%	%	%
<b>Total injuries (N800–N999)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Fractures (N800–N829)	20.3	0.1	49.2	—	0.8	7.0	21.2
Intracranial injury, excluding those with skull fracture (N850–N854)	21.1	0.4	17.7	—	1.5	12.6	14.9
Internal injury of chest, abdomen and pelvis (N860–N869)	19.4	—	1.9	0.6	0.4	11.5	10.2
Open wound (N870–N897)	1.3	—	0.5	—	—	3.1	1.1
Burns (N940–N949)	0.8	0.1	0.1	40.8	—	2.2	1.5
Certain traumatic complications and unspecified injuries (N958–N959)	29.2	0.1	14.9	7.6	—	15.9	18.2
Poisoning by drugs, medicaments and biological substances (N960–N979)	0.3	81.7	0.3	—	1.2	0.4	11.6
Toxic effects of substances chiefly non-medical as to source (N980–N989)	0.4	13.9	0.2	47.8	1.2	1.3	3.3
Other and unspecified effects of external causes (N990–N995)	0.6	0.5	0.4	—	95.0	17.7	6.4
	no.	no.	no.	no.	no.	no.	no.
Total injuries	3 175	1 083	1 870	157	259	1 249	7 793

2.7 NATURE OF INJURY, By External Cause *continued*

INTENTIONAL INJURY AND OTHER.....					
<i>Nature of injury or poisoning and ICD code</i>	<i>Suicide (E950–E959)</i>	<i>Homicide (E960–E969)</i>	<i>Other</i>	<i>Total</i>	<i>External causes</i>
PERSONS					
	%	%	%	%	%
<b>Total injuries (N800–N999)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Fractures (N800–N829)	1.6	3.1	4.4	1.9	14.8
Intracranial injury, excluding those with skull fracture (N850–N854)	3.1	23.7	3.9	5.4	11.8
Internal injury of chest, abdomen and pelvis (N860–N869)	1.6	9.9	4.4	2.6	7.7
Open wound (N870–N897)	7.9	37.1	9.2	11.1	4.5
Burns (N940–N949)	0.7	1.4	1.5	0.8	1.3
Certain traumatic complications and unspecified injuries (N958–N959)	7.1	8.2	4.4	7.1	14.5
Poisoning by drugs, medicaments and biological substances (N960–N979)	17.0	1.4	52.9	17.2	13.5
Toxic effects of substances chiefly non-medical as to source (N980–N989)	20.2	2.3	9.7	17.7	8.2
Other and unspecified effects of external causes (N996–N999)	39.4	7.7	7.3	34.3	15.7
	no.	no.	no.	no.	no.
Total injuries	3 280	426	206	3 912	11 705



## SECTION 3

## PERINATAL DEATHS .....

### INTRODUCTION

Perinatal deaths comprise stillbirths (fetal deaths) and deaths of infants within the first 28 days of life (neonatal deaths). They include infants and fetuses weighing at least 400 grams or having a gestational age of 20 weeks. Prior to the issue of the 1997 Causes of Death publication, published data relating to perinatal deaths were based upon the World Health Organisation (WHO) recommended definition for compiling national perinatal statistics. This definition includes infants and fetuses weighing at least 500 g or having a gestational age of 22 weeks (see Explanatory Notes, paragraphs 4–8 for further information on perinatal death statistics).

To assist with the transition to the 400 g/20 weeks definition, this section includes summary data tabulated according to the WHO definition (see Table 3.1). Further unpublished tables based on this definition are available from the ABS (all other tables and information in this publication are based on the 400 g/20 weeks definition).

There were 2,090 perinatal deaths registered in Australia in 1998, comprising 1,336 fetal deaths and 754 neonatal deaths. Fetal deaths decreased by 12% on the number registered in 1997 while neonatal deaths decreased by 6%.

Between 1989 and 1998 the perinatal death rate declined from 11.0 to 8.3 deaths per 1,000 births. Over this period the neonatal death rate has fallen relatively more than the fetal death rate (4.5 to 3.0 deaths per 1,000 births and 6.5 to 5.3 deaths per 1,000 births respectively).

### CAUSES OF PERINATAL DEATHS

In 1998, medical certifiers did not provide a specific cause of death in the fetus or infant for 26% of all perinatal deaths. The proportion of deaths with an 'unspecified' cause has increased over the last 10 years from the 16% recorded in 1989. The absence of a specific cause of death largely affects fetal deaths. While 40% of all fetal deaths registered in 1998 reported no specific cause, the corresponding figure for neonatal deaths was only 1%.

The major specific groupings of causes under which perinatal deaths were reported in 1998 included 'Hypoxia, birth asphyxia and other respiratory conditions' (23% of the total) and 'Congenital anomalies' which accounted for a further 20%. However, the relative importance of particular causes varied between fetal and neonatal deaths.

Hypoxia, birth asphyxia and other respiratory conditions accounted for 26% of total fetal deaths registered in 1998, while congenital anomalies accounted for 12% and slow fetal growth, fetal malnutrition and immaturity, contributed a further 11%.

Congenital anomalies accounted for 32% of total neonatal deaths registered in 1998. Hypoxia, birth asphyxia and other respiratory conditions were responsible for a further 17% while slow fetal growth, fetal malnutrition and immaturity accounted for 15%.

CAUSES OF PERINATAL DEATHS *continued*

## PERINATAL DEATHS, Main Condition in Fetus/Infant

Conditions	1989	1994	1998
	%	%	%
FETAL DEATHS			
Respiratory conditions(a)	42.0	34.0	26.0
Congenital anomalies	11.6	14.3	12.4
Slow fetal growth and fetal malnutrition	6.0	5.7	6.3
Unspecified	27.4	31.9	40.1
NEONATAL DEATHS			
Respiratory conditions(a)	29.2	24.6	17.0
Congenital anomalies	31.3	34.0	32.4
Slow fetal growth and fetal malnutrition	0.7	0.5	0.8
Unspecified	0.2	1.4	1.5
PERINATAL DEATHS			
Respiratory conditions(a)	36.7	30.2	22.8
Congenital anomalies	19.7	22.2	19.6
Slow fetal growth and fetal malnutrition	3.8	3.6	4.3
Unspecified	16.2	19.6	26.2

(a) Hypoxia, birth asphyxia and other respiratory conditions.

## TRENDS IN CAUSES OF PERINATAL DEATHS

As mentioned previously, it has become less common in recent years for medical certifiers to specify a cause of death in the fetus or infant. As a result, the proportion of fetal deaths reported without a specified cause has risen from 27% in 1989 to 40% in 1998. Deaths from hypoxia, birth asphyxia and other respiratory conditions decreased markedly from 42% of the total in 1989 to 26% in 1998. Over this period the proportions of fetal deaths attributed to slow fetal growth, fetal malnutrition and immaturity and congenital anomalies have remained relatively stable.

The major change in neonatal deaths since 1989, has been a decrease in hypoxia, birth asphyxia and other respiratory conditions from 29% of total deaths to 17% in 1998.

## CONDITIONS IN MOTHER

Perinatal deaths differ from general deaths in that a condition may be reported in the mother, the infant, or in both. In 1998, no condition was reported in the mother in 672 (32%) of the 2,090 perinatal deaths recorded. Complications of the placenta, cord and membrane were present in 42% of the cases where maternal conditions were reported in 1998, while multiple pregnancy accounted for a further 8% of these cases.

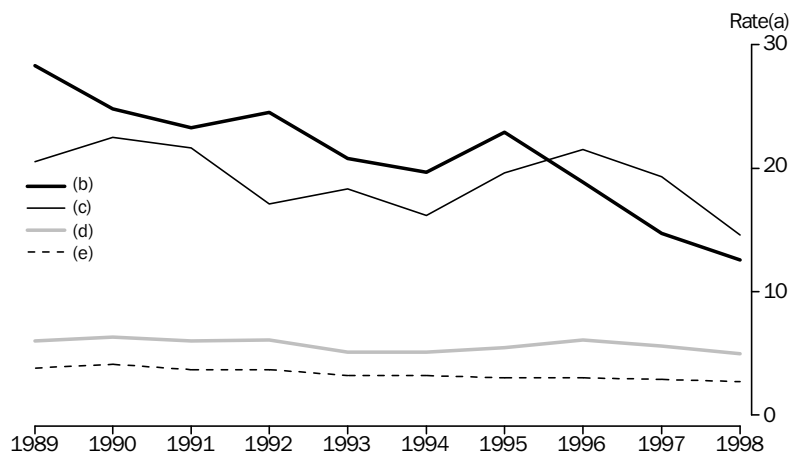
## MULTIPLE BIRTHS

Multiple births (twins or more) account for nearly 3% of babies born annually<sup>1</sup>. The perinatal death rate for multiple births in 1998, was 27.0 per 1,000 relevant births, nearly four times the corresponding rate of 7.7 recorded for single births.

The fetal death rate for multiple births in 1998, was 14.6, the lowest rate recorded in the last ten years. The rate for fetal deaths for single births was 5.0. This figure was also a ten year low.

For 1998, the neonatal rate for multiple births was 12.6. While this represents a 55% decrease on the rate of 28.3 recorded in 1989, it is still considerably higher than the 1998 rate for single births of 2.7.

## PERINATAL DEATHS, Rates, Multiple Births



- (a) Per 1,000 relevant births.  
 (b) Neonatal deaths in multiple births.  
 (c) Fetal deaths in multiple births.  
 (d) Fetal deaths in single births.  
 (e) Neonatal deaths in single births.

## AGE OF MOTHER

The majority of births in 1998 occurred among women aged 20 to 39 years, with 5% of total births registered to mothers aged less than 20 years and 2.3% to those aged 40 years and over<sup>2</sup>. While actual numbers are relatively small (see table 3.4), perinatal deaths registered to mothers aged less than 20 years (7% of total) and aged 40 years and over (4%) are proportionally higher than the percentage contributions of these two age groups to total births. The changes in the perinatal death rate for these two age groups over the last ten years have shown different trends. There has been a reduction of about a third in the rate for mothers over 40 years while the rate for mothers under 20 years has remained fairly constant.

<sup>1</sup> ABS, Births Australia (Cat. no. 3301.0).

<sup>2</sup> ABS, Births Australia (Cat. no. 3301.0).

