



# CAUSES OF DEATH AUSTRALIA

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

# NOTES

## ABOUT THIS PUBLICATION

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



## CHANGES IN THIS ISSUE

This issue provides, for the first time, both the underlying cause of death as well as data on multiple causes of death for deaths registered in Australia in 1997. For multiple causes, information on the mean number of causes per death has been presented by age and sex. Basic information on cause associations and nature of injury for deaths due to external causes have also been provided. To accommodate the above changes, the format of this publication has been changed. Separate sections dealing with underlying cause of death, multiple causes and perinatal deaths have been included.

Perinatal data are now based on a 400 g/20 weeks definition. This differs from previous years where all data were based on a 500 g/22 weeks definition.

A number of tables based on standardised death rates have been included in this publication for the first time.

Explanatory and Technical Notes further detailing the above changes have been included.



## SYMBOLS AND OTHER USAGES

ABS	Australian Bureau of Statistics
ACS	Automated Coding System
AIDS	Acquired Immune Deficiency Syndrome
ICD	International Classification of Diseases (produced by the World Health Organisation)
ICD-9	International Classification of Diseases Version 9
ICD-9 CM	International Classification of Diseases Version 9 Clinically Modified
NCHS	National Center for Health Statistics
WHO	World Health Organisation
YPLL	Years of Potential Life Lost
..	not applicable
—	nil or rounded to zero

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# SECTION 1

## UNDERLYING CAUSE OF DEATH .....

### INTRODUCTION

For 1997 mortality data, the Australian Bureau of Statistics (ABS) introduced an automated system of cause of death coding. Because this automated system was developed in the United States it uses their interpretation of the International Classification of Diseases Version 9 (ICD-9) coding rules, which in some instances differ significantly from the coding rules used previously in Australia. An explanation of the impact of these coding rules on underlying causes is provided in Appendix 5.

### LEADING CAUSES

There were 129,350 deaths registered in 1997, comprising 67,752 male and 61,598 female deaths. This was an increase of only 0.5% on the total deaths registered in 1996.

Due to the introduction of the automated coding system (ACS), there is now a break in the underlying cause of death series between 1996 and 1997, with a number of causes of death being affected. The cause of death most affected was pneumonia and, hence, the category of pneumonia and influenza, in 1997, became one of the ten leading causes of death. The other causes significantly affected included senile and presenile organic psychotic conditions (including dementia), and hereditary and degenerative diseases of the central nervous system (including alzheimer's disease). Hence, while applying ACS coding interpretations caused pneumonia deaths to rise, deaths coded to a wide range of other conditions declined, in particular those due to dementia.

### LEADING CAUSES OF DEATH

Cause of death and ICD code	Males no.	Females no.	Persons no.	Proportion
				of total deaths %
<b>All causes</b>	<b>67 752</b>	<b>61 598</b>	<b>129 350</b>	<b>100.0</b>
Malignant neoplasms (cancer) (140–208)	19 279	15 037	34 316	26.5
Malignant neoplasms of trachea, bronchus and lung (162)	4 605	2 058	6 663	5.2
Ischaemic heart disease (410–414)	15 565	13 486	29 051	22.5
Cerebrovascular disease (stroke) (430–438)	4 879	7 254	12 133	9.4
Chronic obstructive pulmonary disease and allied conditions (including asthma, emphysema and bronchitis) (490–496)	3 830	2 627	6 457	5.0
Pneumonia and influenza (480–487)	2 151	2 866	5 017	3.9
Accidents (E800–E949)	2 935	1 617	4 552	3.5
Motor vehicle traffic accidents (E810–E819)	1 240	561	1 801	1.4
Diseases of arteries, arterioles and capillaries (including atherosclerosis and aortic aneurysm) (440–448)	1 538	1 395	2 933	2.3
Diabetes mellitus (250)	1 425	1 420	2 845	2.2
Suicide (E950–E959)	2 146	577	2 723	2.1
Hereditary and degenerative diseases of the central nervous system (330–337)	896	1 112	2 008	1.6
All other causes	13 108	14 207	27 315	21.1

LEADING CAUSES *continued*

As for 1996, cancer (27% of all deaths) and ischaemic heart disease (22% of all deaths) were the leading causes of death in 1997. As a result of the different coding interpretations referred to above, pneumonia and influenza became the fifth leading cause of death in 1997, and diseases of the arteries, arterioles and capillaries caused more deaths than did diabetes. Senile and presenile organic psychotic conditions were no longer among the ten leading causes.

## STANDARDISED DEATH RATES

Many causes of death are age related. Consequently, to enable a more accurate comparison of deaths in populations with different age structures, causes of death data are standardised to remove the effects of the ageing of the population. For causes of death, standardised death rates are expressed per 100,000 persons (see Glossary for details).

In 1997, the standardised death rate for all causes was 624.3, down from 641.5 in 1996. This rate has fallen every year since 1988 when it was 752.2.

While the standardised death rate has declined over this period the actual numbers of deaths from all causes have increased. There were 119,866 deaths registered in 1988 compared to 129,350 in 1997.



(a) Per 100,000 persons standardised using 1991 population as standard.

## LEADING CAUSES OF DEATH BY AGE

Leading causes of death differ by age. For example, while accidents are the sixth leading cause of deaths overall, they are the leading cause of death for those aged 1–24 years, accounting for nearly two in every five deaths in this age group. In the 25–44 years age group, suicides accounted for almost as many deaths as cancers. In the 45–64 years age group, the number of cancer deaths are more than double those from ischaemic heart disease while the reverse is true for those aged 85 years and over (see table 1.1).

## MALIGNANT NEOPLASMS (CANCERS)

In 1997 there were 34,316 cancer deaths (ICD codes 140–208), slightly less than in 1996. Between 1988 and 1997, the standardised cancer death rate for males decreased from 243.2 to 219.4 while the rate for females declined from 142.5 to 134.8.

In 1997 malignant neoplasms of the trachea, bronchus and lung were the largest cause of cancer deaths (6,663), accounting for 19% of all cancer deaths. The standardised death rate for this group of cancers did decrease between 1988 and 1997, but only very slightly due to differing trends between males and females. The rate for males decreased by 20% from 65.1 to 52.1, while there was a 10% increase in the rate for females from 17.4 to 19.1. In 1988 the age standardised rate for males was nearly four times that for females, but in 1997 it was just over two and half times the female rate.

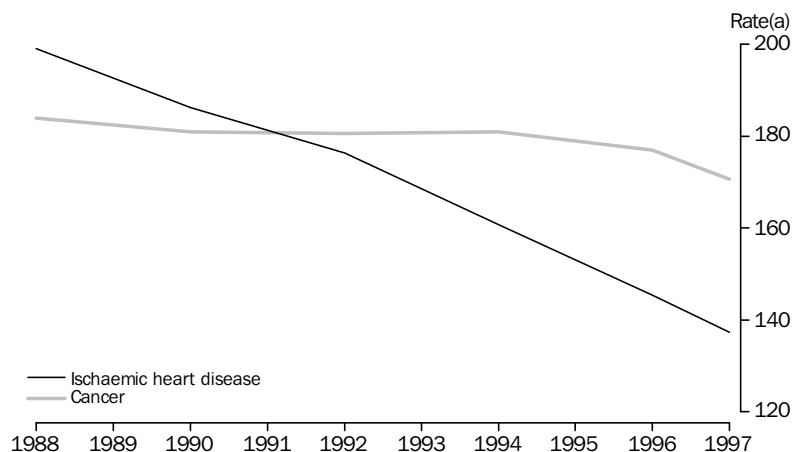
The second largest cause of cancer deaths in males in 1997 was prostate cancer (2,448), which accounted for 13% of all male cancer deaths. Between 1988 and 1997, the standardised death rate decreased slightly from 30.6 to 29.3. Over this time, the age-specific death rates for each age group also declined, with the exception of the 85 years and over age group, which experienced an increase of 9%.

In 1997, 2,602 females died of breast cancer. Breast cancer accounted for 17% of all female cancer deaths, making it still the largest cause of cancer deaths among females. However, since 1988 there has been a 10% decrease in the female standardised death rate for breast cancer from 26.9 to 24.2 (see table 1.4).

## ISCHAEMIC HEART DISEASE

In 1997, there were 29,051 deaths due to ischaemic heart disease (ICD codes 410–414). The male standardised death rate was almost double that of females (182.3 compared with 101.1). Since 1988 the standardised death rate has decreased 31%, with a similar decline exhibited for both males and females (see table 1.4).

## DEATH RATES, Cancer and Ischaemic Heart Disease



(a) Per 100,000 persons standardised using 1991 population as standard.

## DRUG DEPENDENCE

Drug dependence is a mental health issue and mental health is one of the National Health priority areas. Deaths as a result of drug dependency accounted for 19% of the total deaths due to mental disorders (ICD codes 290–319) in 1997, compared to 16% of the total in 1988. Overall, however, deaths due to drug dependence are rare, accounting for less than half of 1% of all deaths in 1997.

