



# CAUSES OF DEATH AUSTRALIA

EMBARGO: 11:30AM (CANBERRA TIME) MON 11 DEC 2000

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- For further information about these and related statistics, contact the National Information Service on 1300 135 070, 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.

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### CHANGES IN THIS ISSUE

This issue contains data coded to the tenth revision of the International Classification of Diseases (ICD). All cause text descriptors and code references now reflect this change.

Deaths from external causes are attributed to the event leading to the fatal injury as described in Chapter XX of ICD-10. Data relating to Chapter XIX, Injury, poisoning and certain other consequences of external causes refer to nature of injury and are not relevant to underlying causes of death.

This issue contains a new table and an extension of an existing table.

Table 1.1, Underlying Cause, Selected Causes provides numbers and proportions of leading causes of death for the current year.

Table 1.8, Underlying Cause, Indigenous People has been expanded in this issue to include New South Wales and Victorian data.

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

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### SYMBOLS AND OTHER USAGES

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 Revision 9
ICD-9 CM	International Classification of Diseases Revision 9 Clinically Modified
ICD-10	International Classification of Diseases Revision 10
NCHS	National Center for Health Statistics
WHO	World Health Organisation
YPLL	Years of Potential Life Lost
..	not applicable
—	nil or rounded to zero (including null cells)

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# SECTION 1

## UNDERLYING CAUSE OF DEATH .....

### INTRODUCTION

All deaths registered from 1 January 1999 have been coded using the tenth revision of the International Classification of Diseases (ICD-10). Data for other years are coded to ICD-9. Mortality data coded to ICD-10 are generally comparable at the broad chapter level to deaths coded to ICD-9.

To assist with comparisons over time, at a more detailed level, the ABS is recoding 1997 and 1998 deaths data to ICD-10. Therefore, 1997 and 1998 deaths will be available coded to both ICD versions. In addition to data for these two years, comparability factors will be produced during 2001. Further explanation on the comparability between ICD-9 and ICD-10 as detailed in this publication is provided in Appendix 5.

### LEADING CAUSES

There were 128,102 deaths registered in 1999, consisting of 67,227 male and 60,875 female deaths. This represented an increase of 0.7% on the corresponding figure for 1998 (127,202 deaths). Malignant neoplasms and ischaemic heart diseases were the leading causes of death, accounting for 27% and 22% respectively of total deaths registered. The introduction of ICD-10 has had only a minor impact on the composition and contribution of the ten leading causes of death in 1999, with pneumonia and influenza being most affected. Changes are discussed further in Appendix 5.

### LEADING CAUSES OF DEATH

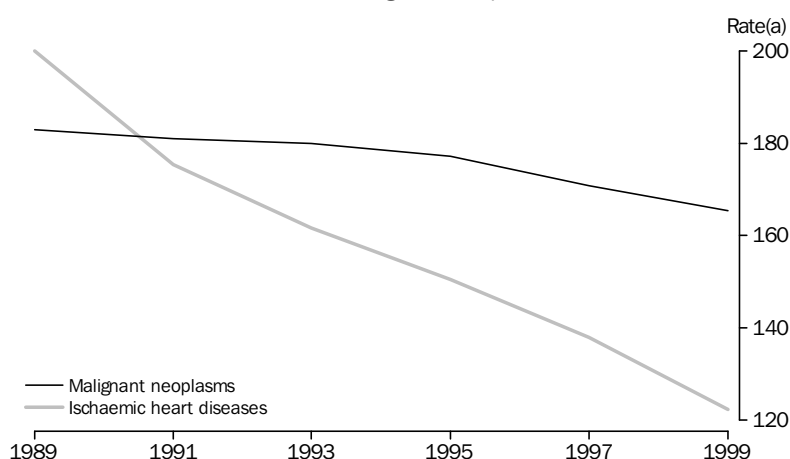
Cause of death and ICD code	Males	Females	Proportion of total deaths	
	no.	no.	no.	%
<b>All causes</b>	<b>67 277</b>	<b>60 875</b>	<b>128 102</b>	<b>100.0</b>
Malignant neoplasms (cancer) (C00–C97)	19 866	15 187	35 053	27.4
Digestive organs (C15–C26)	5 600	4 312	9 912	7.7
Trachea, bronchus and lung (C33, C34)	4 655	2 148	6 803	5.3
Ischaemic heart diseases (I20–I25)	14 865	12 744	27 609	21.6
Cerebrovascular diseases (stroke) (I60–I69)	4 894	7 372	12 266	9.6
Chronic lower respiratory diseases (including asthma, emphysema and bronchitis) (J40–J47)	3 609	2 487	6 096	4.8
Accidents (V01–X59)	3 486	1 801	5 287	4.1
Transport accidents (V01–V99)	1 441	570	2 011	1.6
Diabetes mellitus (E10–E14)	1 485	1 462	2 947	2.3
Diseases of arteries, arterioles and capillaries (including atherosclerosis and aortic aneurysm) (I70–I79)	1 476	1 388	2 864	2.2
Intentional self-harm (X60–X84)	2 002	490	2 492	1.9
Organic, including symptomatic, mental disorders (F00–F09)	648	1 296	1 944	1.5
Influenza and pneumonia (J10–J18)	765	1 133	1 898	1.5
All other causes	14 131	15 515	29 646	23.1

## TRENDS OVER THE LAST DECADE

While the total number of deaths registered in 1999 was 3.1% greater than the number registered in 1989, the standardised death rate of 584 deaths per 100,000 population recorded in 1999 was 23% lower than the corresponding figure of 759 in 1989. These figures are consistent with continuing improvements in life expectancy in Australia.

During the ten years to 1999, the pattern of decline of the two leading causes of death, malignant neoplasms and ischaemic heart diseases, which account for nearly half the total deaths, has been quite different. Since 1989, the standardised death rate for malignant neoplasms decreased 10%, while the rate for ischaemic heart diseases decreased 39%.

## STANDARDISED DEATH RATES, Malignant Neoplasms and Ischaemic Heart Diseases



(a) Per 100,000 estimated resident population.

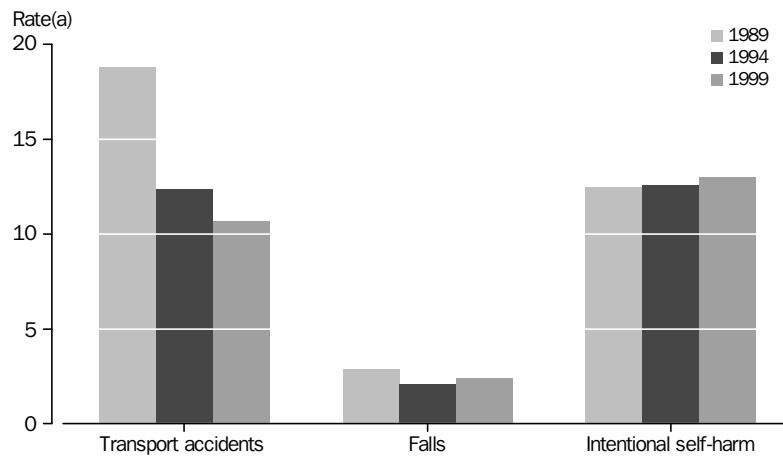
## EXTERNAL CAUSES

External causes of death relate to deaths from accidents, poisonings and violence and were responsible for 6.5% of all deaths registered in 1999. External causes of death account for a higher proportion of male deaths (8.7%) than females (4.1%). External causes have a relatively higher impact on those in the younger age groups. For example, in 1999, deaths from external causes accounted for 69% of all deaths in the 15–24 year age group, 62% in the 25–34 year age group and 43% in the 1–14 year age group.

Since 1989, there has been a considerable decrease in the number of deaths from external causes. This decrease has largely been driven by the decline in the deaths from transport accidents (from 3,163 in 1989 to 2,011 in 1999). Deaths from accidental drowning declined by 11% during this period from 314 in 1989 to 278 in 1999. However, this decline has not been evident across all external causes. For example, deaths as a result of intentional self-harm (suicide) rose from 2,096 in 1989 to 2,492 in 1999.

EXTERNAL CAUSES *continued*

STANDARDISED DEATH RATES, Selected External Causes



## 1.1 UNDERLYING CAUSE, Selected Causes

Cause of death and ICD code	NUMBERS.....			PERCENTAGE OF ALL DEATHS.....		
	Males	Females	Persons	Males	Females	Persons
<b>All causes</b>	<b>67 227</b>	<b>60 875</b>	<b>128 102</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Chapter I Certain infectious and parasitic diseases (A00–B99)	842	761	1 603	1.3	1.3	1.3
Human immunodeficiency virus (HIV) disease (B20–B24)	126	9	135	0.2	—	0.1
Chapter II Neoplasms (C00–D48)	20 283	15 573	35 856	30.2	25.6	28.0
Malignant neoplasms (C00–C97)	19 866	15 187	35 053	29.6	24.9	27.4
Digestive organs (C15–C26)	5 600	4 312	9 912	8.3	7.1	7.7
Respiratory and intrathoracic organs (C30–C39)	4 923	2 213	7 136	7.3	3.6	5.6
Breast (C50)	22	2 505	2 527	—	4.1	2.0
Female genital organs (C51–C58)	..	1 300	1 300	..	2.1	1.0
Male genital organs (C60–C63)	2 546	..	2 546	3.8	..	2.0
Eye, brain and other parts of central nervous system (C69–C72)	609	459	1 068	0.9	0.8	0.8
Lymphoid, haematopoietic and related tissue (C81–C96)	1 962	1 596	3 558	2.9	2.6	2.8
In situ and benign neoplasms and neoplasms of uncertain or unknown behaviour (D00–D48)	417	386	803	0.6	0.6	0.6
Chapter III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	195	255	450	0.3	0.4	0.4
Chapter IV Endocrine, nutritional and metabolic diseases (E00–E90)	2 001	2 099	4 100	3.0	3.4	3.2
Diabetes mellitus (E10–E14)	1 485	1 462	2 947	2.2	2.4	2.3
Chapter V Mental and behavioural disorders (F00–F99)	1 256	1 552	2 808	1.9	2.5	2.2
Organic, including symptomatic, mental disorders (F00–F09)	648	1 296	1 944	1.0	2.1	1.5
Psychoactive substance use (F10–F19)	546	167	713	0.8	0.3	0.6
Chapter VI Diseases of the nervous system (G00–G99)	1 818	2 072	3 890	2.7	3.4	3.0
Extrapyramidal and movement disorders (G20–G26)	471	323	794	0.7	0.5	0.6
Chapter VII Diseases of the eye and adnexa (H00–H59)	—	5	5	—	—	—
Chapter VIII Diseases of the ear and mastoid process (H60–H95)	—	6	6	—	—	—
Chapter IX Diseases of the circulatory system (I00–I99)	24 824	26 479	51 303	36.9	43.5	40.0
All heart disease (I05–I09, I11, I13, I20–I25, I26, I27, I30–I52)	18 116	17 229	35 345	26.9	28.3	27.6
Acute rheumatic fever and chronic rheumatic heart disease (I00–I09)	84	177	261	0.1	0.3	0.2
Hypertensive diseases (I10–I15)	432	745	1 177	0.6	1.2	0.9
Ischaemic heart diseases (I20–I25)	14 865	12 744	27 609	22.1	20.9	21.6
Pulmonary heart disease and diseases of pulmonary circulation (I26–I28)	191	322	513	0.3	0.5	0.4
Other forms of heart disease (I30–I52)	2 764	3 574	6 338	4.1	5.9	4.9
Cerebrovascular diseases (I60–I69)	4 894	7 372	12 266	7.3	12.1	9.6
Diseases of arteries, arterioles and capillaries (I70–I79)	1 476	1 388	2 864	2.2	2.3	2.2
Chapter X Diseases of the respiratory system (J00–J99)	5 296	4 317	9 613	7.9	7.1	7.5
Influenza and pneumonia (J10–J18)	765	1 133	1 898	1.1	1.9	1.5
Chronic lower respiratory diseases (J40–J47)	3 609	2 487	6 096	5.4	4.1	4.8
Chapter XI Diseases of the digestive system (K00–K93)	2 111	2 110	4 221	3.1	3.5	3.3
Diseases of oesophagus, stomach and duodenum (K20–K31)	313	335	648	0.5	0.6	0.5
Diseases of liver (K70–K77)	863	380	1 243	1.3	0.6	1.0
Chapter XII Diseases of the skin and subcutaneous tissue (L00–L99)	108	181	289	0.2	0.3	0.2
Chapter XIII Diseases of the musculoskeletal system and connective tissue (M00–M99)	300	562	862	0.4	0.9	0.7
Chapter XIV Diseases of the genitourinary system (N00–N99)	1 232	1 536	2 768	1.8	2.5	2.2
Glomerular diseases (N00–N08)	48	51	99	0.1	0.1	0.1
Renal failure (N17–N19)	842	919	1 761	1.3	1.5	1.4
Chapter XV Pregnancy, childbirth and the puerperium (O00–O99)	..	11	11	..	—	—
Chapter XVI Certain conditions originating in the perinatal period (P00–P96)	377	264	641	0.6	0.4	0.5
Chapter XVII Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	392	323	715	0.6	0.5	0.6
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	324	276	600	0.5	0.5	0.5
Chapter XX External causes of morbidity and mortality (V01–Y98)	5 868	2 493	8 361	8.7	4.1	6.5
Accidents (V01–X59)	3 486	1 801	5 287	5.2	3.0	4.1
Transport accidents (V01–V99)	1 441	570	2 011	2.1	0.9	1.6
Falls (W00–W19)	309	211	520	0.5	0.3	0.4
Accidental drowning and submersion (W65–W74)	203	75	278	0.3	0.1	0.2
Intentional self-harm (X60–X84)	2 002	490	2 492	3.0	0.8	1.9
Assault (X85–Y09)	204	96	300	0.3	0.2	0.2



## 1.2 UNDERLYING CAUSE, Selected Causes and Age at Death

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>812</b>	<b>596</b>	<b>1 408</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Certain conditions originating in the perinatal period (P00–P96)	373	262	635	45.9	44.0	45.1
Maternal factors and by complications of pregnancy, labour and delivery (P00–P04)	213	147	360	26.2	24.7	25.6
Disorders related to short gestation and low birthweight, not elsewhere classified (P07)	13	15	28	1.6	2.5	2.0
Respiratory and cardiovascular disorders specific to the perinatal period (P20–P29)	75	43	118	9.2	7.2	8.4
Infections specific to the perinatal period (P35–P39)	17	13	30	2.1	2.2	2.1
Haemorrhagic and haematological disorders of fetus and newborn (P50–P61)	21	14	35	2.6	2.3	2.5
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	233	193	426	28.7	32.4	30.3
Congenital malformations of the nervous system (Q00–Q07)	32	24	56	3.9	4.0	4.0
Congenital malformations of circulatory system (Q20–Q28)	76	59	135	9.4	9.9	9.6
Congenital malformations of the respiratory system (Q30–Q34)	29	16	45	3.6	2.7	3.2
Sudden infant death syndrome (R95)	94	61	155	11.6	10.2	11.0
<b>1–14 years</b>	<b>371</b>	<b>290</b>	<b>661</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	67	42	109	18.1	14.5	16.5
Brain (C71)	21	9	30	5.7	3.1	4.5
Lymphoid, haematopoietic and related tissue (C81–C96)	27	18	45	7.3	6.2	6.8
Leukaemia (C91–C95)	23	16	39	6.2	5.5	5.9
Diseases of the nervous system (G00–G99)	30	32	62	8.1	11.0	9.4
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	33	19	52	8.9	6.6	7.9
External causes of morbidity and mortality (V01–Y98)	167	117	284	45.0	40.3	43.0
Transport accidents (V01–V99)	60	67	127	16.2	23.1	19.2
Accidental drowning and submersion (W65–W74)	46	17	63	12.4	5.9	9.5
<b>15–24 years</b>	<b>1 388</b>	<b>484</b>	<b>1 872</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	95	47	142	6.8	9.7	7.6
Lymphoid, haematopoietic and related tissue (C81–C96)	49	18	67	3.5	3.7	3.6
Leukaemia (C91–C95)	35	11	46	2.5	2.3	2.5
Mental and behavioural disorders due to psychoactive substance use (F10–F19)	68	27	95	4.9	5.6	5.1
Diseases of the nervous system (G00–G99)	58	23	81	4.2	4.8	4.3
External causes of morbidity and mortality (V01–Y98)	1 015	278	1 293	73.1	57.4	69.1
Transport accidents (V01–V99)	407	116	523	29.3	24.0	27.9
Intentional self-harm (X60–X84)	309	71	380	22.3	14.7	20.3
<b>25–34 years</b>	<b>2 003</b>	<b>721</b>	<b>2 724</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	143	153	296	7.1	21.2	10.9
Digestive organs (C15–C26)	25	22	47	1.2	3.1	1.7
Melanoma of skin (C43)	17	15	32	0.8	2.1	1.2
Breast (C50)	—	26	26	—	3.6	1.0
Brain (C71)	25	13	38	1.2	1.8	1.4
Lymphoid, haematopoietic and related tissue (C81–C96)	32	33	65	1.6	4.6	2.4
Mental and behavioural disorders due to psychoactive substance use (F10–F19)	137	30	167	6.8	4.2	6.1
Diseases of the circulatory system (I00–I99)	123	63	186	6.1	8.7	6.8
Ischaemic heart diseases (I20–I25)	48	13	61	2.4	1.8	2.2
Acute myocardial infarction (I21)	20	4	24	1.0	0.6	0.9
Diseases of the digestive system (K00–K93)	30	14	44	1.5	1.9	1.6
Diseases of liver (K70–K77)	23	8	31	1.1	1.1	1.1
External causes of morbidity and mortality (V01–Y98)	1 368	328	1 696	68.3	45.5	62.3
Transport accidents (V01–V99)	306	84	390	15.3	11.7	14.3
Intentional self-harm (X60–X84)	507	116	623	25.3	16.1	22.9

1.2 UNDERLYING CAUSE, Selected Causes and Age at Death *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>35–44 years</b>	<b>2 368</b>	<b>1 318</b>	<b>3 686</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	421	558	979	17.8	42.3	26.6
Digestive organs (C15–C26)	98	87	185	4.1	6.6	5.0
Melanoma of skin (C43)	43	30	73	1.8	2.3	2.0
Breast (C50)	5	200	205	0.2	15.2	5.6
Brain (C71)	52	32	84	2.2	2.4	2.3
Lymphoid, haematopoietic and related tissue (C81–C96)	70	50	120	3.0	3.8	3.3
Mental and behavioural disorders due to psychoactive substance use (F10–F19)	112	29	141	4.7	2.2	3.8
Diseases of the circulatory system (I00–I99)	415	150	565	17.5	11.4	15.3
Ischaemic heart diseases (I20–I25)	267	51	318	11.3	3.9	8.6
Acute myocardial infarction (I21)	119	20	139	5.0	1.5	3.8
Diseases of the digestive system (K00–K93)	117	78	195	4.9	5.9	5.3
Diseases of liver (K70–K77)	96	58	154	4.1	4.4	4.2
External causes of morbidity and mortality (V01–Y98)	1 019	299	1 318	43.0	22.7	35.8
Transport accidents (V01–V99)	206	57	263	8.7	4.3	7.1
Intentional self-harm (X60–X84)	427	104	531	18.0	7.9	14.4
<b>45–54 years</b>	<b>4 050</b>	<b>2 475</b>	<b>6 525</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	1 402	1 389	2 791	34.6	56.1	42.8
Digestive organs (C15–C26)	433	255	688	10.7	10.3	10.5
Colon (C18)	113	89	202	2.8	3.6	3.1
Trachea, bronchus and lung (C33, C34)	294	176	470	7.3	7.1	7.2
Breast (C50)	1	450	451	—	18.2	6.9
Lymphoid, haematopoietic and related tissue (C81–C96)	158	102	260	3.9	4.1	4.0
Diseases of the circulatory system (I00–I99)	1 133	351	1 484	28.0	14.2	22.7
Ischaemic heart diseases (I20–I25)	813	144	957	20.1	5.8	14.7
Acute myocardial infarction (I21)	388	81	469	9.6	3.3	7.2
Cerebrovascular diseases (I60–I69)	121	96	217	3.0	3.9	3.3
Diseases of the respiratory system (J00–J99)	95	99	194	2.3	4.0	3.0
Disease of the digestive system (K00–K93)	257	87	344	6.3	3.5	5.3
Diseases of liver (K70–K77)	204	56	260	5.0	2.3	4.0
External causes of morbidity and mortality (V01–Y98)	686	244	930	16.9	9.9	14.3
Transport accidents (V01–V99)	128	60	188	3.2	2.4	2.9
Intentional self-harm (X60–X84)	312	97	409	7.7	3.9	6.3
<b>55–64 years</b>	<b>7 268</b>	<b>4 104</b>	<b>11 372</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	3 171	2 216	5 387	43.6	54.0	47.4
Digestive organs (C15–C26)	1 036	543	1 579	14.3	13.2	13.9
Colon (C18)	330	214	544	4.5	5.2	4.8
Trachea, bronchus and lung (C33, C34)	833	364	1 197	11.5	8.9	10.5
Breast (C50)	4	523	527	0.1	12.7	4.6
Female genital organs (C51–C58)	..	207	207	..	5.0	1.8
Male genital organs (C60–C63)	151	..	151	2.1	..	1.3
Diseases of the circulatory system (I00–I99)	2 289	890	3 179	31.5	21.7	28.0
Ischaemic heart diseases (I20–I25)	1 625	462	2 087	22.4	11.3	18.4
Acute myocardial infarction (I21)	836	247	1 083	11.5	6.0	9.5
Cerebrovascular diseases (I60–I69)	309	213	522	4.3	5.2	4.6
Diseases of the respiratory system (J00–J99)	372	256	628	5.1	6.2	5.5
Chronic lower respiratory diseases (J40–J47)	278	196	474	3.8	4.8	4.2
Diseases of the digestive system (K00–K93)	276	116	392	3.8	2.8	3.4
External causes of morbidity and mortality (V01–Y98)	433	160	593	6.0	3.9	5.2

1.2 UNDERLYING CAUSE, Selected Causes and Age at Death *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>65–74 years</b>	<b>15 878</b>	<b>9 319</b>	<b>25 197</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	6 290	3 846	10 136	39.6	41.3	40.2
Digestive organs (C15–C26)	1 865	1 094	2 959	11.7	11.7	11.7
Colon (C18)	604	377	981	3.8	4.0	3.9
Trachea, bronchus and lung (C33, C34)	1 748	721	2 469	11.0	7.7	9.8
Breast (C50)	6	500	506	—	5.4	2.0
Prostate (C61)	627	..	627	3.9	..	2.5
Lymphoid, haematopoietic and related tissue (C81–C96)	547	340	887	3.4	3.6	3.5
Endocrine, nutritional and metabolic diseases (E00–E90)	542	383	925	3.4	4.1	3.7
Diabetes mellitus (E10–E14)	415	284	699	2.6	3.0	2.8
Diseases of the nervous system (G00–G99)	380	277	657	2.4	3.0	2.6
Alzheimer's disease (G30)	84	67	151	0.5	0.7	0.6
Diseases of the circulatory system (I00–I99)	5 667	2 950	8 617	35.7	31.7	34.2
Ischaemic heart diseases (I20–I25)	3 714	1 617	5 331	23.4	17.4	21.2
Acute myocardial infarction (I21)	2 012	966	2 978	12.7	10.4	11.8
Cerebrovascular diseases (I60–I69)	935	701	1 636	5.9	7.5	6.5
Diseases of the respiratory system (J00–J99)	1 377	737	2 114	8.7	7.9	8.4
Chronic lower respiratory diseases (J40–J47)	1 075	611	1 686	6.8	6.6	6.7
Diseases of the digestive system (K00–K93)	483	316	799	3.0	3.4	3.2
<b>75–84 years</b>	<b>20 976</b>	<b>19 128</b>	<b>40 104</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	6 048	4 470	10 518	28.8	23.4	26.2
Digestive organs (C15–C26)	1 555	1 437	2 992	7.4	7.5	7.5
Colon (C18)	484	498	982	2.3	2.6	2.4
Trachea, bronchus and lung (C33, C34)	1 384	651	2 035	6.6	3.4	5.1
Breast (C50)	6	506	512	—	2.6	1.3
Male genital organs (C60–C63)	1 149	..	1 149	5.5	..	2.9
Prostate (C61)	1 140	..	1 140	5.4	..	2.8
Lymphoid, haematopoietic and related tissue (C81–C96)	613	543	1 156	2.9	2.8	2.9
Endocrine, nutritional and metabolic diseases (E00–E90)	638	730	1 368	3.0	3.8	3.4
Diabetes mellitus (E10–E14)	518	534	1 052	2.5	2.8	2.6
Diseases of the nervous system (G00–G99)	593	648	1 241	2.8	3.4	3.1
Alzheimer's disease (G30)	198	311	509	0.9	1.6	1.3
Diseases of the circulatory system (I00–I99)	9 092	9 051	18 143	43.3	47.3	45.2
Ischaemic heart diseases (I20–I25)	5 275	4 534	9 809	25.1	23.7	24.5
Acute myocardial infarction (I21)	2 986	2 726	5 712	14.2	14.3	14.2
Cerebrovascular diseases (I60–I69)	1 938	2 494	4 432	9.2	13.0	11.1
Diseases of arteries, arterioles and capillaries (I70–I79)	601	480	1 081	2.9	2.5	2.7
Diseases of the respiratory system (J00–J99)	2 124	1 503	3 627	10.1	7.9	9.0
Chronic lower respiratory diseases (J40–J47)	1 471	952	2 423	7.0	5.0	6.0
Diseases of the digestive system (K00–K93)	566	663	1 229	2.7	3.5	3.1
Diseases of the genitourinary system (N00–N99)	534	569	1 103	2.5	3.0	2.8
External causes of morbidity and mortality (V01–Y98)	440	356	796	2.1	1.9	2.0
Falls (W00–W19)	66	67	133	0.3	0.4	0.3

1.2 UNDERLYING CAUSE, Selected Causes and Age at Death *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>85 years and over</b>	<b>12 104</b>	<b>22 438</b>	<b>34 542</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	2 224	2 458	4 682	18.4	11.0	13.6
Digestive organs (C15–C26)	584	871	1 455	4.8	3.9	4.2
Colon (C18)	213	339	552	1.8	1.5	1.6
Pancreas (C25)	100	146	246	0.8	0.7	0.7
Trachea, bronchus and lung (C33, C34)	345	188	533	2.9	0.8	1.5
Breast (C50)	—	298	298	—	1.3	0.9
Male genital organs (C60–C63)	558	..	558	4.6	..	1.6
Prostate (C61)	557	..	557	4.6	..	1.6
Lymphoid, haematopoietic and related tissue (C81–C96)	179	304	483	1.5	1.4	1.4
Endocrine, nutritional and metabolic diseases (E00–E90)	289	665	954	2.4	3.0	2.8
Diabetes mellitus (E10–E14)	227	454	681	1.9	2.0	2.0
Diseases of the nervous system (G00–G99)	390	835	1 225	3.2	3.7	3.5
Alzheimer's disease (G30)	199	627	826	1.6	2.8	2.4
Diseases of the circulatory system (I00–I99)	6 039	12 977	19 016	49.9	57.8	55.1
Ischaemic heart diseases (I20–I25)	3 111	5 913	9 024	25.7	26.4	26.1
Acute myocardial infarction (I21)	1 662	3 079	4 741	13.7	13.7	13.7
Pulmonary heart disease and diseases of pulmonary circulation and other forms of heart disease (I26–I52)	894	2 125	3 019	7.4	9.5	8.7
Heart failure (I50)	463	1 147	1 610	3.8	5.1	4.7
Cerebrovascular diseases (I60–I69)	1 504	3 800	5 304	12.4	16.9	15.4
Diseases of arteries, arterioles and capillaries (I70–I79)	380	682	1 062	3.1	3.0	3.1
Diseases of the respiratory system (J00–J99)	1 224	1 632	2 856	10.1	7.3	8.3
Influenza and pneumonia (J10–J18)	340	728	1 068	2.8	3.2	3.1
Chronic lower respiratory diseases (J40–J47)	670	611	1 281	5.5	2.7	3.7
Diseases of the digestive system (K00–K93)	369	824	1 193	3.0	3.7	3.5
Diseases of the genitourinary system (N00–N99)	468	729	1 197	3.9	3.2	3.5
Renal failure (N17–N19)	318	459	777	2.6	2.0	2.2
External causes of morbidity and mortality (V01–Y98)	301	507	808	2.5	2.3	2.3
Falls (W00–W19)	55	90	145	0.5	0.4	0.4

## 1.3 UNDERLYING CAUSE, Age-Specific Rates

Cause of death and ICD code	1989(a).....			1999(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>6.38</b>	<b>4.90</b>	<b>5.66</b>
Certain conditions originating in the perinatal period (P00–P96)	3.67	3.04	3.36	2.93	2.16	2.55
Disorders related to short gestation and low birthweight, not elsewhere classified (P07)	0.89	0.89	0.89	0.10	0.12	0.11
Respiratory and cardiovascular disorders specific to the perinatal period (P20–P29)	1.76	1.31	1.54	0.59	0.35	0.47
Infections specific to the perinatal period (P35–P39)	0.23	0.16	0.20	0.13	0.11	0.12
Haemorrhagic and haematological disorders of fetus and newborn (P50–P61)	0.38	0.35	0.37	0.16	0.12	0.14
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	1.98	1.95	1.97	1.83	1.59	1.71
Congenital malformations of the nervous system (Q00–Q07)	0.40	0.43	0.42	0.25	0.20	0.23
Congenital malformations of the circulatory system (Q20–Q28)	0.71	0.64	0.67	0.60	0.49	0.54
Congenital malformations of the respiratory system (Q30–Q34)	0.22	0.12	0.17	0.23	0.13	0.18
Sudden infant death syndrome (R95)	2.35	1.37	1.87	0.74	0.50	0.62
<b>1–14 years</b>	<b>30.1</b>	<b>22.7</b>	<b>26.5</b>	<b>19.7</b>	<b>16.2</b>	<b>18.0</b>
Malignant neoplasms (C00–C97)	4.4	4.0	4.2	3.6	2.3	3.0
Brain (C71)	1.2	1.0	1.1	1.1	0.5	0.8
Lymphoid, haematopoietic and related tissue (C81–C96)	2.0	1.9	2.0	1.4	1.0	1.2
Leukaemia (C91–C95)	1.7	1.9	1.8	1.2	0.9	1.1
Diseases of the nervous system (G00–G99)	2.0	1.5	1.8	1.6	1.8	1.7
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	3.0	2.7	2.8	1.8	1.1	1.4
External causes of morbidity and mortality (V01–Y98)	15.4	9.7	12.7	8.9	6.5	7.7
Transport accidents (V01–V99)	7.3	5.2	6.3	3.2	3.7	3.5
Accidental drowning and submersion (W65–W74)	3.9	1.5	2.7	2.4	0.9	1.7
<b>15–24 years</b>	<b>121.1</b>	<b>42.6</b>	<b>82.6</b>	<b>100.7</b>	<b>36.8</b>	<b>69.5</b>
Malignant neoplasms (C00–C97)	6.5	4.4	5.5	6.9	3.6	5.3
Lymphoid, haematopoietic and related tissue (C81–C96)	3.1	1.6	2.3	3.6	1.4	2.5
Leukaemia (C91–C95)	1.9	1.3	1.6	2.5	0.8	1.7
Mental and behavioural disorders due to psychoactive substance use (F10–F19)	3.6	2.2	2.9	4.9	2.1	3.5
Diseases of the nervous system (G00–G99)	3.4	1.5	2.4	4.2	1.7	3.0
External causes of morbidity and mortality (V01–Y98)	96.5	26.1	61.9	73.6	21.1	48.0
Transport accidents (V01–V99)	52.7	19.0	36.2	29.5	8.8	19.4
Intentional self-harm (X60–X84)	23.9	3.4	13.8	22.4	5.4	14.1
<b>25–34 years</b>	<b>143.2</b>	<b>51.2</b>	<b>97.4</b>	<b>138.4</b>	<b>49.9</b>	<b>94.2</b>
Malignant neoplasms (C00–C97)	13.1	12.9	13.0	9.9	10.6	10.2
Digestive organs (C15–C26)	1.9	1.6	1.7	1.7	1.5	1.6
Melanoma of skin (C43)	1.5	0.8	1.1	1.2	1.0	1.1
Breast (C50)	—	3.0	1.5	—	1.8	0.9
Brain (C71)	1.4	1.2	1.3	1.7	0.9	1.3
Lymphoid, haematopoietic and related tissue (C81–C96)	3.7	1.7	2.7	2.2	2.3	2.2
Mental and behavioural disorders due to psychoactive substance use (F10–F19)	9.6	2.5	6.1	9.5	2.1	5.8
Diseases of the circulatory system (I00–I99)	10.6	4.3	7.5	8.5	4.4	6.4
Ischaemic heart disease (I20–I25)	3.7	0.9	2.3	3.3	0.9	2.1
Acute myocardial infarction (I21)	2.2	0.6	1.4	1.4	0.3	0.8
Diseases of the digestive system (K00–K93)	3.1	1.0	2.1	2.1	1.0	1.5
Diseases of liver (K70–K77)	2.3	0.5	1.4	1.6	0.6	1.1
External causes of morbidity and mortality (V01–Y98)	89.4	22.0	55.9	94.5	22.7	58.6
Transport accidents (V01–V99)	37.2	8.9	23.1	21.1	5.8	13.5
Intentional self-harm (X60–X84)	30.0	6.9	18.5	35.0	8.0	21.5

(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.