## 3.1 FETAL, NEONATAL AND PERINATAL DEATHS, 500 Grams/22 Weeks(a)

Year	FETAL DEATHS.....			NEONATAL DEATHS.....			PERINATAL DEATHS.....		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
NUMBER									
1989	769	682	1 451	595	463	1 058	1 364	1 145	2 509
1990	888	702	1 590	660	462	1 122	1 548	1 164	2 712
1991	777	701	1 478	571	441	1 012	1 348	1 142	2 490
1992	779	714	1 493	596	419	1 015	1 375	1 133	2 508
1993	668	577	1 245	511	375	886	1 179	952	2 131
1994	692	515	1 207	517	351	868	1 209	866	2 075
1995	681	602	1 283	467	344	811	1 148	946	2 094
1996	759	652	1 411	446	313	759	1 205	965	2 170
1997	692	588	1 280	408	310	718	1 100	898	1 998
1998	590	532	1 122	395	284	679	985	816	1 801
RATE(b)									
1989	5.9	5.5	5.8	4.6	3.8	4.2	10.6	9.3	9.9
1990	6.5	5.5	6.0	4.9	3.6	4.3	11.4	9.1	10.3
1991	5.9	5.6	5.7	4.3	3.5	3.9	10.2	9.1	9.6
1992	5.7	5.5	5.6	4.4	3.3	3.8	10.1	8.8	9.4
1993	5.0	4.5	4.8	3.8	3.0	3.4	8.8	7.5	8.2
1994	5.2	4.1	4.7	3.9	2.8	3.4	9.1	6.9	8.0
1995	5.2	4.8	5.0	3.6	2.8	3.2	8.7	7.5	8.1
1996	5.8	5.3	5.5	3.4	2.5	3.0	9.2	7.8	8.5
1997	5.3	4.8	5.1	3.2	2.5	2.9	8.5	7.3	7.9
1998	4.6	4.4	4.5	3.1	2.3	2.7	7.7	6.7	7.2

(a) See Explanatory Notes, paragraph 5 for further information.

(b) Rates are per 1,000 total relevant births. See Glossary for further information.

### 3.2 FETAL, NEONATAL AND PERINATAL DEATHS, 400 Grams/20 Weeks(a)

Year	FETAL DEATHS.....			NEONATAL DEATHS.....			PERINATAL DEATHS.....		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
NUMBER									
1989	862	770	1 632	633	506	1 139	1 495	1 276	<b>2 771</b>
1990	989	791	1 780	706	511	1 217	1 695	1 302	<b>2 997</b>
1991	868	790	1 658	616	481	1 097	1 484	1 271	<b>2 755</b>
1992	889	812	1 701	664	466	1 130	1 553	1 278	<b>2 831</b>
1993	765	674	1 439	563	409	972	1 328	1 083	<b>2 411</b>
1994	798	614	1 412	561	388	949	1 359	1 002	<b>2 361</b>
1995	805	707	1 512	514	394	908	1 319	1 101	<b>2 420</b>
1996	900	768	1 668	509	370	879	1 409	1 138	<b>2 547</b>
1997	829	687	1 516	443	362	805	1 272	1 049	<b>2 321</b>
1998	707	629	1 336	435	319	754	1 142	948	<b>2 090</b>
RATE(b)									
1989	6.7	6.3	6.5	4.9	4.1	4.5	11.6	10.4	<b>11.0</b>
1990	7.3	6.2	6.7	5.2	4.0	4.6	12.4	10.2	<b>11.3</b>
1991	6.5	6.3	6.4	4.7	3.8	4.3	11.2	10.1	<b>10.6</b>
1992	6.5	6.3	6.4	4.9	3.6	4.3	11.4	9.9	<b>10.7</b>
1993	5.7	5.3	5.5	4.2	3.2	3.7	9.9	8.5	<b>9.2</b>
1994	6.0	4.9	5.4	4.2	3.1	3.7	10.2	8.0	<b>9.1</b>
1995	6.1	5.6	5.9	3.9	3.2	3.5	10.0	8.8	<b>9.4</b>
1996	6.8	6.2	6.5	3.9	3.0	3.5	10.7	9.2	<b>10.0</b>
1997	6.4	5.6	6.0	3.4	3.0	3.2	9.8	8.5	<b>9.2</b>
1998	5.5	5.1	5.3	3.4	2.6	3.0	8.9	7.8	<b>8.3</b>

(a) See Explanatory Notes, paragraph 4 for further information.

(b) Rates are per 1,000 total relevant births. See Glossary for further information.

## 3.3 PERINATAL DEATHS(a), By Usual Residence of Mother

Year	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	<b>Aust.</b>
NUMBER									
1989	990	652	455	233	241	78	81	41	<b>2 771</b>
1990	1 070	781	461	219	264	75	65	62	<b>2 997</b>
1991	969	644	492	178	264	82	66	60	<b>2 755</b>
1992	1 097	625	491	193	246	64	73	42	<b>2 831</b>
1993	852	549	444	178	208	69	77	34	<b>2 411</b>
1994	815	601	419	165	210	58	62	31	<b>2 361</b>
1995	785	582	459	192	235	64	62	41	<b>2 420</b>
1996	959	542	480	165	255	62	45	39	<b>2 547</b>
1997	861	522	430	152	202	70	56	28	<b>2 321</b>
1998	695	470	452	131	186	59	48	49	<b>2 090</b>
RATE(b)									
1989	11.5	10.1	10.8	11.8	9.6	11.4	23.6	9.8	<b>11.0</b>
1990	11.7	11.6	10.2	11.0	10.4	10.6	18.1	13.8	<b>11.3</b>
1991	11.0	9.8	11.1	9.0	10.3	11.9	18.2	12.5	<b>10.6</b>
1992	11.8	9.4	10.6	9.9	9.8	9.1	19.3	9.4	<b>10.7</b>
1993	9.5	8.5	9.4	8.8	8.3	10.0	21.1	7.7	<b>9.2</b>
1994	9.2	9.3	8.9	8.5	8.3	8.4	16.9	6.9	<b>9.1</b>
1995	8.9	9.2	9.8	9.9	9.3	9.7	16.3	9.2	<b>9.4</b>
1996	11.0	8.8	10.0	8.6	10.2	9.5	12.6	8.8	<b>10.0</b>
1997	9.8	8.5	9.1	8.2	8.1	11.6	15.5	6.6	<b>9.2</b>
1998	8.1	7.7	9.6	7.2	7.5	9.8	13.1	12.2	<b>8.3</b>

(a) Based on 400 grams/20 weeks definition. See Explanatory Notes, paragraph 4 for further information.

(b) Rates are per 1,000 total relevant births. See Glossary for further information.

### 3.4 PERINATAL DEATHS(a), By Age of Mother

#### AGE OF MOTHER (YEARS).....

Year	Under 20	20-24	25-29	30-34	35-39	40 and over	Not stated	Total
NUMBER								
1989	210	593	899	687	261	61	60	<b>2 771</b>
1990	233	610	977	771	303	71	32	<b>2 997</b>
1991	226	570	831	739	272	76	41	<b>2 755</b>
1992	r201	591	843	744	302	75	r75	<b>2 831</b>
1993	r168	488	718	627	281	56	r73	<b>2 411</b>
1994	155	461	651	651	311	68	64	<b>2 361</b>
1995	r181	487	670	614	289	67	r112	<b>2 420</b>
1996	r177	490	699	684	319	92	r86	<b>2 547</b>
1997	186	408	666	583	357	65	56	<b>2 321</b>
1998	155	357	605	524	330	74	45	<b>2 090</b>
RATE(b)								
1989	14.6	11.4	9.3	10.5	12.3	r19.5	..	<b>11.0</b>
1990	15.3	11.4	10.0	10.9	13.2	20.0	..	<b>11.3</b>
1991	15.2	11.0	9.0	10.3	11.3	20.8	..	<b>10.6</b>
1992	14.1	11.1	9.2	9.8	11.6	18.0	..	<b>10.7</b>
1993	r12.7	9.6	8.1	8.1	10.4	13.1	..	<b>9.2</b>
1994	12.0	9.3	7.6	8.4	10.8	14.8	..	<b>9.1</b>
1995	r14.2	10.2	8.0	7.9	9.5	13.4	..	<b>9.4</b>
1996	r14.0	10.9	8.4	8.9	9.9	17.3	..	<b>10.0</b>
1997	15.0	9.6	8.0	7.6	10.7	12.1	..	<b>9.2</b>
1998	13.0	8.9	7.4	6.9	9.6	12.6	..	<b>8.3</b>

(a) Based on 400 grams/20 weeks definition. See Explanatory Notes, paragraph 4 for further information.

(b) Rates are per 1,000 total relevant births. See Glossary for further information.

## 3.5 MAIN CAUSES OF FETAL, NEONATAL AND PERINATAL DEATHS(a)

Cause of death and ICD code	FETAL DEATHS.....		NEONATAL DEATHS.....		PERINATAL DEATHS.....	
	Males	Females	Males	Females	Males	Females
TOTAL						
<b>All causes</b>	<b>707</b>	<b>629</b>	<b>435</b>	<b>319</b>	<b>1 142</b>	<b>948</b>
MAIN CONDITION IN FETUS/INFANT						
Congenital anomalies (740–759)	87	79	141	103	228	182
Anencephalus and similar anomalies (740)	1	3	11	3	12	6
Spina bifida (741)	4	9	3	2	7	11
Congenital hydrocephalus (742.3)	4	5	5	—	9	5
Heart and circulatory system (745–747)	13	11	39	28	52	39
Respiratory system (748)	—	—	23	19	23	19
Genital organs and urinary system (752, 753)	8	6	8	6	16	12
Musculoskeletal system and limbs (754–756)	8	6	15	9	23	15
Chromosomal anomalies (758)	29	25	18	17	47	42
Certain conditions originating in the perinatal period (760–779)	617	543	266	190	883	733
Slow fetal growth, fetal malnutrition and immaturity (764, 765)	80	62	62	48	142	110
Slow fetal growth and fetal malnutrition (764)	43	41	5	1	48	42
Extreme immaturity (765.0)	37	21	57	46	94	67
Birth trauma (767)	—	3	25	21	25	24
Birth injury to brain, spine or spinal cord (767.0, 767.4)	—	2	25	20	25	22
Hypoxia, birth asphyxia and other respiratory conditions (768–770)	188	160	78	50	266	210
Fetal death from asphyxia or anoxia before onset of labour or at unspecified time (768.0)	145	135	—	—	145	135
Fetal death from asphyxia or anoxia during labour (768.1)	32	18	—	—	32	18
Fetal distress or birth asphyxia in liveborn infant (768.2–768.9)	—	—	15	19	15	19
Respiratory distress syndrome (769)	—	—	24	11	24	11
Massive aspiration syndrome (770.1)	7	3	6	4	13	7
Atelectasis (770.4–770.5)	—	—	6	1	6	1
Fetal and neonatal haemorrhage (772)	10	13	43	23	53	36
Intraventricular haemorrhage (772.1)	—	—	38	22	38	22
Other conditions originating in the perinatal period (766, 771, 773–779)	339	305	58	48	397	353
Infections specific to the perinatal period (771)	14	9	23	21	37	30
Hydrops fetalis not due to isoimmunization (778.0)	13	5	3	3	16	8
Unspecified (779.9)	271	265	6	5	277	270
MAIN CONDITION IN MOTHER						
Maternal conditions which may be unrelated to present pregnancy (760)	110	88	43	31	153	119
Maternal hypertensive disorders (760.0)	36	33	19	9	55	42
Maternal complications of pregnancy (761)	81	67	164	93	245	160
Incompetent cervix (761.0)	13	4	10	7	23	11
Polyhydramnios (761.3)	3	3	7	3	10	6
Multiple pregnancy (761.5)	27	26	44	19	71	45
Complications of placenta, cord and membranes (762)	242	230	67	56	309	286
Placenta praevia (762.0)	3	2	1	1	4	3
Other placental separation and haemorrhage (762.1)	93	59	32	29	125	88
Other and unspecified morphological and functional abnormalities of placenta (762.2)	49	51	—	1	49	52
Prolapsed cord (762.4)	7	9	4	3	11	12
Other compression of umbilical cord (762.5)	47	54	1	1	48	55
Other complications of labour and delivery (763)	51	60	20	15	71	75
Breech delivery and extraction (763.0)	3	3	3	3	6	6
No maternal condition reported	223	184	141	124	364	308

(a) Based on 400 grams/20 weeks definition. See Explanatory Notes, paragraph 4 for further information.