The number of deaths as a result of drug dependency (ICD code 304) increased from 318 in 1988 to 596 in 1997. The standardised death rate has risen from 1.9 in 1988 to 3.3 in 1997. The male rate was responsible for most of this rise increasing from 2.7 in 1988 to 5.2 in 1997. By comparison the female rate rose only marginally from 1.1 to 1.4 during this period.

The 1997 age-specific death rate for males aged 15–24 years was 7.6, while the rate for males aged 25–44 years was 12.2. The corresponding 1988 age-specific death rates were 4.4 for males aged 15–24 years and 6.4 for those aged 25–44 years.

## ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

The number of AIDS-related deaths fell dramatically in 1997, continuing the downward trend which began in 1995. Total AIDS-related deaths were 279, less than half the 568 deaths noted in 1996 (see table 1.3). A similar decrease has been recorded by the National Centre in HIV Epidemiology and Clinical Research in their '1998 HIV/AIDS and Related Diseases Annual Surveillance Report'. In a report published in the *Medical Journal of Australia*, the centre acknowledged the possible connection with the decrease in AIDS-related deaths and the introduction of anti-retro viral therapy in mid-1996.<sup>1</sup>

## AIDS-RELATED DEATHS



<sup>1</sup> P. K. Correll, M. G. Law, A. M. McDonald, D. A. Cooper and J. M. Kaldor, 'HIV Disease Progression in Australia in Time of Combination and Anti-retro Viral Therapy', *Medical Journal of Australia*, vol. 169, 1998, pp. 469–472.



## EXTERNAL CAUSES

For 1997 most external causes of death were still coded manually to overcome limitations of the ACS in capturing relevant detail from the medical certificate of cause of death for these causes.

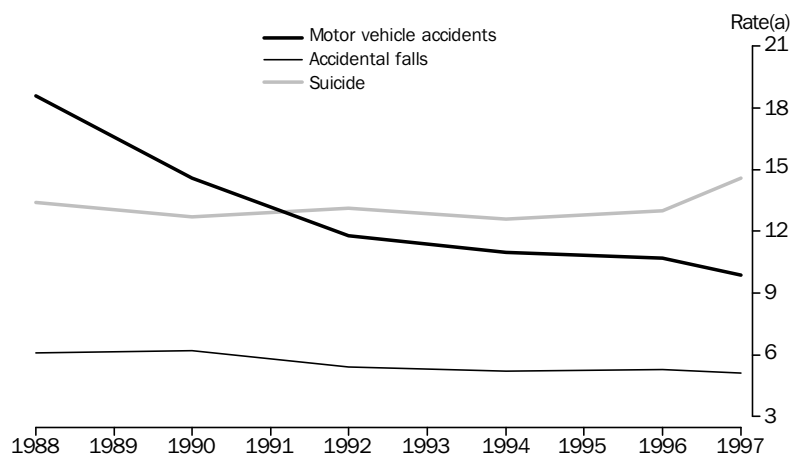
External causes accounted for 6% of deaths in 1997, around the same proportion as in the previous few years.

Deaths from accidents accounted for the majority (59%) of deaths from external causes in 1997. This proportion has decreased over time with accidents accounting for 68% of the total deaths from external causes in 1988. The major factor in this decline has been the decrease in deaths due to motor vehicle accidents. The standardised death rate for motor vehicle accidents has decreased from 18.6 in 1988 to 9.9 in 1997 (see table 1.4).

The number of suicides in 1997 was the highest ever recorded (2,723). This represented a 14% increase on the 2,393 suicide deaths registered in 1996 and a 24% increase over the 1988 figure of 2,197. The 15–24 years age group accounted for 19% of total suicides in 1997, with a corresponding age-specific death rate of 19.1. However, the age-specific death rate for suicide was highest in the 25–44 year age group (21.0).

Male suicides still outnumber female suicides by nearly four to one, in both the 15–24 and 25–44 age groups. Between 1988 and 1997, the standardised death rate for both male and female suicides increased by 9%.

## STANDARDISED DEATH RATES, Selected External Causes



(a) Per 100,000 persons standardised using 1991 population as standard.

## 1.1 UNDERLYING CAUSE, Selected Causes

Cause of death and ICD code	NUMBER OF DEATHS.			PERCENTAGE OF ALL DEATHS OF SAME AGE AND SEX.....		
	Males	Females	Persons	Males	Females	Persons
<b>Under 1 year</b>	<b>744</b>	<b>597</b>	<b>1 341</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Congenital anomalies (740–759)	212	194	406	28.5	32.5	30.3
Congenital anomalies of nervous system (740–742)	37	30	67	5.0	5.0	5.0
Congenital anomalies of circulatory system (745–747)	66	57	123	8.9	9.5	9.2
Congenital anomalies of respiratory system (748)	26	20	46	3.5	3.4	3.4
Certain conditions originating in the perinatal period (760–779)	335	278	613	45.0	46.6	45.7
Disorders relating to short gestation and unspecified low birthweight (765)	31	24	55	4.2	4.0	4.1
Birth trauma (767)	17	14	31	2.3	2.3	2.3
Hypoxia, birth asphyxia and other respiratory conditions (768–770)	63	31	94	8.5	5.2	7.0
Infections specific to the perinatal period (771)	7	7	14	0.9	1.2	1.0
Fetal and neonatal haemorrhage (772)	8	8	16	1.1	1.3	1.2
Sudden death, cause unknown (798)	93	58	151	12.5	9.7	11.3
<b>1–14 years</b>	<b>438</b>	<b>288</b>	<b>726</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	72	55	127	16.4	19.1	17.5
Brain (191)	17	21	38	3.9	7.3	5.2
Lymphatic and haematopoietic tissue (200–208)	28	20	48	6.4	6.9	6.6
Leukaemia (204–208)	23	18	41	5.3	6.3	5.6
Diseases of the nervous system and sense organs (320–389)	35	25	60	8.0	8.7	8.3
Diseases of the circulatory system (390–459)	8	10	18	1.8	3.5	2.5
Congenital anomalies (740–759)	44	31	75	10.0	10.8	10.3
Accidents, poisonings and violence (E800–E999)	208	99	307	47.5	34.4	42.3
Motor vehicle traffic accidents (E810–E819)	70	35	105	16.0	12.2	14.5
Accidents caused by submersion, suffocation and foreign bodies (E910–E915)	60	28	88	13.7	9.7	12.1
Accidental drowning and submersion (E910)	50	24	74	11.4	8.3	10.2
<b>15–24 years</b>	<b>1 429</b>	<b>505</b>	<b>1 934</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	78	53	131	5.5	10.5	6.8
Lymphatic and haematopoietic tissue (200–208)	35	21	56	2.4	4.2	2.9
Leukaemia (204–208)	7	9	16	0.5	1.8	0.8
Drug dependence (304)	104	39	143	7.3	7.7	7.4
Diseases of the nervous system and sense organs (320–389)	51	24	75	3.6	4.8	3.9
Accidents, poisonings and violence (E800–E999)	1 035	285	1 320	72.4	56.4	68.3
Motor vehicle traffic accidents (E810–E819)	388	134	522	27.2	26.5	27.0
Suicide (E950–E959)	417	93	510	29.2	18.4	26.4
<b>25–44 years</b>	<b>4 288</b>	<b>2 050</b>	<b>6 338</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	571	742	1 313	13.3	36.2	20.7
Digestive organs and peritoneum (150–159)	148	92	240	3.5	4.5	3.8
Bone, connective tissue, skin and breast (170–175)	90	334	424	2.1	16.3	6.7
Melanoma of skin (172)	59	51	110	1.4	2.5	1.7
Female breast (174)	—	262	262	. .	12.8	4.1
Brain (191)	69	55	124	1.6	2.7	2.0
Lymphatic and haematopoietic tissue (200–208)	115	74	189	2.7	3.6	3.0
Mental disorders (290–319)	398	90	488	9.3	4.4	7.7
Drug dependence (304)	350	72	422	8.2	3.5	6.7
Diseases of the circulatory system (390–459)	561	234	795	13.1	11.4	12.5
Ischaemic heart disease (410–414)	323	68	391	7.5	3.3	6.2
Acute myocardial infarction (410)	161	32	193	3.8	1.6	3.0
Diseases of the digestive system (520–579)	149	73	222	3.5	3.6	3.5
Chronic liver disease and cirrhosis (571)	103	50	153	2.4	2.4	2.4
Accidents, poisonings and violence (E800–E999)	2 009	582	2 591	46.9	28.4	40.9
Motor vehicle traffic accidents (E810–E819)	422	156	578	9.8	7.6	9.1
Suicide (E950–E959)	971	237	1 208	22.6	11.6	19.1