1.3 UNDERLYING CAUSE, Age-Specific Rates *continued*

Cause of death and ICD code	1989(a).....			1999(a).....		
	Males	Females	Persons	Males	Females	Persons
<b>35–44 years</b>	<b>180.2</b>	<b>100.0</b>	<b>140.5</b>	<b>162.1</b>	<b>89.9</b>	<b>125.9</b>
Malignant neoplasms (C00–C97)	38.1	47.3	42.6	28.8	38.1	33.4
Digestive organs (C15–C26)	9.0	6.6	7.8	6.7	5.9	6.3
Melanoma of skin (C43)	3.6	2.6	3.1	2.9	2.0	2.5
Breast (C50)	0.1	16.8	8.3	0.3	13.6	7.0
Brain (C71)	2.7	2.5	2.6	3.6	2.2	2.9
Lymphoid, haematopoietic and related tissue (C81–C96)	8.0	3.8	5.9	4.8	3.4	4.1
Mental and behavioural disorders due to psychoactive substance use (F10–F19)	5.5	1.4	3.5	7.7	2.0	4.8
Diseases of the circulatory system (I00–I99)	38.9	14.2	26.6	28.4	10.2	19.3
Ischaemic heart disease (I20–I25)	25.1	4.4	14.9	18.3	3.5	10.9
Acute myocardial infarction (I21)	15.4	3.1	9.3	8.1	1.4	4.7
Diseases of the digestive system (K00–K93)	7.9	3.9	5.9	8.0	5.3	6.7
Diseases of liver (K70–K77)	6.0	3.0	4.5	6.6	4.0	5.3
External causes of morbidity and mortality (V01–Y98)	61.5	19.5	40.7	69.8	20.4	45.0
Transport accidents (V01–V99)	23.1	8.2	15.7	14.1	3.9	9.0
Intentional self-harm (X60–X84)	22.4	6.7	14.6	29.2	7.1	18.1
<b>45–54 years</b>	<b>440.1</b>	<b>262.8</b>	<b>353.7</b>	<b>317.0</b>	<b>197.1</b>	<b>257.5</b>
Malignant neoplasms (C00–C97)	147.6	140.5	144.1	109.7	110.6	110.2
Digestive organs (C15–C26)	43.2	28.6	36.1	33.9	20.3	27.2
Colon (C18)	15.0	14.2	14.6	8.8	7.1	8.0
Trachea, bronchus and lung (C33, C34)	38.1	15.5	27.1	23.0	14.0	18.6
Breast (C50)	0.2	46.0	22.6	0.1	35.8	17.8
Lymphoid, haematopoietic and related tissue (C81–C96)	15.9	8.3	12.2	12.4	8.1	10.3
Diseases of the circulatory system (I00–I99)	150.8	55.1	104.1	88.7	27.9	58.6
Ischaemic heart disease (I20–I25)	115.1	27.2	72.2	63.6	11.5	37.8
Acute myocardial infarction (I21)	75.8	17.9	47.5	30.4	6.4	18.5
Cerebrovascular diseases (I60–I69)	14.9	14.3	14.6	9.5	7.6	8.6
Diseases of the respiratory system (J00–J99)	17.6	14.6	16.1	7.4	7.9	7.7
Diseases of the digestive system (K00–K93)	25.9	9.7	18.0	20.1	6.9	13.6
Diseases of liver (K70–K77)	19.5	5.4	12.6	16.0	4.5	10.3
External causes of morbidity and mortality (V01–Y98)	60.6	20.1	40.8	53.7	19.4	36.7
Transport accidents (V01–V99)	19.1	7.9	13.7	10.0	4.8	7.4
Intentional self-harm (X60–X84)	23.9	7.1	15.7	24.4	7.7	16.1
<b>55–64 years</b>	<b>1 325.2</b>	<b>701.8</b>	<b>1 014.4</b>	<b>860.1</b>	<b>494.6</b>	<b>679.0</b>
Malignant neoplasms (C00–C97)	485.9	324.5	405.5	375.2	267.1	321.6
Digestive organs (C15–C26)	146.5	81.5	114.1	122.6	65.4	94.3
Colon (C18)	48.8	34.2	41.5	39.1	25.8	32.5
Trachea, bronchus and lung (C33, C34)	151.4	51.7	101.7	98.6	43.9	71.5
Breast (C50)	0.4	70.3	35.2	0.5	63.0	31.5
Female genital organs (C51–C58)	..	36.8	18.3	..	24.9	12.4
Male genital organs (C60–C63)	27.2	..	13.6	17.9	..	9.0
Diseases of the circulatory system (I00–I99)	543.7	203.8	374.2	270.9	107.3	189.8
Ischaemic heart disease (I20–I25)	400.5	121.0	261.1	192.3	55.7	124.6
Acute myocardial infarction (I21)	279.5	89.7	184.9	98.9	29.8	64.7
Cerebrovascular diseases (I60–I69)	61.3	45.2	53.3	36.6	25.7	31.2
Diseases of the respiratory system (J00–J99)	93.4	55.8	74.6	44.0	30.9	37.5
Chronic lower respiratory diseases (J40–J47)	72.0	46.3	59.2	32.9	23.6	28.3
Diseases of the digestive system (K00–K93)	58.7	24.5	41.6	32.7	14.0	23.4
External causes of morbidity and mortality (V01–Y98)	61.8	27.9	44.9	51.2	19.3	35.4

(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, Age-Specific Rates *continued*

Cause of death and ICD code	1989(a).....			1999(a).....		
	Males	Females	Persons	Males	Females	Persons
<b>65–74 years</b>	<b>3 456.9</b>	<b>1 830.3</b>	<b>2 579.1</b>	<b>2 554.7</b>	<b>1 379.8</b>	<b>1 942.8</b>
Malignant neoplasms (C00–C97)	1 077.7	592.9	816.1	1 012.0	569.4	781.5
Digestive organs (C15–C26)	297.6	182.2	235.3	300.1	162.0	228.2
Colon (C18)	91.5	68.5	79.1	97.2	55.8	75.6
Trachea, bronchus and lung (C33, C34)	345.6	95.6	210.7	281.2	106.8	190.4
Breast (C50)	1.0	91.8	50.0	1.0	74.0	39.0
Prostate (185)	111.1	..	51.2	100.9	..	48.3
Lymphoid, haematopoietic and related tissue (C81–C96)	84.0	51.9	66.7	88.0	50.3	68.4
Endocrine, nutritional and metabolic diseases (E00–E90)	73.2	50.9	61.2	87.2	56.7	71.3
Diabetes mellitus (E10–E14)	60.1	41.9	50.3	66.8	42.0	53.9
Diseases of the nervous system (G00–G99)	50.3	35.0	42.0	61.1	41.0	50.7
Alzheimer's disease (G30)	8.9	10.2	9.6	13.5	9.9	11.6
Diseases of the circulatory system (I00–I99)	1 595.4	803.2	1 167.9	911.8	436.8	664.4
Ischaemic heart disease (I20–I25)	1 085.0	489.6	763.7	597.6	239.4	411.0
Acute myocardial infarction (I21)	752.9	353.4	537.3	323.7	143.0	229.6
Cerebrovascular diseases (I60–I69)	255.0	176.6	212.7	150.4	103.8	126.1
Diseases of the respiratory system (J00–J99)	350.8	151.6	243.3	221.5	109.1	163.0
Chronic lower respiratory diseases (J40–J47)	289.5	119.3	197.6	173.0	90.5	130.0
Diseases of the digestive system (K00–K93)	113.1	56.2	82.4	77.7	46.8	61.6
<b>75–84 years</b>	<b>8 667.8</b>	<b>5 314.3</b>	<b>6 636.3</b>	<b>6 480.1</b>	<b>4 155.0</b>	<b>5 114.9</b>
Malignant neoplasms (C00–C97)	2 065.6	970.8	1 402.4	1 868.4	971.0	1 341.5
Digestive organs (C15–C26)	557.6	339.9	425.8	480.4	312.1	381.6
Colon (C18)	187.3	128.8	151.9	149.5	108.2	125.2
Trachea, bronchus and lung (C33, C34)	510.4	101.6	262.7	427.6	141.4	259.5
Breast (C50)	2.2	136.3	83.4	1.9	109.9	65.3
Male genital organs (C60–C63)	399.8	..	157.6	355.0	..	146.5
Prostate (C61)	398.5	..	157.1	352.2	..	145.4
Lymphoid, haematopoietic and related tissue (C81–C96)	192.6	106.1	140.2	189.4	118.0	147.4
Endocrine, nutritional and metabolic diseases (E00–E90)	179.8	150.0	161.8	197.1	158.6	174.5
Diabetes mellitus (E10–E15)	149.9	127.9	136.6	160.0	116.0	134.2
Diseases of the nervous system (G00–G99)	175.4	111.9	136.9	183.2	140.8	158.3
Alzheimer's disease (G30)	62.2	51.6	55.8	61.2	67.6	64.9
Diseases of the circulatory system (I00–I99)	4 311.9	3 069.5	3 559.3	2 808.8	1 966.1	2 314.0
Ischaemic heart disease (I20–I25)	2 622.3	1 650.1	2 033.4	1 629.6	984.9	1 251.1
Acute myocardial infarction (I21)	1 778.6	1 105.6	1 370.9	922.5	592.1	728.5
Cerebrovascular diseases (I60–I69)	883.4	805.8	836.4	598.7	541.8	565.3
Diseases of arteries, arterioles and capillaries (I70–I79)	286.1	144.9	200.5	185.7	104.3	137.9
Diseases of the respiratory system (J00–J99)	1 055.7	382.1	647.7	656.2	326.5	462.6
Chronic lower respiratory diseases (J40–J47)	805.8	240.1	463.1	454.4	206.8	309.0
Diseases of the digestive system (K00–K93)	260.1	182.4	213.0	174.9	144.0	156.7
Diseases of the genitourinary system (N00–N99)	166.6	105.9	129.8	165.0	123.6	140.7
External causes of morbidity and mortality (V01–Y98)	175.0	104.4	132.2	135.9	77.3	101.5
Falls (W00–W19)	26.0	20.9	22.9	20.4	14.6	17.0

(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, Age-Specific Rates *continued*

Cause of death and ICD code	1989(a).....			1999(a).....		
	Males	Females	Persons	Males	Females	Persons
<b>85 years and over</b>	<b>19 995.0</b>	<b>15 992.9</b>	<b>17 110.4</b>	<b>16 315.1</b>	<b>13 451.7</b>	<b>14 333.2</b>
Malignant neoplasms (C00–C97)	2 991.5	1 448.5	1 879.3	2 997.7	1 473.6	1 942.8
Digestive organs (C15–C26)	822.9	594.9	658.6	787.2	522.2	603.8
Colon (C18)	315.2	242.2	262.6	287.1	203.2	229.1
Pancreas (C25)	105.1	80.4	87.3	134.8	87.5	102.1
Trachea, bronchus and lung (C33, C34)	465.2	69.8	180.2	465.0	112.7	221.2
Breast (C50)	2.5	235.4	170.4	—	178.7	123.7
Male genital organs (C60–C63)	787.9	..	220.0	752.1	..	231.5
Prostate (C61)	785.4	..	219.3	750.8	..	231.1
Lymphoid, haematopoietic and related tissue (C81–C96)	295.1	141.5	184.4	241.3	182.2	200.4
Endocrine, nutritional and metabolic diseases (E00–E90)	360.2	334.3	341.5	389.5	398.7	395.9
Diabetes mellitus (E10–E14)	287.6	256.8	265.4	306.0	272.2	282.6
Diseases of the nervous system (G00–G99)	430.2	299.4	335.9	525.7	500.6	508.3
Alzheimer's disease (G30)	180.1	187.0	185.1	268.2	375.9	342.7
Diseases of the circulatory system (I00–I99)	10 660.3	10 300.6	10 401.0	8 140.0	7 779.8	7 890.7
Ischaemic heart disease (I20–I25)	5 527.8	4 448.3	4 749.7	4 193.3	3 544.9	3 744.5
Acute myocardial infarction (I21)	3 499.2	2 650.0	2 887.1	2 240.2	1 845.9	1 967.3
Pulmonary heart disease and diseases of pulmonary circulation and other forms of heart disease (I26–I52)	1 563.3	1 719.8	1 676.1	1 205.0	1 274.0	1 252.7
Heart failure (I50)	978.0	1 075.5	1 048.3	624.1	687.6	668.1
Cerebrovascular diseases (I60–I69)	2 568.8	3 003.6	2 882.2	2 027.3	2 278.1	2 200.9
Diseases of arteries, arterioles and capillaries (I70–I79)	710.4	775.1	757.0	512.2	408.9	440.7
Diseases of the respiratory system (J00–J99)	2 816.4	1 260.6	1 695.0	1 649.8	978.4	1 185.1
Influenza and pneumonia (J10–J18)	850.4	679.2	727.0	458.3	436.4	443.2
Chronic lower respiratory diseases (J40–J47)	1 633.3	363.3	717.9	903.1	366.3	531.6
Diseases of the digestive system (K00–K93)	752.9	616.2	654.4	497.4	494.0	495.0
Diseases of the genitourinary system (N00–N99)	532.8	373.0	417.6	630.8	437.0	496.7
Renal failure (N17–N19)	325.2	247.1	268.9	428.6	275.2	322.4
External causes of morbidity and mortality (V01–Y98)	460.2	370.1	395.3	405.7	303.9	335.3
Falls (W00–W19)	85.0	66.9	71.9	74.1	54.0	60.2

(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.



## 1.4 UNDERLYING CAUSE, Selected Years

Cause of death and ICD code	1989.....			1994.....		
	Males	Females	Persons	Males	Females	Persons
<b>All causes</b>	<b>66 926</b>	<b>57 306</b>	<b>124 232</b>	<b>67 459</b>	<b>59 224</b>	<b>126 683</b>
Chapter I Certain infectious and parasitic diseases (A00–B99)	402	359	761	565	477	1 042
Septicaemia (A40, A41)	152	187	339	225	255	480
Human immunodeficiency virus (HIV) disease (B20–B24)(a)	383	9	392	721	43	764
Chapter II Neoplasms (C00–D48)	17 350	13 074	30 424	19 551	14 652	34 203
Malignant neoplasms (C00–C97)	17 201	12 943	30 144	19 285	14 373	33 658
Digestive organs (C15–C26)	4 743	3 859	8 602	5 268	4 183	9 451
Oesophagus (C15)	504	270	774	587	307	894
Stomach (C16)	790	510	1 300	820	474	1 294
Colon (C18)	1 565	1 535	3 100	1 817	1 719	3 536
Rectosigmoid junction, rectum, anus and anal canal (C19–C21)	622	379	1 001	683	416	1 099
Liver and intrahepatic bile ducts (C22)	264	125	389	353	198	551
Pancreas (C25)	719	677	1 396	768	701	1 469
Trachea, bronchus and lung (C33, C34)	4 666	1 570	6 236	4 810	1 887	6 697
Melanoma of skin (C43)	487	281	768	608	285	893
Breast (C50)	17	2 431	2 448	17	2 655	2 672
Female genital organs (C51–C58)	..	1 358	1 358	..	1 399	1 399
Ovary (C56)	..	635	635	..	739	739
Male genital organs (C60–C63)	2 058	..	2 058	2 627	..	2 627
Prostate (C61)	2 014	..	2 014	2 590	..	2 590
Urinary tract (C64–C68)	875	477	1 352	969	523	1 492
Kidney, except renal pelvis (C64)	357	241	598	437	284	721
Bladder (C67)	493	214	707	509	210	719
Brain (C71)	451	361	812	539	428	967
Lymphoid, haematopoietic and related tissue (C81–C96)	1 621	1 216	2 837	1 867	1 481	3 348
Leukaemia (C91–C95)	642	457	1 099	723	531	1 254
In situ and benign neoplasms and neoplasms of uncertain or unknown behaviour (D00–D48)	149	131	280	266	279	545
Chapter III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	458	249	707	675	264	939
Chapter IV Endocrine, nutritional and metabolic diseases (E00–E90)	1 300	1 420	2 720	1 758	1 815	3 573
Diabetes mellitus (E10–E14)	1 004	1 111	2 115	1 377	1 365	2 742
Chapter V Mental and behavioural disorders (F00–F99)	1 000	1 157	2 157	1 262	1 723	2 985
Chapter VI Diseases of the nervous system (G00–G99)	1 198	1 183	2 381	1 386	1 546	2 932
Alzheimer's disease (G30)	269	450	719	366	683	1 049
Chapter VII Diseases of the eye and adnexa (H00–H59)	2	—	2	2	2	4
Chapter VIII Diseases of the ear and mastoid process (H60–H95)	5	2	7	6	2	8
Chapter IX Diseases of the circulatory system (I00–I99)	28 376	28 453	56 829	27 031	27 856	54 887
All heart disease (I05–I09, I11, I13, I20–I25, I26, I27, I30–I52)	21 349	18 912	40 261	19 842	18 412	38 254
Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09)	146	281	427	111	229	340
Hypertensive diseases (I10–I15)	452	698	1 150	427	691	1 118
Ischaemic heart diseases (I20–I25)	18 132	14 507	32 639	16 515	14 059	30 574
Acute myocardial infarction (I21)	12 299	9 594	21 893	10 240	8 757	18 997
Pulmonary heart disease and diseases of pulmonary circulation and other forms of heart disease (I26–I52)	2 849	3 710	6 559	2 995	3 696	6 691
Heart failure (I50)	1 117	1 925	3 042	1 070	1 833	2 903
Cerebrovascular diseases (I60–I69)	5 057	7 522	12 579	5 260	7 578	12 838
Diseases of arteries, arterioles and capillaries (I70–I79)	1 614	1 587	3 201	1 611	1 459	3 070
Atherosclerosis (I70)	343	749	1 092	324	508	832
Aortic aneurysm and dissection (I71)	895	464	1 359	935	545	1 480

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

1.4 UNDERLYING CAUSE, Selected Years *continued*

Cause of death and ICD code	1998.....			1999.....		
	Males	Females	Persons	Males	Females	Persons
<b>All causes</b>	<b>67 073</b>	<b>60 129</b>	<b>127 202</b>	<b>67 227</b>	<b>60 875</b>	<b>128 102</b>
Chapter I Certain infectious and parasitic diseases (A00–B99)	752	603	1 355	842	761	1 603
Septicaemia (A40, A41)	304	366	670	401	460	861
Human immunodeficiency virus (HIV) disease (B20–B24)(a)	176	11	187	156	10	166
Chapter II Neoplasms (C00–D48)	19 861	15 212	35 073	20 283	15 573	35 856
Malignant neoplasms (C00–C97)	19 590	14 970	34 560	19 866	15 187	35 053
Digestive organs (C15–C26)	5 409	4 307	9 716	5 600	4 312	9 912
Oesophagus (C15)	654	323	977	641	299	940
Stomach (C16)	753	438	1 191	754	447	1 201
Colon (C18)	1 733	1 661	3 394	1 771	1 557	3 328
Rectosigmoid junction, rectum, anus and anal canal (C19–C21)	736	504	1 240	734	514	1 248
Liver and intrahepatic bile ducts (C22)	427	221	648	449	234	683
Pancreas (C25)	811	801	1 612	868	850	1 718
Trachea, bronchus and lung (C33, C34)	4 821	2 053	6 874	4 655	2 148	6 803
Melanoma of skin (C43)	635	345	980	631	359	990
Breast (C50)	16	2 542	2 558	22	2 505	2 527
Female genital organs (C51–C58)	..	1 367	1 367	..	1 300	1 300
Ovary (C56)	..	743	743	..	737	737
Male genital organs (C60–C63)	2 570	..	2 570	2 546	..	2 546
Prostate (C61)	2 531	..	2 531	2 499	..	2 499
Urinary tract (C64–C68)	1 064	594	1 658	1 112	605	1 717
Kidney, except renal pelvis (C64)	465	320	785	482	320	802
Bladder (C67)	572	247	819	587	252	839
Brain (C71)	567	443	1 010	588	430	1 018
Lymphoid, haematopoietic and related tissue (C81–C96)	1 870	1 600	3 470	1 962	1 596	3 558
Leukaemia (C91–C95)	763	553	1 316	768	578	1 346
In situ and benign neoplasms and neoplasms of uncertain or unknown behaviour (D00–D48)	271	242	513	417	386	803
Chapter III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	225	235	460	195	255	450
Chapter IV Endocrine, nutritional and metabolic diseases (E00–E90)	1 946	1 887	3 833	2 001	2 099	4 100
Diabetes mellitus (E10–E14)	1 424	1 327	2 751	1 485	1 462	2 947
Chapter V Mental and behavioural disorders (F00–F99)	1 558	1 720	3 278	1 256	1 552	2 808
Chapter VI Diseases of the nervous system (G00–G99)	1 369	1 421	2 790	1 818	2 072	3 890
Alzheimer's disease (G30)	245	535	780	493	1 023	1 516
Chapter VII Diseases of the eye and adnexa (H00–H59)	1	3	4	—	5	5
Chapter VIII Diseases of the ear and mastoid process (H60–H95)	5	6	11	—	6	6
Chapter IX Diseases of the circulatory system (I00–I99)	24 746	26 051	50 797	24 824	26 479	51 303
All heart disease (I05–I09, I11, I13, I20–I25, I26, I27, I30–I52)	18 201	17 054	35 255	18 116	17 229	35 345
Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09)	87	171	258	84	177	261
Hypertensive diseases (I10–I15)	410	730	1 140	432	745	1 177
Ischaemic heart diseases (I20–I25)	15 024	12 801	27 825	14 865	12 744	27 609
Acute myocardial infarction (I21)	8 897	7 630	16 527	8 028	7 124	15 152
Pulmonary heart disease and diseases of pulmonary circulation and other forms of heart disease (I26–I52)	2 895	3 678	6 573	2 955	3 896	6 851
Heart failure (I50)	988	1 567	2 555	989	1 725	2 714
Cerebrovascular diseases (I60–I69)	4 812	7 170	11 982	4 894	7 372	12 266
Diseases of arteries, arterioles and capillaries (I70–I79)	1 415	1 330	2 745	1 476	1 388	2 864
Atherosclerosis (I70)	193	338	531	229	423	652
Aortic aneurysm and dissection (I71)	878	551	1 429	882	568	1 450

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

1.4 UNDERLYING CAUSE, Selected Years *continued*

Cause of death and ICD code	1989.....			1994.....		
	Males	Females	Persons	Males	Females	Females
Chapter X Diseases of the respiratory system (J00–J99)	6 366	4 245	10 611	5 791	4 167	9 958
Influenza and pneumonia (J10–J18)	1 062	1 242	2 304	894	994	1 888
Chronic lower respiratory diseases (J40–J47)	4 711	2 469	7 180	4 132	2 581	6 713
Emphysema (J43)	719	289	1 008	591	304	895
Asthma and status asthmaticus (J45, J46)	434	530	964	329	496	825
Chapter XI Diseases of the digestive system (K00–K93)	2 299	1 945	4 244	1 961	1 897	3 858
Diseases of oesophagus, stomach and duodenum (K20–K31)	530	481	1 011	374	396	770
Gastric and duodenal ulcer (K25–K27)	460	412	872	287	321	608
Diseases of liver (K70–K77)	897	328	1 225	793	370	1 163
Chapter XII Diseases of the skin and subcutaneous tissue (L00–L99)	55	89	144	85	126	211
Chapter XIII Diseases of the musculoskeletal system and connective tissue (M00–M99)	216	476	692	229	546	775
Arthropathies and systemic connective tissue disorders (M00–M36)	158	374	532	148	368	516
Chapter XIV Diseases of the genitourinary system (N00–N99)	842	1 087	1 929	977	1 133	2 110
Renal failure (N17–N19)	449	546	995	625	661	1 286
Chapter XV Pregnancy, childbirth and the puerperium (O00–O99)	..	13	13	..	16	16
Chapter XVI Certain conditions originating in the perinatal period (P00–P96)	481	372	853	402	293	695
Chapter XVII Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	400	373	773	413	341	754
Congenital malformations of the circulatory system (Q20–Q28)	156	126	282	177	139	316
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	473	341	814	278	269	547
Chapter XX External causes of morbidity and mortality (V01–Y98)	5 703	2 468	8 171	5 087	2 099	7 186
Accidents (V01–X59)	3 736	1 885	5 621	2 969	1 521	4 490
Transport accidents (V01–V99)	2 266	897	3 163	1 562	635	2 197
Falls (W00–W19)	285	198	483	253	149	402
Accidental drowning and submersion (W65–W74)	244	70	314	208	41	249
Intentional self-harm (X60–X84)	1 658	438	2 096	1 830	428	2 258
Hanging, strangulation and suffocation (X70)	467	88	555	532	107	639
Assault (X85–Y09)	210	109	319	211	121	332

1.4 UNDERLYING CAUSE, Selected Years *continued*

Cause of death and ICD code	1998.....			1999.....		
	Males	Females	Persons	Males	Females	Persons
Chapter X Diseases of the respiratory system (J00–J99)	6 593	5 817	12 410	5 296	4 317	9 613
Influenza and pneumonia (J10–J18)	2 049	2 530	4 579	765	1 133	1 898
Chronic lower respiratory diseases (J40–J47)	3 628	2 486	6 114	3 609	2 487	6 096
Emphysema (J43)	575	287	862	575	312	887
Asthma and status asthmaticus (J45, J46)	278	407	685	160	264	424
Chapter XI Diseases of the digestive system (K00–K93)	1 969	1 968	3 937	2 111	2 110	4 221
Diseases of oesophagus, stomach and duodenum (K20–K31)	323	353	676	313	335	648
Gastric and duodenal ulcer (K25–K27)	225	253	478	215	231	446
Diseases of liver (K70–K77)	810	376	1 186	863	380	1 243
Chapter XII Diseases of the skin and subcutaneous tissue (L00–L99)	92	145	237	108	181	289
Chapter XIII Diseases of the musculoskeletal system and connective tissue (M00–M99)	197	474	671	300	562	862
Arthropathies and systemic connective tissue disorders (M00–M36)	125	334	459	208	360	568
Chapter XIV Diseases of the genitourinary system (N00–N99)	1 117	1 433	2 550	1 232	1 536	2 768
Renal failure (N17–N19)	668	762	1 430	842	919	1 761
Chapter XV Pregnancy, childbirth and the puerperium (O00–O99)	..	7	7	..	11	11
Chapter XVI Certain conditions originating in the perinatal period (P00–P96)	325	252	577	377	264	641
Chapter XVII Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	334	271	605	392	323	715
Congenital malformations of the circulatory system (Q20–Q28)	111	93	204	133	118	251
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	369	292	661	324	276	600
Chapter XX External causes of morbidity and mortality (V01–Y98)	5 614	2 332	7 946	5 868	2 493	8 361
Accidents (V01–X59)	3 168	1 652	4 820	3 486	1 801	5 287
Transport accidents (V01–V99)	1 411	547	1 958	1 441	570	2 011
Falls (W00–W19)	267	190	457	309	211	520
Accidental drowning and submersion (W65–W74)	187	58	245	203	75	278
Intentional self-harm (X60–X84)	2 150	533	2 683	2 002	490	2 492
Hanging, strangulation and suffocation (X70)	1 035	182	1 217	868	160	1 028
Assault (X85–Y09)	203	104	307	204	96	300