## 3.6 PERINATAL DEATHS(a), By Birthweight

Cause of death and ICD code	BIRTHWEIGHT (GRAMS).....						Total(b)
	400– 499	500– 999	1 000– 1 999	2 000– 2 999	3 000– 3 999	4 000 or more	
TOTAL							
<b>All causes</b>	<b>281</b>	<b>583</b>	<b>371</b>	<b>408</b>	<b>323</b>	<b>57</b>	<b>2 090</b>
MAIN CONDITION IN FETUS/INFANT							
Congenital anomalies (740–759)	62	90	91	97	63	3	410
Anencephalus and similar anomalies (740)	—	3	9	3	3	—	18
Spina bifida (741)	7	7	1	1	1	1	18
Congenital hydrocephalus (742.3)	7	2	1	2	1	—	14
Heart and circulatory system (745–747)	8	9	7	30	35	1	91
Respiratory system (748)	—	7	17	13	5	—	42
Genital organs and urinary system (752, 753)	3	11	5	8	1	—	28
Musculoskeletal system and limbs (754–756)	7	5	8	11	6	—	38
Chromosomal anomalies (758)	19	25	24	17	3	—	89
Certain conditions originating in the perinatal period (760–779)	218	483	273	291	242	53	1 616
Slow fetal growth, fetal malnutrition and immaturity (764, 765)	73	108	41	26	—	—	252
Slow fetal growth and fetal malnutrition (764)	6	18	39	26	—	—	90
Extreme immaturity (765.0)	67	90	1	—	—	—	161
Birth trauma (767)	—	10	5	9	18	5	49
Birth injury to brain, spine or spinal cord (767.0, 767.4)	—	10	5	9	18	4	47
Hypoxia, birth asphyxia and other respiratory conditions (768–770)	24	125	69	110	111	18	476
Fetal death from asphyxia or anoxia before onset of labour or at unspecified time (768.0)	13	49	48	83	68	8	280
Fetal death from asphyxia or anoxia during labour (768.1)	3	15	2	8	14	7	50
Fetal distress or birth asphyxia in liveborn infant (768.2–768.9)	1	4	5	8	10	3	34
Respiratory distress syndrome (769)	2	30	3	—	—	—	35
Massive aspiration syndrome (770.1)	—	—	2	4	12	—	20
Atelectasis (770.4–770.5)	—	6	—	1	—	—	7
Fetal and neonatal haemorrhage (772)	3	49	19	7	6	2	89
Intraventricular haemorrhage (772.1)	2	43	13	1	—	—	60
Other conditions originating in the perinatal period (766, 771, 773–779)	118	191	139	139	107	28	750
Infections specific to the perinatal period (771)	6	30	16	10	3	1	67
Hydrops fetalis not due to isoimmunization (778.0)	3	4	9	4	3	1	24
Unspecified (779.9)	71	139	99	115	87	12	547
MAIN CONDITION IN MOTHER							
Maternal conditions which may be unrelated to present pregnancy (760)	54	74	51	43	29	13	272
Maternal hypertensive disorders (760.0)	11	32	24	18	9	2	97
Maternal complications of pregnancy (761)	91	186	76	31	4	3	405
Incompetent cervix (761.0)	15	18	1	—	—	—	34
Polyhydramnios (761.3)	—	4	3	7	1	1	16
Multiple pregnancy (761.5)	21	36	36	12	1	2	116
Complications of placenta, cord and membranes (762)	64	196	98	116	87	14	595
Placenta praevia (762.0)	1	4	2	—	—	—	7
Other placental separation and haemorrhage (762.1)	28	85	34	34	22	2	213
Other and unspecified morphological and functional abnormalities of placenta (762.2)	4	21	25	26	16	3	101
Prolapsed cord (762.4)	3	12	3	3	—	—	23
Other compression of umbilical cord (762.5)	2	15	10	35	35	6	103
Other complications of labour and delivery (763)	33	43	17	21	21	6	146
Breech delivery and extraction (763.0)	—	3	2	2	5	—	12
No maternal condition reported	39	84	129	197	182	21	672

(a) Based on 400 grams/20 weeks definition. See Explanatory Notes, paragraph 4 for further information.

(b) Including deaths of 'birthweight not stated'.

## 3.7 PERINATAL DEATHS(a), By Period of Gestation

Cause of death and ICD code	PERIOD OF GESTATION (COMPLETED WEEKS).....						Total(b)
	Under 22	22-27	28-31	32-36	37-41	42 and over	
TOTAL							
<b>All causes</b>	<b>149</b>	<b>670</b>	<b>231</b>	<b>355</b>	<b>612</b>	<b>16</b>	<b>2 090</b>
MAIN CONDITION IN FETUS/INFANT							
Congenital anomalies (740-759)	46	98	51	78	128	2	410
Anencephalus and similar anomalies (740)	—	3	3	5	6	1	18
Spina bifida (741)	3	13	1	—	1	—	18
Congenital hydrocephalus (742.3)	5	6	—	1	2	—	14
Heart and circulatory system (745-747)	6	10	8	14	51	—	91
Respiratory system (748)	—	8	7	12	13	—	42
Genital organs and urinary system (752, 753)	3	10	3	7	3	—	28
Musculoskeletal system and limbs (754-756)	4	6	6	10	12	—	38
Chromosomal anomalies (758)	16	24	9	15	24	—	89
Certain conditions originating in the perinatal period (760-779)	100	563	177	269	454	14	1 616
Slow fetal growth, fetal malnutrition and immaturity (764, 765)	39	125	17	28	35	1	252
Slow fetal growth and fetal malnutrition (764)	—	9	15	28	35	1	90
Extreme immaturity (765.0)	39	116	1	—	—	—	161
Birth trauma (767)	—	11	2	6	27	1	49
Birth injury to brain, spine or spinal cord (767.0, 767.4)	—	11	2	6	26	1	47
Hypoxia, birth asphyxia and other respiratory conditions (768-770)	17	129	42	86	185	7	476
Fetal death from asphyxia or anoxia before onset of labour or at unspecified time (768.0)	8	47	28	70	119	4	280
Fetal death from asphyxia or anoxia during labour (768.1)	3	16	1	4	24	2	50
Fetal distress or birth asphyxia in liveborn infant (768.2-768.9)	2	6	2	3	19	—	34
Respiratory distress syndrome (769)	1	30	2	1	—	—	35
Massive aspiration syndrome (770.1)	—	—	1	2	14	1	20
Atelectasis (770.4-770.5)	—	5	1	—	1	—	7
Fetal and neonatal haemorrhage (772)	4	54	9	9	11	—	89
Intraventricular haemorrhage (772.1)	2	49	6	2	—	—	60
Other conditions originating in the perinatal period (766, 771, 773-779)	40	244	107	140	196	5	750
Infections specific to the perinatal period (771)	1	39	9	10	8	—	67
Hydrops fetalis not due to isoimmunization (778.0)	3	7	6	5	3	—	24
Unspecified (779.9)	29	148	77	115	160	1	547
MAIN CONDITION IN MOTHER							
Maternal conditions which may be unrelated to present pregnancy (760)	11	94	47	60	53	2	272
Maternal hypertensive disorders (760.0)	2	31	19	29	14	—	97
Maternal complications of pregnancy (761)	48	233	45	45	23	—	405
Incompetent cervix (761.0)	9	25	—	—	—	—	34
Polyhydramnios (761.3)	—	2	4	4	6	—	16
Multiple pregnancy (761.5)	5	52	19	20	14	—	116
Complications of placenta, cord and membranes (762)	42	202	61	97	178	9	595
Placenta praevia (762.0)	—	5	—	2	—	—	7
Other placental separation and haemorrhage (762.1)	23	87	21	38	41	—	213
Other and unspecified morphological and functional abnormalities of placenta (762.2)	—	14	16	26	39	4	101
Prolapsed cord (762.4)	1	17	2	1	2	—	23
Other compression of umbilical cord (762.5)	2	8	10	17	63	3	103
Other complications of labour and delivery (763)	25	56	11	15	36	1	146
Breech delivery and extraction (763.0)	—	4	—	2	5	—	12
No maternal condition reported	23	85	67	138	322	4	672

(a) Based on 400 grams/20 weeks definition. See Explanatory Notes, paragraph 4 for further information.

(b) Including deaths of 'weeks not stated'.