1.1 UNDERLYING CAUSE, Selected Causes *continued*

Cause of death and ICD code	NUMBER OF DEATHS.			PERCENTAGE OF ALL DEATHS OF SAME AGE AND SEX.....		
	Males	Females	Persons	Males	Females	Persons
<b>45–54 years</b>	<b>4 134</b>	<b>2 529</b>	<b>6 663</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	1 386	1 457	2 843	33.5	57.6	42.7
Digestive organs and peritoneum (150–159)	428	287	715	10.4	11.3	10.7
Colon (153)	148	123	271	3.6	4.9	4.1
Trachea, bronchus and lung (162)	286	188	474	6.9	7.4	7.1
Female breast (174)	—	483	483	..	19.1	7.2
Genitourinary organs (179–189)	100	190	290	2.4	7.5	4.4
Lymphatic and haematopoietic tissue (200–208)	157	102	259	3.8	4.0	3.9
Diseases of the circulatory system (390–459)	1 240	369	1 609	30.0	14.6	24.1
Ischaemic heart disease (410–414)	842	168	1 010	20.4	6.6	15.2
Acute myocardial infarction (410)	426	108	534	10.3	4.3	8.0
Cerebrovascular disease (430–438)	170	111	281	4.1	4.4	4.2
Diseases of the respiratory system (460–519)	145	96	241	3.5	3.8	3.6
Disease of the digestive system (520–579)	235	96	331	5.7	3.8	5.0
Chronic liver disease and cirrhosis (571)	177	61	238	4.3	2.4	3.6
Accidents, poisonings and violence (E800–E999)	656	231	887	15.9	9.1	13.3
Motor vehicle traffic accidents (E810–E819)	112	61	173	2.7	2.4	2.6
Suicide (E950–E959)	294	96	390	7.1	3.8	5.9
<b>55–64 years</b>	<b>7 625</b>	<b>4 297</b>	<b>11 922</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	3 254	2 256	5 510	42.7	52.5	46.2
Digestive organs and peritoneum (150–159)	1 038	612	1 650	13.6	14.2	13.8
Colon (153)	371	252	623	4.9	5.9	5.2
Trachea, bronchus and lung (162)	886	366	1 252	11.6	8.5	10.5
Female breast (174)	—	477	477	..	11.1	4.0
Genitourinary organs (179–189)	341	282	623	4.5	6.6	5.2
Diseases of the circulatory system (390–459)	2 585	973	3 558	33.9	22.6	29.8
Ischaemic heart disease (410–414)	1 787	552	2 339	23.4	12.8	19.6
Acute myocardial infarction (410)	1 035	336	1 371	13.6	7.8	11.5
Cerebrovascular disease (430–438)	316	189	505	4.1	4.4	4.2
Diseases of the respiratory system (460–519)	448	304	752	5.9	7.1	6.3
Chronic obstructive pulmonary disease and allied conditions (490–496)	319	243	562	4.2	5.7	4.7
Diseases of the digestive system (520–579)	300	133	433	3.9	3.1	3.6
Accidents, poisonings and violence (E800–E999)	404	161	565	5.3	3.7	4.7
<b>65–74 years</b>	<b>16 896</b>	<b>10 284</b>	<b>27 180</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	6 404	4 026	10 430	37.9	39.1	38.4
Digestive organs and peritoneum (150–159)	1 885	1 191	3 076	11.2	11.6	11.3
Colon (153)	624	452	1 076	3.7	4.4	4.0
Trachea, bronchus and lung (162)	1 781	713	2 494	10.5	6.9	9.2
Female breast (174)	—	586	586	..	5.7	2.2
Genitourinary organs (179–189)	999	534	1 533	5.9	5.2	5.6
Prostate (185)	679	—	679	4.0	..	2.5
Lymphatic and haematopoietic tissue (200–208)	568	404	972	3.4	3.9	3.6
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	563	425	988	3.3	4.1	3.6
Diabetes mellitus (250)	427	321	748	2.5	3.1	2.8
Senile and presenile organic psychotic conditions (290)	55	36	91	0.3	0.4	0.3
Diseases of the nervous system and sense organs (320–389)	264	248	512	1.6	2.4	1.9
Alzheimer's disease (3310)	43	52	95	0.3	0.5	0.3
Diseases of the circulatory system (390–459)	6 373	3 533	9 906	37.7	34.4	36.4
Ischaemic heart disease (410–414)	4 222	2 004	6 226	25.0	19.5	22.9
Acute myocardial infarction (410)	2 506	1 220	3 726	14.8	11.9	13.7
Cerebrovascular disease (430–438)	1 032	797	1 829	6.1	7.7	6.7
Diseases of the respiratory system (460–519)	1 673	964	2 637	9.9	9.4	9.7
Chronic obstructive pulmonary disease and allied conditions (490–496)	1 236	705	1 941	7.3	6.9	7.1
Diseases of the digestive system (520–579)	487	315	802	2.9	3.1	3.0

1.1 UNDERLYING CAUSE, Selected Causes *continued*

Cause of death and ICD code	NUMBER OF DEATHS..			PERCENTAGE OF ALL DEATHS OF SAME AGE AND SEX.....		
	Males	Females	Persons	Males	Females	Persons
<b>75–84 years</b>	<b>21 058</b>	<b>19 478</b>	<b>40 536</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	5 655	4 235	9 890	26.9	21.7	24.4
Digestive organs and peritoneum (150–159)	1 515	1 346	2 861	7.2	6.9	7.1
Colon (153)	511	503	1 014	2.4	2.6	2.5
Trachea, bronchus and lung (162)	1 310	590	1 900	6.2	3.0	4.7
Female breast (174)	—	529	529	..	2.7	1.3
Genitourinary organs (179–189)	1 372	606	1 978	6.5	3.1	4.9
Prostate (185)	1 055	—	1 055	5.0	..	2.6
Lymphatic and haematopoietic tissue (200–208)	518	480	998	2.5	2.5	2.5
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	619	702	1 321	2.9	3.6	3.3
Diabetes mellitus (250)	495	538	1 033	2.4	2.8	2.5
Senile and presenile organic psychotic conditions (290)	140	195	335	0.7	1.0	0.8
Diseases of the nervous system and sense organs (320–389)	440	438	878	2.1	2.2	2.2
Hereditary and degenerative diseases of the central nervous system (330–337)	377	371	748	1.8	1.9	1.8
Alzheimer's disease (3310)	124	171	295	0.6	0.9	0.7
Diseases of the circulatory system (390–459)	9 341	9 546	18 887	44.4	49.0	46.6
Ischaemic heart disease (410–414)	5 479	4 925	10 404	26.0	25.3	25.7
Acute myocardial infarction (410)	3 329	3 083	6 412	15.8	15.8	15.8
Cerebrovascular disease (430–438)	1 981	2 576	4 557	9.4	13.2	11.2
Diseases of arteries, arterioles and capillaries (440–448)	607	483	1 090	2.9	2.5	2.7
Diseases of the respiratory system (460–519)	2 799	2 093	4 892	13.3	10.7	12.1
Chronic obstructive pulmonary disease and allied conditions (490–496)	1 503	971	2 474	7.1	5.0	6.1
Diseases of the digestive system (520–579)	524	606	1 130	2.5	3.1	2.8
Diseases of the genitourinary system (580–629)	503	501	1 004	2.4	2.6	2.5
Nephritis, nephrotic syndrome and nephrosis (580–589)	353	341	694	1.7	1.8	1.7
Accidents, poisonings and violence (E800–E999)	395	326	721	1.9	1.7	1.8
Accidental falls (E880–E888)	147	201	348	0.7	1.0	0.9
<b>85 years and over</b>	<b>11 133</b>	<b>21 566</b>	<b>32 699</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Malignant neoplasms (140–208)	1 854	2 209	4 063	16.7	10.2	12.4
Digestive organs and peritoneum (150–159)	460	858	1 318	4.1	4.0	4.0
Genitourinary organs (179–189)	659	282	941	5.9	1.3	2.9
Prostate (185)	527	—	527	4.7	..	1.6
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	253	554	807	2.3	2.6	2.5
Diabetes mellitus (250)	201	369	570	1.8	1.7	1.7
Senile and presenile organic psychotic conditions (290)	142	449	591	1.3	2.1	1.8
Hereditary and degenerative diseases of the central nervous system (330–337)	187	441	628	1.7	2.0	1.9
Alzheimer's disease (3310)	91	324	415	0.8	1.5	1.3
Diseases of the circulatory system (390–459)	5 545	12 236	17 781	49.8	56.7	54.4
Ischaemic heart disease (410–414)	2 904	5 767	8 671	26.1	26.7	26.5
Acute myocardial infarction (410)	1 627	3 260	4 887	14.6	15.1	14.9
Cerebrovascular disease (430–438)	1 280	3 494	4 774	11.5	16.2	14.6
Diseases of arteries, arterioles and capillaries (440–448)	368	650	1 018	3.3	3.0	3.1
Diseases of the respiratory system (460–519)	1 745	2 714	4 459	15.7	12.6	13.6
Pneumonia and influenza (480–487)	843	1 742	2 585	7.6	8.1	7.9
Chronic obstructive pulmonary disease and allied conditions (490–496)	642	596	1 238	5.8	2.8	3.8
Diseases of the digestive system (520–579)	309	694	1 003	2.8	3.2	3.1
Diseases of the genitourinary system (580–629)	345	610	955	3.1	2.8	2.9
Nephritis, nephrotic syndrome and nephrosis (580–589)	226	359	585	2.0	1.7	1.8
Accidents, poisonings and violence (E800–E999)	241	436	677	2.2	2.0	2.1
Accidental falls (E880–E880)	159	364	523	1.4	1.7	1.6