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

Cause of death and ICD code	1989.....			1994.....		
	Males	Females	Persons	Males	Females	Persons
<b>All causes</b>	<b>980.8</b>	<b>588.9</b>	<b>758.9</b>	<b>861.7</b>	<b>523.5</b>	<b>671.6</b>
Chapter I Certain infectious and parasitic diseases (A00–B99)	5.9	3.8	4.6	7.1	4.3	5.6
Septicaemia (A40, A41)	2.4	1.9	2.1	3.1	2.2	2.5
Chapter II Neoplasms (C00–D48)	244.5	142.8	184.7	242.5	141.6	183.8
Malignant neoplasms (C00–C97)	242.4	141.4	183.0	239.0	139.1	181.0
Digestive organs (C15–C26)	66.8	41.2	52.3	64.7	39.2	50.7
Oesophagus (C15)	6.8	2.8	4.7	7.1	2.8	4.8
Stomach (C16)	11.5	5.4	7.9	10.2	4.4	6.9
Colon (C18)	22.3	16.4	18.9	22.3	16.2	19.0
Rectosigmoid junction, rectum, anus and anal canal (C19–C21)	8.7	4.1	6.1	8.4	3.9	5.9
Liver and intrahepatic bile ducts (C22)	3.5	1.4	2.4	4.3	1.9	3.0
Pancreas (C25)	10.0	7.2	8.5	9.4	6.6	7.9
Trachea, bronchus and lung (C33, C34)	64.0	17.5	37.7	58.7	18.7	36.3
Melanoma of skin (C43)	6.5	3.2	4.7	7.3	2.8	4.8
Breast (C50)	0.2	27.2	14.9	0.2	26.5	14.3
Female genital organs (C51–C58)	..	15.1	8.2	..	13.9	7.5
Ovary (C56)	..	7.1	3.8	..	7.4	4.0
Male genital organs (C60–C63)	32.2	..	12.6	35.1	..	13.9
Prostate (C61)	31.7	..	12.3	34.7	..	13.7
Urinary tract (C64–C68)	12.8	5.1	8.2	12.2	4.9	8.0
Kidney, except renal pelvis (C64)	4.9	2.6	3.6	5.2	2.8	3.9
Bladder (C67)	7.5	2.2	4.3	6.7	1.9	3.8
Brain (C71)	5.7	4.1	4.9	6.2	4.4	5.3
Lymphoid, haematopoietic and related tissue (C81–C96)	22.7	13.2	17.2	23.0	14.2	18.0
Leukaemia (C91–C95)	9.0	4.9	6.7	9.0	5.1	6.8
In situ and benign neoplasms and neoplasms of uncertain or unknown behaviour (D00–D48)	2.2	1.4	1.7	3.5	2.5	2.9
Chapter III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D00–D48)	6.2	2.5	4.3	7.8	2.4	5.1
Chapter IV Endocrine, nutritional and metabolic diseases (E00–E90)	19.1	14.6	16.6	22.5	16.4	19.0
Diabetes mellitus (E10–E14)	14.9	11.4	13.0	17.8	12.2	14.5
Chapter V Mental and behavioural disorders (F00–F99)	15.4	11.2	13.3	16.8	13.7	15.5
Class VI Disease of the nervous system (G00–G99)	18.0	12.3	14.6	18.1	13.6	15.4
Alzheimer's disease (G30)	4.6	4.4	4.5	5.2	5.4	5.4
Chapter VII Diseases of the eye and adnexa (H00–H59)	—	—	—	—	—	—
Chapter VIII Diseases of the ear and mastoid process (H60–H95)	0.1	—	—	0.1	—	—
Chapter IX Diseases of the circulatory system (I00–I99)	432.7	281.5	349.1	355.8	231.4	287.0
All heart disease (I05–I09, I11, I13, I20–I25, I26, I27, I30–I52)	320.7	188.3	247.0	258.7	154.0	200.6
Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09)	2.0	3.0	2.6	1.4	2.1	1.8
Hypertensive diseases (I10–I15)	7.1	6.9	7.1	5.6	5.7	5.8
Ischaemic heart diseases (I20–I25)	270.0	145.4	200.0	214.1	118.4	160.7
Acute myocardial infarction (I21)	182.1	96.9	134.1	132.3	74.6	100.1
Pulmonary heart disease and diseases of pulmonary circulation and other forms of heart disease (I26–I52)	45.3	35.9	40.4	40.3	30.1	34.8
Heart failure (I50)	19.6	18.0	18.9	15.4	14.1	14.8
Cerebrovascular diseases (I60–I69)	81.0	73.7	77.6	71.5	61.9	66.5
Diseases of arteries, arterioles and capillaries (I70–I79)	25.4	15.2	19.7	21.5	12.0	16.0
Atherosclerosis (I70)	6.2	6.9	6.8	4.6	3.9	4.2
Aortic aneurysm and dissection (I71)	13.2	4.7	8.3	12.1	4.8	7.8

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

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

Cause of death and ICD code	1998.....			1999.....		
	Males	Females	Persons	Males	Females	Persons
<b>All causes</b>	<b>758.2</b>	<b>468.8</b>	<b>597.6</b>	<b>737.1</b>	<b>460.1</b>	<b>584.2</b>
Chapter I Certain infectious and parasitic diseases (A00–B99)	8.4	4.7	6.4	9.2	5.8	7.3
Septicaemia (A40–A41)	3.6	2.6	3.0	4.5	3.3	3.8
Chapter II Neoplasms (C00–D48)	220.1	132.6	170.0	218.9	132.1	169.1
Malignant neoplasms (C00–C97)	217.1	130.7	167.6	214.2	129.2	165.5
Digestive organs (C15–C26)	59.7	36.7	47.1	60.1	35.5	46.7
Oesophagus (C15)	7.2	2.6	4.7	6.8	2.4	4.4
Stomach (C16)	8.3	3.7	5.7	8.1	3.6	5.7
Colon (C18)	19.1	14.2	16.4	19.1	12.8	15.6
Rectosigmoid junction, rectum, anus and anal canal (C19–C21)	8.1	4.4	6.1	7.8	4.3	5.9
Liver and intrahepatic bile ducts (C22)	4.7	1.9	3.2	4.8	2.0	3.3
Pancreas (C25)	8.9	6.8	7.8	9.3	7.1	8.1
Trachea, bronchus and lung (C33, C34)	53.1	18.6	33.9	49.9	19.0	32.7
Melanoma of skin (C43)	6.9	3.0	4.8	6.7	3.2	4.7
Breast (C50)	0.2	22.9	12.3	0.2	22.1	11.9
Female genital organs (C51–C58)	..	12.1	6.6	..	11.3	6.1
Ovary (C56)	..	6.7	3.6	..	6.4	3.5
Male genital organs (C60–C63)	29.7	..	12.1	28.5	..	11.6
Prostate (C61)	29.2	..	11.8	28.0	..	11.3
Urinary tract (C64–C68)	11.9	5.0	7.9	12.1	4.9	8.0
Kidney, except renal pelvis (C64)	5.1	2.7	3.8	5.1	2.7	3.8
Bladder (C67)	6.5	2.0	3.8	6.5	2.0	3.8
Brain (C71)	6.0	4.2	5.0	6.0	4.0	5.0
Lymphoid, haematopoietic and related tissue (C81–C96)	20.7	13.8	16.8	21.1	13.3	16.8
Leukaemia (C91–C95)	8.5	4.8	6.4	8.3	4.8	6.4
In situ and benign neoplasms and neoplasms of uncertain or unknown behaviour (D00–D48)	3.1	1.9	2.4	4.7	2.9	3.6
Chapter III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D00–D48)	2.6	1.8	2.1	2.1	2.0	2.1
Chapter IV Endocrine, nutritional and metabolic diseases (E00–E90)	21.8	15.2	18.2	21.7	16.3	18.8
Diabetes mellitus (E10–E14)	16.0	10.6	13.0	16.2	11.3	13.5
Chapter V Mental and behavioural disorders (F00–F99)	17.9	12.1	15.1	14.1	10.4	12.3
Class VI Disease of the nervous system (320–389)	15.6	11.3	13.2	20.0	15.4	17.5
Alzheimer's disease (G30)	2.9	3.6	3.4	5.6	6.6	6.3
Chapter VII Diseases of the eye and adnexa (H00–H59)	—	—	—	—	—	—
Chapter VIII Diseases of the ear and mastoid process (H60–H95)	0.1	—	0.1	—	0.1	—
Chapter IX Diseases of the circulatory system (I00–I99)	283.7	187.1	230.7	275.4	182.4	224.6
All heart disease (I05–I09, I11, I13, I20–I25, I26, I27, I30–I52)	207.5	123.2	161.1	200.0	119.3	155.8
Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09)	1.0	1.5	1.2	0.9	1.4	1.2
Hypertensive diseases (I10–I15)	4.7	5.2	5.1	4.8	5.1	5.1
Ischaemic heart diseases (I20–I25)	170.8	92.8	127.7	163.6	88.9	122.4
Acute myocardial infarction (I21)	101.1	56.0	76.1	88.6	50.2	67.3
Pulmonary heart disease and diseases of pulmonary circulation and other forms of heart disease (I26–I52)	33.6	26.1	29.5	33.1	26.3	29.5
Heart failure (I50)	11.9	10.2	10.9	11.4	10.8	11.1
Cerebrovascular diseases (I60–I69)	56.1	50.6	53.4	55.1	49.9	52.6
Diseases of arteries, arterioles and capillaries (I70–I79)	16.4	9.6	12.5	16.5	9.5	12.5
Atherosclerosis (I70)	2.3	2.2	2.3	2.6	2.6	2.7
Aortic aneurysm (I71)	10.0	4.3	6.7	9.8	4.2	6.6

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

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

Cause of death and ICD code	1989.....			1994.....		
	Males	Females	Persons	Males	Females	Persons
Chapter X Diseases of the respiratory system (J00–J99)	99.7	43.3	65.0	76.9	36.9	52.5
Influenza and pneumonia (J10–J18)	17.9	11.8	14.2	12.2	8.1	9.8
Chronic lower respiratory diseases (J40–J47)	72.3	26.2	43.9	54.3	23.8	35.6
Emphysema (J43)	10.8	3.1	6.1	7.6	2.9	4.8
Asthma and status asthmaticus (J45, J46)	5.9	5.8	5.8	4.2	4.7	4.4
Chapter XI Diseases of the digestive system (K00–K93)	33.6	19.7	25.9	24.7	16.5	20.4
Diseases of oesophagus, stomach and duodenum (K20–K31)	8.4	4.8	6.2	5.0	3.3	4.0
Gastric and duodenal ulcer (K25–K27)	7.4	4.1	5.4	3.8	2.7	3.2
Diseases of liver (K70–K77)	11.4	3.7	7.4	9.1	3.8	6.3
Chapter XII Diseases of the skin and subcutaneous tissue (L00–L99)	0.9	0.8	0.9	1.2	1.0	1.1
Chapter XIII Diseases of the musculoskeletal system and connective tissue (M00–M99)	3.4	4.9	4.2	3.0	4.8	4.1
Arthropathies and systemic connective tissue disorders (M00–M36)	2.5	3.9	3.3	1.9	3.3	2.7
Chapter XIV Diseases of the genitourinary system (N00–N99)	14.1	10.9	11.9	13.8	9.5	10.9
Renal failure (N17–N19)	7.8	5.2	6.2	9.0	5.2	6.6
Chapter XV Pregnancy, childbirth and the puerperium (O00–O99)	..	0.2	0.1	..	0.2	0.1
Chapter XVI Certain conditions originating in the perinatal period (P00–P96)	5.6	4.6	5.1	4.6	3.5	4.0
Chapter XVII Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4.8	4.5	4.6	4.7	3.9	4.3
Congenital malformations of the circulatory system (Q20–Q28)	1.9	1.5	1.7	2.0	1.6	1.8
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	5.9	3.8	4.9	3.3	2.6	3.0
Chapter XX External causes of morbidity and mortality (V01–Y98)	71.0	27.5	48.9	58.9	21.2	39.7
Accidents (V01–X59)	47.1	20.6	33.6	35.0	14.9	24.7
Transport accidents (V01–V99)	27.2	10.5	18.8	17.9	7.0	12.4
Falls (W00–W19)	4.0	2.0	2.9	3.1	1.3	2.1
Accidental drowning and submersion (W65–W74)	3.0	0.8	1.9	2.3	0.5	1.4
Intentional self-harm (X60–X84)	20.2	5.2	12.5	20.7	4.7	12.6
Hanging, strangulation and suffocation (X70)	5.7	1.0	3.3	6.1	1.2	3.6
Assault (X85–Y09)	2.5	1.3	1.9	2.4	1.4	1.9

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



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

Cause of death and ICD code	1998.....			1999.....		
	Males	Females	Persons	Males	Females	Persons
Chapter X Diseases of the respiratory system (J00–J99)	76.7	43.2	56.6	59.1	32.0	43.1
Influenza and pneumonia (J10–J18)	24.5	16.8	19.9	8.8	7.2	7.9
Chronic lower respiratory diseases (J40–J47)	41.5	20.5	29.0	40.1	19.7	28.0
Emphysema (J43)	6.5	2.4	4.1	6.3	2.5	4.1
Asthma and status asthmaticus (J45 ,J46)	3.1	3.5	3.3	1.7	2.2	2.0
Chapter XI Diseases of the digestive system (K00–K93)	21.9	15.1	18.3	22.7	15.6	19.0
Diseases of oesophagus, stomach and duodenum (K20–K31)	3.7	2.5	3.0	3.5	2.3	2.8
Gastric and duodenal ulcer (K25–K27)	2.6	1.8	2.1	2.4	1.6	2.0
Diseases of liver (K70–K77)	8.5	3.5	5.9	8.8	3.5	6.0
Chapter XII Diseases of the skin and subcutaneous tissue (L00–L99)	1.1	1.0	1.0	1.2	1.2	1.2
Chapter XIII Diseases of the musculoskeletal system and connective tissue (M00–M99)	2.2	3.7	3.1	3.3	4.2	3.8
Arthropathies and systemic connective tissue disorders (M00–M36)	1.4	2.8	2.2	2.3	2.9	2.6
Chapter XIV Diseases of the genitourinary system (N00–N99)	13.2	10.3	11.3	14.1	10.6	11.8
Renal failure (N17–N19)	8.0	5.3	6.3	9.6	6.2	7.5
Chapter XV Pregnancy, childbirth and the puerperium (O00–O99)	..	0.1	—	..	0.1	0.1
Chapter XVI Certain conditions originating in the perinatal period (P00–P96)	3.8	3.1	3.5	4.2	3.1	3.7
Chapter XVII Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	3.8	3.1	3.5	4.3	3.6	4.0
Congenital malformations of the circulatory system (Q20–Q28)	1.3	1.1	1.2	1.5	1.3	1.4
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	4.1	2.5	3.3	3.6	2.4	3.0
Chapter XX External causes of morbidity and mortality (V01–Y98)	61.2	21.6	41.2	63.1	22.8	42.6
Accidents (V01–X59)	35.0	14.5	24.6	37.9	15.8	26.7
Transport accidents (V01–V99)	15.4	5.7	10.5	15.7	5.9	10.7
Falls (W00–W19)	3.0	1.5	2.2	3.3	1.5	2.4
Accidental drowning and submersion (W65–W74)	2.0	0.6	1.3	2.2	0.8	1.5
Intentional self-harm (X60–X84)	23.1	5.6	14.3	21.1	5.1	13.0
Hanging, strangulation and suffocation (X70)	11.3	2.0	6.6	9.3	1.7	5.4
Assault (X85–Y09)	2.2	1.1	1.6	2.2	1.0	1.6

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



## 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>281</b>	<b>223</b>	<b>188</b>	<b>143</b>	<b>159</b>	<b>107</b>	<b>50</b>	<b>28</b>
Certain conditions originating in the perinatal period (P00–P96)	138	98	85	70	61	46	21	10
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	74	67	64	49	52	36	11	7
Sudden infant death syndrome (R95)	29	26	17	12	21	11	10	—
<b>1–14 years</b>	<b>115</b>	<b>91</b>	<b>87</b>	<b>62</b>	<b>70</b>	<b>68</b>	<b>24</b>	<b>18</b>
Malignant neoplasms (C00–C97)	24	10	19	14	10	8	4	2
Diseases of the nervous system (G00–G99)	8	8	11	8	4	10	3	3
Diseases of the circulatory system (I00–I99)	2	6	4	3	1	4	1	1
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	10	10	6	3	6	4	4	1
External causes of morbidity and mortality (V01–Y98)	48	36	33	18	37	31	10	6
<b>15–24 years</b>	<b>430</b>	<b>168</b>	<b>318</b>	<b>111</b>	<b>270</b>	<b>88</b>	<b>96</b>	<b>39</b>
Malignant neoplasms (C00–C97)	34	19	19	8	19	14	3	3
Mental and behavioural disorders due to psychoactive substance use (F10–F19)	40	13	7	1	3	2	6	6
Diseases of the nervous system (G00–G99)	17	7	15	6	11	3	3	4
External causes of morbidity and mortality (V01–Y98)	287	87	244	78	206	48	77	18
Transport accidents (V01–V99)	113	40	91	24	76	20	39	8
Intentional self-harm (X60–X84)	91	31	60	16	69	10	17	5
<b>25–34 years</b>	<b>682</b>	<b>209</b>	<b>469</b>	<b>202</b>	<b>352</b>	<b>133</b>	<b>153</b>	<b>57</b>
Malignant neoplasms (C00–C97)	42	52	39	38	29	23	9	19
Mental and behavioural disorders due to psychoactive substance use (F10–F19)	75	14	14	5	9	5	17	—
Diseases of the circulatory system (I00–I99)	35	22	22	10	22	17	18	4
Diseases of the digestive system (K00–K93)	9	4	5	4	5	2	4	2
External causes of morbidity and mortality (V01–Y98)	451	83	349	99	256	64	88	23
Transport accidents (V01–V99)	94	22	74	19	57	23	19	5
Intentional self-harm (X60–X84)	176	31	104	34	97	23	45	11
<b>35–44 years</b>	<b>818</b>	<b>420</b>	<b>537</b>	<b>319</b>	<b>431</b>	<b>261</b>	<b>205</b>	<b>101</b>
Malignant neoplasms (C00–C97)	136	172	113	147	77	106	40	43
Mental and behavioural disorders due to psychoactive substance use (F10–F19)	66	18	12	6	8	—	13	3
Diseases of the circulatory system (I00–I99)	148	47	80	33	83	34	31	11
Diseases of the digestive system (K00–K93)	42	23	21	18	20	17	18	5
External causes of morbidity and mortality (V01–Y98)	333	107	250	69	194	57	84	22
Transport accidents (V01–V99)	61	15	40	11	44	8	19	7
Intentional self-harm (X60–X84)	142	47	109	19	84	17	36	9
<b>45–54 years</b>	<b>1 398</b>	<b>827</b>	<b>924</b>	<b>566</b>	<b>802</b>	<b>463</b>	<b>294</b>	<b>204</b>
Malignant neoplasms (C00–C97)	469	456	336	338	274	259	109	108
Trachea, bronchus and lung (C33, C34)	107	63	61	35	61	39	22	11
Breast (C50)	1	132	—	125	—	79	—	30
Diseases of the circulatory system (I00–I99)	413	117	224	72	238	75	81	30
Ischaemic heart diseases (I20–I25)	301	46	158	25	171	31	56	18
Cerebrovascular diseases (I60–I69)	39	34	24	22	29	20	9	6
Diseases of the respiratory system (J00–J99)	43	41	16	16	16	23	5	5
Disease of the digestive system (K00–K93)	89	21	58	17	56	19	19	13
External causes of morbidity and mortality (V01–Y98)	223	91	168	54	139	34	45	23
Transport accidents (V01–V99)	36	25	40	16	21	5	11	6
Intentional self-harm (X60–X84)	110	34	67	18	69	13	20	14

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>70</b>	<b>47</b>	<b>27</b>	<b>19</b>	<b>24</b>	<b>18</b>	<b>13</b>	<b>11</b>
Certain conditions originating in the perinatal period (P00–P96)	31	21	16	8	13	4	8	5
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	20	15	5	8	4	7	3	4
Sudden infant death syndrome (R95)	10	5	4	2	1	3	2	2
<b>1–14 years</b>	<b>51</b>	<b>29</b>	<b>12</b>	<b>10</b>	<b>6</b>	<b>7</b>	<b>6</b>	<b>5</b>
Malignant neoplasms (C00–C97)	7	2	2	3	—	1	1	2
Diseases of the nervous system (G00–G99)	3	2	—	1	—	—	1	—
Diseases of the circulatory system (I00–I99)	—	—	—	—	1	—	—	—
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	3	1	1	—	1	—	2	—
External causes of morbidity and mortality (V01–Y98)	28	17	7	5	2	3	2	1
<b>15–24 years</b>	<b>177</b>	<b>44</b>	<b>39</b>	<b>15</b>	<b>41</b>	<b>13</b>	<b>17</b>	<b>6</b>
Malignant neoplasms (C00–C97)	13	2	3	—	2	1	2	—
Mental and behavioural disorders due to psychoactive substance use (F10–F19)	10	4	—	—	2	1	—	—
Diseases of the nervous system (G00–G99)	8	1	1	1	1	1	2	—
External causes of morbidity and mortality (V01–Y98)	127	23	33	12	29	7	12	5
Transport accidents (V01–V99)	54	10	15	9	15	3	4	2
Intentional self-harm (X60–X84)	43	4	10	2	12	1	7	2
<b>25–34 years</b>	<b>205</b>	<b>75</b>	<b>48</b>	<b>16</b>	<b>62</b>	<b>19</b>	<b>31</b>	<b>10</b>
Malignant neoplasms (C00–C97)	18	10	3	4	2	2	1	5
Mental and behavioural disorders due to psychoactive substance use (F10–F19)	14	5	—	—	4	—	4	1
Diseases of the circulatory system (I00–I99)	9	5	3	2	9	2	5	1
Diseases of the digestive system (K00–K93)	4	1	1	—	2	1	—	—
External causes of morbidity and mortality (V01–Y98)	141	43	33	7	32	6	17	3
Transport accidents (V01–V99)	39	14	6	—	11	1	5	—
Intentional self-harm (X60–X84)	52	11	18	3	8	1	7	2
<b>35–44 years</b>	<b>223</b>	<b>132</b>	<b>62</b>	<b>35</b>	<b>58</b>	<b>27</b>	<b>34</b>	<b>22</b>
Malignant neoplasms (C00–C97)	38	61	9	13	1	6	7	10
Mental and behavioural disorders due to psychoactive substance use (F10–F19)	8	1	—	—	4	—	1	1
Diseases of the circulatory system (I00–I99)	40	13	11	4	14	5	8	2
Diseases of the digestive system (K00–K93)	9	7	—	1	6	4	1	3
External causes of morbidity and mortality (V01–Y98)	93	28	33	8	21	5	11	3
Transport accidents (V01–V99)	24	11	12	3	5	1	1	1
Intentional self-harm (X60–X84)	34	7	14	3	3	2	5	—
<b>45–54 years</b>	<b>396</b>	<b>234</b>	<b>111</b>	<b>95</b>	<b>57</b>	<b>42</b>	<b>66</b>	<b>44</b>
Malignant neoplasms (C00–C97)	143	141	43	50	11	13	17	24
Trachea, bronchus and lung (C33, C34)	27	25	11	2	3	—	2	1
Breast (C50)	—	50	—	18	—	11	—	5
Diseases of the circulatory system (I00–I99)	107	32	29	9	19	10	21	6
Ischaemic heart diseases (I20–I25)	76	12	19	5	16	5	16	2
Cerebrovascular diseases (I60–I69)	13	8	4	1	1	3	1	2
Diseases of the respiratory system (J00–J99)	9	7	1	5	4	1	1	1
Disease of the digestive system (K00–K93)	19	8	5	4	3	5	8	—
External causes of morbidity and mortality (V01–Y98)	67	16	23	12	8	5	12	9
Transport accidents (V01–V99)	17	4	3	1	—	2	—	1
Intentional self-harm (X60–X84)	24	10	14	1	3	1	5	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>2 590</b>	<b>1 496</b>	<b>1 706</b>	<b>950</b>	<b>1 428</b>	<b>749</b>	<b>534</b>	<b>349</b>
Malignant neoplasms (C00–C97)	1 089	801	752	529	651	403	228	176
Digestive organs (C15–C26)	351	185	274	146	194	96	72	41
Trachea, bronchus and lung (C33, C34)	280	139	195	73	188	78	51	26
Breast (C50)	2	192	—	125	—	84	2	42
Diseases of the circulatory system (I00–I99)	859	332	512	193	434	167	178	77
Ischaemic heart diseases (I20–I25)	623	182	361	104	310	95	119	29
Cerebrovascular diseases (I60–I69)	116	75	62	40	63	41	25	22
Diseases of the respiratory system (J00–J99)	148	107	70	46	71	49	26	28
Diseases of the digestive system (K00–K93)	107	39	69	29	45	21	22	8
External causes of morbidity and mortality (V01–Y98)	151	53	102	39	91	31	32	10
<b>65–74 years</b>	<b>5 768</b>	<b>3 344</b>	<b>3 877</b>	<b>2 326</b>	<b>2 872</b>	<b>1 647</b>	<b>1 376</b>	<b>795</b>
Malignant neoplasms (C00–C97)	2 176	1 300	1 585	1 052	1 132	666	564	321
Digestive organs (C15–C26)	611	368	543	306	304	173	166	94
Trachea, bronchus and lung (C33, C34)	610	243	398	202	346	129	158	61
Breast (C50)	6	150	—	151	—	88	—	40
Female genital organs (C51–C58)	..	112	..	93	..	62	..	28
Male genital organs (C60–C63)	217	..	170	..	108	..	61	..
Endocrine, nutritional and metabolic diseases (E00–E90)	170	121	170	108	86	59	55	47
Diseases of the circulatory system (I00–I99)	2 173	1 106	1 315	670	1 023	542	495	263
Ischaemic heart diseases (I20–I25)	1 410	599	839	372	695	316	337	135
Cerebrovascular diseases (I60–I69)	351	268	226	169	166	116	79	67
Diseases of the respiratory system (J00–J99)	482	294	336	164	277	128	103	51
Chronic lower respiratory diseases (J40–J47)	364	245	262	139	224	103	83	43
Diseases of the digestive system (K00–K93)	189	115	108	68	91	56	35	30
<b>75–84 years</b>	<b>7 508</b>	<b>6 806</b>	<b>5 188</b>	<b>4 938</b>	<b>3 658</b>	<b>3 278</b>	<b>1 979</b>	<b>1 735</b>
Malignant neoplasms (C00–C97)	2 143	1 527	1 543	1 225	1 031	737	573	411
Digestive organs (C15–C26)	544	492	400	397	274	237	151	132
Trachea, bronchus and lung (C33, C34)	480	220	363	182	210	95	136	57
Breast (C50)	—	173	3	149	—	78	1	44
Female genital organs (C51–C58)	..	113	..	104	..	71	..	38
Male genital organs (C60–C63)	398	..	306	..	201	..	112	..
Prostate (C61)	394	..	302	..	201	..	111	..
Diabetes mellitus (E10–E14)	142	134	174	186	79	97	53	38
Mental and behavioural disorders (F00–F99)	97	119	78	118	47	68	23	39
Diseases of the nervous system (G00–G99)	212	247	160	164	94	119	36	33
Diseases of the circulatory system (I00–I99)	3 313	3 357	2 135	2 194	1 671	1 586	887	808
Ischaemic heart diseases (I20–I25)	1 870	1 630	1 251	1 079	1 023	876	523	417
Acute myocardial infarction (I21)	1 035	975	726	657	590	517	302	282
Cerebrovascular diseases (I60–I69)	719	934	454	624	347	399	185	218
Diseases of arteries, arterioles and capillaries (I70–I79)	240	186	131	110	99	86	57	34
Diseases of the respiratory system (J00–J99)	737	537	523	379	359	231	213	186
Chronic lower respiratory diseases (J40–J47)	504	354	384	252	268	147	108	86
Diseases of the digestive system (K00–K93)	210	220	139	185	92	109	54	54