## 3.8 PERINATAL DEATHS(a), By Usual Residence

Particulars	NSW.....		VIC.....		QID.....		SA.....	
	Males	Females	Males	Females	Males	Females	Males	Females
<b>FETAL DEATHS</b>								
<b>Weight at delivery (grams)</b>	<b>264</b>	<b>199</b>	<b>145</b>	<b>152</b>	<b>142</b>	<b>120</b>	<b>46</b>	<b>47</b>
400–499	49	37	19	14	23	19	6	8
500–999	64	48	34	33	37	30	20	11
1 000–1 999	45	33	34	30	25	24	7	8
2 000–2 999	55	47	24	44	25	21	8	8
3 000 or more	47	34	25	26	31	24	3	11
Not stated	4	—	9	5	1	2	2	1
<b>Period of gestation (weeks)</b>	<b>264</b>	<b>199</b>	<b>145</b>	<b>152</b>	<b>142</b>	<b>120</b>	<b>46</b>	<b>47</b>
Less than 22	29	13	12	6	8	4	9	5
22–27	83	65	38	35	45	40	14	12
28–36	77	55	56	50	41	37	16	13
37–41	69	62	36	58	43	38	7	16
42 or more	2	3	3	2	3	—	—	1
Not stated	4	1	—	1	2	1	—	—
<b>Age group of mother (years)</b>	<b>264</b>	<b>199</b>	<b>145</b>	<b>152</b>	<b>142</b>	<b>120</b>	<b>46</b>	<b>47</b>
Less than 20	24	15	7	10	14	3	3	3
20–24	46	32	23	20	24	25	9	12
25–29	63	52	48	45	49	40	15	9
30–34	74	62	36	43	31	37	10	11
35–39	46	28	22	28	18	12	7	10
40 or more	10	10	8	5	4	3	2	2
Not stated	1	—	1	1	2	—	—	—
<b>NEONATAL DEATHS</b>								
<b>Age at death</b>	<b>128</b>	<b>104</b>	<b>99</b>	<b>74</b>	<b>114</b>	<b>76</b>	<b>24</b>	<b>14</b>
Less than 1 hour	23	22	19	18	17	20	4	3
1 hour to under 1 day	40	28	25	14	29	22	6	5
1 day to under 1 week	39	24	31	24	33	15	7	2
1 week to under 4 weeks	26	30	24	18	35	19	7	4
<b>Weight at delivery (grams)</b>	<b>128</b>	<b>104</b>	<b>99</b>	<b>74</b>	<b>114</b>	<b>76</b>	<b>24</b>	<b>14</b>
400–499	7	11	12	9	9	9	1	1
500–999	47	37	37	12	38	29	6	4
1 000–1 999	21	17	17	16	15	11	5	2
2 000–2 999	28	17	16	14	25	13	4	2
3 000 or more	18	19	14	19	26	13	8	5
Not stated	7	3	3	4	1	1	—	—
<b>Period of gestation (weeks)</b>	<b>128</b>	<b>104</b>	<b>99</b>	<b>74</b>	<b>114</b>	<b>76</b>	<b>24</b>	<b>14</b>
Less than 22	9	6	6	6	8	3	1	—
22–27	44	38	44	19	41	37	6	6
28–36	35	24	23	20	22	12	7	2
37–41	33	30	24	27	42	22	10	6
42 or more	—	—	—	1	—	—	—	—
Not stated	7	6	2	1	1	2	—	—
<b>Age group of mother (years)</b>	<b>128</b>	<b>104</b>	<b>99</b>	<b>74</b>	<b>114</b>	<b>76</b>	<b>24</b>	<b>14</b>
Less than 20	6	6	2	5	7	7	3	2
20–24	20	16	15	8	27	13	4	—
25–29	30	38	30	19	36	26	7	5
30–34	36	22	24	23	26	15	5	6
35–39	23	16	25	18	14	12	2	1
40 or more	7	4	3	1	3	—	2	—
Not stated	6	2	—	—	1	3	1	—

(a) Based on 400 grams/20 weeks definition. See Explanatory Notes, paragraph 4 for further information.

3.8 PERINATAL DEATHS(a) by Usual Residence *continued*

Particulars	WA.....		TAS.....		NT.....		ACT.....	
	Males	Females	Males	Females	Males	Females	Males	Females
FETAL DEATHS								
<b>Weight at delivery (grams)</b>	<b>58</b>	<b>68</b>	<b>19</b>	<b>20</b>	<b>14</b>	<b>11</b>	<b>19</b>	<b>12</b>
400-499	9	13	2	2	2	1	2	1
500-999	17	18	2	5	3	6	7	4
1 000-1 999	12	14	3	3	3	1	3	1
2 000-2 999	11	12	5	2	2	2	1	3
3 000 or more	9	10	3	1	2	—	5	2
Not stated	—	1	4	7	2	1	1	1
<b>Period of gestation (weeks)</b>	<b>58</b>	<b>68</b>	<b>19</b>	<b>20</b>	<b>14</b>	<b>11</b>	<b>19</b>	<b>12</b>
Less than 22	6	2	2	1	—	1	2	—
22-27	14	26	4	3	4	5	7	1
28-36	25	23	7	5	6	2	3	4
37-41	13	17	5	5	2	2	6	7
42 or more	—	—	—	—	—	—	1	—
Not stated	—	—	1	6	2	1	—	—
<b>Age group of mother (years)</b>	<b>58</b>	<b>68</b>	<b>19</b>	<b>20</b>	<b>14</b>	<b>11</b>	<b>19</b>	<b>12</b>
Less than 20	6	6	3	2	6	2	2	2
20-24	10	8	3	2	1	3	5	2
25-29	13	23	2	3	4	3	7	2
30-34	13	15	4	2	—	2	3	1
35-39	8	11	2	2	3	1	1	5
40 or more	2	4	—	1	—	—	—	—
Not stated	6	1	5	8	—	—	1	—
NEONATAL DEATHS								
<b>Age at death</b>	<b>36</b>	<b>24</b>	<b>15</b>	<b>5</b>	<b>11</b>	<b>12</b>	<b>8</b>	<b>10</b>
Less than 1 hour	7	1	3	1	2	2	2	3
1 hour to under 1 day	7	5	2	2	3	6	3	3
1 day to under 1 week	13	8	7	1	1	3	3	1
1 week to under 4 weeks	9	10	3	1	5	1	—	3
<b>Weight at delivery (grams)</b>	<b>36</b>	<b>24</b>	<b>15</b>	<b>5</b>	<b>11</b>	<b>12</b>	<b>8</b>	<b>10</b>
400-499	4	3	2	1	2	—	3	—
500-999	9	4	6	—	4	6	3	2
1 000-1 999	6	4	1	2	2	3	—	3
2 000-2 999	10	2	3	—	—	2	1	1
3 000 or more	5	9	1	2	3	—	1	4
Not stated	2	2	2	—	—	1	—	—
<b>Period of gestation (weeks)</b>	<b>36</b>	<b>24</b>	<b>15</b>	<b>5</b>	<b>11</b>	<b>12</b>	<b>8</b>	<b>10</b>
Less than 22	3	1	2	—	2	—	2	—
22-27	10	6	5	1	5	6	3	3
28-36	9	—	3	2	2	3	—	2
37-41	10	9	3	2	2	2	1	3
42 or more	—	—	—	—	—	—	—	—
Not stated	4	8	2	—	—	1	2	2
<b>Age group of mother (years)</b>	<b>36</b>	<b>24</b>	<b>15</b>	<b>5</b>	<b>11</b>	<b>12</b>	<b>8</b>	<b>10</b>
Less than 20	3	1	—	—	2	1	1	1
20-24	9	3	5	1	6	3	1	1
25-29	12	7	6	2	2	4	2	1
30-34	6	9	2	—	1	1	2	2
35-39	4	2	—	1	—	2	2	4
40 or more	1	1	—	—	—	—	—	1
Not stated	1	1	2	1	—	1	—	—

(a) Based on 400 grams/20 weeks definition. See Explanatory Notes, paragraph 4 for further information.

3.8 PERINATAL DEATHS(a) by Usual Residence *continued*

Particulars	NSW.....		VIC.....		QLD.....		SA.....	
	Males	Females	Males	Females	Males	Females	Males	Females
PERINATAL DEATHS								
<b>Age at death</b>	<b>128</b>	<b>104</b>	<b>99</b>	<b>74</b>	<b>114</b>	<b>76</b>	<b>24</b>	<b>14</b>
Less than 1 hour	23	22	19	18	17	20	4	3
1 hour to under 1 day	40	28	25	14	29	22	6	5
1 day to under 1 week	39	24	31	24	33	15	7	2
1 week to under 4 weeks	26	30	24	18	35	19	7	4
<b>Weight at delivery (grams)</b>	<b>392</b>	<b>303</b>	<b>244</b>	<b>226</b>	<b>256</b>	<b>196</b>	<b>70</b>	<b>61</b>
400–499	56	48	31	23	32	28	7	9
500–999	111	85	71	45	75	59	26	15
1 000–1 999	66	50	51	46	40	35	12	10
2 000–2 999	83	64	40	58	50	34	12	10
3 000 or more	65	53	39	45	57	37	11	16
Not stated	11	3	12	9	2	3	2	1
<b>Period of gestation (weeks)</b>	<b>392</b>	<b>303</b>	<b>244</b>	<b>226</b>	<b>256</b>	<b>196</b>	<b>70</b>	<b>61</b>
Less than 22	38	19	18	12	16	7	10	5
22–27	127	103	82	54	86	77	20	18
28–36	112	79	79	70	63	49	23	15
37–41	102	92	60	85	85	60	17	22
42 or more	2	3	3	3	3	—	—	1
Not stated	11	7	2	2	3	3	—	—
<b>Age group of mother (years)</b>	<b>392</b>	<b>303</b>	<b>244</b>	<b>226</b>	<b>256</b>	<b>196</b>	<b>70</b>	<b>61</b>
Less than 20	30	21	9	15	21	10	6	5
20–24	66	48	38	28	51	38	13	12
25–29	93	90	78	64	85	66	22	14
30–34	110	84	60	66	57	52	15	17
35–39	69	44	47	46	32	24	9	11
40 or more	17	14	11	6	7	3	4	2
Not stated	7	2	1	1	3	3	1	—

(a) Based on 400 grams/20 weeks definition. See Explanatory Notes, paragraph 4 for further information.