## 1.2 UNDERLYING CAUSE, Age-Specific Rates

Cause of death and ICD code	1988(a).....			1997(a).....		
	Males	Females	Persons	Males	Females	Persons
<b>Under 1 year</b>	<b>9.72</b>	<b>7.54</b>	<b>8.66</b>	<b>5.75</b>	<b>4.87</b>	<b>5.32</b>
Congenital anomalies (740–759)	2.39	2.14	2.27	1.64	1.58	1.61
Congenital anomalies of nervous system (740–742)	0.43	0.53	0.48	0.28	0.24	0.27
Congenital anomalies of circulatory system (745–747)	0.79	0.63	0.71	0.51	0.47	0.49
Congenital anomalies of respiratory system (748)	0.33	0.17	0.25	0.20	0.16	0.18
Certain conditions originating in the perinatal period (760–779)	4.03	3.15	3.60	2.59	2.27	2.43
Disorders relating to short gestation and unspecified low birthweight (765)	1.17	0.96	1.07	0.24	0.20	0.22
Birth trauma (767)	0.13	0.12	0.13	0.13	0.11	0.12
Hypoxia, birth asphyxia and other respiratory conditions (768–770)	1.85	1.38	1.62	0.49	0.25	0.37
Infections specific to the perinatal period (771)	0.25	0.23	0.24	0.05	0.06	0.06
Fetal and neonatal haemorrhage (772)	0.35	0.25	0.30	0.06	0.07	0.06
Sudden death, cause unknown (798)	2.38	1.39	1.90	0.72	0.47	0.60
<b>1–14 years</b>	<b>31.9</b>	<b>23.6</b>	<b>27.9</b>	<b>23.3</b>	<b>16.1</b>	<b>19.8</b>
Malignant neoplasms (140–208)	4.5	2.8	3.6	3.8	3.1	3.5
Brain (191)	1.6	0.6	1.1	0.9	1.2	1.0
Lymphatic and haematopoietic tissue (200–208)	1.8	1.3	1.5	1.5	1.1	1.3
Leukaemia (204–208)	1.1	1.1	1.1	1.2	1.0	1.1
Diseases of the nervous system and sense organs (320–389)	2.0	2.4	2.2	1.9	1.4	1.6
Diseases of the circulatory system (390–459)	0.8	0.8	0.8	0.4	0.6	0.5
Congenital anomalies (740–759)	3.0	2.7	2.8	2.3	1.7	2.0
Accidents, poisonings and violence (E800–E999)	17.1	10.2	13.7	11.1	5.5	8.4
Motor vehicle traffic accidents (E810–E819)	7.4	4.5	6.0	3.7	2.0	2.9
Accidents caused by submersion, suffocation and foreign bodies (E910–E915)	4.9	2.4	3.7	3.2	1.6	2.4
Accidental drowning and submersion (E910)	4.0	2.1	3.1	2.7	1.3	2.0
<b>15–24 years</b>	<b>134.9</b>	<b>47.4</b>	<b>91.9</b>	<b>105.0</b>	<b>38.7</b>	<b>72.5</b>
Malignant neoplasms (140–208)	6.8	3.7	5.3	5.7	4.1	4.9
Lymphatic and haematopoietic tissue (200–208)	2.4	1.9	2.2	2.6	1.6	2.1
Leukaemia (204–208)	0.4	0.7	0.5	0.5	0.7	0.6
Drug dependence (304)	4.4	3.1	3.7	7.6	3.0	5.4
Diseases of the nervous system and sense organs (320–389)	4.1	1.3	2.7	3.7	1.8	2.8
Accidents, poisonings and violence (E800–E999)	107.3	29.1	68.9	76.0	21.8	49.5
Motor vehicle traffic accidents (E810–E819)	55.0	18.3	36.9	28.5	10.3	19.6
Suicide (E950–E959)	27.9	4.5	16.4	30.6	7.1	19.1
<b>25–44 years</b>	<b>164.1</b>	<b>76.1</b>	<b>120.5</b>	<b>149.6</b>	<b>71.3</b>	<b>110.4</b>
Malignant neoplasms (140–208)	24.0	28.3	26.1	19.9	25.8	22.9
Digestive organs and peritoneum (150–159)	4.9	3.8	4.4	5.2	3.2	4.2
Bone, connective tissue, skin and breast (170–175)	5.0	11.4	8.2	3.1	11.6	7.4
Melanoma of skin (172)	3.4	2.2	2.8	2.1	1.8	1.9
Female breast (174)	..	8.6	4.3	..	9.1	4.6
Brain (191)	2.6	1.5	2.1	2.4	1.9	2.2
Lymphatic and haematopoietic tissue (200–208)	5.4	3.7	4.6	4.0	2.6	3.3
Mental disorders (290–319)	8.6	2.2	5.4	13.9	3.1	8.5
Drug dependence (304)	6.4	1.6	4.0	12.2	2.5	7.4
Diseases of the circulatory system (390–459)	26.8	9.4	18.2	19.6	8.1	13.8
Ischaemic heart disease (410–414)	17.1	2.3	9.8	11.3	2.4	6.8
Acute myocardial infarction (410)	11.0	1.5	6.3	5.6	1.1	3.4
Diseases of the digestive system (520–579)	6.2	2.9	4.6	5.2	2.5	3.9
Chronic liver disease and cirrhosis (571)	4.6	1.7	3.2	3.6	1.7	2.7
Accidents, poisonings and violence (E800–E999)	78.2	21.7	50.2	70.1	20.2	45.1
Motor vehicle traffic accidents (E810–E819)	27.6	8.3	18.0	14.7	5.4	10.1
Suicide (E950–E959)	27.2	7.3	17.3	33.9	8.2	21.0

(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.