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>638</b>	<b>341</b>	<b>192</b>	<b>118</b>	<b>96</b>	<b>48</b>	<b>84</b>	<b>53</b>
Malignant neoplasms (C00–C97)	297	195	82	67	37	17	35	28
Digestive organs (C15–C26)	93	57	29	10	10	2	13	6
Trachea, bronchus and lung (C33, C34)	83	27	18	14	11	1	7	6
Breast (C50)	—	50	—	15	—	7	—	8
Diseases of the circulatory system (I00–I99)	190	66	62	24	32	11	22	20
Ischaemic heart diseases (I20–I25)	134	30	40	10	22	3	16	9
Cerebrovascular diseases (I60–I69)	24	18	14	8	2	5	3	4
Diseases of the respiratory system (J00–J99)	32	13	12	6	7	6	6	1
Diseases of the digestive system (K00–K93)	21	14	6	3	—	2	6	—
External causes of morbidity and mortality (V01–Y98)	33	23	11	4	2	—	11	—
<b>65–74 years</b>	<b>1 300</b>	<b>744</b>	<b>450</b>	<b>295</b>	<b>89</b>	<b>61</b>	<b>146</b>	<b>107</b>
Malignant neoplasms (C00–C97)	555	322	190	122	26	13	62	50
Digestive organs (C15–C26)	164	88	52	47	8	1	17	17
Trachea, bronchus and lung (C33, C34)	160	62	53	16	10	4	13	4
Breast (C50)	—	45	—	14	—	3	—	9
Female genital organs (C51–C58)	..	34	..	9	..	2	..	7
Male genital organs (C60–C63)	46	..	24	..	2	..	7	..
Endocrine, nutritional and metabolic diseases (E00–E90)	42	27	10	11	4	8	5	2
Diseases of the circulatory system (I00–I99)	426	229	160	88	33	23	42	29
Ischaemic heart diseases (I20–I25)	282	121	100	48	23	12	28	14
Cerebrovascular diseases (I60–I69)	74	52	27	18	6	3	6	8
Diseases of the respiratory system (J00–J99)	102	63	48	24	14	5	15	8
Chronic lower respiratory diseases (J40–J47)	81	50	40	19	11	5	10	7
Diseases of the digestive system (K00–K93)	43	25	7	16	4	2	6	4
<b>75–84 years</b>	<b>1 734</b>	<b>1 516</b>	<b>671</b>	<b>600</b>	<b>53</b>	<b>64</b>	<b>184</b>	<b>190</b>
Malignant neoplasms (C00–C97)	523	367	166	138	16	16	53	49
Digestive organs (C15–C26)	118	117	50	42	6	9	12	11
Trachea, bronchus and lung (C33, C34)	139	68	42	18	5	3	9	8
Breast (C50)	1	34	—	24	—	1	1	3
Female genital organs (C51–C58)	..	30	..	7	..	1	..	3
Male genital organs (C60–C63)	92	..	30	..	2	..	8	..
Prostate (C61)	92	..	30	..	2	..	8	..
Diabetes mellitus (E10–E14)	43	56	20	17	2	1	5	5
Mental and behavioural disorders (F00–F99)	29	36	18	6	—	1	1	6
Diseases of the nervous system (G00–G99)	65	61	18	18	1	2	7	4
Diseases of the circulatory system (I00–I99)	702	709	293	283	21	22	69	91
Ischaemic heart diseases (I20–I25)	399	344	160	142	8	4	41	42
Acute myocardial infarction (I21)	221	190	90	72	2	2	20	31
Cerebrovascular diseases (I60–I69)	156	203	61	74	5	10	11	31
Diseases of arteries, arterioles and capillaries (I70–I79)	46	43	25	16	1	1	2	4
Diseases of the respiratory system (J00–J99)	187	90	75	58	5	7	25	15
Chronic lower respiratory diseases (J40–J47)	133	58	52	43	3	4	19	8
Diseases of the digestive system (K00–K93)	48	68	15	21	3	1	5	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>4 186</b>	<b>7 847</b>	<b>3 138</b>	<b>5 868</b>	<b>2 138</b>	<b>3 875</b>	<b>1 129</b>	<b>2 125</b>
Malignant neoplasms (C00–C97)	738	801	589	667	397	409	212	246
Digestive organs (C15–C26)	197	272	144	242	102	134	51	97
Female genital organs (C51–C58)	..	62	..	49	..	19	..	13
Male genital organs (C60–C63)	172	..	158	..	113	..	57	..
Diabetes mellitus (E10–E14)	62	123	82	153	41	78	16	48
Mental and behavioural disorders (F00–F99)	113	286	109	285	70	140	28	96
Diseases of the circulatory system (I00–I99)	2 174	4 765	1 483	3 242	1 074	2 307	547	1 183
Ischaemic heart diseases (I20–I25)	1 064	2 092	784	1 473	599	1 114	276	549
Cerebrovascular diseases (I60–I69)	571	1 422	337	905	265	691	138	356
Diseases of arteries, arterioles and capillaries (I70–I79)	136	232	91	179	58	132	38	50
Diseases of the respiratory system (J00–J99)	375	527	334	414	216	261	150	219
Chronic lower respiratory diseases (J40–J47)	223	221	189	150	125	111	52	47
Diseases of the digestive system (K00–K93)	122	270	89	212	66	145	38	82
Diseases of the genitourinary system (N00–N99)	155	243	136	226	81	107	44	69
<b>All ages(a)</b>	<b>23 782</b>	<b>21 433</b>	<b>16 433</b>	<b>15 485</b>	<b>12 180</b>	<b>10 669</b>	<b>5 840</b>	<b>5 451</b>
Chapter I Certain infectious and parasitic diseases (A00–B99)	352	293	204	192	122	126	67	71
Chapter II Neoplasms (C00–D48)	7 022	5 275	5 098	4 129	3 685	2 702	1 778	1 364
Malignant neoplasms (C00–C97)	6 853	5 141	4 996	4 020	3 620	2 628	1 743	1 329
Trachea, bronchus and lung (C33, C34)	1 608	735	1 126	553	878	388	405	178
Melanoma of skin (C43)	237	132	118	79	149	78	44	29
Breast (C50)	11	811	5	684	1	428	3	197
Female genital organs (C51–C58)	..	434	..	328	..	240	..	118
Male genital organs (C60–C63)	843	..	693	..	454	..	250	..
Chapter III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	78	100	55	58	29	44	19	26
Chapter IV Endocrine, nutritional and metabolic diseases (E00–E90)	577	615	652	633	341	359	188	211
Diabetes mellitus (E10–E14)	418	398	499	476	249	258	140	130
Chapter V Mental and behavioural disorders (F00–F99)	515	504	276	458	175	231	112	167
Chapter VI Diseases of the nervous system (G00–G99)	641	735	480	542	300	382	123	116
Chapter VII Diseases of the eye and adnexa (H00–H59)	—	1	—	1	—	2	—	—
Chapter VIII Diseases of the ear and mastoid process (H60–H95)	—	2	—	—	—	4	—	—
Chapter IX Diseases of the circulatory system (I00–I99)	9 137	9 764	5 783	6 423	4 561	4 740	2 240	2 380
All heart disease (I05–I09, I11, I13, I20–I25, I26, I27, I30–I52)	6 616	6 322	4 232	4 192	3 372	3 116	1 633	1 556
Ischaemic heart diseases (I20–I25)	5 379	4 569	3 450	3 070	2 866	2 449	1 344	1 154
Acute myocardial infarction (I21)	2 836	2 528	1 867	1 726	1 628	1 370	737	717
Cerebrovascular diseases (I60–I69)	1 824	2 757	1 128	1 775	887	1 286	440	672
Chapter X Diseases of the respiratory system (J00–J99)	1 821	1 531	1 296	1 042	964	714	502	496
Influenza and pneumonia (J10–J18)	216	317	172	294	133	175	131	208
Chronic lower respiratory diseases (J40–J47)	1 245	940	909	603	697	429	267	202
Chapter XI Diseases of the digestive system (K00–K93)	775	695	490	534	377	373	190	195
Diseases of liver (K70–K77)	335	125	207	92	130	72	82	32
Chapter XII Diseases of the skin and subcutaneous tissue (L00–L99)	42	73	25	42	23	32	7	16
Chapter XIII Diseases of the musculoskeletal system and connective tissue (M00–M99)	88	175	82	159	55	107	35	50
Chapter XIV Diseases of the genitourinary system (N00–N99)	442	547	334	432	203	250	99	133
Chapter XV Pregnancy, childbirth and the puerperium (O00–O99)	..	4	..	2	..	3	..	1
Chapter XVI Certain conditions originating in the perinatal period (P00–P96)	139	99	87	70	61	46	21	11
Chapter XVII Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	127	102	97	79	84	64	24	23
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	90	88	51	53	47	33	19	12
Chapter XX External causes of morbidity and mortality (V01–Y98)	1 936	830	1 423	636	1 153	457	416	179
Transport accidents (V01–V99)	441	192	338	134	270	94	114	50
Falls (W00–W19)	127	81	63	38	61	41	15	12
Intentional self-harm (X60–X84)	689	180	440	112	396	84	155	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>1 048</b>	<b>1 872</b>	<b>341</b>	<b>626</b>	<b>23</b>	<b>24</b>	<b>101</b>	<b>201</b>
Malignant neoplasms (C00–C97)	209	236	56	63	5	3	18	33
Digestive organs (C15–C26)	68	83	16	27	1	—	5	16
Female genital organs (C51–C58)	..	17	..	4	..	—	..	1
Male genital organs (C60–C63)	40	..	14	..	—	..	4	..
Diabetes mellitus (E10–E14)	17	41	6	6	—	2	3	3
Mental and behavioural disorders (F00–F99)	27	81	12	20	1	1	5	10
Diseases of the circulatory system (I00–I99)	518	1 005	181	350	9	9	53	116
Ischaemic heart diseases (I20–I25)	271	474	88	158	5	5	24	48
Cerebrovascular diseases (I60–I69)	137	294	42	88	2	2	12	42
Diseases of arteries, arterioles and capillaries (I70–I79)	36	57	14	30	1	—	6	2
Diseases of the respiratory system (J00–J99)	101	146	38	54	2	1	8	10
Chronic lower respiratory diseases (J40–J47)	53	55	24	21	—	—	4	6
Diseases of the digestive system (K00–K93)	39	74	10	27	1	1	4	13
Diseases of the genitourinary system (N00–N99)	33	53	13	23	2	4	4	4
<b>All ages(a)</b>	<b>5 843</b>	<b>5 034</b>	<b>1 954</b>	<b>1 829</b>	<b>509</b>	<b>323</b>	<b>682</b>	<b>649</b>
Chapter I Certain infectious and parasitic diseases (A00–B99)	55	39	18	24	13	11	11	5
Chapter II Neoplasms (C00–D48)	1 835	1 359	565	470	104	72	196	202
Malignant neoplasms (C00–C97)	1 803	1 336	554	460	101	72	196	201
Trachea, bronchus and lung (C33, C34)	445	207	130	55	29	10	34	22
Melanoma of skin (C43)	59	30	12	9	5	—	7	2
Breast (C50)	1	240	—	86	—	26	1	33
Female genital organs (C51–C58)	..	121	..	34	..	10	..	15
Male genital organs (C60–C63)	203	..	78	..	4	..	21	..
Chapter III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	10	19	2	4	1	3	1	1
Chapter IV Endocrine, nutritional and metabolic diseases (E00–E90)	154	176	52	67	20	24	17	14
Diabetes mellitus (E10–E14)	116	130	35	41	15	18	13	11
Chapter V Mental and behavioural disorders (F00–F99)	116	138	33	29	15	5	14	20
Chapter VI Diseases of the nervous system (G00–G99)	192	208	48	64	13	10	21	15
Chapter VII Diseases of the eye and adnexa (H00–H59)	—	1	—	—	—	—	—	—
Chapter VIII Diseases of the ear and mastoid process (H60–H95)	—	—	—	—	—	—	—	—
Chapter IX Diseases of the circulatory system (I00–I99)	1 999	2 060	740	761	141	84	221	265
All heart disease (I05–I09, I11, I13, I20–I25, I26, I27, I30–I52)	1 459	1 323	516	500	118	55	169	164
Ischaemic heart diseases (I20–I25)	1 185	988	417	366	91	32	133	115
Acute myocardial infarction (I21)	633	525	227	178	29	14	71	66
Cerebrovascular diseases (I60–I69)	412	578	149	190	18	24	35	89
Chapter X Diseases of the respiratory system (J00–J99)	439	325	176	149	42	22	56	38
Influenza and pneumonia (J10–J18)	66	91	27	35	7	4	13	9
Chronic lower respiratory diseases (J40–J47)	302	184	126	92	27	14	36	23
Chapter XI Diseases of the digestive system (K00–K93)	184	199	45	72	20	17	30	25
Diseases of liver (K70–K77)	64	32	15	14	11	8	19	5
Chapter XII Diseases of the skin and subcutaneous tissue (L00–L99)	7	12	3	6	—	—	1	—
Chapter XIII Diseases of the musculoskeletal system and connective tissue (M00–M99)	24	47	12	13	2	6	2	5
Chapter XIV Diseases of the genitourinary system (N00–N99)	90	102	37	40	15	19	12	13
Chapter XV Pregnancy, childbirth and the puerperium (O00–O99)	..	—	..	—	..	1	..	—
Chapter XVI Certain conditions originating in the perinatal period (P00–P96)	32	21	16	8	13	4	8	5
Chapter XVII Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	36	27	8	12	8	9	8	7
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	80	53	27	26	6	8	4	3
Chapter XX External causes of morbidity and mortality (V01–Y98)	590	248	172	84	96	28	80	31
Transport accidents (V01–V99)	177	63	56	22	31	8	13	7
Falls (W00–W19)	25	29	6	9	2	—	9	1
Intentional self-harm (X60–X84)	192	44	68	10	27	5	35	10

(a) Including age not stated.



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

Cause of death and ICD code	NSW	Vic.	Qld	SA
1989				
<b>All causes</b>	<b>776.0</b>	<b>749.0</b>	<b>767.5</b>	<b>740.1</b>
Malignant neoplasms (C00–C97)	181.5	189.6	179.8	178.1
Trachea, bronchus and lung (C33, C34)	38.0	38.4	36.5	33.7
Diabetes mellitus (E10–E14)	10.5	18.0	11.3	12.4
Mental and behavioural disorders (F00–F99)	13.0	16.1	12.0	9.9
Diseases of the nervous system (G00–G99)	14.1	15.9	13.8	11.2
Diseases of the circulatory system (I00–I99)	367.4	330.5	354.0	351.8
Ischaemic heart disease (I20–I25)	205.0	188.5	212.2	205.9
Acute myocardial infarction (I21)	137.4	120.5	145.4	146.4
Cerebrovascular diseases (I60–I69)	87.4	69.7	74.2	75.5
Diseases of arteries, arterioles and capillaries (I70–I79)	19.8	19.8	18.9	21.7
Diseases of the respiratory system (J00–J99)	65.8	62.1	67.1	66.7
Influenza and pneumonia (J40–J47)	12.3	11.9	13.9	23.7
Chronic lower respiratory diseases (J40–J47)	45.9	43.5	46.1	37.2
Diseases of the digestive system (K00–K93)	25.0	25.9	27.8	25.0
Accidents (V01–X59)	33.9	34.4	34.5	29.7
Transport accidents (V01–V99)	18.1	21.3	17.5	17.1
Intentional self-harm (X60–X84)	11.8	11.5	14.8	14.1
1999				
<b>All causes</b>	<b>591.5</b>	<b>565.4</b>	<b>598.0</b>	<b>563.3</b>
Malignant neoplasms (C00–C97)	162.4	166.2	168.7	160.9
Trachea, bronchus and lung (C33, C34)	32.2	31.4	35.1	30.8
Diabetes mellitus (E10–E14)	10.7	17.4	13.3	13.3
Mental and behavioural disorders (F00–F99)	13.4	12.0	10.0	13.8
Diseases of the nervous system (G00–G99)	17.7	17.8	17.6	12.5
Diseases of the circulatory system (I00–I99)	236.5	206.2	236.1	216.5
Ischaemic heart disease (I20–I25)	126.3	111.6	136.4	118.9
Acute myocardial infarction (I21)	68.3	61.5	77.3	68.7
Cerebrovascular diseases (I60–I69)	56.1	48.3	54.0	50.5
Diseases of arteries, arterioles and capillaries (I70–I79)	13.4	11.4	13.0	11.2
Diseases of the respiratory system (J00–J99)	43.1	40.3	43.8	46.7
Influenza and pneumonia (J40–J47)	6.4	7.3	7.5	14.6
Chronic lower respiratory diseases (J40–J47)	28.6	26.9	29.9	23.4
Diseases of the digestive system (K00–K93)	19.2	17.9	19.3	19.1
Accidents (V01–X59)	25.2	27.8	27.1	22.0
Transport accidents (V01–V99)	9.9	10.0	10.6	11.2
Intentional self-harm (X60–X84)	13.4	11.5	13.6	13.3

(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>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>
1989				
<b>All causes</b>	<b>694.3</b>	<b>808.4</b>	<b>1 097.1</b>	<b>637.7</b>
Malignant neoplasms (C00–C97)	182.5	190.1	183.4	146.2
Trachea, bronchus and lung (C33,C34)	39.9	41.5	42.6	31.9
Diabetes mellitus (E10–E14)	11.2	11.1	27.3	8.5
Mental and behavioural disorders (F00–F99)	11.3	15.5	29.1	6.3
Diseases of the nervous system (G00–G99)	18.7	11.8	15.4	7.5
Diseases of the circulatory system (I00–I99)	308.1	383.8	357.0	290.8
Ischaemic heart disease (I20–I25)	181.1	214.7	197.9	166.8
Acute myocardial infarction (I21)	123.3	149.3	101.7	102.8
Cerebrovascular diseases (I60–I69)	70.7	81.7	57.6	57.1
Diseases of arteries, arterioles and capillaries (I70–I79)	16.2	27.5	11.1	20.1
Diseases of the respiratory system (J00–J99)	57.7	69.4	194.3	69.6
Influenza and pneumonia (J40–J47)	15.6	21.5	33.4	15.5
Chronic lower respiratory diseases (J40–J47)	36.4	45.5	119.5	41.2
Diseases of the digestive system (K00–K93)	25.3	27.8	45.6	30.7
Accidents (V01–X59)	28.6	38.8	66.8	23.3
Transport accidents (V01–V99)	16.4	19.8	37.7	11.6
Intentional self-harm (X60–X84)	12.0	13.2	23.1	13.4
1999				
<b>All causes</b>	<b>570.9</b>	<b>647.7</b>	<b>873.8</b>	<b>535.9</b>
Malignant neoplasms (C00–C97)	169.3	180.0	208.9	159.8
Trachea, bronchus and lung (C33, C34)	36.0	33.2	52.8	23.3
Diabetes mellitus (E10–E14)	13.1	12.9	38.5	9.9
Mental and behavioural disorders (F00–F99)	12.8	9.4	15.8	13.8
Diseases of the nervous system (G00–G99)	20.5	19.1	25.2	14.4
Diseases of the circulatory system (I00–I99)	208.6	243.2	285.2	202.8
Ischaemic heart disease (I20–I25)	112.7	128.3	141.6	102.6
Acute myocardial infarction (I21)	60.3	67.6	53.9	56.7
Cerebrovascular diseases (I60–I69)	50.1	54.2	65.0	52.6
Diseases of arteries, arterioles and capillaries (I70–I79)	11.6	17.7	10.2	10.9
Diseases of the respiratory system (J00–J99)	40.0	53.9	79.7	40.0
Influenza and pneumonia (J40–J47)	7.6	9.5	10.7	8.6
Chronic lower respiratory diseases (J40–J47)	26.2	36.8	52.3	25.8
Diseases of the digestive system (K00–K93)	19.9	19.5	34.2	21.8
Accidents (V01–X59)	29.4	32.6	38.3	21.7
Transport accidents (V01–V99)	13.2	17.0	18.1	6.7
Intentional self-harm (X60–X84)	12.6	16.9	15.2	13.8

(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 Usual Residence(a)

Cause of death and ICD code	INDIGENOUS.....				NON-INDIGENOUS(b).....			
	Males	Females	Persons	Proportion of total deaths	Males	Females	Persons	Proportion of total deaths
	no.	no.	no.	%	no.	no.	no.	%
NEW SOUTH WALES								
<b>All causes</b>	<b>257</b>	<b>178</b>	<b>435</b>	<b>100.0</b>	<b>23 525</b>	<b>21 255</b>	<b>44 780</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	37	32	69	15.9	6 816	5 109	11 925	26.6
Digestive organs (C15–C26)	10	2	12	2.8	1 877	1 432	3 309	7.4
Trachea, bronchus and lung (C33, C34)	7	10	17	3.9	1 601	725	2 326	5.2
Diabetes mellitus (E10–E14)	8	10	18	4.1	410	388	798	1.8
Mental and behavioural disorders (F00–F99)	14	1	15	3.4	501	503	1 004	2.2
Diseases of the circulatory system (I00–I99)	90	54	144	33.1	9 047	9 710	18 757	41.9
Ischaemic heart diseases (I20–I25)	57	32	89	20.5	5 322	4 537	9 859	22.0
Cerebrovascular diseases (I60–I69)	14	7	21	4.8	1 810	2 750	4 560	10.2
Diseases of the respiratory system (J00–J99)	21	17	38	8.7	1 800	1 514	3 314	7.4
Chronic lower respiratory diseases (J40–J47)	16	11	27	6.2	1 229	929	2 158	4.8
Diseases of the digestive system (K00–K93)	15	4	19	4.4	760	691	1 451	3.2
Diseases of the liver (K70–K77)	12	2	14	3.2	323	123	446	1.0
Certain conditions originating in the perinatal period (P00–P96)	8	11	19	4.4	131	88	219	0.5
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	3	9	12	2.8	124	93	217	0.5
All other medical conditions (remainder of A00–R99)	16	18	34	7.8	2 045	2 351	4 396	9.8
External causes of morbidity and mortality (V01–Y98)	45	22	67	15.4	1 891	808	2 699	6.0
Transport accidents (V01–V99)	16	2	18	4.1	425	190	615	1.4
Intentional self-harm (X60–X84)	6	1	7	1.6	683	179	862	1.9
Assault (X85–Y09)	8	4	12	2.8	70	28	98	0.2
Other external causes (remainder of V01–Y98)	15	15	30	6.9	713	411	1 124	2.5
VICTORIA								
<b>All causes</b>	<b>80</b>	<b>50</b>	<b>130</b>	<b>100.0</b>	<b>16 353</b>	<b>15 435</b>	<b>31 788</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	12	11	23	17.7	4 984	4 009	8 993	28.3
Digestive organs (C15–C26)	4	3	7	5.4	1 505	1 183	2 688	8.5
Trachea, bronchus and lung (C33, C34)	5	4	9	6.9	1 121	549	1 670	5.3
Diabetes mellitus (E10–E14)	3	1	4	3.1	496	475	971	3.1
Mental and behavioural disorders (F00–F99)	2	2	4	3.1	274	456	730	2.3
Diseases of the circulatory system (I00–I99)	22	17	39	30.0	5 761	6 406	12 167	38.3
Ischaemic heart diseases (I20–I25)	15	8	23	17.7	3 435	3 062	6 497	20.4
Cerebrovascular diseases (I60–I69)	4	5	9	6.9	1 124	1 770	2 894	9.1
Diseases of the respiratory system (J00–J99)	2	4	6	4.6	1 294	1 038	2 332	7.3
Chronic lower respiratory diseases (J40–J47)	2	4	6	4.6	907	599	1 506	4.7
Diseases of the digestive system (K00–K93)	4	1	5	3.8	486	533	1 019	3.2
Diseases of the liver (K70–K77)	2	1	3	2.3	205	91	296	0.9
Certain conditions originating in the perinatal period (P00–P96)	2	1	3	2.3	85	69	154	0.5
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	3	1	4	3.1	94	78	172	0.5
All other medical conditions (remainder of A00–R99)	6	8	14	10.8	1 480	1 739	3 219	10.1
External causes of morbidity and mortality (V01–Y98)	24	4	28	21.5	1 399	632	2 031	6.4
Transport accidents (V01–V99)	5	1	6	4.6	333	133	466	1.5
Intentional self-harm (X60–X84)	4	—	4	3.1	436	112	548	1.7
Assault (X85–Y09)	—	1	1	0.8	41	22	63	0.2
Other external causes (remainder of V01–Y98)	15	2	17	13.1	589	365	954	3.0

(a) Coverage varies for States and Territories Indigenous death registration data.  
See Appendix 6, page 86 for further explanation.

(b) Includes not stated.

1.8 UNDERLYING CAUSE, Indigenous People and Usual Residence(a) *continued*

Cause of death and ICD code	INDIGENOUS.....				NON-INDIGENOUS(b).....			
	Males	Females	Persons	Proportion of total deaths	Males	Females	Persons	Proportion of total deaths
	no.	no.	no.	%	no.	no.	no.	%
QUEENSLAND								
<b>All causes</b>	<b>305</b>	<b>224</b>	<b>529</b>	<b>100.0</b>	<b>11 875</b>	<b>10 445</b>	<b>22 320</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	53	39	92	17.4	3 567	2 589	6 156	27.6
Digestive organs (C15–C26)	14	4	18	3.4	955	693	1 648	7.4
Trachea, bronchus and lung (C33, C34)	24	10	34	6.4	854	378	1 232	5.5
Diabetes mellitus (E10–E14)	24	22	46	8.7	225	236	461	2.1
Mental and behavioural disorders (F00–F99)	3	—	3	0.6	172	231	403	1.8
Diseases of the circulatory system (I00–I99)	87	82	169	31.9	4 474	4 658	9 132	40.9
Ischaemic heart diseases (I20–I25)	57	38	95	18.0	2 809	2 411	5 220	23.4
Cerebrovascular diseases (I60–I69)	14	22	36	6.8	873	1 264	2 137	9.6
Diseases of the respiratory system (J00–J99)	16	17	33	6.2	948	697	1 645	7.4
Chronic lower respiratory diseases (J40–J47)	9	14	23	4.3	688	415	1 103	4.9
Diseases of the digestive system (K00–K93)	17	14	31	5.9	360	359	719	3.2
Diseases of the liver (K70–K77)	10	10	20	3.8	120	62	182	0.8
Certain conditions originating in the perinatal period (P00–P96)	12	1	13	2.5	49	45	94	0.4
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	10	2	12	2.3	74	62	136	0.6
All other medical conditions (remainder of (A00–R99)	27	28	55	10.4	909	1 130	2 039	9.1
External causes of morbidity and mortality (V01–Y98)	56	19	75	14.2	1 097	438	1 535	6.9
Transport accidents (V01–V99)	9	4	13	2.5	261	90	351	1.6
Intentional self-harm (X60–X84)	22	2	24	4.5	374	82	456	2.0
Assault (X85–Y09)	4	5	9	1.7	29	14	43	0.2
Other external causes (remainder of V01–Y98)	21	8	29	5.5	433	252	685	3.1
SOUTH AUSTRALIA								
<b>All causes</b>	<b>62</b>	<b>54</b>	<b>116</b>	<b>100.0</b>	<b>5 778</b>	<b>5 397</b>	<b>11 175</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	6	7	13	11.2	1 737	1 322	3 059	27.4
Digestive organs (C15–C26)	2	1	3	2.6	483	397	880	7.9
Trachea, bronchus and lung (C33, C34)	—	3	3	2.6	405	175	580	5.2
Diabetes mellitus (E10–E14)	6	2	8	6.9	134	128	262	2.3
Mental and behavioural disorders (F00–F99)	3	2	5	4.3	109	165	274	2.5
Diseases of the circulatory system (I00–I99)	20	16	36	31.0	2 220	2 364	4 584	41.0
Ischaemic heart diseases (I20–I25)	16	8	24	20.7	1 328	1 146	2 474	22.1
Cerebrovascular diseases (I60–I69)	2	3	5	4.3	438	669	1 107	9.9
Diseases of the respiratory system (J00–J99)	4	6	10	8.6	498	490	988	8.8
Chronic lower respiratory diseases (J40–J47)	2	2	4	3.4	265	200	465	4.2
Diseases of the digestive system (K00–K93)	3	2	5	4.3	187	193	380	3.4
Diseases of the liver (K70–K77)	2	2	4	3.4	80	30	110	1.0
Certain conditions originating in the perinatal period (P00–P96)	—	1	1	0.9	21	10	31	0.3
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	—	1	1	0.9	24	22	46	0.4
All other medical conditions (remainder of (A00–R99)	5	11	16	13.8	447	530	977	8.7
External causes of morbidity and mortality (V01–Y98)	15	6	21	18.1	401	173	574	5.1
Transport accidents (V01–V99)	4	2	6	5.2	110	48	158	1.4
Intentional self-harm (X60–X84)	2	—	2	1.7	153	45	198	1.8
Assault (X85–Y09)	—	1	1	0.9	23	5	28	0.3
Other external causes (remainder of V01–Y98)	9	3	12	10.3	115	75	190	1.7

(a) Coverage varies for States and Territories Indigenous death registration data.  
See Appendix 6, page 86 for further explanation.

(b) Includes not stated.