3.8 PERINATAL DEATHS(a) by Usual Residence *continued*

Particulars	WA.....		TAS.....		NT.....		ACT.....	
	Males	Females	Males	Females	Males	Females	Males	Females
PERINATAL DEATHS								
<b>Age at death</b>	<b>36</b>	<b>24</b>	<b>15</b>	<b>5</b>	<b>11</b>	<b>12</b>	<b>8</b>	<b>10</b>
Less than 1 hour	7	1	3	1	2	2	2	3
1 hour to under 1 day	7	5	2	2	3	6	3	3
1 day to under 1 week	13	8	7	1	1	3	3	1
1 week to under 4 weeks	9	10	3	1	5	1	—	3
<b>Weight at delivery (grams)</b>	<b>94</b>	<b>92</b>	<b>34</b>	<b>25</b>	<b>25</b>	<b>23</b>	<b>27</b>	<b>22</b>
400–499	13	16	4	3	4	1	5	1
500–999	26	22	8	5	7	12	10	6
1 000–1 999	18	18	4	5	5	4	3	4
2 000–2 999	21	14	8	2	2	4	2	4
3 000 or more	14	19	4	3	5	—	6	6
Not stated	2	3	6	7	2	2	1	1
<b>Period of gestation (weeks)</b>	<b>94</b>	<b>92</b>	<b>34</b>	<b>25</b>	<b>25</b>	<b>23</b>	<b>27</b>	<b>22</b>
Less than 22	9	3	4	1	2	1	4	—
22–27	24	32	9	4	9	11	10	4
28–36	34	23	10	7	8	5	3	6
37–41	23	26	8	7	4	4	7	10
42 or more	—	—	—	—	—	—	1	—
Not stated	4	8	3	6	2	2	2	2
<b>Age group of mother (years)</b>	<b>94</b>	<b>92</b>	<b>34</b>	<b>25</b>	<b>25</b>	<b>23</b>	<b>27</b>	<b>22</b>
Less than 20	9	7	3	2	8	3	3	3
20–24	19	11	8	3	7	6	6	3
25–29	25	30	8	5	6	7	9	3
30–34	19	24	6	2	1	3	5	3
35–39	12	13	2	3	3	3	3	9
40 or more	3	5	—	1	—	—	—	1
Not stated	7	2	7	9	—	1	1	—

(a) Based on 400 grams/20 weeks definition. See Explanatory Notes, paragraph 4 for further information.

## EXPLANATORY NOTES .....

### INTRODUCTION

**1** This publication contains summary statistics on causes of death for the general population, together with selected statistics on perinatal deaths. The registration of deaths is the responsibility of the individual State and Territory Registrars of Births, Deaths and Marriages. As part of the registration process, information as to the cause of death is supplied by the medical practitioner certifying the death or by a coroner. Other information about the deceased is supplied by a relative or other person acquainted with the deceased, or by an official of the institution where the death occurred. This information is provided to the Australian Bureau of Statistics (ABS) by individual Registrars for coding and compilation into aggregate statistics shown in this publication. Statistics of perinatal deaths for years prior to 1994 were published separately in *Perinatal Deaths, Australia* (Cat. no. 3304.0), which has been discontinued.

### SCOPE AND COVERAGE

**2** The statistics relate to the number of deaths registered, not those which actually occurred, in the years shown. Normally about 5% to 6% of deaths occurring in one year are not registered until the following year or later.

**3** In 1988 revisions were made to the Northern Territory legislation to enable the registration of a death prior to the certification of cause. This enabled the majority of deaths to be registered in the year in which they occurred. This change should be borne in mind when comparing statistics for 1988 and later years with statistics for earlier years.

#### Perinatal death statistics

**4** The perinatal death statistics contained in this publication, unless otherwise stated, include all fetuses and infants delivered weighing at least 400 g or (when birthweight is unavailable) the corresponding gestational age (20 weeks), whether alive or dead. This definition recognises the availability of reliable 400 g/20 weeks data from all State and Territory Registrars of Births, Deaths and Marriages and recommendations from major users that the ABS adopt the legal requirement for registration of a perinatal death as the statistical standard.

**5** For 1996 and previous editions of this publication data relating to perinatal deaths were based upon the World Health Organisation (WHO) recommended definition for compiling national perinatal statistics. The WHO definition of perinatal deaths included infants and fetuses weighing at least 500 g or having a gestational age of 22 weeks or body length of 25 cm crown-heel.

**6** The birth statistics used to calculate the perinatal and neonatal death rates in this publication, are shown in Appendix 3. Appendix tables A3.1–A3.3 detail registered live birth statistics and stillbirth statistics adjusted to exclude infants who are known to have weighed under 400 g. Such births are identified from the medical certificate of perinatal death, which records birthweight. However, infants who survived 28 days or more but weighed less than 400 g at birth have not been excluded since figures for weight at birth are not available for these infants. Appendix tables A3.4 and A3.5 show similar adjusted information but it is based on the 500 g definition.

Perinatal death statistics *continued*

**7** The adjusted live birth statistics differ from the live birth statistics used to derive the infant death rates in this publication. The statistics used to calculate infant death rates include all registered live births regardless of birthweight. These statistics are shown in tables A2.1 and A2.2 of Appendix 2.

**8** The adjusted birth statistics also differ from the statistics published in *Births, Australia* (Cat. no. 3301.0), which are unadjusted for birthweight, i.e. have not had births known to have weighed less than 400 grams excluded. For years 1993 to 1996, births which occurred in Other Territories were excluded from adjusted live births used in calculating perinatal rates.

## STATISTICS FOR STATES AND TERRITORIES

**9** Cause of death statistics for States and Territories in this publication have been compiled in respect of the State or Territory of usual residence of the deceased, regardless of where in Australia the death occurred and was registered. The State or Territory of usual residence for a perinatal death is determined by the State or Territory of usual residence of the mother. Statistics compiled on a State or Territory of registration basis are available on request.

**10** The Australian Standard Geographical Classification versions used since 1993 have a category 'Other Territories' comprising Jervis Bay, Christmas Island and Cocos (Keeling) Islands. In the past, Jervis Bay was included with Australian Capital Territory and the two island Territories were included in Offshore and Migratory. From 1993 to 1996, statistics for 'Other Territories' have been excluded from this publication. However from 1997 onwards they are included in the Australian totals.

## CAUSE OF DEATH CLASSIFICATION USED

**11** The causes of death, both underlying and multiple, in this publication are classified according to the International Classification of Diseases (ICD-9) which was adopted for world-wide use from 1979 (see Glossary for definition of underlying and multiple cause). For underlying cause of death, accidental and violent deaths are classified according to the external cause, that is, to the circumstances of the accident or violence which produced the fatal injury rather than to the nature of the injury.

**12** The extensive nature of the ICD enables classification of causes of death at various levels of detail. For the purpose of this publication, three summary classifications are used. They are:

- the ICD at the Class level (with further disaggregation for major causes of death);
- the ICD Mortality List of Fifty Causes (with certain subdivisions) as recommended under Article 23 of the constitution of WHO; and
- main Causes of Death for age groups.

**13** Table 1.5 utilises the Mortality List of Fifty Causes. Tables 1.3, 1.4, 2.2, 2.3 and 2.4 present statistics at the ICD Class level. Background on both these summary classifications is given in volume 1 of the ICD.

**14** Tables 1.1, 1.2 and 1.6 present data for main Causes of Death for age groups. For each age group, a summary classification of the main causes of death relevant to the age group has been used. These consist of causes of death significant in that age group, at the Class level, with further disaggregation below the Class level where appropriate.



CAUSE OF DEATH CLASSIFICATION USED *continued*

**15** To enable the reader to see the relationship between the various summary classifications used in this publication, all tables show in brackets the ICD codes which constitute the causes of death covered.

**16** As ICD-9 does not directly accommodate the coding of AIDS and AIDS-related deaths, cases where AIDS was the underlying cause were coded to ICD-9 deficiency of cell-mediated immunity (279.1), from 1988 to 1995. In 1996, ABS adopted ICD-9 Clinically Modified (CM) for coding of AIDS and AIDS-related deaths. Hence, from 1996, all AIDS-related deaths (ie deaths where AIDS was mentioned in any place on the death certificate) have been coded to HIV infection (042–044). To enable comparison over time, all AIDS-related deaths in table 1.3 have been reported as ICD-9 CM HIV infection (042–044) for all years.

**17** All data in this publication refer to AIDS-related deaths rather than only those deaths where AIDS is the underlying cause. Hence in table 1.3, AIDS-related deaths, differ from the data provided for all other causes in that table since for all other causes, only data for underlying cause are given.

**18** 1998 is the final year of classifying deaths using ICD-9. Deaths registered from 1 January 1999 onwards, will be classified according to ICD-10.

## Perinatal statistics

**19** For perinatal deaths, both the main condition in the fetus/infant, and the main condition in the mother are coded to the full four-digit level of the ICD. An abridged version of ICD was used in perinatal deaths publications prior to 1983. However, with the decline in perinatal mortality, some categories of that classification are now responsible for few perinatal deaths. Causes selected for publication in this issue are those categories of this abridged classification which were responsible for a significant proportion of perinatal deaths.

## DATA QUALITY

**20** In compiling these statistics, the ABS employs a variety of quality control measures to ensure that the statistics are as reliable as possible. These measures include: seeking further information where necessary to enable accurate classification of the underlying cause of death; check-coding of cause of death; detailed computer editing of data; and checks on the statistical output, at the individual record and aggregate levels.

**21** To assist certifiers in providing accurate and comprehensive information for mortality coding, the ABS provides certification booklets for guidance in the completion of medical certificates of cause of death.

## Indigenous deaths

**22** This publication includes Indigenous deaths data for Queensland, South Australia, Western Australia and the Northern Territory. It is estimated that more than 90% of Indigenous deaths in these States and Territories are identified. While it is estimated that the Australian Capital Territory also has more than 90% coverage of indigenous deaths, no figure are published due to the very small number of indigenous deaths in the ACT. While other States have provision for the identification of Indigenous deaths on their death registration forms, deaths for these States are considered to be under identified. As causes of death data are published on a State of usual residence basis, deaths of Queensland, South Australian, Western Australian, Northern Territory and Australian Capital Territory residents which occur in other States may be identified less completely than if the deaths had been registered in their home State or Territory. Detailed information on coverage of indigenous deaths is provided in Appendix 6.

## POPULATIONS

**23** Appendix 2 provides details of the number of live births registered and the estimated age and mean resident populations which have been used to calculate the rates shown in this publication. Appendix 3 provides data on adjusted births used for calculating perinatal death rates. These appendix figures also enable further rates to be calculated.

## ACKNOWLEDGMENT

**24** 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

**25** Other available ABS publications which may be of interest include:

- Australian Social Trends* (Cat. no. 4102.0) — issued annually
- Births, Australia* (Cat. no. 3301.0) — issued annually
- Causes of Infant and Child Deaths, Australia, 1982–96* (Cat. no. 4398.0) — issued irregularly — discontinued
- Deaths, Australia* (Cat. no. 3302.0) — issued annually
- Deaths due to Diseases and Cancers of the Respiratory System, Australia, 1979–1994* (Cat. no. 3314.0) — issued irregularly
- Firearms Deaths, Australia, 1980–1995* (Cat. no. 4397.0) — issued irregularly — discontinued
- Social Indicators, Australia, 1992* (Cat. no. 4101.0) — issued irregularly — discontinued
- Suicides, Australia, 1982–1992* (Cat. no. 3309.0) — issued irregularly
- Trends in Mortality by Causes of Death in Australia, the States and Territories during 1971–92 and in Statistical Divisions and Sub-divisions during 1991–92* (Cat. no. 3313.0) — issued irregularly — discontinued
- Women's Health, 1994* (Cat. no. 4365.0) — issued irregularly — discontinued

## UNPUBLISHED DATA

**26** More detailed cause of death information is available upon request from the ABS. This information can comprise standard non-published tables (see Appendix 1) or customised tabulations (via hardcopy or electronic media). Unit record files are available to approved users upon application. Generally, a charge is levied for providing unpublished information.