1.2 UNDERLYING CAUSE, Age-Specific Rates *continued*

Cause of death and ICD code	1988(a).....			1997(a).....		
	Males	Females	Persons	Males	Females	Persons
<b>45–54 years</b>	<b>457.5</b>	<b>270.1</b>	<b>366.2</b>	<b>342.4</b>	<b>214.9</b>	<b>279.5</b>
Malignant neoplasms (140–208)	146.0	144.2	145.1	114.8	123.8	119.2
Digestive organs and peritoneum (150–159)	44.8	32.6	38.9	35.4	24.4	30.0
Colon (153)	15.9	13.8	14.9	12.3	10.5	11.4
Trachea, bronchus and lung (162)	38.4	14.6	26.8	23.7	16.0	19.9
Female breast (174)	..	44.4	21.6	..	41.0	20.3
Genitourinary organs (179–189)	8.0	22.3	14.9	8.3	16.1	12.2
Lymphatic and haematopoietic tissue (200–208)	14.9	11.0	13.0	13.0	8.7	10.9
Diseases of the circulatory system (390–459)	167.6	51.9	111.2	102.7	31.4	67.5
Ischaemic heart disease (410–414)	124.5	27.3	77.1	69.7	14.3	42.4
Acute myocardial Infarction (410)	84.9	19.1	52.8	35.3	9.2	22.4
Cerebrovascular disease (430–438)	14.7	14.0	14.4	14.1	9.4	11.8
Diseases of the respiratory system (460–519)	16.6	15.3	16.0	12.0	8.2	10.1
Disease of the digestive system (520–579)	25.6	11.6	18.8	19.5	8.2	13.9
Chronic liver disease and cirrhosis (571)	19.2	6.9	13.2	14.7	5.2	10.0
Accidents, poisonings and violence (E800–E999)	66.7	26.6	47.1	54.3	19.6	37.2
Motor vehicle traffic accidents (E810–E999)	18.4	8.9	13.7	9.3	5.2	7.3
Accidents, poisonings and violence (E800–E999)	24.4	8.2	16.6	24.3	8.2	16.4
<b>55–64 years</b>	<b>1 357.8</b>	<b>712.4</b>	<b>1 035.7</b>	<b>961.9</b>	<b>549.1</b>	<b>756.8</b>
Malignant neoplasms (140–208)	495.0	335.7	415.5	410.5	288.3	349.8
Digestive organs and peritoneum (150–159)	145.4	85.3	115.4	130.9	78.2	104.7
Colon (153)	50.5	37.4	43.9	46.8	32.2	39.5
Trachea, bronchus and lung (162)	162.9	51.4	107.3	111.8	46.8	79.5
Female breast (174)	..	73.6	36.7	..	60.9	30.3
Genitourinary organs (179–189)	46.4	53.6	50.0	43.0	36.0	39.5
Diseases of the circulatory system (390–459)	555.8	214.7	385.6	326.1	124.3	225.9
Ischaemic heart disease (410–414)	414.4	127.3	271.2	225.4	70.5	148.5
Acute myocardial infarction (410)	288.1	88.2	188.4	130.6	42.9	87.0
Cerebrovascular disease (430–438)	61.6	48.1	54.9	39.9	24.1	32.1
Diseases of the respiratory system (460–519)	89.3	46.6	68.0	56.5	38.8	47.7
Chronic obstructive pulmonary disease and allied conditions (490–496)	71.8	40.2	56.1	40.2	31.0	35.7
Diseases of the digestive system (520–579)	60.7	25.1	42.9	37.8	17.0	27.5
Accidents, poisonings and violence (E800–E999)	72.1	26.9	49.5	51.0	20.6	35.9
<b>65–74 years</b>	<b>3 467.6</b>	<b>1 818.6</b>	<b>2 574.3</b>	<b>2 740.5</b>	<b>1 513.9</b>	<b>2 097.5</b>
Malignant neoplasms (140–208)	1 097.3	587.4	821.1	1 038.7	592.7	804.9
Digestive organs and peritoneum (150–159)	304.0	178.6	236.1	305.7	175.3	237.4
Colon (153)	93.1	71.0	81.1	101.2	66.5	83.0
Trachea, bronchus and lung (162)	339.8	92.8	206.0	288.9	105.0	192.5
Female breast (174)	..	92.5	50.1	..	86.3	45.2
Genitourinary organs (179–189)	181.6	79.3	126.2	162.0	78.6	118.3
Prostate (185)	116.4	..	53.4	110.1	..	52.4
Lymphatic and haematopoietic tissue (200–208)	90.5	53.8	70.6	92.1	59.5	75.0
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	66.1	55.1	60.2	91.3	62.6	76.2
Diabetes mellitus (250)	51.3	42.4	46.5	69.3	47.3	57.7
Senile and presenile organic psychotic conditions (290)	9.1	9.4	9.3	8.9	5.3	7.0
Diseases of the nervous system and sense organs (320–389)	45.7	30.2	37.3	42.8	36.5	39.5
Alzheimer's disease (3310)	10.1	8.0	9.0	7.0	7.7	7.3
Diseases of the circulatory system (390–459)	1 640.3	827.9	1 200.2	1 033.7	520.1	764.5
Ischaemic heart disease (410–414)	1 131.6	513.9	797.0	684.8	295.0	480.5
Acute myocardial infarction (410)	803.0	378.3	573.0	406.5	179.6	287.5
Cerebrovascular disease (430–438)	256.9	181.1	215.8	167.4	117.3	141.1
Diseases of the respiratory system (460–519)	319.8	133.0	218.6	271.4	141.9	203.5
Chronic obstructive pulmonary disease and allied conditions (490–496)	261.4	104.4	176.3	200.5	103.8	149.8
Diseases of the digestive system (520–579)	108.3	59.5	81.9	79.0	46.4	61.9

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



1.2 UNDERLYING CAUSE, Age-Specific Rates *continued*

Cause of death and ICD code	1988(a).....			1997(a).....		
	Males	Females	Persons	Males	Females	Persons
<b>75–84 years</b>	<b>8 546.1</b>	<b>5 284.2</b>	<b>6 566.6</b>	<b>7 046.6</b>	<b>4 484.7</b>	<b>5 528.9</b>
Malignant neoplasms (140–208)	2 064.4	1 003.2	1 420.4	1 892.3	975.1	1 349.0
Digestive organs and peritoneum (150–159)	596.9	361.0	453.7	507.0	309.9	390.2
Colon (153)	188.5	140.6	159.5	171.0	115.8	138.3
Trachea, bronchus and lung (162)	522.2	109.9	272.0	438.4	135.8	259.2
Female breast (174)	..	133.5	81.0	..	121.8	72.2
Genitourinary organs (179–189)	499.6	133.5	277.4	459.1	139.5	269.8
Prostate (185)	378.4	..	148.8	353.0	..	143.9
Lymphatic and haematopoietic tissue (200–208)	168.7	106.9	131.2	173.3	110.5	136.1
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	176.1	146.0	157.8	207.1	161.6	180.2
Diabetes mellitus (250)	144.7	123.0	131.5	165.6	123.9	140.9
Senile and presenile organic psychotic conditions (290)	106.9	85.1	93.7	46.8	44.9	45.7
Diseases of the nervous system and sense organs (320–389)	179.8	101.8	132.5	147.2	100.8	119.8
Hereditary and degenerative diseases of the central nervous system (330–337)	160.9	89.6	117.6	126.2	85.4	102.0
Alzheimer's disease (3310.0)	62.2	41.5	49.6	41.5	39.4	40.2
Diseases of the circulatory system (390–459)	4 286.4	3 071.8	3 549.3	3 125.8	2 197.9	2 576.1
Ischaemic heart disease (410–414)	2 542.3	1 622.2	1 983.9	1 833.4	1 134.0	1 419.1
Acute myocardial infarction (410)	1 778.6	1 130.4	1 385.3	1 114.0	709.8	874.6
Cerebrovascular disease (430–438)	958.7	853.0	894.6	662.9	593.1	621.6
Diseases of arteries, arterioles and capillaries (440–448)	269.2	150.8	197.3	203.1	111.2	148.7
Diseases of the respiratory system (460–519)	981.3	318.9	579.3	936.6	481.9	667.2
Chronic obstructive pulmonary disease and allied conditions (490–496)	762.3	202.1	422.4	502.9	223.6	337.4
Diseases of the digestive system (520–579)	245.7	195.9	215.4	175.3	139.5	154.1
Diseases of the genitourinary system (580–629)	162.7	107.8	129.4	168.3	115.3	136.9
Nephritis, nephrotic syndrome and nephrosis (580–589)	117.1	79.1	94.0	118.1	78.5	94.7
Accidents, poisonings and violence (E800–E999)	181.1	109.6	137.7	132.2	75.1	98.3
Accidental falls (E880–E888)	59.9	50.5	54.2	49.2	46.3	47.5
<b>85 years and over</b>	<b>18 894.0</b>	<b>14 951.0</b>	<b>16 035.8</b>	<b>17 059.2</b>	<b>14 299.0</b>	<b>15 132.6</b>
Malignant neoplasms (140–208)	2 927.3	1 411.6	1 828.6	2 840.9	1 464.6	1 880.3
Digestive organs and peritoneum (150–159)	826.2	577.1	645.6	704.9	568.9	610.0
Genitourinary organs (179–189)	974.0	170.3	391.4	1 009.8	187.0	435.5
Prostate (185)	739.1	..	203.3	807.5	..	243.9
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	340.5	311.6	319.5	387.7	367.3	373.5
Diabetes mellitus (250)	277.2	243.5	252.7	308.0	244.7	263.8
Senile and presenile organic psychotic conditions (290)	485.7	484.9	485.1	217.6	297.7	273.5
Hereditary and degenerative diseases of the central nervous system (330–337)	285.1	250.5	260.0	286.5	292.4	290.6
Alzheimer's disease (3310.0)	134.6	150.3	146.0	139.4	214.8	192.1
Diseases of the circulatory system (390–459)	10 283.8	9 805.3	9 937.0	8 496.7	8 112.9	8 228.8
Ischaemic heart disease (410–414)	5 118.1	4 135.7	4 406.0	4 449.8	3 823.7	4 012.8
Acute myocardial infarction (410)	3 143.7	2 441.6	2 634.8	2 493.1	2 161.5	2 261.6
Cerebrovascular disease (430–438)	2 541.9	2 914.5	2 812.0	1 961.4	2 316.6	2 209.3
Diseases of arteries, arterioles and capillaries (440–448)	794.5	751.4	763.3	563.9	431.0	471.1
Diseases of the respiratory system (460–519)	2 312.3	930.7	1 310.8	2 673.9	1 799.5	2 063.6
Pneumonia and influenza (480–487)	570.1	472.9	499.6	1 291.8	1 155.0	1 196.3
Chronic obstructive pulmonary disease and allied conditions (490–496)	1 509.8	312.6	642.0	983.7	395.2	572.9
Diseases of the digestive system (520–579)	667.8	608.1	624.6	473.5	460.1	464.2
Diseases of the genitourinary system (580–629)	625.6	372.7	442.3	528.6	404.5	442.0
Nephritis, nephrotic syndrome and nephrosis (580–589)	422.3	251.5	298.5	346.3	238.0	270.7
Accidents, poisonings and violence (E800–E999)	461.9	328.6	365.3	369.3	289.1	313.3
Accidental falls (E880–E888)	285.1	272.5	276.0	243.6	241.3	242.0