1.8 UNDERLYING CAUSE, Indigenous People and Usual Residence(a) *continued*

Cause of death and ICD code	INDIGENOUS.....				NON-INDIGENOUS(b).....			
	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>208</b>	<b>142</b>	<b>350</b>	<b>100.0</b>	<b>5 635</b>	<b>4 892</b>	<b>10 527</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	22	13	35	10.0	1 781	1 323	3 104	29.5
Digestive organs (C15–C26)	6	6	12	3.4	497	380	877	8.3
Trachea, bronchus and lung (C33, C34)	5	3	8	2.3	440	204	644	6.1
Diabetes mellitus (E10–E14)	12	19	31	8.9	104	111	215	2.0
Mental and behavioural disorders (F00–F99)	10	3	13	3.7	106	135	241	2.3
Diseases of the circulatory system (I00–I99)	57	41	98	28.0	1 942	2 019	3 961	37.6
Ischaemic heart diseases (I20–I25)	29	20	49	14.0	1 156	968	2 124	20.2
Cerebrovascular diseases (I60–I69)	14	7	21	6.0	398	571	969	9.2
Diseases of the respiratory system (J00–J99)	14	8	22	6.3	425	317	742	7.0
Chronic lower respiratory diseases (J40–J47)	11	6	17	4.9	291	178	469	4.5
Diseases of the digestive system (K00–K93)	10	7	17	4.9	174	192	366	3.5
Diseases of the liver (K70–K77)	8	4	12	3.4	56	28	84	0.8
Certain conditions originating in the perinatal period (P00–P96)	7	10	17	4.9	25	11	36	0.3
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	2	5	7	2.0	34	22	56	0.5
All other medical conditions (remainder of A00–R99)	30	19	49	14.0	498	531	1 029	9.8
External causes of morbidity and mortality (V01–Y98)	44	17	61	17.4	546	231	777	7.4
Transport accidents (V01–V99)	16	11	27	7.7	161	52	213	2.0
Intentional self-harm (X60–X84)	11	1	12	3.4	181	43	224	2.1
Assault (X85–Y09)	3	1	4	1.1	15	7	22	0.2
Other external causes (remainder of V01–Y98)	14	4	18	5.1	189	129	318	3.0
NORTHERN TERRITORY								
<b>All causes</b>	<b>221</b>	<b>178</b>	<b>399</b>	<b>100.0</b>	<b>288</b>	<b>145</b>	<b>433</b>	<b>100.0</b>
Malignant neoplasms (C00–C97)	21	25	46	11.5	80	47	127	29.3
Digestive organs (C15–C26)	11	1	12	3.0	18	11	29	6.7
Trachea, bronchus and lung (C33, C34)	5	3	8	2.0	24	7	31	7.2
Diabetes mellitus (E10–E14)	8	13	21	5.3	7	5	12	2.8
Mental and behavioural disorders (F00–F99)	6	3	9	2.3	9	2	11	2.5
Diseases of the circulatory system (I00–I99)	65	48	113	28.3	76	36	112	25.9
Ischaemic heart diseases (I20–I25)	38	20	58	14.5	53	12	65	15.0
Cerebrovascular diseases (I60–I69)	11	8	19	4.8	7	16	23	5.3
Diseases of the respiratory system (J00–J99)	24	15	39	9.8	18	7	25	5.8
Chronic lower respiratory diseases (J40–J47)	14	7	21	5.3	13	7	20	4.6
Diseases of the digestive system (K00–K93)	9	10	19	4.8	11	7	18	4.2
Diseases of the liver (K70–K77)	6	6	12	3.0	5	2	7	1.6
Certain conditions originating in the perinatal period (P00–P96)	10	2	12	3.0	3	2	5	1.2
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4	4	8	2.0	4	5	9	2.1
All other medical conditions (remainder of A00–R99)	36	40	76	19.0	22	24	46	10.6
External causes of morbidity and mortality (V01–Y98)	38	18	56	14.0	58	10	68	15.7
Transport accidents (V01–V99)	8	3	11	2.8	23	5	28	6.5
Intentional self-harm (X60–X84)	13	3	16	4.0	14	2	16	3.7
Assault (X85–Y09)	4	2	6	1.5	4	2	6	1.4
Other external causes (remainder of V01–Y98)	13	10	23	5.8	17	1	18	4.2

(a) Coverage varies for States and Territories Indigenous death registration data.  
See Appendix 6, page 86 for further explanation.

(b) Includes not stated.

## SECTION 2

## MULTIPLE CAUSE OF DEATH .....

### INTRODUCTION

Multiple causes of death include all causes and conditions reported on the death certificate (i.e. both underlying and associated causes, see glossary page 90 for further details). Deaths due to external causes are those which occur as a result of accidents, poisonings and/or violence. They are classified according to the event, such as accidental fall, leading to the fatal injury. Multiple cause data for external causes include the nature of injury or poisoning, as well as any other conditions reported on the death certificate.

The introduction of ICD-10 will lead to some differences when comparing certain causes of death in 1999 to previous years. (See Appendix 5 for details on the comparability between ICD-9 and ICD-10).

### NUMBERS OF CAUSES

For the 128,102 deaths registered in 1999, there were 357,144 causes reported (including 12,881 injuries) giving a mean 2.8 causes per death. Twenty percent of deaths were reported with only one condition.

The average number of causes reported per death varies with age, sex and underlying cause of death. For example, in 1999, males aged 45–54 years averaged 2.5 causes per death, while females aged 25–34 years recorded 3.0 causes per death. Deaths as a result of external causes recorded 3.4 causes (including injuries) per death in 1999, with deaths as a result of accidental falls averaging 4.3 causes, reflecting the number of injuries sustained.

### LEADING MULTIPLE CAUSES

The following table lists the ten leading multiple causes of death (underlying and associated causes) appearing on death certificates for deaths registered in 1999, and their corresponding ranking in terms of underlying causes.

#### LEADING MULTIPLE CAUSES OF DEATH .....

Cause of death and ICD code	Multiple cause(a).....			Underlying cause	
	no.	%	rank	%	rank
Malignant neoplasms (C00–C97)	39 417	30.8	1	27.4	1
Ischaemic heart diseases (I20–I25)	37 966	29.6	2	21.6	2
Cerebrovascular diseases (I60–I69)	20 027	15.6	3	9.6	3
Influenza and pneumonia (J10–J18)	17 723	13.8	4	1.5	10
Chronic lower respiratory diseases (J40–J47)	13 913	10.9	5	4.8	4
Renal failure (N17–N19)	11 032	8.6	6	1.4	11
Diabetes mellitus (E10–E14)	9 588	7.5	7	2.3	6
Organic, including symptomatic, mental disorders (F00–F09)	8 573	6.7	8	1.5	9
Diseases of arteries, arterioles and capillaries (I70–I79)	8 543	6.7	9	2.2	7
Accidents (V01–X59)	7 827	6.1	10	4.1	5
<b>Deaths from all causes</b>	<b>128 102</b>	<b>100.0</b>	<b>..</b>	<b>100.0</b>	<b>..</b>

(a) Number of deaths and percentages may add to more than totals because a death certificate can report more than one leading multiple cause.

LEADING MULTIPLE CAUSES *continued*

The leading multiple causes of death are generally consistent with the leading underlying causes of death. In particular, the closeness of the percentages for malignant neoplasms indicate that neoplasms are very likely to be identified as the underlying cause whenever they are reported on the death certificate. This is less likely for heart disease, and the remaining causes present quite a different pattern. For example, although influenza and pneumonia are reported on almost 14% of death records, they are identified as the underlying cause for only 1.5% of deaths.

## EXTERNAL CAUSES OF DEATH

In 1999, there were 8,361 deaths due to external causes. For these deaths, 28,396 multiple causes were reported, including 12,881 injuries. The average of 3.4 causes per death is consistent with data from recent years.

In 1999, transport accidents and intentional self-harm accounted for over 50% of all injuries reported for deaths due to external causes. Transport accidents were the largest source accounting for 27% of the total number of injuries, with almost 30% of these being injuries to the head. Intentional self-harm accounted for 25% of total injuries recorded in 1999, of these asphyxiation was the most common (32%).

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

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

Age group (years)	Mean	Total deaths	Total	1	2	3	4	5	6 or more
	conditions per death								
	no.	no.	%	%	%	%	%	%	%
MALES									
<b>All ages(a)</b>	<b>2.8</b>	<b>67 227</b>	<b>100.0</b>	<b>19.9</b>	<b>27.8</b>	<b>24.0</b>	<b>14.6</b>	<b>7.7</b>	<b>6.0</b>
Under 1	2.8	812	100.0	24.8	24.5	22.3	12.8	9.2	6.4
1-14	2.6	371	100.0	17.3	41.8	22.6	10.0	5.1	3.2
15-24	2.8	1 388	100.0	8.4	48.1	21.0	10.1	6.0	6.4
25-34	3.0	2 003	100.0	10.0	42.9	18.8	11.5	7.2	9.6
35-44	2.8	2 368	100.0	20.4	36.7	17.8	10.5	6.5	8.0
45-54	2.5	4 050	100.0	27.9	31.2	18.9	11.4	5.6	5.1
55-64	2.6	7 268	100.0	28.9	27.3	21.2	12.0	5.9	4.7
65-74	2.8	15 878	100.0	22.8	25.9	23.0	14.5	7.8	6.0
75-84	3.0	20 976	100.0	17.4	25.4	26.3	16.1	8.7	6.2
85 and over	3.0	12 104	100.0	15.0	26.8	27.2	16.8	8.4	5.8
FEMALES									
<b>All ages(a)</b>	<b>2.8</b>	<b>60 875</b>	<b>100.0</b>	<b>20.6</b>	<b>27.9</b>	<b>24.5</b>	<b>14.4</b>	<b>7.3</b>	<b>5.4</b>
Under 1	2.6	596	100.0	24.3	27.2	25.8	12.8	5.9	4.0
1-14	2.4	290	100.0	19.3	43.4	21.7	9.0	4.1	2.4
15-24	3.0	484	100.0	13.6	34.5	24.0	12.2	7.9	7.9
25-34	3.0	721	100.0	17.1	32.7	19.8	12.5	7.1	10.8
35-44	2.6	1 318	100.0	29.4	27.3	18.6	11.4	6.4	6.9
45-54	2.4	2 475	100.0	35.4	26.9	17.0	10.1	5.5	5.2
55-64	2.5	4 104	100.0	32.3	26.4	18.7	11.8	6.3	4.5
65-74	2.7	9 319	100.0	25.0	25.4	22.6	13.5	7.6	5.9
75-84	2.9	19 128	100.0	19.1	27.0	25.0	15.7	7.6	5.6
85 and over	2.9	22 438	100.0	15.9	29.7	27.2	15.0	7.4	4.8
PERSONS									
<b>All ages(a)</b>	<b>2.8</b>	<b>128 102</b>	<b>100.0</b>	<b>20.2</b>	<b>27.8</b>	<b>24.2</b>	<b>14.5</b>	<b>7.5</b>	<b>5.7</b>
Under 1	2.7	1 408	100.0	24.6	25.6	23.8	12.8	7.8	5.4
1-14	2.5	661	100.0	18.2	42.5	22.2	9.5	4.7	2.9
15-24	2.9	1 872	100.0	9.7	44.6	21.8	10.6	6.5	6.8
25-34	3.0	2 724	100.0	11.9	40.2	19.1	11.8	7.2	9.9
35-44	2.7	3 686	100.0	23.7	33.3	18.1	10.8	6.5	7.6
45-54	2.5	6 525	100.0	30.7	29.5	18.2	10.9	5.5	5.1
55-64	2.5	11 372	100.0	30.1	27.0	20.3	11.9	6.1	4.6
65-74	2.8	25 197	100.0	23.6	25.7	22.9	14.1	7.7	5.9
75-84	2.9	40 104	100.0	18.2	26.1	25.7	15.9	8.1	5.9
85 and over	2.9	34 542	100.0	15.6	28.7	27.2	15.6	7.7	5.2

(a) Including age not stated.

## 2.2 UNDERLYING AND NUMBER OF CAUSES OF DEATH REPORTED

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>13 377</b>	<b>18 677</b>	<b>16 125</b>	<b>9 812</b>	<b>9 236</b>	<b>2.8</b>
Chapter I Certain infectious and parasitic diseases (A00–B99)	115	177	193	147	210	3.4
Septicaemia (A40, A41)	42	77	87	86	109	3.6
Human immunodeficiency virus (HIV) disease (B20–B24)	48	39	22	10	7	2.2
Chapter II Neoplasms (C00–D48)	7 744	5 330	3 749	1 903	1 557	2.3
Malignant neoplasms (C00–C97)	7 687	5 219	3 646	1 831	1 483	2.3
Digestive organs (C15–C26)	2 277	1 438	989	504	392	2.2
Oesophagus (C15)	264	155	123	53	46	2.2
Stomach (C16)	343	188	118	55	50	2.1
Colon (C18)	717	438	309	172	135	2.3
Rectosigmoid junction, rectum, anus and anal canal (C19–C21)	302	174	132	76	50	2.2
Liver and intrahepatic bile ducts (C22)	121	139	100	54	35	2.5
Pancreas (C25)	394	230	137	62	45	2.0
Trachea, bronchus and lung (C33, C34)	1 811	1 282	871	384	307	2.2
Melanoma of skin (C43)	298	177	78	38	40	2.0
Breast (C50)	6	4	6	4	2	2.6
Female genital organs (C51–C58)	..	..	..	..	..	..
Ovary (C56)	..	..	..	..	..	..
Male genital organs (C60–C63)	965	682	482	230	187	2.3
Prostate (C61)	946	670	473	227	183	2.3
Urinary tract (C64–C68)	417	286	192	120	97	2.3
Kidney, except renal pelvis (C64)	206	123	72	42	39	2.2
Bladder (C67)	192	155	115	71	54	2.5
Brain (C71)	332	150	71	23	12	1.7
Lymphoid, haematopoietic and related tissue (C81–C96)	534	498	423	273	234	2.7
Leukaemia (C91–C95)	148	208	189	119	104	2.9
In situ and benign neoplasms and neoplasms of uncertain or unknown behaviour (D00–D48)	57	111	103	72	74	3.1
Chapter III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	11	35	48	39	62	3.8
Chapter IV Endocrine, nutritional and metabolic diseases (E00–E90)	47	346	664	503	441	3.6
Diabetes mellitus (E10–E14)	17	258	509	380	321	3.6
Chapter V Mental and behavioural disorders (F00–F99)	94	354	354	215	239	3.3
Chapter VI Diseases of the nervous system (G00–G99)	301	588	485	233	211	2.8
Alzheimer's disease (G30)	87	200	125	44	37	2.5
Chapter VII Diseases of the eye and adnexa (H00–H59)	—	—	—	—	—	..
Chapter VIII Diseases of the ear and mastoid process (H60–H95)	—	—	—	—	—	..
Chapter IX Diseases of the circulatory system (I00–I99)	3 630	6 672	6 814	4 174	3 534	3.0
All heart disease (I05–I09, I11, I13, I20–I25, I26, I27, I30–I52)	2 433	4 769	5 108	3 170	2 636	3.0
Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09)	2	15	21	18	28	4.0
Hypertensive diseases (I10–I15)	61	109	113	84	65	3.1
Ischaemic heart diseases (I20–I25)	2 057	3 970	4 203	2 559	2 076	3.0
Acute myocardial infarction (I21)	763	2 492	2 436	1 356	981	3.0
Pulmonary heart disease and diseases of pulmonary circulation and other forms of heart disease (I26–I52)	332	717	832	567	507	3.2
Heart failure (I50)	111	261	307	175	135	3.0
Cerebrovascular diseases (I60–I69)	963	1 437	1 262	694	538	2.7
Diseases of arteries, arterioles and capillaries (I70–I79)	210	389	362	228	287	3.2
Atherosclerosis (I70)	11	58	67	51	42	3.4
Aortic aneurysm and dissection (I71)	192	270	210	102	108	2.7

2.2 UNDERLYING AND NUMBER OF CAUSES OF DEATH REPORTED *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	
Chapter X Diseases of the respiratory system (J00–J99)	750	1 452	1 469	909	716	3.0
Influenza and pneumonia (J10–J18)	334	218	111	59	43	2.1
Chronic lower respiratory diseases (J40–J47)	291	977	1 110	698	533	3.1
Emphysema (J43)	55	195	162	101	62	2.9
Asthma and status asthmaticus (J45, J46)	26	48	50	25	11	2.7
Chapter XI Diseases of the digestive system (K00–K93)	192	452	544	417	506	3.5
Diseases of oesophagus, stomach and duodenum (K20–K31)	27	72	69	61	84	3.5
Gastric and duodenal ulcer (K25–K27)	25	57	47	41	45	3.2
Diseases of liver (K70–K77)	91	227	231	165	149	3.2
Chapter XII Diseases of the skin and subcutaneous tissue (L00–L99)	—	10	34	37	27	4.0
Chapter XIII Diseases of the musculoskeletal system and connective tissue (M00–M99)	5	41	84	73	97	4.0
Arthropathies and systemic connective tissue disorders (M00–M36)	4	27	64	58	55	3.9
Chapter XIV Diseases of the genitourinary system (N00–N99)	61	222	340	263	346	3.7
Renal failure (N17–N19)	55	162	233	176	216	3.6
Chapter XV Pregnancy, childbirth and the puerperium (O00–O99)	..	..	..	..	..	..
Chapter XVI Certain conditions originating in the perinatal period (P00–P96)	33	95	100	69	80	3.3
Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00–P04)	2	61	57	39	55	3.6
Chapter XVII Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	53	87	110	61	81	3.2
Congenital malformations of the circulatory system (Q20–Q28)	31	32	30	20	20	2.9
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	292	14	10	3	5	1.2
Chapter XX External causes of morbidity and mortality (V01–Y98)	49	2 802	1 127	766	1 124	3.2
Accidents (V01–X59)	32	1 423	650	529	852	3.5
Transport accidents (V01–V99)	22	811	251	151	206	3.0
Falls (W00–W19)	2	77	57	55	118	4.2
Accidental drowning and submersion (W65–W74)	—	139	30	25	9	2.6
Intentional self-harm (X60–X84)	6	1 247	381	173	195	2.7
Hanging, strangulation and suffocation (X70)	3	586	180	61	38	2.5
Assault (X85–Y09)	10	112	54	18	10	2.6



## 2.2 UNDERLYING AND NUMBER OF CAUSES OF DEATH REPORTED *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>12 534</b>	<b>16 996</b>	<b>14 895</b>	<b>8 765</b>	<b>7 685</b>	<b>2.8</b>
Chapter I Certain infectious and parasitic diseases (A00–B99)	74	172	187	148	180	3.4
Septicaemia (A40, A41)	38	115	118	86	103	3.4
Human immunodeficiency virus (HIV) disease (B20–B24)	4	2	2	1	—	2.0
Chapter II Neoplasms (C00–D48)	6 381	4 115	2 691	1 315	1 071	2.2
Malignant neoplasms (C00–C97)	6 321	4 010	2 589	1 255	1 012	2.2
Digestive organs (C15–C26)	1 872	1 127	718	329	266	2.1
Oesophagus (C15)	113	89	52	24	21	2.2
Stomach (C16)	231	101	66	27	22	1.9
Colon (C18)	663	409	262	122	101	2.1
Rectosigmoid junction, rectum, anus and anal canal (C19–C21)	222	126	80	46	40	2.2
Liver and intrahepatic bile ducts (C22)	76	48	59	29	22	2.5
Pancreas (C25)	409	232	121	52	36	1.9
Trachea, bronchus and lung (C33, C34)	881	596	360	190	121	2.1
Melanoma of skin (C43)	180	88	50	19	22	1.9
Breast (C50)	1 138	632	406	186	143	2.1
Female genital organs (C51–C58)	574	329	209	106	82	2.1
Ovary (C56)	352	187	111	54	33	2.0
Male genital organs (C60–C63)	..	..	..	..	..	..
Prostate (C61)	..	..	..	..	..	..
Urinary tract (C64–C68)	231	151	118	53	52	2.3
Kidney, except renal pelvis (C64)	130	79	55	25	31	2.3
Bladder (C67)	89	64	54	26	19	2.3
Brain (C71)	249	103	54	12	12	1.7
Lymphoid, haematopoietic and related tissue (C81–C96)	500	426	322	190	158	2.5
Leukaemia (C91–C95)	145	159	131	81	62	2.7
In situ and benign neoplasms and neoplasms of uncertain or unknown behaviour (D00–D48)	60	105	102	60	59	3.0
Chapter III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	14	45	71	59	66	3.7
Chapter IV Endocrine, nutritional and metabolic diseases (E00–E90)	39	390	649	513	508	3.7
Diabetes mellitus (E10–E14)	16	272	482	363	329	3.6
Chapter V Mental and behavioural disorders (F00–F99)	191	618	357	205	181	2.8
Chapter VI Diseases of the nervous system (G00–G99)	407	730	520	226	189	2.6
Alzheimer's disease (G30)	221	396	246	100	60	2.4
Chapter VII Diseases of the eye and adnexa (H00–H59)	—	2	—	3	—	3.2
Chapter VIII Diseases of the ear and mastoid process (H60–H95)	—	1	3	2	—	3.2
Chapter IX Diseases of the circulatory system (I00–I99)	3 886	7 874	7 400	4 167	3 152	2.9
All heart disease (I05–I09, I11, I13, I20–I25, I26, I27, I30–I52)	1 925	4 891	5 033	3 022	2 358	3.0
Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09)	6	26	50	41	54	3.9
Hypertensive diseases (I10–I15)	93	217	216	132	87	2.9
Ischaemic heart diseases (I20–I25)	1 427	3 600	3 748	2 282	1 687	3.0
Acute myocardial infarction (I21)	854	2 256	2 087	1 186	741	2.9
Pulmonary heart disease and diseases of pulmonary circulation and other forms of heart disease (I26–I52)	420	1 135	1 129	642	570	3.0
Heart failure (I50)	206	561	523	254	181	2.8
Cerebrovascular diseases (I60–I69)	1 749	2 431	1 823	826	543	2.5
Diseases of arteries, arterioles and capillaries (I70–I79)	187	415	387	224	175	2.9
Atherosclerosis (I70)	51	148	137	53	34	2.7
Aortic aneurysm and dissection (I71)	122	205	138	66	37	2.5

2.2 UNDERLYING AND NUMBER OF CAUSES OF DEATH REPORTED *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	
Chapter X Diseases of the respiratory system (J00–J99)	926	1 160	1 092	647	492	2.8
Influenza and pneumonia (J10–J18)	597	286	148	57	45	1.8
Chronic lower respiratory diseases (J40–J47)	225	675	760	471	356	3.1
Emphysema (J43)	32	98	96	59	27	2.9
Asthma and status asthmaticus (J45, J46)	41	66	84	39	34	2.9
Chapter XI Diseases of the digestive system (K00–K93)	188	444	567	446	465	3.4
Diseases of oesophagus, stomach and duodenum (K20–K31)	23	74	103	69	66	3.4
Gastric and duodenal ulcer (K25–K27)	23	66	67	39	36	3.1
Diseases of liver (K70–K77)	52	98	97	68	65	3.1
Chapter XII Diseases of the skin and subcutaneous tissue (L00–L99)	2	28	61	57	33	3.6
Chapter XIII Diseases of the musculoskeletal system and connective tissue (M00–M99)	14	98	173	131	146	3.7
Arthropathies and systemic connective tissue disorders (M00–M36)	12	69	104	81	94	3.7
Chapter XIV Diseases of the genitourinary system (N00–N99)	84	344	414	320	374	3.5
Renal failure (N17–N19)	75	226	243	180	195	3.4
Chapter XV Pregnancy, childbirth and the puerperium (O00–O99)	3	3	1	3	1	2.6
Chapter XVI Certain conditions originating in the perinatal period (P00–P96)	29	81	81	43	30	2.9
Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00–P04)	—	49	50	26	22	3.2
Chapter XVII Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	40	83	96	55	49	3.1
Congenital malformations of the circulatory system (Q20–Q28)	16	29	36	15	22	3.0
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	227	29	12	1	7	1.3
Chapter XX External causes of morbidity and mortality (V01–Y98)	29	779	520	424	741	3.8
Accidents (V01–X59)	15	504	349	319	614	3.9
Transport accidents (V01–V99)	9	324	123	57	57	2.8
Falls (W00–W19)	—	22	47	46	96	4.5
Accidental drowning and submersion (W65–W74)	—	45	21	6	3	2.6
Intentional self-harm (X60–X84)	3	220	131	66	70	3.1
Hanging, strangulation and suffocation (X70)	—	96	47	13	4	2.5
Assault (X85–Y09)	11	49	16	10	10	2.7

## 2.2 UNDERLYING AND NUMBER OF CAUSES OF DEATH REPORTED *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	
PERSONS						
<b>All causes</b>	<b>25 911</b>	<b>35 673</b>	<b>31 020</b>	<b>18 577</b>	<b>16 921</b>	<b>2.8</b>
Chapter I Certain infectious and parasitic diseases (A00–B99)	189	349	380	295	390	3.4
Septicaemia (A40, A41)	80	192	205	172	212	3.5
Human immunodeficiency virus (HIV) disease (B20–B24)	52	41	24	11	7	2.2
Chapter II Neoplasms (C00–D48)	14 125	9 445	6 440	3 218	2 628	2.2
Malignant neoplasms (C00–C97)	14 008	9 229	6 235	3 086	2 495	2.2
Digestive organs (C15–C26)	4 149	2 565	1 707	833	658	2.2
Oesophagus (C15)	377	244	175	77	67	2.2
Stomach (C16)	574	289	184	82	72	2.0
Colon (C18)	1 380	847	571	294	236	2.2
Rectosigmoid junction, rectum, anus and anal canal (C19–C21)	524	300	212	122	90	2.2
Liver and intrahepatic bile ducts (C22)	197	187	159	83	57	2.5
Pancreas (C25)	803	462	258	114	81	2.0
Trachea, bronchus and lung (C33, C34)	2 692	1 878	1 231	574	428	2.2
Melanoma of skin (C43)	478	265	128	57	62	2.0
Breast (C50)	1 144	636	412	190	145	2.1
Female genital organs (C51–C58)	574	329	209	106	82	2.1
Ovary (C56)	352	187	111	54	33	2.0
Male genital organs (C60–C63)	965	682	482	230	187	2.3
Prostate (C61)	946	670	473	227	183	2.3
Urinary tract (C64–C68)	648	437	310	173	149	2.3
Kidney, except renal pelvis (C64)	336	202	127	67	70	2.2
Bladder (C67)	281	219	169	97	73	2.4
Brain (C71)	581	253	125	35	24	1.7
Lymphoid, haematopoietic and related tissue (C81–C96)	1 034	924	745	463	392	2.6
Leukaemia (C91–C95)	293	367	320	200	166	2.8
In situ and benign neoplasms and neoplasms of uncertain or unknown behaviour (D00–D48)	117	216	205	132	133	3.0
Chapter III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	25	80	119	98	128	3.7
Chapter IV Endocrine, nutritional and metabolic diseases (E00–E90)	86	736	1 313	1 016	949	3.7
Diabetes mellitus (E10–E14)	33	530	991	743	650	3.6
Chapter V Mental and behavioural disorders (F00–F99)	285	972	711	420	420	3.0
Chapter VI Diseases of the nervous system (G00–G99)	708	1 318	1 005	459	400	2.7
Alzheimer's disease (G30)	308	596	371	144	97	2.5
Chapter VII Diseases of the eye and adnexa (H00–H59)	—	2	—	3	—	3.2
Chapter VIII Diseases of the ear and mastoid process (H60–H95)	—	1	3	2	—	3.2
Chapter IX Diseases of the circulatory system (I00–I99)	7 516	14 546	14 214	8 341	6 686	2.9
All heart disease (I05–I09, I11, I13, I20–I25, I26, I27, I30–I52)	4 358	9 660	10 141	6 192	4 994	3.0
Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09)	8	41	71	59	82	3.9
Hypertensive diseases (I10–I15)	154	326	329	216	152	3.0
Ischaemic heart diseases (I20–I25)	3 484	7 570	7 951	4 841	3 763	3.0
Acute myocardial infarction (I21)	1 617	4 748	4 523	2 542	1 722	2.9
Pulmonary heart disease and diseases of pulmonary circulation and other forms of heart disease (I26–I52)	752	1 852	1 961	1 209	1 077	3.1
Heart failure (I50)	317	822	830	429	316	2.9
Cerebrovascular diseases (I60–I69)	2 712	3 868	3 085	1 520	1 081	2.6
Diseases of arteries, arterioles and capillaries (I70–I79)	397	804	749	452	462	3.1
Atherosclerosis (I70)	62	206	204	104	76	3.0
Aortic aneurysm and dissection (I71)	314	475	348	168	145	2.6

2.2 UNDERLYING AND NUMBER OF CAUSES OF DEATH REPORTED *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	
Chapter X Diseases of the respiratory system (J00–J99)	1 676	2 612	2 561	1 556	1 208	2.9
Influenza and pneumonia (J10–J18)	931	504	259	116	88	1.9
Chronic lower respiratory diseases (J40–J47)	516	1 652	1 870	1 169	889	3.1
Emphysema (J43)	87	293	258	160	89	2.9
Asthma and status asthmaticus (J45, J46)	67	114	134	64	45	2.8
Chapter XI Diseases of the digestive system (K00–K93)	380	896	1 111	863	971	3.5
Diseases of oesophagus, stomach and duodenum (K20–K31)	50	146	172	130	150	3.5
Gastric and duodenal ulcer (K25–K27)	48	123	114	80	81	3.2
Diseases of liver (K70–K77)	143	325	328	233	214	3.2
Chapter XII Diseases of the skin and subcutaneous tissue (L00–L99)	2	38	95	94	60	3.7
Chapter XIII Diseases of the musculoskeletal system and connective tissue (M00–M99)	19	139	257	204	243	3.8
Arthropathies and systemic connective tissue disorders (M00–M36)	16	96	168	139	149	3.8
Chapter XIV Diseases of the genitourinary system (N00–N99)	145	566	754	583	720	3.6
Renal failure (N17–N19)	130	388	476	356	411	3.5
Chapter XV Pregnancy, childbirth and the puerperium (O00–O99)	3	3	1	3	1	2.6
Chapter XVI Certain conditions originating in the perinatal period (P00–P96)	62	176	181	112	110	3.2
Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00–P04)	2	110	107	65	77	3.4
Chapter XVII Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	93	170	206	116	130	3.2
Congenital malformations of the circulatory system (Q20–Q28)	47	61	66	35	42	2.9
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	519	43	22	4	12	1.3
Chapter XX External causes of morbidity and mortality (V01–Y98)	78	3 581	1 647	1 190	1 865	3.4
Accidents (V01–X59)	47	1 927	999	848	1 466	3.7
Transport accidents (V01–V99)	31	1 135	374	208	263	3.0
Falls (W00–W19)	2	99	104	101	214	4.3
Accidental drowning and submersion (W65–W74)	—	184	51	31	12	2.6
Intentional self-harm (X60–X84)	9	1 467	512	239	265	2.8
Hanging, strangulation and suffocation (X70)	3	682	227	74	42	2.5
Assault (X85–Y09)	21	161	70	28	20	2.7

## 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>67 227</b>	<b>60 875</b>	<b>128 102</b>	<b>180 268</b>	<b>163 995</b>	<b>344 263</b>	<b>2.7</b>
Chapter I Certain infectious and parasitic diseases (A00–B99)	842	761	1 603	4 539	4 050	8 589	5.4
Septicaemia (A40, A41)	401	460	861	3 265	3 283	6 548	7.6
Human immunodeficiency virus (HIV) disease (B20–B24)	126	9	135	160	10	170	1.3
Chapter II Neoplasms (C00–D48)	20 283	15 573	35 856	27 677	20 718	48 395	1.3
Malignant neoplasms (C00–C97)	19 866	15 187	35 053	26 807	19 960	46 767	1.3
Digestive organs (C15–C26)	5 600	4 312	9 912	6 270	4 760	11 030	1.1
Oesophagus (C15)	641	299	940	691	334	1 025	1.1
Stomach (C16)	754	447	1 201	826	485	1 311	1.1
Colon (C18)	1 771	1 557	3 328	2 020	1 725	3 745	1.1
Rectosigmoid junction, rectum, anus and anal canal (C19–C21)	734	514	1 248	822	565	1 387	1.1
Liver and intrahepatic bile ducts (C22)	449	234	683	503	251	754	1.1
Pancreas (C25)	868	850	1 718	914	888	1 802	1.0
Trachea, bronchus and lung (C33, C34)	4 655	2 148	6 803	5 003	2 266	7 269	1.1
Melanoma of skin (C43)	631	359	990	710	411	1 121	1.1
Breast (C50)	22	2 505	2 527	29	3 002	3 031	1.2
Female genital organs (C51–C58)	..	1 300	1 300	..	1 477	1 477	1.1
Ovary (C56)	..	737	737	..	791	791	1.1
Male genital organs (C60–C63)	2 546	..	2 546	3 710	..	3 710	1.5
Prostate (C61)	2 499	..	2 499	3 649	..	3 649	1.5
Urinary tract (C64–C68)	1 112	605	1 717	1 410	729	2 139	1.2
Kidney, except renal pelvis (C64)	482	320	802	567	372	939	1.2
Bladder (C67)	587	252	839	796	320	1 116	1.3
Brain (C71)	588	430	1 018	604	450	1 054	1.0
Lymphoid, haematopoietic and related tissue (C81–C96)	1 962	1 596	3 558	2 446	1 952	4 398	1.2
Leukaemia (C91–C95)	768	578	1 346	1 002	743	1 745	1.3
In situ and benign neoplasms and neoplasms of uncertain or unknown behaviour (D00–D48)	417	386	803	870	758	1 628	2.0
Chapter III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	195	255	450	1 677	1 775	3 452	7.7
Chapter IV Endocrine, nutritional and metabolic diseases (E00–E90)	2 001	2 099	4 100	7 812	7 769	15 581	3.8
Diabetes mellitus (E10–E14)	1 485	1 462	2 947	5 096	4 501	9 597	3.3
Chapter V Mental and behavioural disorders (F00–F99)	1 256	1 552	2 808	6 889	7 239	14 128	5.0
Chapter VI Diseases of the nervous system (G00–G99)	1 818	2 072	3 890	5 098	5 180	10 278	2.6
Alzheimer's disease (G30)	493	1 023	1 516	978	1 927	2 905	1.9
Chapter VII Diseases of the eye and adnexa (H00–H59)	—	5	5	113	179	292	58.4
Chapter VIII Diseases of the ear and mastoid process (H60–H95)	—	6	6	25	41	66	11.0
Chapter IX Diseases of the circulatory system (I00–I99)	24 824	26 479	51 303	64 578	63 611	128 189	2.5
All heart disease (I05–I09, I11, I13, I20–I25, I26, I27, I30–I52)	18 116	17 229	35 345	48 138	43 895	92 033	2.6
Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09)	84	177	261	229	381	610	2.3
Hypertensive diseases (I10–I15)	432	745	1 177	1 494	2 176	3 670	3.1
Ischaemic heart diseases (I20–I25)	14 865	12 744	27 609	26 888	21 499	48 387	1.8
Acute myocardial infarction (I21)	8 028	7 124	15 152	9 753	8 472	18 225	1.2
Pulmonary heart disease and diseases of pulmonary circulation and other forms of heart disease (I26–I52)	2 955	3 896	6 851	20 736	21 513	42 249	6.2
Heart failure (I50)	989	1 725	2 714	7 720	9 524	17 244	6.4
Cerebrovascular diseases (I60–I69)	4 894	7 372	12 266	9 575	12 772	22 347	1.8
Diseases of arteries, arterioles and capillaries (I70–I79)	1 476	1 388	2 864	4 818	4 452	9 270	3.2
Atherosclerosis (I70)	229	423	652	2 123	2 495	4 618	7.1
Aortic aneurysm and dissection (I71)	882	568	1 450	1 218	722	1 940	1.3

(a) Total mentions of cause on death certificates. See Glossary for further information. Excludes injury codes (ICD codes S000–T983).