**27** Perinatal tabulations for Australia based on WHO national (see Explanatory Notes, paragraph 5) and international definitions are available upon request. The WHO international definition comprises all fetuses and infants (who die within seven days of birth) weighing at least 1,000 g or (when birthweight is unavailable) having the corresponding gestational age (28 weeks) or body length (35 cm crown-heel). A charge is levied for providing this information.

**28** For more information about related unpublished statistics or data concepts contact Peter Burke on 1800 620 963.

## EFFECTS OF ROUNDING

**29** Where figures have been rounded, discrepancies may occur between totals and sums of the component items.

# APPENDIX **1** UNPUBLISHED STATISTICS .....

## GENERAL

Causes of death data are available from calendar year 1964, through the ABS special data service. Please note that for comparability purposes the data conform to the different revisions of the ICD, namely:

- ICD-7 1964–67
- ICD-8 1968–78
- ICD-9 1979 to the present

Documentation is available detailing the relationship between the ninth revision of the ICD and earlier revisions (ICD-7 and ICD-8). Detailed data tables excluded from the national cause of death publication since 1984 are available on microfiche up to 1996 or through the special data service.

## DATA ITEMS FOR CROSS-TABULATION WITH CAUSES OF DEATH

The following variables relating to the deceased are available for both underlying and multiple causes of death :

- State or Territory of registration of the death
- Month and year of registration of the death
- Place of usual residence
  - ◆ State or Territory
  - ◆ Statistical Division
  - ◆ Statistical Local Area
- Occupation
  - ◆ From 1990
    - Males and females aged 15 years and over
  - ◆ Pre-1990
    - Males aged 15–64 years only
  - ◆ 1985–90
    - Females aged 15–59 years only
- Sex
- Age
  - ◆ In completed days under one week
  - ◆ In completed days under one month
  - ◆ In completed months under one year
  - ◆ In completed years other ages
- Date of death
- Country of birth
- Duration of residence in Australia (where not Australian born)
- Marital status
- Number of issue
- Indigenous status
- Post-mortem indicator (not available for all States)
- Drowning indicator (from 1992)
- AIDS indicator (where AIDS is mentioned on the death certificate, whether the underlying cause or not)
- Certifier of cause of death (doctor or coroner)
- Cancer indicator (where cancer is mentioned on the death certificate, whether the underlying cause or not)

**A1.1 STANDARD UNDERLYING CAUSE OF DEATH TABLES**

<i>Table</i>	<i>Description</i>
COD 1	Deaths by State and Territory of usual residence by cause of death (ICD 3-digit) by sex
COD 2	Deaths by State and Territory of usual residence by cause of death (ICD 3-digit) by sex by five-year age groups
COD 3	Deaths by State and Territory of registration by cause of death (ICD 3-digit) by sex
COD 4	Deaths by State and Territory of registration by cause of death (ICD 3-digit) by sex by five-year age groups
COD 5	Causes of death (ICD 3-digit) (S list) by country of birth by sex by age
COD 6	Causes of death (ICD 3-digit) by month of occurrence by State
COD 7	Causes of death (ICD 3-digit) (S list) by marital status by sex by age

## APPENDIX 2 DATA USED IN CALCULATING RATES .....

The following tables contain data used in calculating the various rates referred to in this publication. Tables A2.1 and A2.2 are used to calculate infant death rates while table A2.3 is used to calculate age-specific death rates.

### A2.1 LIVE BIRTHS REGISTERED(a)

Sex	1989	1998
Males	128 510	128 016
Females	122 343	121 600
<b>Persons</b>	<b>250 853</b>	<b>249 616</b>

(a) Used to calculate infant death rates.

### A2.2 LIVE BIRTHS REGISTERED(a), By Usual Residence of Mother

Sex	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Males	43 763	31 303	24 042	9 266	12 655	3 053	1 913	2 006	128 016
Females	41 736	29 189	23 004	8 960	12 062	2 925	1 728	1 976	121 600
<b>Persons</b>	<b>85 499</b>	<b>60 492</b>	<b>47 046</b>	<b>18 226</b>	<b>24 717</b>	<b>5 978</b>	<b>3 641</b>	<b>3 982</b>	<b>249 616</b>

(a) Used to calculate infant death rates.

### A2.3 AGES OF ESTIMATED RESIDENT POPULATION AT 30 JUNE

#### AGE GROUPS(YEARS).....

Year	Under 1	1-14	15-24	25-44	45-54	55-64	65-74	75-84	85 and over	All ages
MALES										
1989	127 847	1 782 512	1 399 357	2 667 756	888 220	735 885	519 169	226 863	39 980	<b>8 387 589</b>
1998	127 560	1 883 552	1 368 968	2 888 653	1 246 935	814 865	619 045	310 986	69 287	<b>9 329 851</b>
FEMALES										
1989	121 711	1 692 848	1 349 711	2 625 384	845 097	731 593	608 685	348 590	103 208	<b>8 426 827</b>
1998	120 730	1 790 525	1 308 193	2 895 712	1 220 511	801 421	677 865	447 868	158 306	<b>9 421 131</b>
PERSONS										
1989	249 558	3 475 360	2 749 068	5 293 140	1 733 317	1 467 478	1 127 854	575 453	143 188	<b>16 814 416</b>
1998	248 290	3 674 077	2 677 161	5 784 365	2 467 446	1 616 286	1 296 910	758 854	227 593	<b>18 750 982</b>

## APPENDIX 3 DATA USED FOR PERINATAL DEATHS .....

### 400 GRAMS/20 WEEKS GESTATION

The following tables contain births data used in calculating perinatal death rates. Tables A3.1, A3.2 and A3.3 are used to calculate perinatal death rates based on the 400 g/20 weeks gestation definition for fetal deaths. This definition was used predominantly in this issue and will be used in future issues.

#### A3.1 ADJUSTED BIRTHS(a), By Usual of Residence of Mother

##### STATE OR TERRITORY OF USUAL RESIDENCE.....

		NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.(b)
Live births	Males	43 756	31 303	24 020	9 265	12 650	3 053	1 913	2 006	<b>127 981</b>
	Females	41 732	29 189	22 986	8 959	12 059	2 925	1 728	1 976	<b>121 574</b>
Stillbirths(c)	Males	264	145	142	46	58	19	14	19	<b>707</b>
	Females	199	152	120	47	68	20	11	12	<b>629</b>
Total	Males	44 020	31 448	24 162	9 311	12 708	3 072	1 927	2 025	<b>128 688</b>
	Females	41 931	29 341	23 106	9 006	12 127	2 945	1 739	1 988	<b>122 203</b>
	Persons	85 951	60 789	47 268	18 317	24 835	6 017	3 666	4 013	<b>250 891</b>

(a) Registered births adjusted to conform to WHO criteria for the calculation of perinatal death rates. See Glossary.

(c) Including those where it was not known if the heartbeat ceased before or after the delivery.

(b) Includes Other Territories. See Explanatory Notes, paragraph 10 for further information.

#### A3.2 ADJUSTED BIRTHS(a), By Sex of Child and Age of Mother

##### AGE OF MOTHER (YEARS).....

		Under 20	20-24	25-29	30-34	35-39	40 and over	Not stated	Total
Live births	Males	6 054	20 608	41 812	38 746	17 735	2 973	53	<b>127 981</b>
	Females	5 789	19 437	39 851	37 111	16 475	2 872	39	<b>121 574</b>
Stillbirths(b)	Males	65	121	201	171	107	26	16	<b>707</b>
	Females	43	104	177	173	97	25	10	<b>629</b>
Total	Males	6 119	20 729	42 013	38 917	17 842	2 999	69	<b>128 688</b>
	Females	5 832	19 541	40 028	37 284	16 572	2 897	49	<b>122 203</b>
	Persons	11 951	40 270	82 041	76 201	34 414	5 896	118	<b>250 891</b>

(a) Registered births adjusted to conform to WHO criteria for the calculation of perinatal death rates. See Glossary.

(b) Including those where it was not known if the heartbeat ceased before or after delivery.

**A3.3 ADJUSTED BIRTHS(a), By Sex**

	LIVE BIRTHS r.....			STILLBIRTHS(b).....			TOTAL r.....		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
1989	128 497	122 332	250 829	862	770	1 632	129 359	123 102	252 461
1990	135 184	127 437	262 621	989	791	1 780	136 173	128 228	264 401
1991	131 955	125 274	257 229	868	790	1 658	132 823	126 064	258 887
1992	135 573	128 525	264 098	889	812	1 701	136 462	129 337	265 799
1993	133 545	126 626	260 171	765	674	1 439	134 310	127 300	261 610
1994	132 589	125 385	257 974	798	614	1 412	133 387	125 999	259 386
1995	131 411	124 725	256 136	805	707	1 512	132 216	125 432	257 648
1996	130 526	123 214	253 740	900	768	1 668	131 426	123 982	255 408
1997	129 143	122 631	251 774	829	687	1 516	129 972	123 318	253 290
1998	127 981	121 574	249 555	707	629	1 336	128 688	122 203	250 891

(a) Registered births adjusted to conform to WHO criteria for the calculation of perinatal death rates. See Glossary.

(b) Including those where it was not known if the heartbeat ceased before or after delivery.



## 500 GRAMS/22 WEEKS GESTATION

Tables A3.4 and A3.5 contain births data used in the calculation of perinatal death rates based on the WHO definition of 500 g/22 weeks gestation for fetal deaths. This definition was used by the ABS in publications up to and including 1996.

**A3.4 ADJUSTED BIRTHS(a), By Usual Residence of Mother**

## STATE OR TERRITORY OF USUAL RESIDENCE.....

		NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	<b>Aust.(b)</b>
Live births	Males	43 747	31 303	24 012	9 262	12 643	3 053	1 913	2 006	<b>127 954</b>
	Females	41 719	29 189	22 976	8 957	12 051	2 925	1 728	1 976	<b>121 541</b>
Stillbirths(c)	Males	214	124	119	38	49	17	12	17	<b>590</b>
	Females	162	137	100	39	55	18	10	11	<b>532</b>
Total	Males	43 961	31 427	24 131	9 300	12 692	3 070	1 925	2 023	<b>128 544</b>
	Females	41 881	29 326	23 076	8 996	12 106	2 943	1 738	1 987	<b>122 073</b>
	Persons	85 842	60 753	47 207	18 296	24 798	6 013	3 663	4 010	<b>250 617</b>

(a) Registered births adjusted to conform to WHO criteria for the calculation of perinatal death rates. See Glossary.