(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, Selected Years

Cause of death and ICD code	1988.....		1990.....		1992.....	
	Males	Females	Males	Females	Males	Females
<b>All causes</b>	<b>65 082</b>	<b>54 784</b>	<b>64 660</b>	<b>55 402</b>	<b>66 115</b>	<b>57 545</b>
Class I Infectious and parasitic diseases (001–139)	410	323	429	374	492	402
Human immunodeficiency virus (HIV) infection (042–044)(a)	226	5	509	10	621	22
Class II Neoplasms (140–239)	16 977	12 910	17 444	13 300	18 451	13 954
Malignant neoplasms (140–208)	16 828	12 734	17 311	13 153	18 289	13 744
Lip, oral cavity and pharynx (140–149)	450	168	473	174	481	165
Digestive organs and peritoneum (150–159)	4 734	3 841	4 811	3 823	4 967	3 990
Oesophagus (150)	497	284	500	227	557	265
Stomach (151)	879	525	796	483	761	473
Colon (153)	1 536	1 546	1 567	1 544	1 617	1 546
Rectum, rectosigmoid junction and anus (154)	657	408	647	421	659	437
Liver and intrahepatic bile ducts (155)	244	127	284	116	342	138
Pancreas (157)	668	580	717	667	721	730
Trachea, bronchus and lung (162)	4 631	1 538	4 466	1 587	4 666	1 734
Bone, connective tissue, skin and breast (170–175)	814	2 816	908	2 934	1 004	2 990
Melanoma of skin (172)	490	294	516	310	527	344
Breast (174, 175)	23	2 348	16	2 449	19	2 438
Genitourinary organs (179–189)	2 821	1 779	3 033	1 880	3 344	1 824
Ovary and other uterine adnexa (183)	—	621	—	741	—	664
Prostate (185)	1 884	—	2 091	—	2 370	—
Bladder (188)	512	217	474	237	505	217
Other and unspecified sites (190–199)	1 521	1 287	1 610	1 431	1 717	1 536
Brain (191)	486	362	517	421	534	410
Lymphatic and haematopoietic tissue (200–208)	1 509	1 231	1 575	1 247	1 664	1 428
Leukaemia (204–208)	611	461	601	445	673	533
Benign and unspecified neoplasms (210–239)	149	176	133	147	162	210
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	1 361	1 403	1 753	1 414	1 938	1 640
Diabetes mellitus (250)	922	1 081	1 077	1 107	1 136	1 269
Class IV Diseases of blood and blood-forming organs (280–289)	197	227	236	237	222	223
Class V Mental disorders (290–319)	950	1 020	959	1 080	957	1 187
Senile and presenile organic psychotic conditions (290)	472	832	488	900	499	1 032
Drug dependence (304)	230	88	210	69	205	58
Class VI Disease of the nervous system and sense organs (320–389)	1 113	1 044	1 099	1 169	1 283	1 376
Hereditary and degenerative diseases of the central nervous system (330–337)	770	784	773	895	903	1 079
Alzheimer's disease (3310)	246	347	249	454	341	611
Class VII Diseases of the circulatory system (390–459)	27 779	27 301	27 033	27 252	27 079	27 833
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	20 833	17 921	20 229	17 967	20 211	18 666
Rheumatic fever and rheumatic heart disease (390–398)	149	259	133	231	118	243
Hypertensive disease (401–405)	451	672	405	644	390	684
Ischaemic heart disease (410–414)	17 737	13 847	17 186	13 988	17 063	14 419
Acute myocardial infarction (410)	12 245	9 323	11 556	9 367	11 085	9 200
Diseases of pulmonary circulation and other forms of heart disease (415–429)	2 717	3 421	2 712	3 399	2 815	3 643
Heart failure (428)	1 051	1 776	1 056	1 764	1 064	1 862
Cerebrovascular disease (430–438)	5 034	7 407	4 792	7 293	4 860	7 126
Diseases of arteries, arterioles and capillaries (440–448)	1 603	1 544	1 697	1 555	1 727	1 557
Atherosclerosis (440)	377	727	325	634	316	601
Aortic aneurysm (441)	898	469	987	507	982	544

(a) See Explanatory Notes, paragraph 12 for further information.



1.3 UNDERLYING CAUSE, Selected Years *continued*

Cause of death and ICD code	1994.....		1996.....		1997.....	
	Males	Females	Males	Females	Males	Females
<b>All causes</b>	<b>67 459</b>	<b>59 224</b>	<b>68 201</b>	<b>60 510</b>	<b>67 752</b>	<b>61 598</b>
Class I Infectious and parasitic diseases (001–139)	565	477	1 067	571	839	633
Human immunodeficiency virus (HIV) infection (042–044)(a)	721	43	546	22	257	22
Class II Neoplasms (140–239)	19 551	14 652	19 887	15 362	19 571	15 316
Malignant neoplasms (140–208)	19 285	14 373	19 584	15 084	19 279	15 037
Lip, oral cavity and pharynx (140–149)	471	184	518	210	448	176
Digestive organs and peritoneum (150–159)	5 307	4 204	5 380	4 339	5 481	4 389
Oesophagus (150)	587	307	616	324	652	299
Stomach (151)	820	474	749	478	780	467
Colon (153)	1 817	1 719	1 862	1 679	1 860	1 682
Rectum, rectosigmoid junction and anus (154)	683	416	644	433	662	478
Liver and intrahepatic bile ducts (155)	353	198	407	183	436	207
Pancreas (157)	768	701	776	834	772	816
Trachea, bronchus and lung (162)	4 810	1 887	4 773	2 053	4 605	2 058
Bone, connective tissue, skin and breast (170–175)	1 035	3 151	1 008	3 203	1 005	3 161
Melanoma of skin (172)	608	285	586	326	580	333
Breast (174, 175)	17	2 655	19	2 623	17	2 602
Genitourinary organs (179–189)	3 596	1 922	3 710	2 047	3 505	1 979
Ovary and other uterine adnexa (183)	—	754	—	814	—	745
Prostate (185)	2 590	—	2 660	—	2 448	—
Bladder (188)	509	210	550	239	551	249
Other and unspecified sites (190–199)	1 776	1 456	1 874	1 614	1 869	1 624
Brain (191)	539	428	598	402	604	442
Lymphatic and haematopoietic tissue (200–208)	1 867	1 481	1 855	1 527	1 870	1 545
Leukaemia (204–208)	723	531	768	536	690	526
Benign and unspecified neoplasms (210–239)	266	279	303	278	292	279
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	2 257	1 854	1 970	1 948	1 935	1 989
Diabetes mellitus (250)	1 377	1 365	1 521	1 470	1 425	1 420
Class IV Diseases of blood and blood-forming organs (280–289)	176	225	196	209	178	212
Class V Mental disorders (290–319)	1 262	1 723	1 495	2 065	1 476	1 658
Senile and presenile organic psychotic conditions (290)	729	1 498	893	1 862	346	689
Drug dependence (304)	263	70	345	78	473	123
Class VI Disease of the nervous system and sense organs (320–389)	1 394	1 550	1 530	1 559	1 289	1 474
Hereditary and degenerative diseases of the central nervous system (330–337)	1 002	1 252	1 104	1 196	896	1 112
Alzheimer's disease (3310)	366	683	367	681	268	568
Class VII Diseases of the circulatory system (390–459)	27 031	27 856	26 550	27 439	25 717	26 924
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	19 842	18 412	19 513	17 990	18 971	17 836
Rheumatic fever and rheumatic heart disease (390–398)	111	229	125	221	125	223
Hypertensive disease (401–405)	427	691	440	660	448	687
Ischaemic heart disease (410–414)	16 515	14 059	16 092	13 545	15 565	13 486
Acute myocardial infarction (410)	10 240	8 757	9 662	8 103	9 087	8 040
Diseases of pulmonary circulation and other forms of heart disease (415–429)	2 995	3 696	3 067	3 831	3 074	3 748
Heart failure (428)	1 070	1 833	1 100	1 808	1 041	1 662
Cerebrovascular disease (430–438)	5 260	7 578	5 205	7 601	4 879	7 254
Diseases of arteries, arterioles and capillaries (440–448)	1 611	1 459	1 496	1 437	1 538	1 395
Atherosclerosis (440)	324	508	285	530	221	389
Aortic aneurysm (441)	935	545	908	528	922	583

(a) See Explanatory Notes, paragraph 12 for further information.