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

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
Chapter X Diseases of the respiratory system (J00–J99)	5 296	4 317	9 613	26 584	21 728	48 312	5.0
Influenza and pneumonia (J10–J18)	765	1 133	1 898	8 892	8 871	17 763	9.4
Chronic lower respiratory diseases (J40–J47)	3 609	2 487	6 096	8 846	5 601	14 447	2.4
Emphysema (J43)	575	312	887	1 246	589	1 835	2.1
Asthma and status asthmaticus (J45, J46)	160	264	424	557	825	1 382	3.3
Chapter XI Diseases of the digestive system (K00–K93)	2 111	2 110	4 221	7 352	6 451	13 803	3.3
Diseases of oesophagus, stomach and duodenum (K20–K31)	313	335	648	1 172	1 046	2 218	3.4
Gastric and duodenal ulcer (K25–K27)	215	231	446	694	567	1 261	2.8
Diseases of liver (K70–K77)	863	380	1 243	2 725	1 433	4 158	3.3
Chapter XII Diseases of the skin and subcutaneous tissue (L00–L99)	108	181	289	593	817	1 410	4.9
Chapter XIII Diseases of the musculoskeletal system and connective tissue (M00–M99)	300	562	862	1 582	2 885	4 467	5.2
Arthropathies and systemic connective tissue disorders (M00–M36)	208	360	568	1 012	1 629	2 641	4.6
Chapter XIV Diseases of the genitourinary system (N00–N99)	1 232	1 536	2 768	7 986	7 505	15 491	5.6
Renal failure (N17–N19)	842	919	1 761	6 460	5 668	12 128	6.9
Chapter XV Pregnancy, childbirth and the puerperium (O00–O99)	..	11	11	..	18	18	1.6
Chapter XVI Certain conditions originating in the perinatal period (P00–P96)	377	264	641	1 445	915	2 360	3.7
Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00–P04)	214	147	361	491	345	836	2.3
Chapter XVII Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	392	323	715	703	541	1 244	1.7
Congenital malformations of the circulatory system (Q20–Q28)	133	118	251	224	204	428	1.7
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99) (c)	324	276	600	6 412	7 245	13 657	22.8
Chapter XX External causes of morbidity and mortality (V01–Y98)	5 868	2 493	8 361	9 203	5 328	14 531	1.7
Accidents (V01–X59)	3 486	1 801	5 287	5 002	3 191	8 193	1.5
Transport accidents (V01–V99)	1 441	570	2 011	1 451	574	2 025	1.0
Falls (W00–W19)	309	211	520	363	291	654	1.3
Accidental drowning and submersion (W65–W74)	203	75	278	216	81	297	1.1
Intentional self-harm (X60–X84)	2 002	490	2 492	2 070	530	2 600	1.0
Hanging, strangulation and suffocation (X70)	868	160	1 028	870	163	1 033	1.0
Assault (X85–Y09)	204	96	300	210	102	312	1.0

(a) Total mentions of cause on death certificates. See Glossary for further information. Excludes injury codes (ICD codes S000–T983).

(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>712.1</b>	<b>639.0</b>	<b>675.4</b>	<b>712.1</b>	<b>639.0</b>	<b>675.4</b>
Chapter I Certain infectious and parasitic diseases (A00–B99)	8.9	8.0	8.5	48.1	42.5	45.3
Septicaemia (A40, A41)	4.2	4.8	4.5	34.6	34.5	34.5
Human immunodeficiency virus (HIV) disease (B20–B24)	1.3	0.1	0.7	1.7	0.1	0.9
Chapter II Neoplasms (C00–D48)	214.9	163.5	189.0	293.2	217.5	255.2
Malignant neoplasms (C00–C97)	210.4	159.4	184.8	284.0	209.5	246.6
Digestive organs (C15–C26)	59.3	45.3	52.3	66.4	50.0	58.2
Oesophagus (C15)	6.8	3.1	5.0	7.3	3.5	5.4
Stomach (C16)	8.0	4.7	6.3	8.7	5.1	6.9
Colon (C18)	18.8	16.3	17.5	21.4	18.1	19.7
Rectosigmoid junction, rectum, anus and anal canal (C19–C21)	7.8	5.4	6.6	8.7	5.9	7.3
Liver and intrahepatic bile ducts (C22)	4.8	2.5	3.6	5.3	2.6	4.0
Pancreas (C25)	9.2	8.9	9.1	9.7	9.3	9.5
Trachea, bronchus and lung (C33, C34)	49.3	22.5	35.9	53.0	23.8	38.3
Melanoma of skin (C43)	6.7	3.8	5.2	7.5	4.3	5.9
Breast (C50)	0.2	26.3	13.3	0.3	31.5	16.0
Female genital organs (C51–C58)	..	13.6	6.9	..	15.5	7.8
Ovary (C56)	..	7.7	3.9	..	8.3	4.2
Male genital organs (C60–C63)	27.0	..	13.4	39.3	..	19.6
Prostate (C61)	26.5	..	13.2	38.7	..	19.2
Urinary tract (C64–C68)	11.8	6.4	9.1	14.9	7.7	11.3
Kidney, except renal pelvis (C64)	5.1	3.4	4.2	6.0	3.9	5.0
Bladder (C67)	6.2	2.6	4.4	8.4	3.4	5.9
Brain (C71)	6.2	4.5	5.4	6.4	4.7	5.6
Lymphoid, haematopoietic and related tissue (C81–C96)	20.8	16.8	18.8	25.9	20.5	23.2
Leukaemia (C91–C95)	8.1	6.1	7.1	10.6	7.8	9.2
In situ and benign neoplasms and neoplasms of uncertain or unknown behaviour (D00–D48)	4.4	4.1	4.2	9.2	8.0	8.6
Chapter III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	2.1	2.7	2.4	17.8	18.6	18.2
Chapter IV Endocrine, nutritional and metabolic diseases (E00–E90)	21.2	22.0	21.6	82.7	81.6	82.1
Diabetes mellitus (E10–E14)	15.7	15.3	15.5	54.0	47.2	50.6
Chapter V Mental and behavioural disorders (F00–F99)	13.3	16.3	14.8	73.0	76.0	74.5
Chapter VI Diseases of the nervous system (G00–G99)	19.3	21.8	20.5	54.0	54.4	54.2
Alzheimer's disease (G30)	5.2	10.7	8.0	10.4	20.2	15.3
Chapter VII Diseases of the eye and adnexa (H00–H59)	..	0.1	—	1.2	1.9	1.5
Chapter VIII Diseases of the ear and mastoid process (H60–H95)	..	0.1	—	0.3	0.4	0.3
Chapter IX Diseases of the circulatory system (I00–I99)	263.0	278.0	270.5	684.1	667.7	675.9
All heart disease (I05–I09, I11, I13, I20–I25, I26, I27, I30–I52)	191.9	180.9	186.4	509.9	460.8	485.2
Acute rheumatic fever and chronic rheumatic heart diseases (I00–I09)	0.9	1.9	1.4	2.4	4.0	3.2
Hypertensive diseases (I10–I15)	4.6	7.8	6.2	15.8	22.8	19.3
Ischaemic heart diseases (I20–I25)	157.5	133.8	145.6	284.8	225.7	255.1
Acute myocardial infarction (I21)	85.0	74.8	79.9	103.3	88.9	96.1
Pulmonary heart disease and diseases of pulmonary circulation and other forms of heart disease (I26–I52)	31.3	40.9	36.1	219.6	225.8	222.8
Heart failure (I50)	10.5	18.1	14.3	81.8	100.0	90.9
Cerebrovascular diseases (I60–I69)	51.8	77.4	64.7	101.4	134.1	117.8
Diseases of arteries, arterioles and capillaries (I70–I79)	15.6	14.6	15.1	51.0	46.7	48.9
Atherosclerosis (I70)	2.4	4.4	3.4	22.5	26.2	24.3
Aortic aneurysm and dissection (I71)	9.3	6.0	7.6	12.9	7.6	10.2

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

(c) Rates are based on total deaths.

(b) Total mentions of cause on death certificates. 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
Chapter X Diseases of the respiratory system (J00–J99)	56.1	45.3	50.7	281.6	228.1	254.7
Influenza and pneumonia (J10–J18)	8.1	11.9	10.0	94.2	93.1	93.7
Chronic lower respiratory diseases (J40–J47)	38.2	26.1	32.1	93.7	58.8	76.2
Emphysema (J43)	6.1	3.3	4.7	13.2	6.2	9.7
Asthma and status asthmaticus (J45, J46)	1.7	2.8	2.2	5.9	8.7	7.3
Chapter XI Diseases of the digestive system (K00–K93)	22.4	22.1	22.3	77.9	67.7	72.8
Diseases of oesophagus, stomach and duodenum (K20–K31)	3.3	3.5	3.4	12.4	11.0	11.7
Gastric and duodenal ulcer (K25–K27)	2.3	2.4	2.4	7.4	6.0	6.6
Diseases of liver (K70–K77)	9.1	4.0	6.6	28.9	15.0	21.9
Chapter XII Diseases of the skin and subcutaneous tissue (L00–L99)	1.1	1.9	1.5	6.3	8.6	7.4
Chapter XIII Diseases of the musculoskeletal system and connective tissue (M00–M99)	3.2	5.9	4.5	16.8	30.3	23.6
Arthropathies and systemic connective tissue disorders (M00–M36)	2.2	3.8	3.0	10.7	17.1	13.9
Chapter XIV Diseases of the genitourinary system (N00–N99)	13.1	16.1	14.6	84.6	78.8	81.7
Renal failure (N17–N19)	8.9	9.6	9.3	68.4	59.5	63.9
Chapter XV Pregnancy, childbirth and the puerperium (O00–O99)	..	0.1	0.1	..	0.2	0.1
Chapter XVI Certain conditions originating in the perinatal period (P00–P96)	4.0	2.8	3.4	15.3	9.6	12.4
Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00–P04)	2.3	1.5	1.9	5.2	3.6	4.4
Chapter XVII Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4.2	3.4	3.8	7.4	5.7	6.6
Congenital malformations of the circulatory system (Q20–Q28)	1.4	1.2	1.3	2.4	2.1	2.3
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)(c)	3.4	2.9	3.2	67.9	76.1	72.0
Chapter XX External causes of morbidity and mortality (V01–Y98)	62.2	26.2	44.1	97.5	55.9	76.6
Accidents (V01–X59)	36.9	18.9	27.9	53.0	33.5	43.2
Transport accidents (V01–V99)	15.3	6.0	10.6	15.4	6.0	10.7
Falls (W00–W19)	3.3	2.2	2.7	3.8	3.1	3.4
Accidental drowning and submersion (W65–W74)	2.2	0.8	1.5	2.3	0.9	1.6
Intentional self-harm (X60–X84)	21.2	5.1	13.1	21.9	5.6	13.7
Hanging, strangulation and suffocation (X70)	9.2	1.7	5.4	9.2	1.7	5.4
Assault (X85–Y09)	2.2	1.0	1.6	2.2	1.1	1.6

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

(b) Total mentions of cause on death certificates. 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 (C00–C97)	19 866	100.0	15 187	100.0	35 053	100.0
Reported alone	7 687	38.7	6 321	41.6	14 008	40.0
Reported with						
Septicaemia (A40, A41)	729	3.7	552	3.6	1 281	3.7
Diabetes mellitus (E10–E14)	785	4.0	483	3.2	1 268	3.6
Diseases of liver (K70–K77)	669	3.4	444	2.9	1 113	3.2
Ischaemic heart diseases (I20–I25)	1 515	7.6	755	5.0	2 270	6.5
Heart failure (I50)	723	3.6	567	3.7	1 290	3.7
Cerebrovascular diseases (I60–I69)	684	3.4	539	3.5	1 223	3.5
Influenza and pneumonia (J10–J18)	1 961	9.9	1 163	7.7	3 124	8.9
Chronic lower respiratory diseases (J40–J47)	1 413	7.1	628	4.1	2 041	5.8
Renal failure (N17–N19)	1 092	5.5	602	4.0	1 694	4.8
Diabetes mellitus (E10–E14)	1 485	100.0	1 462	100.0	2 947	100.0
Reported alone	17	1.1	16	1.1	33	1.1
Reported with						
Ischaemic heart diseases (I20–I25)	824	55.5	691	47.3	1 515	51.4
Heart failure (I50)	246	16.6	260	17.8	506	17.2
Cerebrovascular diseases (I60–I69)	314	21.1	331	22.6	645	21.9
Diseases of arteries, arterioles and capillaries (I70–I79)	147	9.9	145	9.9	292	9.9
Influenza and pneumonia (J10–J18)	196	13.2	169	11.6	365	12.4
Renal failure (N17–N19)	305	20.5	307	21.0	612	20.8
Organic, including symptomatic, mental disorders (F00–F09)	648	100.0	1 296	100.0	1 944	100.0
Reported alone	56	8.6	181	14.0	237	12.2
Reported with						
Heart failure (I50)	41	6.3	93	7.2	134	6.9
Cerebrovascular diseases (I60–I69)	34	5.2	60	4.6	94	4.8
Influenza and pneumonia (J10–J18)	364	56.2	580	44.8	944	48.6
Diseases of the nervous system (G00–G99)	1 818	100.0	2 072	100.0	3 890	100.0
Reported alone	301	16.6	407	19.6	708	18.2
Reported with						
Organic, including symptomatic, mental disorders (F00–F09)	194	10.7	233	11.2	427	11.0
Ischaemic heart diseases (I20–I25)	112	6.2	119	5.7	231	5.9
Cerebrovascular diseases (I60–I69)	149	8.2	186	9.0	335	8.6
Influenza and pneumonia (J10–J18)	685	37.7	693	33.4	1 378	35.4
Ischaemic heart diseases (I20–I25)	14 865	100.0	12 744	100.0	27 609	100.0
Reported alone	2 057	13.8	1 427	11.2	3 484	12.6
Reported with						
Malignant neoplasms (C00–C97)	954	6.4	505	4.0	1 459	5.3
Diabetes mellitus (E10–E14)	1 409	9.5	1 088	8.5	2 497	9.0
Organic, including symptomatic, mental disorders (F00–F09)	505	3.4	894	7.0	1 399	5.1
Heart failure (I50)	2 920	19.6	3 429	26.9	6 349	23.0
Cerebrovascular diseases (I60–I69)	1 116	7.5	1 276	10.0	2 392	8.7
Diseases of arteries, arterioles and capillaries (I70–I79)	1 282	8.6	1 051	8.2	2 333	8.5
Influenza and pneumonia (J10–J18)	830	5.6	825	6.5	1 655	6.0
Chronic lower respiratory diseases (J40–J47)	1 800	12.1	990	7.8	2 790	10.1
Renal failure (N17–N19)	1 291	8.7	991	7.8	2 282	8.3
Heart failure (I50)	989	100.0	1 725	100.0	2 714	100.0
Reported alone	111	11.2	206	11.9	317	11.7
Reported with						
Organic, including symptomatic, mental disorders (F00–F09)	91	9.2	188	10.9	279	10.3
Cerebrovascular diseases (I60–I69)	78	7.9	141	8.2	219	8.1
Influenza and pneumonia (J10–J18)	274	27.7	527	30.6	801	29.5
Chronic lower respiratory diseases (J40–J47)	156	15.8	163	9.4	319	11.8
Renal failure (N17–N19)	214	21.6	250	14.5	464	17.1

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

Underlying cause/associated cause and ICD code	Males.....		Females.....		Persons.....	
	no.	%	no.	%	no.	%
Cerebrovascular diseases (I60–I69)	4 894	100.0	7 372	100.0	12 266	100.0
Reported alone	963	19.7	1 749	23.7	2 712	22.1
Reported with						
Diabetes mellitus (E10–E14)	392	8.0	411	5.6	803	6.5
Organic, including symptomatic, mental disorders (F00–F09)	557	11.4	966	13.1	1 523	12.4
Diseases of the nervous system (G00–G99)	468	9.6	674	9.1	1 142	9.3
Ischaemic heart diseases (I20–I25)	548	11.2	665	9.0	1 213	9.9
Diseases of arteries, arterioles and capillaries (I70–I79)	605	12.4	849	11.5	1 454	11.9
Influenza and pneumonia (J10–J18)	943	19.3	1 154	15.7	2 097	17.1
Diseases of arteries, arterioles and capillaries (I70–I79)	1 476	100.0	1 388	100.0	2 864	100.0
Reported alone	210	14.2	187	13.5	397	13.9
Reported with						
Ischaemic heart diseases (I20–I25)	284	19.2	168	12.1	452	15.8
Heart failure (I50)	143	9.7	227	16.4	370	12.9
Cerebrovascular diseases (I60–I69)	142	9.6	120	8.6	262	9.1
Influenza and pneumonia (J10–J18)	120	8.1	182	13.1	302	10.5
Renal failure (N17–N19)	187	12.7	137	9.9	324	11.3
Influenza and pneumonia (J10–J18)	765	100.0	1 133	100.0	1 898	100.0
Reported alone	334	43.7	597	52.7	931	49.1
Reported with						
Septicaemia (A40, A41)	86	11.2	71	6.3	157	8.3
Ischaemic heart diseases (I20–I25)	58	7.6	47	4.1	105	5.5
Heart failure (I50)	32	4.2	55	4.9	87	4.6
Renal failure (N17–N19)	41	5.4	35	3.1	76	4.0
Chronic lower respiratory diseases (J40–J47)	3 609	100.0	2 487	100.0	6 096	100.0
Reported alone	291	8.1	225	9.0	516	8.5
Reported with						
Malignant neoplasms (C00–C97)	300	8.3	96	3.9	396	6.5
Organic, including symptomatic, mental disorders (F00–F09)	178	4.9	126	5.1	304	5.0
Ischaemic heart diseases (I20–I25)	629	17.4	423	17.0	1 052	17.3
Heart failure (I50)	612	17.0	478	19.2	1 090	17.9
Cerebrovascular diseases (I60–I69)	192	5.3	111	4.5	303	5.0
Influenza and pneumonia (J10–J18)	1 219	33.8	754	30.3	1 973	32.4
Renal failure (N17–N19)	223	6.2	143	5.7	366	6.0
Renal failure (N17–N19)	842	100.0	919	100.0	1 761	100.0
Reported alone	55	6.5	75	8.2	130	7.4
Reported with						
Septicaemia (A40, A41)	114	13.5	98	10.7	212	12.0
Diabetes mellitus (E10–E14)	67	8.0	64	7.0	131	7.4
Ischaemic heart diseases (I20–I25)	227	27.0	199	21.7	426	24.2
Heart failure (I50)	233	27.7	253	27.5	486	27.6
Cerebrovascular diseases (I60–I69)	58	6.9	68	7.4	126	7.2
Influenza and pneumonia (J10–J18)	162	19.2	177	19.3	339	19.3

## 2.6 CAUSES OF DEATH, Associated Cause and Underlying Cause

<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>
Septicaemia (A40–A41)	3 261	100.0	3 281	100.0	6 542	100.0
Reported as underlying cause	401	12.3	460	14.0	861	13.2
Reported in association with an underlying cause of						
Malignant neoplasms (C00–C97)	729	22.4	552	16.8	1 281	19.6
Diabetes mellitus (E10–E14)	116	3.6	135	4.1	251	3.8
Ischaemic heart diseases (I20–I25)	179	5.5	163	5.0	342	5.2
Cerebrovascular diseases (I60–I69)	133	4.1	135	4.1	268	4.1
Diseases of arteries, arterioles and capillaries (I70–I79)	139	4.3	108	3.3	247	3.8
Malignant neoplasms (C00–C97)	22 594	100.0	16 823	100.0	39 417	100.0
Reported as underlying cause	19 866	87.9	15 187	90.3	35 053	88.9
Reported in association with an underlying cause of						
Ischaemic heart diseases (I20–I25)	954	4.2	505	3.0	1 459	3.7
Cerebrovascular diseases (I60–I69)	328	1.5	245	1.5	573	1.5
Diabetes mellitus (E10–E14)	5 091	100.0	4 497	100.0	9 588	100.0
Reported as underlying cause	1 485	29.2	1 462	32.5	2 947	30.7
Reported in association with an underlying cause of						
Malignant neoplasms (C00–C97)	785	15.4	483	10.7	1 268	13.2
Ischaemic heart diseases (I20–I25)	1 409	27.7	1 088	24.2	2 497	26.0
Cerebrovascular diseases (I60–I69)	392	7.7	411	9.1	803	8.4
Organic, including symptomatic, mental disorders (F00–F09)	3 211	100.0	5 362	100.0	8 573	100.0
Reported as underlying cause	648	20.2	1 296	24.2	1 944	22.7
Reported in association with an underlying cause of						
Malignant neoplasms (C00–C97)	251	7.8	332	6.2	583	6.8
Diseases of the nervous system (G00–G99)	194	6.0	233	4.3	427	5.0
Ischaemic heart diseases (I20–I25)	505	15.7	894	16.7	1 399	16.3
Cerebrovascular diseases (I60–I69)	557	17.3	966	18.0	1 523	17.8
Diseases of the nervous system (G00–G99)	4 786	100.0	4 901	100.0	9 687	100.0
Reported as underlying cause	1 818	38.0	2 072	42.3	3 890	40.2
Reported in association with an underlying cause of						
Malignant neoplasms (C00–C97)	513	10.7	370	7.5	883	9.1
Ischaemic heart diseases (I20–I25)	680	14.2	621	12.7	1 301	13.4
Cerebrovascular diseases (I60–I69)	468	9.8	674	13.8	1 142	11.8
Hypertensive diseases (I10–I15)	1 494	100.0	2 176	100.0	3 670	100.0
Reported as underlying cause	432	28.9	745	34.2	1 177	32.1
Reported in association with an underlying cause of						
Malignant neoplasms (C00–C97)	406	27.2	503	23.1	909	24.8
Diabetes mellitus (E10–E14)	62	4.1	83	3.8	145	4.0
Diseases of arteries, arterioles and capillaries (I70–I79)	123	8.2	92	4.2	215	5.9
Chronic lower respiratory diseases (J40–J47)	103	6.9	104	4.8	207	5.6
Ischaemic heart diseases (I20–I25)	20 786	100.0	17 180	100.0	37 966	100.0
Reported as underlying cause	14 865	71.5	12 744	74.2	27 609	72.7
Reported in association with an underlying cause of						
Malignant neoplasms (C00–C97)	1 515	7.3	755	4.4	2 270	6.0
Diabetes mellitus (E10–E14)	824	4.0	691	4.0	1 515	4.0
Cerebrovascular diseases (I60–I69)	548	2.6	665	3.9	1 213	3.2
Chronic lower respiratory diseases (J40–J47)	629	3.0	423	2.5	1 052	2.8
Heart failure (I50)	7 690	100.0	9 470	100.0	17 160	100.0
Reported as underlying cause	989	12.9	1 725	18.2	2 714	15.8
Reported in association with an underlying cause of						
Malignant neoplasms (C00–C97)	723	9.4	567	6.0	1 290	7.5
Ischaemic heart diseases (I20–I25)	2 920	38.0	3 429	36.2	6 349	37.0
Cerebrovascular diseases (I60–I69)	257	3.3	453	4.8	710	4.1
Chronic lower respiratory diseases (J40–J47)	612	8.0	478	5.0	1 090	6.4

2.6 CAUSES OF DEATH, Associated Cause 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>
Cerebrovascular diseases (I60–I69)	8 680	100.0	11 347	100.0	20 027	100.0
Reported as underlying cause	4 894	56.4	7 372	65.0	12 266	61.2
Reported in association with an underlying cause of						
Malignant neoplasms (C00–C97)	684	7.9	539	4.8	1 223	6.1
Diabetes mellitus (E10–E14)	314	3.6	331	2.9	645	3.2
Diseases of the nervous system (G00–G99)	149	1.7	186	1.6	335	1.7
Ischaemic heart diseases (I20–I25)	1 116	12.9	1 276	11.2	2 392	11.9
Diseases of arteries, arterioles and capillaries (I70–I79)	4 382	100.0	4 161	100.0	8 543	100.0
Reported as underlying cause	1 476	33.7	1 388	33.4	2 864	33.5
Reported in association with an underlying cause of						
Malignant neoplasms (C00–C97)	235	5.4	111	2.7	346	4.1
Diabetes mellitus (E10–E14)	147	3.4	145	3.5	292	3.4
Ischaemic heart diseases (I20–I25)	1 282	29.3	1 051	25.3	2 333	27.3
Cerebrovascular diseases (I60–I69)	605	13.8	849	20.4	1 454	17.0
Influenza and pneumonia (J10–J18)	8 881	100.0	8 842	100.0	17 723	100.0
Reported as underlying cause	765	8.6	1 133	12.8	1 898	10.7
Reported in association with an underlying cause of						
Malignant neoplasms (C00–C97)	1 961	22.1	1 163	13.2	3 124	17.6
Organic, including symptomatic, mental disorders (F00–F09)	364	4.1	580	6.6	944	5.3
Diseases of the nervous system (G00–G99)	685	7.7	693	7.8	1 378	7.8
Ischaemic heart diseases (I20–I25)	830	9.3	825	9.3	1 655	9.3
Heart failure (I50)	274	3.1	527	6.0	801	4.5
Cerebrovascular diseases (I60–I69)	943	10.6	1 154	13.1	2 097	11.8
Chronic lower respiratory diseases (J40–J47)	1 219	13.7	754	8.5	1 973	11.1
Chronic lower respiratory diseases (J40–J47)	8 538	100.0	5 375	100.0	13 913	100.0
Reported as underlying cause	3 609	42.3	2 487	46.3	6 096	43.8
Reported in association with an underlying cause of						
Malignant neoplasms (C00–C97)	1 413	16.5	628	11.7	2 041	14.7
Ischaemic heart diseases (I20–I25)	1 800	21.1	990	18.4	2 790	20.1
Cerebrovascular diseases (I60–I69)	260	3.0	220	4.1	480	3.5
Diseases of liver (K70–K77)	2 291	100.0	1 225	100.0	3 516	100.0
Reported as underlying cause	863	37.7	380	31.0	1 243	35.4
Reported in association with an underlying cause of						
Malignant neoplasms (C00–C97)	669	29.2	444	36.2	1 113	31.7
Ischaemic heart diseases (I20–I25)	173	7.6	47	3.8	220	6.3
Renal failure (N17–N19)	5 866	100.0	5 166	100.0	11 032	100.0
Reported as underlying cause	842	14.4	919	17.8	1 761	16.0
Reported in association with an underlying cause of						
Malignant neoplasms (C00–C97)	1 092	18.6	602	11.7	1 694	15.4
Diabetes mellitus (E10–E14)	305	5.2	307	5.9	612	5.5
Ischaemic heart diseases (I20–I25)	1 291	22.0	991	19.2	2 282	20.7
Heart failure (I50)	214	3.6	250	4.8	464	4.2
Cerebrovascular diseases (I60–I69)	233	4.0	232	4.5	465	4.2