(c) Including those where it was not known if the heartbeat ceased before or after the delivery.

(b) Includes Other Territories. See Explanatory Notes, paragraph 10 for further information.

**A3.5 ADJUSTED BIRTHS(a), By Sex**

## LIVE BIRTHS r.....

## STILLBIRTHS(b).....

## TOTAL r.....

	LIVE BIRTHS r.....			STILLBIRTHS(b).....			TOTAL r.....		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
1989	128 481	122 316	250 797	769	682	1 451	129 250	122 998	252 248
1990	135 165	127 421	262 586	888	702	1 590	136 053	128 123	264 176
1991	131 941	125 253	257 194	777	701	1 478	132 718	125 954	258 672
1992	135 544	128 509	264 053	779	714	1 493	136 323	129 223	265 546
1993	133 525	126 616	260 141	668	577	1 245	134 193	127 193	261 386
1994	132 563	125 365	257 928	692	515	1 207	133 255	125 880	259 135
1995	131 386	124 700	256 086	681	602	1 283	132 067	125 302	257 369
1996	130 495	123 179	253 674	759	652	1 411	131 254	123 831	255 085
1997	129 119	122 601	251 720	692	588	1 280	129 811	123 189	253 000
1998	127 954	121 541	249 495	590	532	1 122	128 544	122 073	250 617

(a) Registered births adjusted to conform to WHO criteria for the calculation of perinatal death rates. See Glossary.

(b) Including those where it was not known if the heartbeat ceased before or after delivery.

## APPENDIX 4 ENHANCED DEATH DATA .....

### MULTIPLE CAUSES OF DEATH STATISTICS

Until 1997, the ABS produced causes of death statistics according to WHO recommendations, where each death was assigned to a single underlying cause. The underlying cause is defined as the 'disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury'. The medical certificate of cause of death recommended by WHO for international use, was designed to facilitate the selection of the underlying cause. When more than one condition is entered on the death certificate the underlying cause is selected using the coding rules of the relevant version of the ICD, currently the ninth revision. The underlying cause is selected so that preventive strategies can be instituted to address that particular cause. Since its adoption in 1948, statistics based on the underlying cause concept have served the purpose of summarising international cause-specific mortality statistics into a single index, which has been used to assess trends in causes of death.

However, the current leading causes of death are very different from those that prevailed when the single underlying cause concept was adopted. The leading causes of death in most countries have shifted from infectious and parasitic diseases to chronic and degenerative diseases, and from infant and child deaths to deaths among the elderly. As the population continues to age, chronic diseases become increasingly more important. Deaths from chronic conditions occur with a number of concurrent or coexisting conditions, whose initiating condition is often difficult to isolate. Some deaths, it has been postulated, cannot occur without the influence of more than one cause. The ability of the single underlying cause statistics alone to accurately summarise the mortality pattern of a population has, therefore, been questioned.

When only a single underlying cause is selected for tabulating cause-specific statistics, other information provided on the death certificate is lost, for instance, immediate cause of death, causes and conditions that intervene between the underlying and immediate causes of death and many other contributory causes that were involved, but did not directly influence the death. The information lost may be important to the understanding of the process of death. For example, 1997 data suggest that on average 1.8 causes (and conditions) would be lost per death if only the single underlying cause was recorded. The loss of information is a particular problem for deaths attributed to external causes (injury, poisoning and violence) which are classified to the circumstances of death, rather than according to the nature of injury.

In considering the above, the ABS began with the 1997 calendar year data to code and tabulate all causes and conditions reported on each death certificate using software developed by the National Center for Health Statistics (NCHS) of the United States. The NCHS software has three major components: MICAR (Medical Indexing, Classification and Retrieval System), ACME (Automatic Classification of Medical Entities) and TRANSAX (Translation of Axes). These three components have been developed to read the textual entries and convert them into a file containing multiple causes of death in accordance with the ICD-9 coding rules.

MULTIPLE CAUSES OF DEATH STATISTICS *continued*

The automation of cause of death coding has brought a number of benefits, including improved data quality and timeliness. It will facilitate policy relevant epidemiological and demographic research by focusing on competing risks and disease interactions which are not possible from the cause of death statistics solely based on underlying cause.

However, there has been a break in the time series data due to the automatic coding of causes of death. This issue is addressed in Appendix 5 and comparability factors to assist with the linking of manually and automatically coded data have been provided.

## APPENDIX 5 COMPARABILITY OF DATA OVER TIME .....

### INTRODUCTION

The use of the Automated Coding System (ACS) has enabled efficient production of multiple cause of death statistics. ACS has been adopted by a number of countries and its growing popularity has the potential to significantly improve the international comparability of causes of death statistics.

ACS was developed in the United States and, therefore, uses their interpretation of ICD-9 coding rules. In some instances, these differ significantly from the coding rules used previously in Australia. As a result of the introduction of ACS, there is now a break in the underlying causes of death series between 1996 and 1997, with significant differences for a number of causes of death.

### COMPARISON OF AUTOMATIC AND MANUAL CODING

The causes of death most affected is pneumonia and, hence, the category of pneumonia and influenza (ICD codes 480–487) became, in 1997, the fifth leading cause of death. The other causes significantly affected include senile and presenile organic psychotic conditions—dementia (ICD code 290), and alzheimer's (ICD code 3310). Under the previous Australian coding interpretations, many of the deaths attributed to pneumonia in 1997 would have been coded to dementia, alzheimer's disease, ischaemic heart disease, cardiac dysrhythmias and heart failure, malignant neoplasms, chronic obstructive pulmonary disease and renal failure. As a result, while applying ACS coding interpretations has caused pneumonia deaths to rise, deaths coded to a wide range of other conditions have declined, in particular those due to dementia.

To highlight the differences and to provide a link for underlying causes of death data between 1996 and 1997, the records for more than 30,000 deaths registered in 1997 (representing one-quarter of the total 1997 deaths) were coded, both manually and automatically. Records selected for the exercise were spread across the year to allow for seasonal influences. Comparability factors were then calculated for groups of causes of death as a means of adjusting data for 1996 and previous years, to make them more comparable with equivalent data for 1997. Comparability factors of 1.0 or close to 1.0, indicate no significant coding differences between automated and manual coding. Factors of less than 1.0 indicate that under automated coding fewer deaths would be assigned to that particular cause than under manual coding. Due to the sampling methodology used, reliable comparability factors could not be calculated for individual causes involving only small numbers of deaths.

Comparability factors for external causes are close to 1.0 due to the extensive clerical intervention required for coding these causes.

An adjusted estimate of the number of deaths attributed to a particular cause can be produced by multiplying the number of deaths attributed to that cause in 1996 (or in earlier years) by its corresponding comparability factor. This adjusted figure can then be more accurately compared with the number of deaths attributed to the same cause in 1997 and enable trends to be more accurately examined.

COMPARISON OF AUTOMATIC AND MANUAL CODING *continued*

Table A5.1 presents comparability factors at the national level, for each cause of death (or groups of causes of death) presented in this publication. A concordance table, which assists in explaining the relationships between the manual and automated coding methodologies, and further information on linking, can be obtained from the ABS by telephoning 1800 620 963.

**A5.1 COMPARABILITY FACTORS**

<i>Cause of death and ICD code</i>	<i>Comparability factor</i>
<b>All causes</b>	<b>1.00</b>
Class I Infectious and parasitic diseases (001–139)	1.05
Class II Neoplasms (140–239)	0.99
Malignant neoplasms (140–208)	0.99
Lip, oral cavity and pharynx (140–149)	1.04
Digestive organs and peritoneum (150–159)	0.99
Oesophagus (150)	0.99
Stomach (151)	0.99
Colon (153)	1.00
Rectum, rectosigmoid junction and anus (154)	0.99
Liver and intrahepatic bile ducts (155)	1.04
Pancreas (157)	1.00
Trachea, bronchus and lung (162)	1.00
Bone, connective tissue, skin and breast (170–175)	0.98
Melanoma of skin (172)	0.99
Breast (174, 175)	0.99
Genitourinary organs (179–189)	0.99
Ovary and other uterine adnexa (183)	1.01
Prostate (185)	0.99
Bladder (188)	0.97
Other and unspecified sites (190–199)	0.99
Brain (191)	0.99
Lymphatic and haematopoietic tissue (200–208)	1.00
Leukaemia (204–208)	0.96
Benign and unspecified neoplasms (210–239)	0.90
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	0.97
Diabetes mellitus (250)	0.94
Class IV Diseases of blood and blood-forming organs (280–289)	1.12
Class V Mental disorders (290–319)	0.84
Senile and presenile organic psychotic conditions (290)	0.38
Drug dependence (304)	1.03
Class VI Disease of the nervous system and sense organs (320–389)	0.88
Hereditary and degenerative diseases of the central nervous system (330–337)	0.86
Alzheimer's disease (3310)	0.84
Class VII Diseases of the circulatory system (390–459)	0.98
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	0.99
Rheumatic fever and rheumatic heart disease (390–398)	0.89
Hypertensive disease (401–405)	0.93
Ischaemic heart disease (410–414)	0.99
Acute myocardial infarction (410)	0.99
Diseases of pulmonary circulation and other forms of heart disease (415–429)	0.99
Heart failure (428)	0.94

**A5.1** COMPARABILITY FACTORS *continued*

<i>Cause of death and ICD code</i>	<i>Comparability factor</i>
.....	
Class VII Diseases of the circulatory system (390–459) <i>continued</i>	
Cerebrovascular disease (430–438)	0.95
Diseases of arteries, arterioles and capillaries (440–448)	0.99
Atherosclerosis (440)	0.88
Aortic aneurysm (441)	0.99
Class VIII Diseases of the respiratory system (460–519)	
Pneumonia and influenza (480–487)	1.21
Chronic obstructive pulmonary disease and allied conditions (490–496)	0.94
Emphysema (492)	0.97
Asthma (493)	0.98
Class IX Diseases of the digestive system (520–579)	
Diseases of oesophagus, stomach and duodenum (530–537)	1.01
Ulcer of stomach and duodenum (531–533)	0.97
Chronic liver disease and cirrhosis (571)	0.96
Class X Diseases of the genitourinary system (580–629)	
Nephritis, nephrotic syndrome and nephrosis (580–589)	0.88
Renal failure (584–586)	0.86
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	
1.00	1.00
Class XII Diseases of the skin and subcutaneous tissue (680–709)	
0.99	0.99
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	
0.97	0.97
Class IV Congenital anomalies (740–759)	
1.09	1.09
Class XV Certain conditions originating in the perinatal period (760–779)	
0.92	0.92
Class XVI Symptoms, signs and ill-defined conditions (780–799)	
0.74	0.74
Class XVII Accidents, poisonings and violence external causes) (E800–E999)	
Accidents (E800–E949)	1.01
Motor vehicle traffic accidents (E810–E819)	1.02
Accidental falls (E880–E888)	1.00
Accidental drowning and submersion (E910)	1.03
Suicide (E950–E959)	0.99
Homicide (E960–E969)	1.00
.....	