1.3 UNDERLYING CAUSE, Selected Years *continued*

Cause of death and ICD code	1988.....		1990.....		1992.....	
	Males	Females	Males	Females	Males	Females
Class VIII Diseases of the respiratory system (460–519)	5 614	3 422	5 466	3 535	5 972	4 096
Pneumonia and influenza (480–487)	787	920	835	962	985	1 023
Chronic obstructive pulmonary disease and allied conditions (490–496)	4 258	2 090	4 018	2 103	4 301	2 481
Emphysema (492)	680	237	584	213	623	298
Asthma (493)	380	446	381	441	332	427
Class IX Diseases of the digestive system (520–579)	2 172	1 982	2 107	1 987	2 058	1 904
Diseases of oesophagus, stomach and duodenum (530–537)	482	515	475	527	428	422
Ulcer of stomach and duodenum (531–533)	410	432	390	444	350	371
Chronic liver disease and cirrhosis (571)	851	309	796	319	807	295
Class X Diseases of the genitourinary system (580–629)	821	1 029	845	1 043	845	1 016
Nephritis, nephrotic syndrome and nephrosis (580–589)	556	708	588	715	588	722
Renal failure (584–586)	432	501	472	506	483	550
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	—	12	—	16	—	9
Class XII Diseases of the skin and subcutaneous tissue (680–709)	47	80	51	86	56	93
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	235	420	225	433	223	499
Arthropathies and related disorders (710–719)	171	318	163	320	153	376
Class IV Congenital anomalies (740–759)	458	406	442	398	453	352
Class XV Certain conditions originating in the perinatal period (760–779)	511	383	532	369	478	368
Class XVI Symptoms, signs and ill-defined conditions (780–799)	457	326	451	362	378	334
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	5 980	2 496	5 588	2 347	5 230	2 259
Accidents (E800–E949)	3 918	1 833	3 489	1 715	3 080	1 598
Motor vehicle traffic accidents (E810–E819)	2 176	902	1 751	738	1 408	658
Accidental falls (E880–E888)	436	522	472	558	455	511
Accidental drowning and submersion (E910)	232	70	227	73	216	75
Suicide (E950–E959)	1 730	467	1 735	426	1 820	474
Homicide (E960–E969)	241	154	239	146	196	123

1.3 UNDERLYING CAUSE, Selected Years *continued*

Cause of death and ICD code	1994.....		1996.....		1997.....	
	Males	Females	Males	Females	Males	Females
Class VIII Diseases of the respiratory system (460–519)	5 791	4 167	5 733	4 560	6 960	6 299
Pneumonia and influenza (480–487)	894	994	790	1 046	2 151	2 866
Chronic obstructive pulmonary disease and allied conditions (490–496)	4 132	2 581	4 147	2 813	3 830	2 627
Emphysema (492)	591	304	613	326	591	316
Asthma (493)	329	496	299	431	306	409
Class IX Diseases of the digestive system (520–579)	1 961	1 897	2 022	1 871	2 024	1 928
Diseases of oesophagus, stomach and duodenum (530–537)	374	396	316	373	295	374
Ulcer of stomach and duodenum (531–533)	287	321	231	279	206	266
Chronic liver disease and cirrhosis (571)	728	319	768	305	764	287
Class X Diseases of the genitourinary system (580–629)	977	1 133	1 001	1 243	1 090	1 362
Nephritis, nephrotic syndrome and nephrosis (580–589)	717	817	789	966	739	878
Renal failure (584–586)	625	661	685	799	634	735
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	—	16	—	12	—	11
Class XII Diseases of the skin and subcutaneous tissue (680–709)	85	126	58	117	87	116
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	229	546	235	559	193	463
Arthropathies and related disorders (710–719)	148	368	146	382	114	286
Class IV Congenital anomalies (740–759)	413	341	350	301	411	349
Class XV Certain conditions originating in the perinatal period (760–779)	402	293	391	309	336	284
Class XVI Symptoms, signs and ill-defined conditions (780–799)	278	269	285	262	253	236
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	5 087	2 099	5 431	2 123	5 393	2 344
Accidents (E800–E949)	2 969	1 521	3 174	1 522	2 935	1 617
Motor vehicle traffic accidents (E810–E819)	1 369	590	1 398	544	1 240	561
Accidental falls (E880–E888)	458	545	523	579	486	639
Accidental drowning and submersion (E910)	208	41	188	59	217	59
Suicide (E950–E959)	1 830	428	1 931	462	2 146	577
Homicide (E960–E969)	211	121	223	103	215	114

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

Cause of death and ICD code	1988.....			1990.....			1992.....		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
<b>All causes</b>	<b>975.4</b>	<b>580.8</b>	<b>752.2</b>	<b>919.1</b>	<b>556.7</b>	<b>715.3</b>	<b>889.3</b>	<b>542.6</b>	<b>694.7</b>
Class I Infectious and parasitic diseases (001–139)	6.1	3.5	4.6	6.0	3.8	4.8	6.6	3.8	5.0
Class II Neoplasms (140–239)	245.4	144.4	185.9	239.9	142.2	182.5	240.4	141.4	182.8
Malignant neoplasms (140–208)	243.2	142.5	183.9	238.1	140.7	180.9	238.2	139.3	180.7
Lip, oral cavity and pharynx (140–149)	6.0	1.8	3.8	6.1	1.9	3.8	5.9	1.7	3.7
Digestive organs and peritoneum (150–159)	68.6	42.1	53.5	65.8	40.0	51.3	64.5	39.5	50.5
Oesophagus (150)	7.1	3.1	4.9	6.7	2.3	4.3	7.1	2.6	4.6
Stomach (151)	13.0	5.6	8.8	11.2	5.0	7.6	10.0	4.6	6.9
Colon (153)	22.2	17.0	19.2	21.5	16.2	18.5	21.2	15.3	17.8
Rectum, rectosigmoid junction and anus (154)	9.5	4.5	6.6	8.8	4.4	6.3	8.5	4.4	6.2
Liver and intrahepatic bile ducts (155)	3.4	1.4	2.3	3.7	1.3	2.4	4.3	1.4	2.7
Pancreas (157)	9.6	6.3	7.8	9.7	7.0	8.2	9.3	7.2	8.2
Trachea, bronchus and lung (162)	65.1	17.4	38.1	60.0	17.2	35.9	59.4	17.9	36.2
Bone, connective tissue, skin and breast (170–175)	11.3	32.2	22.6	12.1	32.2	22.8	12.9	31.1	22.5
Melanoma of skin (172)	6.6	3.4	4.9	6.7	3.4	4.9	6.6	3.6	4.9
Breast (174, 175)	0.4	26.9	14.8	0.2	26.9	14.6	0.3	25.4	13.8
Genitourinary organs (179–189)	44.6	20.0	28.8	45.3	20.2	29.3	46.6	18.5	29.1
Ovary and other uterine adnexa (183)	0.0	7.1	3.8	0.0	8.1	4.4	0.0	7.0	3.8
Prostate (185)	30.6	0.0	11.9	32.1	0.0	12.5	33.7	0.0	13.3
Bladder (188)	8.0	2.3	4.6	7.0	2.4	4.2	6.9	2.1	4.1
Other and unspecified sites (190–199)	21.3	14.4	17.5	21.5	15.2	18.0	21.8	15.5	18.4
Brain (191)	6.4	4.2	5.2	6.5	4.7	5.5	6.4	4.4	5.4
Lymphatic and haematopoietic tissue (200–208)	21.6	13.7	17.1	21.5	13.1	16.8	21.5	14.3	17.4
Leukaemia (204–208)	8.8	5.2	6.7	8.2	4.7	6.2	8.7	5.4	6.8
Benign and unspecified neoplasms (210–239)	2.2	1.9	2.0	1.9	1.5	1.7	2.2	2.0	2.1
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	20.1	15.0	17.3	24.1	14.3	18.8	25.2	15.7	20.1
Diabetes mellitus (250)	14.1	11.5	12.6	15.5	11.1	13.0	15.5	12.0	13.5
Class IV Diseases of blood and blood-forming organs (280–289)	3.1	2.3	2.7	3.6	2.3	2.8	3.1	2.1	2.5
Class V Mental disorders (290–319)	15.1	10.2	12.5	14.4	10.1	12.2	13.4	10.2	12.0
Senile and presenile organic psychotic conditions (290)	9.0	8.0	8.4	8.6	8.2	8.4	8.0	8.6	8.5
Drug dependence (304)	2.7	1.1	1.9	2.4	0.8	1.6	2.3	0.7	1.5
Class VI Disease of the nervous system and sense organs (320–389)	17.0	11.1	13.6	16.0	11.8	13.5	17.7	12.9	14.9
Hereditary and degenerative diseases of the central nervous system (330–337)	12.4	8.1	9.9	11.9	8.7	10.0	13.0	9.8	11.1
Alzheimer's disease (3310)	4.3	3.5	3.8	4.1	4.2	4.2	5.3	5.3	5.3
Class VII Diseases of the circulatory system (390–459)	434.4	279.1	348.5	399.8	262.9	324.7	376.8	249.7	307.1
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	319.8	184.3	244.6	295.1	174.5	228.2	278.3	168.5	217.6
Rheumatic fever and rheumatic heart disease (390–398)	2.1	2.9	2.5	1.8	2.4	2.2	1.6	2.4	2.0
Hypertensive disease (401–405)	7.2	6.8	7.1	6.1	6.1	6.3	5.5	6.1	6.0
Ischaemic heart disease (410–414)	269.3	143.4	199.0	248.7	136.7	186.2	233.4	130.8	176.4
Acute myocardial infarction (410)	184.5	97.3	135.8	166.4	92.3	124.9	150.9	84.2	113.7
Diseases of pulmonary circulation and other forms of heart disease (415–429)	44.7	34.1	39.1	41.6	32.1	36.6	40.3	32.1	36.0
Heart failure (428)	19.4	17.2	18.2	18.1	16.1	17.0	16.7	15.7	16.2
Cerebrovascular disease (430–438)	83.5	75.0	79.3	74.1	69.5	72.5	70.1	63.1	66.8
Diseases of arteries, arterioles and capillaries (440–448)	26.3	15.3	20.0	25.8	14.7	19.5	24.5	13.7	18.3
Atherosclerosis (440)	7.0	6.9	7.1	5.6	5.7	5.8	5.0	5.0	5.1
Aortic aneurysm (441)	13.8	4.9	8.6	14.2	5.1	8.9	13.3	5.1	8.6

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

See Glossary for further explanation.