## 2.7 NATURE OF INJURY, By External Cause

## ACCIDENTS.....

<i>Nature of injury or poisoning and ICD code</i>	<i>Transport accidents (V01–V99)</i>	<i>Accidental falls (W00–W19)</i>	<i>Accidental drowning and submersion (W65–W74)</i>	<i>Exposure to smoke, fire and flames (X00–X09)</i>	<i>Accidental poisonings (X40–X49)</i>	<i>Other</i>	<i>Total</i>
MALES							
	%	%	%	%	%	%	%
<b>Total injuries (S00–T98)</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>
Injuries to the head (S00–S09)	29.1	51.3	3.1	—	0.3	11.4	19.3
Fracture of skull and facial bones (S02)	4.8	5.4	—	—	—	1.0	2.7
Injuries to the thorax (S20–S29)	18.7	11.1	—	—	—	9.3	10.6
Injuries to the abdomen, lower back, lumbar spine and pelvis (S30–S39)	8.5	5.7	0.9	—	—	5.6	5.1
Injuries to the hip and thigh (S70–S79)	0.7	6.5	0.4	—	—	20.8	4.5
Fracture of femur (S72)	0.6	6.3	0.4	—	—	20.3	4.4
Unspecified multiple injuries (T07)	22.2	5.0	0.4	—	—	2.8	10.4
Burns and corrosions (T20–T32)	1.0	—	—	53.2	—	0.8	1.1
Poisoning by drugs, medicaments and biological substances (T36–T50)	0.4	1.1	2.2	—	83.7	0.2	22.1
Poisoning by narcotics and psychodysleptics (hallucinogens) (T40)	0.2	0.2	0.4	—	49.3	—	12.9
Toxic effects of substances chiefly nonmedicinal as to source (T51–T65)	0.4	0.2	1.3	38.7	12.5	0.8	4.0
Toxic effect of carbon monoxide (T58)	0.1	—	—	4.8	1.5	—	0.5
Other and unspecified effects of external causes (T66–T78)	3.3	2.0	89.8	1.6	0.6	16.2	8.0
Asphyxiation (T71)	1.0	0.6	0.9	—	0.3	10.0	2.3
Certain early complications of trauma (T79)	1.9	6.9	—	3.2	0.3	13.1	3.8
	no.	no.	no.	no.	no.	no.	no.
Total injuries	2 484	540	225	62	1 513	1 009	5 833
FEMALES							
	%	%	%	%	%	%	%
<b>Total injuries (S00–T98)</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>
Injuries to the head (S00–S09)	29.7	38.0	2.4	—	0.2	4.8	15.3
Fracture of skull and facial bones (S02)	5.6	0.9	—	—	—	0.3	2.0
Injuries to the thorax (S20–S29)	15.3	4.4	1.2	—	—	3.4	6.6
Injuries to the abdomen, lower back, lumbar spine and pelvis (S30–S39)	8.3	6.3	—	—	0.2	5.6	5.2
Injuries to the hip and thigh (S70–S79)	0.8	18.4	—	—	0.2	38.5	14.5
Fracture of femur (S72)	0.7	17.7	—	—	0.2	38.1	14.3
Unspecified multiple injuries (T07)	23.6	0.9	—	—	—	0.6	8.0
Burns and corrosions (T20–T32)	0.7	—	—	51.3	—	0.5	1.1
Poisoning by drugs, medicaments and biological substances (T36–T50)	—	2.5	—	—	89.7	0.4	19.3
Poisoning by narcotics and psychodysleptics (hallucinogens) (T40)	—	0.9	—	—	33.8	0.1	7.3
Toxic effects of substances chiefly nonmedicinal as to source (T51–T65)	0.2	0.3	1.2	41.0	7.8	0.2	2.4
Toxic effect of carbon monoxide (T58)	—	—	—	5.1	0.8	—	0.2
Other and unspecified effects of external causes (T66–T78)	0.9	2.5	91.5	—	0.6	3.5	4.3
Asphyxiation (T71)	0.5	0.3	—	—	0.3	1.9	0.9
Certain early complications of trauma (T79)	2.3	10.8	3.7	5.1	0.3	17.9	7.8
	no.	no.	no.	no.	no.	no.	no.
Total injuries	971	316	82	39	630	951	2 989

2.7 NATURE OF INJURY, By External Cause *continued*

Nature of injury or poisoning and ICD code	INTENTIONAL INJURY AND OTHER.....				
	<i>Intentional self-harm (X60–X84)</i>	<i>Assault (X85–Y09)</i>	<i>Other</i>	<i>Total</i>	<i>External causes</i>
MALES					
	%	%	%	%	%
<b>Total injuries (S00–T98)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Injuries to the head (S00–S09)	13.0	35.8	3.5	14.4	17.6
Fracture of skull and facial bones (S02)	0.8	2.7	—	0.9	2.1
Injuries to the thorax (S20–S29)	3.6	24.6	2.7	5.6	8.9
Injuries to the abdomen, lower back, lumbar spine and pelvis (S30–S39)	1.4	9.9	0.4	2.2	4.1
Injuries to the hip and thigh (S70–S79)	0.1	1.0	0.4	0.2	3.0
Fracture of femur (S72)	—	—	0.4	0.1	2.9
Unspecified multiple injuries (T07)	3.5	2.4	2.3	3.3	8.0
Burns and corrosions (T20–T32)	0.5	0.7	—	0.5	0.9
Poisoning by drugs, medicaments and biological substances (T36–T50)	12.9	0.3	35.0	13.5	19.2
Poisoning by narcotics and psychodysleptics (hallucinogens) (T40)	4.2	0.3	16.3	4.8	10.1
Toxic effects of substances chiefly nonmedicinal as to source (T51–T65)	21.8	1.4	2.7	18.3	8.9
Toxic effect of carbon monoxide (T58)	18.9	1.0	0.4	15.6	5.7
Other and unspecified effects of external causes (T66–T78)	36.4	6.5	3.9	30.8	15.9
Asphyxiation (T71)	34.6	5.1	1.2	29.0	11.5
Certain early complications of trauma (T79)	0.4	0.7	1.6	0.5	2.7
	no.	no.	no.	no.	no.
Total injuries	2 509	293	257	3 059	8 892
FEMALES					
	%	%	%	%	%
<b>Total injuries (S00–T98)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Injuries to the head (S00–S09)	3.5	27.7	0.7	6.5	13.1
Fracture of skull and facial bones (S02)	0.3	0.7	0.7	0.4	1.6
Injuries to the thorax (S20–S29)	2.8	19.9	2.1	5.1	6.2
Injuries to the abdomen, lower back, lumbar spine and pelvis (S30–S39)	0.8	5.0	0.7	1.4	4.2
Injuries to the hip and thigh (S70–S79)	—	0.7	0.7	0.2	10.9
Fracture of femur (S72)	—	—	0.7	0.1	10.7
Unspecified multiple injuries (T07)	4.2	0.7	—	3.1	6.7
Burns and corrosions (T20–T32)	1.8	2.8	2.1	2.0	1.3
Poisoning by drugs, medicaments and biological substances (T36–T50)	37.9	1.4	30.5	31.7	22.4
Poisoning by narcotics and psychodysleptics (hallucinogens) (T40)	7.9	0.7	10.6	7.3	7.3
Toxic effects of substances chiefly nonmedicinal as to source (T51–T65)	17.7	4.3	4.3	13.9	5.3
Toxic effect of carbon monoxide (T58)	13.2	2.1	—	9.8	2.6
Other and unspecified effects of external causes (T66–T78)	26.5	12.8	1.4	21.0	8.5
Asphyxiation (T71)	23.0	12.1	—	18.2	5.2
Certain early complications of trauma (T79)	0.1	1.4	0.7	0.4	5.9
	no.	no.	no.	no.	no.
Total injuries	718	141	141	1 000	3 989

2.7 NATURE OF INJURY, By External Cause *continued*

## ACCIDENTS.....

Nature of injury or poisoning and ICD code	Transport accidents (V01–V99)	Accidental falls (W00–W19)	Accidental drowning and submersion (W65–W74)	Exposure to smoke, fire and flames (X00–X09)	Accidental poisonings (X40–X49)	Other	Total
	%	%	%	%	%	%	%
<b>Total injuries (S00–T98)</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>
Injuries to the head (S00–S09)	29.3	46.4	2.9	—	0.3	8.2	18.0
Fracture of skull and facial bones (S02)	5.0	3.7	—	—	—	0.7	2.5
Injuries to the thorax (S20–S29)	17.7	8.6	0.3	—	—	6.4	9.2
Injuries to the abdomen, lower back, lumbar spine and pelvis (S30–S39)	8.4	6.0	0.7	—	—	5.6	5.2
Injuries to the hip and thigh (S70–S79)	0.8	10.9	0.3	—	—	29.4	7.9
Fracture of femur (S72)	0.6	10.5	0.3	—	—	28.9	7.7
Unspecified multiple injuries (T07)	22.6	3.5	0.3	—	—	1.7	9.6
Burns and corrosions (T20–T32)	1.0	—	—	52.5	—	0.7	1.1
Poisoning by drugs, medicaments and biological substances (T36–T50)	0.3	1.6	1.6	—	85.4	0.3	21.2
Poisoning by narcotics and psychodysleptics (hallucinogens) (T40)	0.2	0.5	0.3	—	44.8	0.1	11.0
Toxic effects of substances chiefly nonmedicinal as to source (T51–T65)	0.4	0.2	1.3	39.6	11.1	0.5	3.5
Toxic effect of carbon monoxide (T58)	0.1	—	—	5.0	1.3	—	0.4
Other and unspecified effects of external causes (T66–T78)	2.7	2.2	90.2	1.0	0.6	10.0	6.8
Asphyxiation (T71)	0.9	0.5	0.7	—	0.3	6.1	1.8
Certain early complications of trauma (T79)	2.0	8.3	1.0	4.0	0.3	15.4	5.2
	no.	no.	no.	no.	no.	no.	no.
Total injuries	3 455	856	307	101	2 143	1 960	8 822

2.7 NATURE OF INJURY, By External Cause *continued*

## INTENTIONAL INJURY AND OTHER.....

<i>Nature of injury or poisoning and ICD code</i>	<i>Intentional self-harm (X60–X84)</i>	<i>Assault (X85–Y09)</i>	<i>Other</i>	<i>Total</i>	<i>External causes</i>
PERSONS					
	%	%	%	%	%
<b>Total injuries (S00–T98)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Injuries to the head (S00–S09)	10.9	33.2	2.5	12.4	16.2
Fracture of skull and facial bones (S02)	0.7	2.1	0.3	0.8	1.9
Injuries to the thorax (S20–S29)	3.4	23.0	2.5	5.4	8.0
Injuries to the abdomen, lower back, lumbar spine and pelvis (S30–S39)	1.3	8.3	0.5	2.0	4.2
Injuries to the hip and thigh (S70–S79)	0.1	0.9	0.5	0.2	5.5
Fracture of femur (S72)	—	—	0.5	0.1	5.3
Unspecified multiple injuries (T07)	3.7	1.8	1.5	3.3	7.6
Burns and corrosions (T20–T32)	0.8	1.4	0.8	0.9	1.0
Poisoning by drugs, medicaments and biological substances (T36–T50)	18.4	0.7	33.4	18.0	20.2
Poisoning by narcotics and psychodysleptics (hallucinogens) (T40)	5.0	0.5	14.3	5.4	9.3
Toxic effects of substances chiefly nonmedicinal as to source (T51–T65)	20.9	2.3	3.3	17.2	7.8
Toxic effect of carbon monoxide (T58)	17.6	1.4	0.3	14.2	4.7
Other and unspecified effects of external causes (T66–T78)	34.2	8.5	3.0	28.4	13.6
Asphyxiation (T71)	32.0	7.4	0.8	26.3	9.5
Certain early complications of trauma (T79)	0.3	0.9	1.3	0.5	3.7
	no.	no.	no.	no.	no.
Total injuries	3 227	434	398	4 059	12 881



## SECTION 3

## PERINATAL DEATHS .....

### INTRODUCTION

Perinatal deaths comprise stillbirths (fetal deaths) and deaths of infants within the first 28 days of life (neonatal deaths). In Cause of Death publications from 1997, these deaths have included infants and fetuses weighing at least 400 grams or having a gestational age of 20 weeks. Previously, data relating to perinatal deaths were based on the World Health Organisation recommended definition which included infants and fetuses weighing at least 500 grams or having a gestational age of 22 weeks (Refer to Explanatory Notes, paragraphs 4–8 for further information on perinatal death statistics).

To assist the reader, this section includes summary data based on the 500 g/22 weeks definition (table 3.1). Further unpublished tables based on this definition are available from the ABS. All other tables and data are based on the 400 g/20 weeks definition.

### TRENDS IN PERINATAL DEATHS

In 1999, there were 2,133 perinatal deaths registered in Australia, a 2.1% increase on the number registered in 1998. The perinatal death rate was 8.5 deaths per 1,000 total relevant births (see Glossary, death rates for further information). Although this was slightly higher than the record low rate of 8.3 recorded for 1998, the overall perinatal rate during the last decade has exhibited a downward trend.

In 1999, there were 1,284 fetal and 849 neonatal deaths. The higher perinatal death rate in 1999 was due to an increase in neonatal deaths. However, since 1989 the neonatal death rate has fallen relatively more than the fetal death rate (4.5 to 3.4 deaths per 1,000 births and 6.5 to 5.1 per 1,000 births respectively).

### CAUSES OF PERINATAL DEATHS

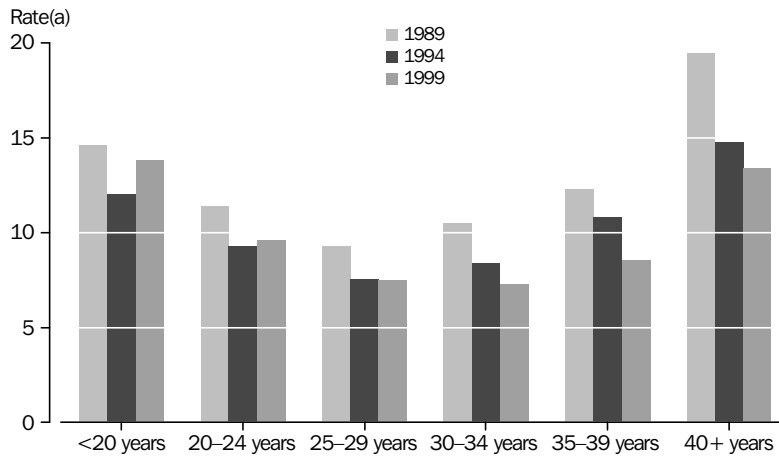
In 1999, over one third (35%) of fetal deaths were not allocated a specific cause of death. Medical certifiers are often unwilling or unable to provide an accurate cause of death without the assistance of an autopsy. The major conditions reported in fetal deaths registered in 1999 were intrauterine hypoxia (23% of total), congenital malformations, deformations and chromosomal abnormalities (16%) and disorders related to length of gestation and fetal growth (13%).

Congenital malformations, deformations and chromosomal abnormalities accounted for 35% of total neonatal deaths registered in 1999, while respiratory and cardiovascular disorders, specific to the perinatal period (19%) and disorders related to length of gestation and fetal growth (17%) were the other major contributors.

## AGE OF MOTHER

In 1999, more than 86% of babies who died in the perinatal period were born to mothers aged 20–39 years and 7.6% to mothers under 20 years. Over the period 1989 to 1999, the perinatal death rate decreased by 23%. The extent of this decrease, however, has not been reflected across all age groups. The greatest reduction occurred for mothers aged 30 years and over with a decrease in each age group of at least 30% while the rate for mothers under 20 years decreased by less than 6%.

PERINATAL DEATHS, Rates, Age of Mother



(a) Per 1,000 relevant births.

### 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	<b>2 509</b>
1990	888	702	1 590	660	462	1 122	1 548	1 164	<b>2 712</b>
1991	777	701	1 478	571	441	1 012	1 348	1 142	<b>2 490</b>
1992	779	714	1 493	596	419	1 015	1 375	1 133	<b>2 508</b>
1993	668	577	1 245	511	375	886	1 179	952	<b>2 131</b>
1994	692	515	1 207	517	351	868	1 209	866	<b>2 075</b>
1995	681	602	1 283	467	344	811	1 148	946	<b>2 094</b>
1996	759	652	1 411	446	313	759	1 205	965	<b>2 170</b>
1997	692	588	1 280	408	310	718	1 100	898	<b>1 998</b>
1998	590	532	1 122	395	284	679	985	816	<b>1 801</b>
1999	549	505	1 054	446	298	744	995	803	<b>1 798</b>
RATE(b)									
1989	5.9	5.5	5.8	4.6	3.8	4.2	10.6	9.3	<b>9.9</b>
1990	6.5	5.5	6.0	4.9	3.6	4.3	11.4	9.1	<b>10.3</b>
1991	5.9	5.6	5.7	4.3	3.5	3.9	10.2	9.1	<b>9.6</b>
1992	5.7	5.5	5.6	4.4	3.3	3.8	10.1	8.8	<b>9.4</b>
1993	5.0	4.5	4.8	3.8	3.0	3.4	8.8	7.5	<b>8.2</b>
1994	5.2	4.1	4.7	3.9	2.8	3.4	9.1	6.9	<b>8.0</b>
1995	5.2	4.8	5.0	3.6	2.8	3.2	8.7	7.5	<b>8.1</b>
1996	5.8	5.3	5.5	3.4	2.5	3.0	9.2	7.8	<b>8.5</b>
1997	5.3	4.8	5.1	3.2	2.5	2.9	8.5	7.3	<b>7.9</b>
1998	4.6	4.4	4.5	3.1	2.3	2.7	7.7	6.7	<b>7.2</b>
1999	4.3	4.1	4.2	3.5	2.5	3.0	7.8	6.6	<b>7.2</b>

(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>
1999	682	602	1 284	510	339	849	1 192	941	<b>2 133</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>
1999	5.3	4.9	5.1	4.0	2.8	3.4	9.3	7.7	<b>8.5</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 State or Territory of 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>
1999	705	543	385	119	208	65	58	50	<b>2 133</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>
1999	8.1	9.2	8.2	6.6	8.3	10.7	16.1	11.7	<b>8.5</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	<i>Under 20</i>	<i>20–24</i>	<i>25–29</i>	<i>30–34</i>	<i>35–39</i>	<i>40 and over</i>	<i>Not stated</i>	<b>Total</b>
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	201	591	843	744	302	75	r75	<b>2 831</b>
1993	168	488	718	627	281	56	r73	<b>2 411</b>
1994	155	461	651	651	311	68	64	<b>2 361</b>
1995	181	487	670	614	289	67	112	<b>2 420</b>
1996	177	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>
1999	163	374	598	566	307	85	40	<b>2 133</b>
RATE(b)								
1989	14.6	11.4	9.3	10.5	12.3	19.5	..	<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	12.7	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	14.2	10.2	8.0	7.9	9.5	13.4	..	<b>9.4</b>
1996	14.0	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>
1999	13.8	9.6	7.5	7.3	8.6	13.4	..	<b>8.5</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>682</b>	<b>602</b>	<b>510</b>	<b>339</b>	<b>1 192</b>	<b>941</b>
MAIN CONDITION IN FETUS/INFANT						
Certain conditions originating in the perinatal period (P00–P96)	566	492	310	200	876	692
Disorders related to length of gestation and fetal growth (P05–P08)	84	82	83	64	167	146
Extremely low birth weight (P07.0)	32	28	75	60	107	88
Respiratory and cardiovascular disorders specific to the perinatal period (P20–P29)	159	156	103	61	262	217
Intrauterine hypoxia (P20)	154	147	7	7	161	154
Birth asphyxia (P21)	—	—	17	10	17	10
Cardiovascular disorders originating in the perinatal period (P29)	1	4	16	7	17	11
Infections specific to the perinatal period (P35–P39)	6	15	25	18	31	33
Haemorrhagic and haematological disorders of fetus and newborn (P50–P61)	14	13	48	25	62	38
Intracranial nontraumatic haemorrhage of fetus and newborn (P52)	1	1	41	18	42	19
Other disorders originating in the perinatal period (P90–P96)	283	214	30	16	313	230
Fetal death of unspecified cause (P95)	120	88	—	—	120	88
Condition originating in the perinatal period, unspecified (P96.9)	133	110	5	8	138	118
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	113	97	178	116	291	213
Congenital malformations of the nervous system (Q00–Q07)	31	24	25	15	56	39
Anencephaly and similar malformations (Q00)	3	7	6	2	9	9
Congenital hydrocephalus (Q03)	11	6	6	5	17	11
Spina bifida (Q05)	5	6	—	1	5	7
Congenital malformations of the circulatory system (Q20–Q28)	22	8	51	33	73	41
Congenital malformations of the heart (Q20–Q24)	19	7	45	25	64	32
Congenital malformations of aortic and mitral valves (Q23)	6	3	20	9	26	12
Congenital malformations of lung (Q33)	2	1	24	17	26	18
Congenital malformations of the urinary system (Q60–Q64)	9	5	13	1	22	6
Congenital malformations and deformations of the musculoskeletal system (Q65–Q79)	12	14	24	18	36	32
Congenital diaphragmatic hernia (Q79.0)	—	1	13	8	13	9
Down's syndrome (Q90)	14	13	9	5	23	18
Edwards' syndrome and Patau's syndrome (Q91)	8	8	17	10	25	18
MAIN CONDITION IN MOTHER						
Maternal conditions that may be unrelated to present pregnancy (P00)	106	84	37	23	143	107
Maternal hypertensive disorders (P00.0)	30	25	17	7	47	32
Maternal complications of pregnancy (P01)	66	46	182	113	248	159
Incompetent cervix (P01.0)	7	9	17	8	24	17
Premature rupture of membranes (P01.1)	8	5	23	18	31	23
Multiple pregnancy (P01.5)	22	17	55	26	77	43
Complications of placenta, cord and membranes (P02)	250	247	99	62	349	309
Placenta praevia and other forms of placental separation and haemorrhage (P02.0–P02.1)	96	80	47	27	143	107
Other and unspecified morphological and functional abnormalities of placenta (P02.2)	44	46	2	3	46	49
Prolapsed cord (P02.4)	9	10	7	5	16	15
Other compression of umbilical cord (P02.5)	50	47	3	—	53	47
Chorioamnionitis (P02.7)	20	28	26	24	46	52
Complications of labour and delivery (P03)	64	47	25	12	89	59
Breech delivery and extraction (P03.0)	1	3	3	—	4	3
Noxious influences transmitted via placenta or breast milk (P04)	7	2	2	1	9	3
No maternal condition reported	189	176	165	128	354	304

(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>312</b>	<b>616</b>	<b>358</b>	<b>394</b>	<b>316</b>	<b>54</b>	<b>2 133</b>
MAIN CONDITION IN FETUS/INFANT							
Certain conditions originating in the perinatal period (P00–P96)	231	483	253	278	227	43	1 568
Disorders related to length of gestation and fetal growth (P05–P08)	93	136	36	27	7	6	313
Extremely low birth weight (P07.0)	83	111	1	—	—	—	195
Respiratory and cardiovascular disorders specific to the perinatal period (P20–P29)	41	126	80	99	105	13	479
Intrauterine hypoxia (P20)	22	50	56	80	88	9	315
Birth asphyxia (P21)	2	8	4	6	7	—	27
Cardiovascular disorders originating in the perinatal period (P29)	2	8	7	7	2	1	28
Infections specific to the perinatal period (P35–P39)	7	36	11	6	4	—	64
Haemorrhagic and haematological disorders of fetus and newborn (P50–P61)	10	54	12	12	6	3	100
Intracranial nontraumatic haemorrhage of fetus and newborn (P52)	5	42	5	3	2	2	61
Other disorders originating in the perinatal period (P90–P96)	80	115	97	122	92	14	543
Fetal death of unspecified cause (P95)	22	42	37	52	37	7	208
Condition originating in the perinatal period, unspecified (P96.9)	21	69	53	61	39	5	256
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	80	125	100	94	68	10	504
Congenital malformations of the nervous system (Q00–Q07)	19	27	24	11	5	1	95
Anencephaly and similar malformations (Q00)	2	—	8	2	2	—	18
Congenital hydrocephalus (Q03)	7	8	8	1	—	1	28
Spina bifida (Q05)	4	5	1	2	—	—	12
Congenital malformations of the circulatory system (Q20–Q28)	14	18	9	29	32	9	114
Congenital malformations of the heart (Q20–Q24)	13	13	7	26	27	7	96
Congenital malformations of aortic and mitral valves (Q23)	5	4	1	8	15	3	38
Congenital malformations of lung (Q33)	—	15	10	13	6	—	44
Congenital malformations of the urinary system (Q60–Q64)	7	6	6	5	3	—	28
Congenital malformations and deformations of the musculoskeletal system (Q65–Q79)	9	9	10	17	18	—	68
Congenital diaphragmatic hernia (Q79.0)	—	—	1	6	14	—	22
Down's syndrome (Q90)	13	20	2	4	1	—	41
Edwards' syndrome and Patau's syndrome (Q91)	4	6	23	7	1	—	43
MAIN CONDITION IN MOTHER							
Maternal conditions that may be unrelated to present pregnancy (P00)	68	63	41	36	30	5	250
Maternal hypertensive disorders (P00.0)	15	25	24	9	5	1	79
Maternal complications of pregnancy (P01)	78	200	76	31	9	—	407
Incompetent cervix (P01.0)	19	15	1	1	—	—	41
Premature rupture of membranes (P01.1)	8	29	11	4	—	—	54
Multiple pregnancy (P01.5)	14	57	30	12	3	—	120
Complications of placenta, cord and membranes (P02)	85	213	111	123	93	13	658
Placenta praevia and other forms of placental separation and haemorrhage (P02.0–P02.1)	36	88	51	40	24	4	250
Other and unspecified morphological and functional abnormalities of placenta (P02.2)	3	26	24	26	12	3	95
Prolapsed cord (P02.4)	2	14	1	3	9	—	31
Other compression of umbilical cord (P02.5)	4	11	14	28	32	5	100
Chorioamnionitis (P02.7)	32	46	7	5	7	1	98
Complications of labour and delivery (P03)	44	53	8	13	10	8	148
Breech delivery and extraction (P03.0)	—	2	—	4	1	—	7
Noxious influences transmitted via placenta or breast milk (P04)	—	3	3	3	3	—	12
No maternal condition reported	37	84	119	188	171	28	658

(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>196</b>	<b>708</b>	<b>219</b>	<b>355</b>	<b>583</b>	<b>13</b>	<b>2 133</b>
MAIN CONDITION IN FETUS/INFANT							
Certain conditions originating in the perinatal period (P00-P96)	123	568	167	248	414	10	1 568
Disorders related to length of gestation and fetal growth (P05-P08)	56	161	18	29	41	4	313
Extremely low birth weight (P07.0)	52	138	2	—	—	—	195
Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)	18	150	45	95	163	1	479
Intrauterine hypoxia (P20)	10	59	29	83	130	1	315
Birth asphyxia (P21)	1	9	4	3	9	—	27
Cardiovascular disorders originating in the perinatal period (P29)	1	10	3	6	8	—	28
Infections specific to the perinatal period (P35-P39)	4	38	10	4	7	1	64
Haemorrhagic and haematological disorders of fetus and newborn (P50-P61)	2	60	11	8	16	—	100
Intracranial nontraumatic haemorrhage of fetus and newborn (P52)	—	46	7	1	6	—	61
Other disorders originating in the perinatal period (P90-P96)	41	142	67	99	172	4	543
Fetal death of unspecified cause (P95)	16	44	29	40	72	1	208
Condition originating in the perinatal period, unspecified (P96.9)	13	67	34	52	77	2	256
Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)	72	130	48	100	136	3	504
Congenital malformations of the nervous system (Q00-Q07)	20	30	10	18	11	1	95
Anencephaly and similar malformations (Q00)	3	1	1	6	5	1	18
Congenital hydrocephalus (Q03)	7	11	5	2	—	—	28
Spina bifida (Q05)	3	6	1	1	1	—	12
Congenital malformations of the circulatory system (Q20-Q28)	7	21	8	13	57	1	114
Congenital malformations of the heart (Q20-Q24)	7	16	7	9	50	1	96
Congenital malformations of aortic and mitral valves (Q23)	3	5	3	2	22	1	38
Congenital malformations of lung (Q33)	—	13	6	12	12	—	44
Congenital malformations of the urinary system (Q60-Q64)	9	5	2	6	6	—	28
Congenital malformations and deformations of the musculoskeletal system (Q65-Q79)	8	11	8	16	24	1	68
Congenital diaphragmatic hernia (Q79.0)	—	—	2	2	17	1	22
Down's syndrome (Q90)	15	17	1	5	3	—	41
Edwards' syndrome and Patau's syndrome (Q91)	1	9	5	14	14	—	43
MAIN CONDITION IN MOTHER							
Maternal conditions that may be unrelated to present pregnancy (P00)	24	101	34	28	57	2	250
Maternal hypertensive disorders (P00.0)	2	32	17	11	16	—	79
Maternal complications of pregnancy (P01)	50	234	39	48	27	—	407
Incompetent cervix (P01.0)	15	22	—	2	—	—	41
Premature rupture of membranes (P01.1)	7	34	6	4	1	—	54
Multiple pregnancy (P01.5)	9	60	14	20	16	—	120
Complications of placenta, cord and membranes (P02)	53	227	67	122	176	2	658
Placenta praevia and other forms of placental separation and haemorrhage (P02.0-P02.1)	27	102	27	53	39	—	250
Other and unspecified morphological and functional abnormalities of placenta (P02.2)	1	15	14	29	35	1	95
Prolapsed cord (P02.4)	2	15	1	1	12	—	31
Other compression of umbilical cord (P02.5)	2	9	8	20	56	1	100
Chorioamnionitis (P02.7)	20	57	7	2	11	—	98
Complications of labour and delivery (P03)	42	63	5	10	23	1	148
Breech delivery and extraction (P03.0)	—	1	—	1	4	—	7
Noxious influences transmitted via placenta or breast milk (P04)	1	1	—	4	4	1	12
No maternal condition reported	26	82	74	143	296	7	658