## INTRODUCTION

In 1998, there were 2,114 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 1998 registered Indigenous deaths is an underestimate of the actual number of such deaths.

## PROPENSITY TO IDENTIFY AS INDIGENOUS

Propensity to identify as Indigenous is determined by a range of factors, including who provides the information (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 6.1. Each is based on a different collection, with a different propensity to identify as Indigenous:

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

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.

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 actual number.

PROPENSITY TO IDENTIFY AS INDIGENOUS *continued***A6.1 DEATHS OF INDIGENOUS PEOPLE, Summary**

Year	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.(a)
DEATHS REGISTERED									
1988	206	39	6	106	322	—	479	—	1 158
1989	189	29	3	139	329	3	422	—	1 115
1990	201	42	4	118	322	—	393	—	1 082
1991	206	50	—	135	401	3	412	—	1 208
1992	165	53	—	107	346	5	397	—	1 074
1993	194	50	—	111	386	6	376	9	1 134
1994	207	50	—	123	377	3	380	10	1 153
1995	224	50	—	121	384	3	387	9	1 182
1996	177	49	258	118	370	—	328	5	1 306
1997	88	93	531	132	351	5	458	4	1 662
1998	462	123	593	127	378	13	415	3	2 114

## EXPECTED DEATHS (1991 Census-based experimental projections)(b)

1993	501	109	587	121	377	52	364	8	2 120
1994	509	111	595	124	382	52	368	9	2 152
1995	518	113	604	126	385	54	374	10	2 185
1996	528	114	613	128	390	56	379	10	2 220
1997	537	116	623	131	394	57	386	11	2 257
1998	547	118	634	133	400	59	391	11	2 293

## EXPECTED DEATHS (1996 Census-based experimental estimates and projections)(c)

1993	901	202	862	178	477	115	434	15	3 191
1994	916	206	874	183	484	115	439	16	3 239
1995	932	209	887	186	488	119	446	18	3 289
1996	950	211	900	189	494	124	452	18	3 341
1997	966	215	915	193	499	126	460	20	3 394
1998	984	219	936	199	509	130	471	21	3 469

## ESTIMATED COVERAGE OF DEATHS (1991 Census-based expectancies)(%)

1993	39	46	—	92	102	12	103	113	53
1994	41	45	—	99	99	6	103	111	54
1995	43	44	—	96	100	6	103	90	54
1996	34	43	42	92	95	—	87	50	59
1997	16	80	85	101	89	9	119	36	74
1998	84	104	94	95	95	22	106	27	92

## ESTIMATED COVERAGE OF DEATHS (1996 Census-based expectancies)(%)

1993	22	25	—	62	81	5	87	62	36
1994	23	24	—	67	78	3	87	61	36
1995	24	24	—	65	79	3	87	50	36
1996	19	23	29	63	75	—	73	28	39
1997	9	43	58	68	70	4	100	20	49
1998	47	56	63	64	74	10	88	14	61

(a) Includes Other Territories from 1993.

(b) Source: ABS, Experimental Projections of the Aboriginal and Torres Strait Islander Population, 30 June 1991–30 June 2001 (Cat. no. 3231.0), medium series.

(c) Source: 1992–1996 estimates derived from ABS, Experimental Estimates of the Aboriginal and Torres Strait Population, 1991–1996 (Cat. no. 3230.0). 1997 and 1998 projection from ABS, Experimental Projections Aboriginal and Torres Strait Island population, 1991–2006 (Cat. no. 3231.0), low series.



## TECHNICAL NOTE .....

### YEARS OF POTENTIAL LIFE LOST

YPLL measures the extent of 'premature' mortality, which is assumed to be any death at ages of 1–75 years inclusive, and aids in assessing the significance of specific diseases or trauma as a cause of premature death.

#### PREMATURE MORTALITY, Deaths of Persons Aged 1–75 Years

Cause of death and ICD code	YPLL(a).....	
	Males	Females
<b>All causes</b>	<b>589 139</b>	<b>297 310</b>
Malignant neoplasms (cancer) (140–208)	147 563	119 020
Accidents (E800–E949)	104 135	32 482
Motor vehicle traffic accidents (E810–E819)	49 858	17 563
Suicide (E950–E959)	78 658	17 848
Ischaemic heart disease (410–414)	76 209	22 173
Drug dependence (304)	23 442	5 503
Cerebrovascular disease (stroke) (430–438)	16 140	12 043
Chronic obstructive pulmonary disease and allied conditions (including asthma, emphysema and bronchitis) (490–496)	14 213	11 060
Chronic liver disease and cirrhosis (571)	11 154	4 258
Diabetes mellitus (250)	8 768	5 470
Pneumonia and influenza (480–487)	4 973	3 460
Diseases of arteries, arterioles and capillaries (including atherosclerosis and aortic aneurysm) (440–448)	4 687	2 435
Hereditary and degenerative diseases of the central nervous system (330–337)	4 197	2 909

(a) Years of potential life lost standardised for age.

Estimates of YPLL were calculated for deaths of persons aged 1–75 years based on the assumption that deaths occurring at these ages are untimely. A number of variables are used in these calculations, as described below.

YPLL is derived from:

$$YPLL = \sum_x (D_x (76 - A_x))$$

where:

$A_x$  = adjusted age at death. As age at death is only available in completed years the midpoint of the reported age was chosen (e.g. age at death 34 years was adjusted to 34.5).

$D_x$  = registered number of deaths at age  $x$  due to a particular cause of death.

YEARS OF POTENTIAL LIFE LOST *continued*

YPLL was standardised for age using the following formula:

$$YPLL_s = \sum_x (D_x (76 - A_x) C_x)$$

where the age correction factor  $C_x$  is defined for age  $x$  as:

$$C_x = \frac{N_{xs}}{N_s} \cdot \frac{1}{N_x} \cdot N$$

where:

$N$  = number of persons aged 1–75 years in the 1998 population

$N_x$  = number of persons aged  $x$  years in the 1998 population

$N_{xs}$  = number of persons aged  $x$  years in the standard population

$N_s$  = number of persons aged 1–75 years in the standard population

The Australian population at 30 June 1991 was chosen as the standard population.

## GLOSSARY .....

**Adjusted births** Registered births adjusted by removing all stillbirths and neonatal deaths where birthweight was known to be less than 400 g. This is the denominator used in calculating perinatal death rates in this publication. This adjustment is made in order to enable meaningful perinatal death rates to be calculated. See Explanatory Notes, paragraph 6.

**Death rates** Four forms of death rate are shown in the general deaths section in this publication. These are crude death rates, standardised death rates, age-specific death rates and infant death rates, as defined below:

- *Crude death rates* relate to the total number of deaths for specific causes and are the number of deaths for those causes per 100,000 of estimated resident population at 30 June of that year—see table 2.4.
- *Standardised death rates* enable the comparison of death rates between populations with different age structures by relating them to a standard population, in this case all persons in the 1991 Australian population. They are expressed per 100,000 persons. The standardised death rates in this publication are calculated using the *direct method*, used when populations under study are large and the age-specific death rates are reliable. It is the overall death rate that would have prevailed in the standard population if it had experienced at each age the death rates of the population under study—see tables 1.4 and 1.7.
- *Age-specific death rates* relate to deaths for age groups other than under one year and are the number of deaths per 100,000 of the mid-year estimated resident population as at 30 June of that year in a particular age/sex group—see table 1.2.
- *Infant death rates* relate to deaths of children under one year of age and are the number of deaths per 1,000 births in the year—see table 1.2.

For comparison and measuring purposes, perinatal deaths in this publication have also been expressed as rates. These rates are defined as follows:

- for fetal deaths and total perinatal deaths, the rates represent the number of deaths per 1,000 live births and fetal deaths combined (where birthweight was at least 400 g).
- for neonatal deaths, the rates represent the number of deaths per 1,000 live births (where birthweight was at least 400 g).

**Fetal death** A fetal death is the delivery of a child who did not, at any time after delivery, breathe or show any other evidence of life such as a heartbeat. (A birthweight criterion applies. See Explanatory Notes, paragraphs 4–6.)

**Infant death** The death of a child before its first birthday.

**Live births** A live birth is the birth of a child who after delivery, breathes or shows any other evidence of life such as a heartbeat. (A birthweight criterion applies. See Explanatory Notes, paragraphs 4–6.)

.....

<b>Multiple causes of death</b>	All morbid conditions, diseases and injuries entered on the death certificate. These include those involved in the morbid train of events leading to death which were classified as either the underlying cause, the immediate cause, or any intervening causes and those conditions which contributed to death, but were not related to the disease or condition causing death. For deaths where the underlying cause was identified as an external cause (injury or poisoning) multiple causes include circumstances of injury, the nature of injury as well as any other conditions reported on the death certificate.
<b>Neonatal death</b>	A neonatal death is the death within 28 days of birth of any child who after delivery, breathed or showed any other evidence of life such as a heartbeat. (A birthweight criterion applies. See Explanatory Notes, paragraphs 4–6.)
<b>Perinatal death</b>	A perinatal death is a fetal death or neonatal death. (A birthweight criterion applies. See Explanatory Notes, paragraphs 4–6.)
<b>Period of gestation</b>	Period of gestation is measured from the first day of the last normal menstrual period to the date of birth and is expressed in completed weeks.
<b>Stillbirth</b>	See Fetal death.
<b>Underlying cause of death</b>	The disease or injury which initiated the train of morbid events leading directly to death. Accidental and violent deaths are classified according to the external cause, that is, to the circumstances of the accident or violence which produced the fatal injury rather than to the nature of the injury.
<b>Years of potential life lost (YPLL)</b>	YPLL measures the extent of 'premature' mortality, where 'premature' mortality is assumed to be any death at ages of 1–75 years inclusive. By estimating YPLL for deaths of people aged 1–75 years it is possible to assess the significance of specific diseases or trauma as a cause of premature death. See Technical Note for an explanation of the calculation of YPLL.

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2330300001987  
ISSN 1031-2005

RRP \$24.00