(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 State or Territory of Usual Residence

Particulars	NSW.....		VIC.....		QLD.....		SA.....	
	Males	Females	Males	Females	Males	Females	Males	Females
FETAL DEATHS								
<b>Weight at delivery (grams) (b)</b>	<b>204</b>	<b>181</b>	<b>188</b>	<b>155</b>	<b>116</b>	<b>125</b>	<b>50</b>	<b>31</b>
400–999	80	69	82	59	51	45	22	16
1,000–2,999	83	76	66	65	37	56	19	8
3,000 or more	41	35	30	25	22	14	9	7
<b>Period of gestation (weeks) (b)</b>	<b>204</b>	<b>181</b>	<b>188</b>	<b>155</b>	<b>116</b>	<b>125</b>	<b>50</b>	<b>31</b>
Less than 28	73	63	81	59	49	46	19	13
28–41	128	113	105	94	64	75	31	17
42 or more	—	1	2	1	1	2	—	—
<b>Age of mother (years) (b)</b>	<b>204</b>	<b>181</b>	<b>188</b>	<b>155</b>	<b>116</b>	<b>125</b>	<b>50</b>	<b>31</b>
Less than 20	14	11	15	5	11	12	8	2
20–29	95	83	81	65	51	53	17	10
30–39	84	77	85	75	51	56	23	17
40 or more	11	10	4	8	2	1	2	2
NEONATAL DEATHS								
<b>Age at death</b>	<b>198</b>	<b>122</b>	<b>111</b>	<b>89</b>	<b>90</b>	<b>54</b>	<b>25</b>	<b>13</b>
Less than 1 day	99	67	58	47	48	26	17	6
1 day to under 1 week	56	29	29	22	27	11	4	2
1 week to under 4 weeks	43	26	24	20	15	17	4	5
<b>Weight at delivery (grams) (b)</b>	<b>198</b>	<b>122</b>	<b>111</b>	<b>89</b>	<b>90</b>	<b>54</b>	<b>25</b>	<b>13</b>
400–999	99	55	58	42	42	28	14	5
1,000–2,999	57	47	32	28	32	15	5	4
3,000 or more	39	19	17	17	14	11	6	4
<b>Period of gestation (weeks) (b)</b>	<b>198</b>	<b>122</b>	<b>111</b>	<b>89</b>	<b>90</b>	<b>54</b>	<b>25</b>	<b>13</b>
Less than 28	99	55	54	42	42	30	15	5
28–41	93	62	54	47	47	22	10	6
42 or more	1	—	2	—	—	1	—	—
<b>Age of mother (years) (b)</b>	<b>198</b>	<b>122</b>	<b>111</b>	<b>89</b>	<b>90</b>	<b>54</b>	<b>25</b>	<b>13</b>
Less than 20	14	8	4	2	8	3	3	1
20–29	98	53	50	42	42	29	13	7
30–39	76	49	54	44	33	19	8	3
40 or more	8	10	3	1	6	2	1	2
PERINATAL DEATHS								
<b>Age at death</b>	<b>198</b>	<b>122</b>	<b>111</b>	<b>89</b>	<b>90</b>	<b>54</b>	<b>25</b>	<b>13</b>
Less than 1 day	99	67	58	47	48	26	17	6
1 day to under 1 week	56	29	29	22	27	11	4	2
1 week to under 4 weeks	43	26	24	20	15	17	4	5
<b>Weight at delivery (grams) (b)</b>	<b>402</b>	<b>303</b>	<b>299</b>	<b>244</b>	<b>206</b>	<b>179</b>	<b>75</b>	<b>44</b>
400–999	179	124	140	101	93	73	36	21
1,000–2,999	140	123	98	93	69	71	24	12
3,000 or more	80	54	47	42	36	25	15	11
<b>Period of gestation (weeks) (b)</b>	<b>402</b>	<b>303</b>	<b>299</b>	<b>244</b>	<b>206</b>	<b>179</b>	<b>75</b>	<b>44</b>
Less than 28	172	118	135	101	91	76	34	18
28–41	221	175	159	141	111	97	41	23
42 or more	1	1	4	1	1	3	—	—
<b>Age of mother (years) (b)</b>	<b>402</b>	<b>303</b>	<b>299</b>	<b>244</b>	<b>206</b>	<b>179</b>	<b>75</b>	<b>44</b>
Less than 20	28	19	19	7	19	15	11	3
20–29	193	136	131	107	93	82	30	17
30–39	160	126	139	119	84	75	31	20
40 or more	19	20	7	9	8	3	3	4

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

(b) Not stated is included in total.

3.8 PERINATAL DEATHS(a) by State or Territory of 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>	<b>71</b>	<b>66</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>12</b>	<b>17</b>	<b>14</b>
400-999	37	28	7	2	7	8	7	8
1,000-2,999	20	29	5	5	7	1	6	2
3,000 or more	13	9	1	—	5	1	4	4
<b>Period of gestation (weeks) (b)</b>	<b>71</b>	<b>66</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>12</b>	<b>17</b>	<b>14</b>
Less than 28	33	25	9	5	4	8	5	6
28-41	35	37	5	12	14	4	9	5
42 or more	1	1	—	—	—	—	—	—
<b>Age of mother (years) (b)</b>	<b>71</b>	<b>66</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>12</b>	<b>17</b>	<b>14</b>
Less than 20	4	7	2	—	3	1	—	—
20-29	37	36	7	7	10	5	9	4
30-39	26	22	4	2	4	6	6	8
40 or more	3	1	—	—	2	—	2	2
NEONATAL DEATHS								
<b>Age at death</b>	<b>43</b>	<b>28</b>	<b>16</b>	<b>14</b>	<b>16</b>	<b>11</b>	<b>11</b>	<b>8</b>
Less than 1 day	17	16	6	4	8	5	4	4
1 day to under 1 week	15	6	6	3	3	2	3	1
1 week to under 4 weeks	11	6	4	7	5	4	4	3
<b>Weight at delivery (grams) (b)</b>	<b>43</b>	<b>28</b>	<b>16</b>	<b>14</b>	<b>16</b>	<b>11</b>	<b>11</b>	<b>8</b>
400-999	14	12	6	3	9	4	7	2
1,000-2,999	17	8	4	2	4	6	3	3
3,000 or more	12	7	1	—	1	—	1	1
<b>Period of gestation (weeks) (b)</b>	<b>43</b>	<b>28</b>	<b>16</b>	<b>14</b>	<b>16</b>	<b>11</b>	<b>11</b>	<b>8</b>
Less than 28	15	12	7	6	9	5	7	3
28-41	27	16	7	1	5	5	3	4
42 or more	—	—	—	—	—	—	—	—
<b>Age of mother (years) (b)</b>	<b>43</b>	<b>28</b>	<b>16</b>	<b>14</b>	<b>16</b>	<b>11</b>	<b>11</b>	<b>8</b>
Less than 20	6	3	6	1	8	1	—	—
20-29	22	15	3	6	7	7	4	4
30-39	14	9	5	—	1	2	7	3
40 or more	—	1	—	—	—	1	—	—
PERINATAL DEATHS								
<b>Age at death</b>	<b>43</b>	<b>28</b>	<b>16</b>	<b>14</b>	<b>16</b>	<b>11</b>	<b>11</b>	<b>8</b>
Less than 1 day	17	16	6	4	8	5	4	4
1 day to under 1 week	15	6	6	3	3	2	3	1
1 week to under 4 weeks	11	6	4	7	5	4	4	3
<b>Weight at delivery (grams) (b)</b>	<b>114</b>	<b>94</b>	<b>33</b>	<b>32</b>	<b>35</b>	<b>23</b>	<b>28</b>	<b>22</b>
400-999	51	40	13	5	16	12	14	10
1,000-2,999	37	37	9	7	11	7	9	5
3,000 or more	25	16	2	—	6	1	5	5
<b>Period of gestation (weeks) (b)</b>	<b>114</b>	<b>94</b>	<b>33</b>	<b>32</b>	<b>35</b>	<b>23</b>	<b>28</b>	<b>22</b>
Less than 28	48	37	16	11	13	13	12	9
28-41	62	53	12	13	19	9	12	9
42 or more	1	1	—	—	—	—	—	—
<b>Age of mother (years) (b)</b>	<b>114</b>	<b>94</b>	<b>33</b>	<b>32</b>	<b>35</b>	<b>23</b>	<b>28</b>	<b>22</b>
Less than 20	10	10	8	1	11	2	—	—
20-29	59	51	10	13	17	12	13	8
30-39	40	31	9	2	5	8	13	11
40 or more	3	2	—	—	2	1	2	2

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

(b) Not Stated is included in total.

## 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** These statistics include all deaths registered in Australia during the registration year, irrespective of the usual residence of the deceased. Deaths of Australian residents which took place outside Australia are not included in the statistics.

#### 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 table A3.4 shows 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 tenth revision of the International Classification of Diseases (ICD-10) was adopted for Australian use for deaths registered from 1 January 1999. However, to identify changes between the ninth and tenth revisions, deaths for 1997 and 1998 have been coded to both revisions. In this publication, underlying cause data for 1999 only, has been coded to the tenth revision while previous years' data is coded to the ninth revision. All multiple cause data in this publication is coded to the tenth revision (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, two summary classifications are used. They are:

- the ICD at the Class level (with further disaggregation for major causes of death);
- main Causes of Death for age groups.

**13** Tables 1.3, 1.4, 2.2, 2.3 and 2.4 present statistics at the ICD Class level with further disaggregation for major causes of death. Background on this summary classification is given in volume 1 of the ICD.

CAUSE OF DEATH CLASSIFICATION USED *continued*

**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 Chapter level, with further disaggregation below the Chapter level where appropriate.

**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** ICD-10 allows for the coding of AIDS and AIDS-related deaths. As ICD-9 did 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 to 1998, all AIDS-related deaths (i.e. deaths where AIDS was mentioned in any place on the death certificate) were coded to HIV infection (042–044). For all years where ICD-9 has been used, all AIDS-related deaths in table 1.3 have been reported as ICD-9 CM HIV infection (042–044).

**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.

## Perinatal statistics

**18** 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 tenth revision of ICD. Causes selected for publication in this issue are those categories which were responsible for a significant proportion of perinatal deaths.

## DATA QUALITY

**19** 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.

**20** 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

**21** This publication includes Indigenous deaths data for all States and Territories with the exception of Tasmania and the Australian Capital Territory, where there are very small numbers of Indigenous deaths. While all States and Territories have provision for the identification of Indigenous deaths on their death registration forms, the coverage of Indigenous deaths varies greatly from State to State. Detailed information on coverage of indigenous deaths is provided in Appendix 6.

## POPULATIONS

**22** Appendix 2 provides details of the number of live births registered and the estimated age 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

**23** 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

**24** 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
- Suicides, Australia, 1921–1998* (Cat. no. 3309.0) — issued irregularly
- Trends in Mortality by Causes of Death in Australia, the States and Territories during 1971–1992 and in Statistical Divisions and Sub-divisions during 1991–1992* (Cat. no. 3313.0) — issued irregularly — discontinued
- Women's Health, 1994* (Cat. no. 4365.0) — issued irregularly — discontinued

## UNPUBLISHED DATA

**25** 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.

**26** 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.

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

## EFFECTS OF ROUNDING

**28** 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 1964–1967
- ICD-8 1968–1978
- ICD-9 1979–1998
- ICD-10 1999

Documentation is available detailing the relationship between the various revisions of ICD. 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
  - ◆ 1985–1990
    - 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) (up to 1997)
- Certifier of cause of death (doctor or coroner)
- Cancer indicator (where cancer is mentioned on the death certificate, whether the underlying cause or not) (up to 1997)

**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) 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) 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	1999
Males	128 510	127 357
Females	122 343	121 513
<b>Persons</b>	<b>250 853</b>	<b>248 870</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.(b)
Males	44 438	30 101	23 919	9 184	12 686	3 056	1 823	2 129	127 357
Females	42 346	28 774	22 584	8 774	12 163	2 976	1 753	2 124	121 513
<b>Persons</b>	<b>86 784</b>	<b>58 875</b>	<b>46 503</b>	<b>17 958</b>	<b>24 849</b>	<b>6 032</b>	<b>3 576</b>	<b>4 253</b>	<b>248 870</b>

(a) Used to calculate infant death rates.

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

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

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

Year	Under 1	1-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over	All ages
MALES											
1989	127 847	1 782 512	1 399 357	1 399 016	1 268 740	888 220	735 885	519 169	226 863	39 980	<b>8 387 589</b>
1999	126 635	1 884 474	1 378 722	1 447 687	1 460 891	1 277 628	845 044	621 531	323 697	74 189	<b>9 440 498</b>
FEMALES											
1989	121 711	1 692 848	1 349 711	1 383 752	1 241 632	845 097	731 593	608 685	348 590	103 208	<b>8 426 827</b>
1999	120 059	1 790 921	1 316 396	1 444 118	1 466 414	1 256 014	829 803	675 403	460 358	166 804	<b>9 526 290</b>
PERSONS											
1989	249 558	3 475 360	2 749 068	2 782 768	2 510 372	1 733 317	1 467 478	1 127 854	575 453	143 188	<b>16 814 416</b>
1999	246 694	3 675 395	2 695 118	2 891 805	2 927 305	2 533 642	1 674 847	1 296 934	784 055	240 993	<b>18 966 788</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	44 434	30 101	23 916	9 184	12 683	3 056	1 823	2 128	<b>127 346</b>
	Females	42 338	28 774	22 579	8 771	12 159	2 976	1 753	2 124	<b>121 493</b>
Stillbirths(c)	Males	204	188	116	50	71	17	19	17	<b>682</b>
	Females	181	155	125	31	66	18	12	14	<b>602</b>
Total	Males	44 638	30 289	24 032	9 234	12 754	3 073	1 842	2 145	<b>128 028</b>
	Females	42 519	28 929	22 704	8 802	12 225	2 994	1 765	2 138	<b>122 095</b>
	Persons	87 157	59 218	46 736	18 036	24 979	6 067	3 607	4 283	<b>250 123</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	5 963	19 897	40 801	39 209	18 151	3 265	60	<b>127 346</b>
	Females	5 787	19 041	38 747	37 557	17 305	3 017	39	<b>121 493</b>
Stillbirths(b)	Males	57	110	197	182	101	26	9	<b>682</b>
	Females	38	95	168	179	84	24	14	<b>602</b>
Total	Males	6 020	20 007	40 998	39 391	18 252	3 291	69	<b>128 028</b>
	Females	5 825	19 136	38 915	37 736	17 389	3 041	53	<b>122 095</b>
	Persons	11 845	39 143	79 913	77 127	35 641	6 332	122	<b>250 123</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.....			STILLBIRTHS(b).....			TOTAL.....		
	<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
1999	127 346	121 493	248 839	682	602	1 284	128 028	122 095	250 123

(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 Sex**

	LIVE BIRTHS.....			STILLBIRTHS(b).....			TOTAL.....		
	<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	128 481	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
1999	127 297	121 456	248 753	549	505	1 054	127 846	121 961	249 807

(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. 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.

The current leading causes of death are now 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. Since the introduction of multiple cause coding, data suggests 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, ABS began with 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 ICD 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.

INTRODUCTION

Comparability of mortality data over time is affected by a number of factors. These include issues relating to the collection, classification and processing of the data. In recent years there have been two major changes, namely, the introduction of the tenth revision of International Classification of Diseases (ICD-10) for classifying deaths registered from 1 January 1999 and the introduction of the Automated Coding System (ACS) for processing deaths registered from 1 January 1997.

**A5.1 MAJOR COMPARABILITY CHANGES**  
.....

<i>Years</i>	<i>Coding method</i>	<i>ICD revision</i>	<i>Comments</i>
1979–1996	Manual	ICD-9	Prior to 1979, manual coding under relevant ICD revisions
1997–1998	Automated	ICD-9 and 10	Comparability factors between manual and automated coding are available, based on a sample of dual coded 1997 data.
1999	Automated	ICD-10	Comparability factors between ICD-9 (manually coded) and ICD-10 (automatically coded) will be available in 2001.

.....

COMPARISON OF AUTOMATIC AND MANUAL ICD-9 CODING

For processing deaths registered from 1 January 1997, Australia adopted the use of the Automated Coding System (ACS). Its use has enabled efficient production of multiple causes of death statistics and has introduced more consistency into coding practices. It 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.

As ACS was developed in the United States it used US 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.

The specific cause of death most affected was pneumonia and, hence, the category of pneumonia and influenza (ICD-9 codes 480–487). The other causes significantly affected include senile and presenile organic psychotic conditions—dementia (ICD-9 code 290), and alzheimer's disease (ICD-9 code 331.0). Under the previous Australian coding interpretations, many of the deaths attributed to pneumonia in 1997 would have been attributed to dementia or alzheimer's disease, and, to a lesser extent, ischaemic heart disease, cardiac dysrhythmias and heart failure, malignant neoplasms, chronic obstructive pulmonary disease or renal failure. Hence, with the introduction of ACS there was a large increase in pneumonia deaths, in association with a decrease in deaths attributed to these causes.



COMPARISON OF AUTOMATIC AND MANUAL ICD-9 CODING *continued*

To provide a link between underlying causes of death data coded manually and by ACS, the records for more than 34,000 deaths registered in 1997 were dual coded. Comparability factors were then calculated for groups of causes of death as a means of adjusting data for 1996 and previous years. 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.

Comparability factors for deaths due to external causes are close to 1.0 due to the extensive clerical intervention which has continued after the introduction of ACS.

An adjusted estimate of the number of deaths attributed to a particular cause in ICD-9 can be produced by multiplying the number of deaths attributed to that cause in 1996 (or in earlier years) by its corresponding comparability factor.

Table A5.2 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.

**A5.2 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

A5.2 COMPARABILITY FACTORS *continued*

<i>Cause of death and ICD code</i>	<i>Comparability factor</i>
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
Cerebrovascular diseases (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)	1.21
Pneumonia and influenza (480–487)	2.00
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)	0.99
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)	1.03
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
Class XII Diseases of the skin and subcutaneous tissue (680–709)	0.99
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	0.97
Class IV Congenital anomalies (740–759)	1.09
Class XV Certain conditions originating in the perinatal period (760–779)	0.92
Class XVI Symptoms, signs and ill-defined conditions (780–799)	0.74
Class XVII Accidents, poisonings and violence external causes) (E800–E999)	1.01
Accidents (E800–E949)	1.02
Motor vehicle traffic accidents (E810–E819)	1.00
Accidental falls (E880–E888)	1.03
Accidental drowning and submersion (E910)	0.99
Suicide (E950–E959)	1.00
Homicide (E960–E969)	1.03

## COMPARISON OF NINTH AND TENTH REVISIONS OF ICD

Australia introduced ICD-10 for classifying deaths registered from 1 January 1999. The introduction of this major revision has resulted in changes to the interpretation and resultant coding of a number of causes, as outlined in the WHO publication *International Statistical Classification of Diseases and Related Health Problems Tenth Revision, Volume 2*. Causes most affected are asthma, hypertension and influenza and pneumonia.

Under ICD-10, asthma more clearly links with chronic obstructive airways diseases (COAD), especially bronchitis and emphysema. Where these conditions are present, COAD takes precedence, resulting in a decrease in the reporting of asthma as the underlying cause.

For hypertension, under ICD-10, there has been an expansion of conditions relating to diseases of the heart and clearer linkages of hypertension to these diseases. These conditions now take precedence over hypertension, thus reducing the reporting hypertension as the underlying cause.

Similarly, where influenza and pneumonia appear with a wide range of associated conditions, these conditions now take precedence. The major impact is a substantial decrease in the reporting of influenza and pneumonia (J10–J18), under ICD-10, back to the levels recorded under manual ICD-9 coding (see comparison of automatic and manual coding above). In association with this there is an increase in the number of deaths attributed to conditions relating to the group 'organic, including symptomatic, mental disorders' (F00–F09).

Table A5.3 presents a concordance between the ninth and tenth revisions of ICD for each cause of death (or groups of causes of death) presented in this publication. Further information or clarification on the concordance between these revisions is available from the ABS on 1800 620 963.

The ABS is recoding 1997 and 1998 deaths data to ICD-10 to assist with comparisons over time. Therefore, 1997 and 1998 deaths will be available coded to both ICD revisions. In addition to data for these two years, comparability factors for causes or groups of causes of deaths will be produced during 2001 as a means of adjusting ICD-9 data to make them more comparable with data coded using ICD-10.

**A5.3 CONCORDANCE**

<i>Cause of death</i>	<i>ICD-10 code</i>	<i>ICD-9 code</i>
<b>All causes</b>	<b>A00–Y98</b>	<b>001–999</b>
Chapter I Certain infectious and parasitic diseases	A00–B99	001–139
Septicaemia	A40, A41	038
Human immunodeficiency virus (HIV) disease	B20–B24	042–044
Chapter II Neoplasms	C00–D48	140–239
Malignant neoplasms	C00–C97	140–208
Digestive organs	C15–C26	150–157, 159
Oesophagus	C15	150
Stomach	C16	151
Colon	C18	153
Rectosigmoid junction, rectum, anus and anal canal	C19–C21	154
Liver and intrahepatic bile ducts	C22	155
Pancreas	C25	157
Respiratory and intrathoracic organs	C30–C39	160–165
Trachea, bronchus and lung	C33, C34	162

A5.3 CONCORDANCE *continued*

<i>Cause of death</i>	<i>ICD-10 code</i>	<i>ICD-9 code</i>
<i>Malignant neoplasms continued</i>		
Melanoma of skin	C43	172
Breast	C50	174, 175
Female genital organs	C51–C58	179–184
Ovary	C56	1830
Male genital organs	C60–C63	185–187
Prostate	C61	185
Urinary tract	C64–C68	188, 189
Kidney, except renal pelvis	C64	1890
Bladder	C67	188
Eye, brain and other parts of central nervous system	C69–C72	190–192
Brain	C71	191
Lymphoid, haematopoietic and related tissue	C81–C96	200–208
Leukaemia	C91–C95	204–208
In situ and benign neoplasms and neoplasms of uncertain or unknown behaviour	D00–D48	210–239
Chapter III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	D50–D89	279, 280–289
Chapter IV Endocrine, nutritional and metabolic diseases	E00–E90	240–278
Diabetes mellitus	E10–E14	250
Chapter V Mental and behavioural disorders	F00–F99	290–319
Psychoactive substance use	F10–F19	291, 292, 303, 304, 305
Chapter VI Diseases of the nervous system	G00–G99	320–359
Extrapyramidal and movement disorders	G20–G26	332–333
Alzheimer's disease	G30	3310
Chapter VII Diseases of the eye and adnexa	H00–H59	360–379
Chapter VIII Diseases of the ear and mastoid process	H60–H95	380–389
Chapter IX Disease of the circulatory system	I00–I99	390–459
All heart disease	I05–I09, I11, I13, I20–I25, I26, I27, I30–I52	393–398, 402, 404, 410–414, 415, 416,
Acute rheumatic fever and chronic rheumatic heart diseases	I00–I09	390–398
Hypertensive diseases	I10–I15	401–405
Ischaemic heart diseases	I20–I25	410–414
Acute myocardial infarction	I21	410
Pulmonary heart disease and diseases of pulmonary circulation and other forms of heart disease	I26–I52)	415–429
Cerebrovascular diseases	I60–I69	430–438
Diseases of arteries, arterioles and capillaries	I70–I79	440–448
Atherosclerosis	I70	440
Aortic aneurysm	I71	441
Chapter X Diseases of the respiratory system	J00–J99	460–519
Influenza and pneumonia	J10–J18	480–487
Chronic lower respiratory diseases	J40–J47	490–496
Emphysema	J43	492
Asthma and status asthmaticus	J45, J46	493

**A5.3 CONCORDANCE** *continued*

<i>Cause of death</i>	<i>ICD-10 code</i>	<i>ICD-9 code</i>
Chapter XI Diseases of the digestive system	K00–K93	520–579
Diseases of oesophagus, stomach and duodenum	K20–K31	530–537
Gastric and duodenal ulcer	K25–K27	531–533
Diseases of liver	K70–K77	570–573
Chapter XII Diseases of the skin and subcutaneous tissue	L00–L99	680–709
Chapter XIII Diseases of the musculoskeletal system and connective tissue	M00–M99	710–739
Arthropathies and systemic connective tissue disorders	M00–M36	710–719
Chapter XIV Diseases of the genitourinary system	N00–N99	580–629
Glomerular diseases	N00–N08	580–583
Renal failure	N17–N19	584–586
Chapter XV Pregnancy, childbirth and the puerperium	O00–O99	630–676
Chapter XVI Certain conditions originating in the perinatal period	P00–P96	760–779
Fetus and newborn affected by maternal conditions that may be unrelated to present pregnancy	P00–P04	760
Disorders related to short gestation and low birthweight, not elsewhere classified	P07	765
Infections specific to the perinatal period	P35–P39	771
Haemorrhagic and haematological disorders of fetus and newborn	P50–P61	772–774, 776
Chapter XVII Congenital malformations, deformations and chromosomal abnormalities	Q00–Q99	740–759
Congenital malformations of the nervous system	Q00–Q07	740–742
Congenital malformations of the circulatory system	Q20–Q28	745–747
Congenital malformations of the respiratory system	Q30–Q34	748
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	R00–R99	780–799
Sudden infant death syndrome	R95	7980
Chapter XX External causes of morbidity and mortality	V01–Y98	E800–E999
Accidents	V01–X59	E800–E949
Transport accidents	V01–V99	E800–E848
Falls	W00–W19	E880–E886,
Accidental drowning and submersion	W65–W74	E910
Accidental poisoning by and exposure to noxious substances	X40–X49	E850–E869
Intentional self-harm	X60–X84	E950–E959
Hanging, strangulation and suffocation	X70	E953
Assault	X85–Y09	E960–E969

## APPENDIX 6 INDIGENOUS DEATHS .....

### INTRODUCTION

In 1999, there were 1,976 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 1999 registered Indigenous deaths is an underestimate of the actual number of such deaths.

### PROPENSITY TO IDENTIFY AS INDIGENOUS

Propensity to identify as Aboriginal and Torres Strait Islander 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 Aboriginal and Torres Strait Islander:

- 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 1986–1991 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 1991–1996 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 1999 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 Aboriginal and Torres Strait Islander 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									
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
1999	435	130	529	116	350	11	399	6	1 976

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

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
1999	556	121	644	135	406	61	397	12	2 334

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

1994(c)	916	206	874	183	484	115	439	16	3 239
1995(c)	932	209	887	186	488	119	446	18	3 289
1996(c)	950	211	900	189	494	124	452	18	3 341
1997(d)	966	215	915	193	499	126	460	20	3 397
1998(d)	984	219	936	199	509	130	471	21	3 472
1999(d)	1 010	222	960	202	518	133	482	22	3 552

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

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
1999	78	107	82	86	86	18	101	50	85

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

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
1999	43	59	55	57	68	8	83	27	56

(a) Includes 'Other Territories' from 1993.

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

(c) Source: *Experimental Estimates of the Aboriginal and Torres Strait Islander Population, 1991–1996* (Cat. no. 3230.0), unpublished data.

(d) Source: *Experimental Projections of the Aboriginal and Torres Strait Islander Population, 1996–2006* (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>575 129</b>	<b>295 529</b>
Malignant neoplasms (cancer) (C00–C97)	144 379	116 137
Digestive organs (C15–C26)	40 017	23 581
Trachea, bronchus and lung (C33–C34)	30 355	14 766
Accidents (V01–X59)	119 140	39 572
Transport accidents (V01–V99)	57 055	21 095
Accidental poisoning by and exposure to noxious substances (X40–X49)	34 254	11 021
Ischaemic heart diseases (I20–I25)	73 466	20 388
Intentional self harm (X60–X84)	69 782	17 313
Cerebrovascular diseases (stroke) (I60–I69)	15 639	11 312
Diseases of the nervous system (G00–G99)	15 929	10 995
Mental and behavioural disorders due to psychoactive substance use (F10–F19)	16 984	4 995
Chronic lower respiratory diseases (J40–J47)	13 834	9 857
Diseases of liver (K70–K77)	13 110	5 247
Diabetes mellitus (E10–E14)	8 542	5 306
Diseases of arteries, arterioles and capillaries (including atherosclerosis and aortic aneurysm) (I70–I79)	4 760	1 971
Human immunodeficiency virus (HIV) disease (B20–B24)	4 159	360
Influenza and pneumonia (J10–J18)	2 301	1 868

(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 1999 population

$N_x$  = number of persons aged  $x$  years in the 1999 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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2330300001994  
ISSN 1031-2005

RRP \$26.00