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

Cause of death and ICD code	1994.....			1996.....			1997.....		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
<b>All causes</b>	<b>861.7</b>	<b>523.5</b>	<b>671.6</b>	<b>820.2</b>	<b>501.1</b>	<b>641.5</b>	<b>787.3</b>	<b>493.5</b>	<b>624.3</b>
Class I Infectious and parasitic diseases (001–139)	7.1	4.3	5.6	12.2	4.8	8.3	9.5	5.1	7.2
Class II Neoplasms (140–239)	242.5	141.6	183.8	234.0	140.9	179.8	222.8	137.0	173.4
Malignant neoplasms (140–208)	239.0	139.1	181.0	230.2	138.6	177.0	219.4	134.8	170.7
Lip, oral cavity and pharynx (140–149)	5.5	1.8	3.6	5.8	1.9	3.8	4.9	1.6	3.2
Digestive organs and peritoneum (150–159)	65.1	39.4	51.0	62.7	38.6	49.5	62.0	38.2	48.9
Oesophagus (150)	7.1	2.8	4.8	7.2	2.8	4.8	7.3	2.5	4.7
Stomach (151)	10.2	4.4	6.9	8.8	4.2	6.2	8.9	4.0	6.2
Colon (153)	22.3	16.2	19.0	21.7	15.1	18.0	21.0	14.7	17.5
Rectum, rectosigmoid junction and anus (154)	8.4	3.9	5.9	7.5	3.8	5.5	7.5	4.2	5.7
Liver and intrahepatic bile ducts (155)	4.3	1.9	3.0	4.7	1.7	3.1	4.9	1.9	3.2
Pancreas (157)	9.4	6.6	7.9	9.0	7.3	8.2	8.7	7.0	7.9
Trachea, bronchus and lung (162)	58.7	18.7	36.3	55.4	19.4	35.3	52.1	19.1	33.6
Bone, connective tissue, skin and breast (170–175)	12.6	31.3	22.5	11.8	30.3	21.5	11.3	29.3	20.8
Melanoma of skin (172)	7.3	2.8	4.8	6.7	3.0	4.7	6.4	3.1	4.6
Breast (174, 175)	0.2	26.5	14.3	0.2	25.0	13.5	0.2	24.2	13.0
Genitourinary organs (179–189)	47.3	18.9	29.4	45.7	18.9	28.9	41.4	17.6	26.7
Ovary and other uterine adnexa (183)	0.0	7.6	4.1	..	7.7	4.2	..	6.8	3.7
Prostate (185)	34.7	0.0	13.7	33.1	..	13.2	29.3	..	11.8
Bladder (188)	6.7	1.9	3.8	6.7	2.0	3.9	6.5	2.0	3.9
Other and unspecified sites (190–199)	21.6	14.0	17.4	21.8	14.6	17.8	21.0	14.4	17.4
Brain (191)	6.2	4.4	5.3	6.7	4.0	5.2	6.6	4.3	5.4
Lymphatic and haematopoietic tissue (200–208)	23.0	14.2	18.0	21.6	13.9	17.3	21.2	13.7	17.0
Leukaemia (204–208)	9.0	5.1	6.8	9.0	4.8	6.7	7.9	4.7	6.1
Benign and unspecified neoplasms (210–239)	3.5	2.5	2.9	3.8	2.3	2.8	3.5	2.3	2.7
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	28.0	16.8	21.9	23.6	16.5	19.6	22.3	16.4	19.1
Diabetes mellitus (250)	17.8	12.2	14.5	18.3	12.3	14.9	16.5	11.7	13.8
Class IV Diseases of blood and blood-forming organs (280–289)	2.3	2.0	2.1	2.4	1.7	2.0	2.1	1.6	1.8
Class V Mental disorders (290–319)	16.8	13.7	15.5	18.7	15.0	17.1	17.2	12.0	14.8
Senile and presenile organic psychotic conditions (290)	10.6	11.5	11.3	11.9	13.0	12.8	4.3	4.6	4.6
Drug dependence (304)	3.0	0.8	1.9	3.9	0.9	2.4	5.2	1.4	3.3
Class VI Disease of the nervous system and sense organs (320–389)	18.2	13.6	15.5	18.6	12.8	15.3	15.0	12.1	13.4
Hereditary and degenerative diseases of the central nervous system (330–337)	13.6	10.5	11.7	13.8	9.3	11.1	10.6	8.6	9.5
Alzheimer's disease (3310)	5.2	5.4	5.4	4.8	4.9	4.9	3.3	4.0	3.8
Class VII Diseases of the circulatory system (390–459)	355.8	231.4	287.0	326.3	211.1	262.7	303.9	199.5	246.7
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	258.7	154.0	200.6	238.1	139.2	183.3	222.9	132.9	173.4
Rheumatic fever and rheumatic heart disease (390–398)	1.4	2.1	1.8	1.5	2.0	1.7	1.4	1.9	1.7
Hypertensive disease (401–405)	5.6	5.7	5.8	5.4	5.1	5.3	5.3	5.1	5.3
Ischaemic heart disease (410–414)	214.1	118.4	160.7	195.5	105.5	145.4	182.3	101.1	137.4
Acute myocardial infarction (410)	132.3	74.6	100.1	117.2	64.1	87.5	106.5	60.7	81.2
Diseases of pulmonary circulation and other forms of heart disease (415–429)	40.3	30.1	34.8	38.3	28.7	33.1	36.8	27.2	31.6
Heart failure (428)	15.4	14.1	14.8	14.6	12.7	13.5	13.0	11.3	12.1
Cerebrovascular disease (430–438)	71.5	61.9	66.5	65.5	57.7	61.5	58.6	52.8	56.0
Diseases of arteries, arterioles and capillaries (440–448)	21.5	12.0	16.0	18.6	10.9	14.2	18.4	10.3	13.7
Atherosclerosis (440)	4.6	3.9	4.2	3.8	3.7	3.8	2.8	2.6	2.7
Aortic aneurysm (441)	12.1	4.8	7.8	11.0	4.3	7.1	10.8	4.6	7.3

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

See Glossary for further explanation.

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

Cause of death and ICD code	1988.....			1990.....			1992.....		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Class VIII Diseases of the respiratory system (460–519)	90.0	36.2	56.9	82.5	35.3	53.7	84.7	38.4	56.4
Pneumonia and influenza (480–487)	13.4	9.2	10.9	13.2	9.0	10.8	14.7	8.9	11.2
Chronic obstructive pulmonary disease and allied conditions (490–496)	67.4	22.8	39.9	59.8	21.8	36.5	60.1	24.2	38.1
Emphysema (492)	10.5	2.6	5.7	8.6	2.2	4.7	8.6	3.0	5.2
Asthma (493)	5.3	5.0	5.1	5.1	4.7	4.9	4.2	4.2	4.3
Class IX Diseases of the digestive system (520–579)	32.3	20.8	26.1	29.7	19.7	24.4	27.4	17.7	22.2
Diseases of oesophagus, stomach and duodenum (530–537)	7.8	5.3	6.3	7.2	5.0	6.0	6.1	3.8	4.8
Ulcer of stomach and duodenum (531–533)	6.6	4.4	5.3	5.9	4.3	5.0	5.0	3.3	4.0
Chronic liver disease and cirrhosis (571)	10.9	3.7	7.1	9.8	3.6	6.6	9.5	3.1	6.3
Class X Diseases of the genitourinary system (580–629)	14.5	10.6	11.8	13.9	10.2	11.3	12.7	9.3	10.4
Nephritis, nephrotic syndrome and nephrosis (580–589)	9.9	7.3	8.1	9.8	7.0	7.8	8.9	6.6	7.3
Renal failure (584–586)	8.0	5.0	6.0	8.2	4.7	5.9	7.5	4.8	5.7
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	0.0	0.1	0.1	0.0	0.2	0.1	0.0	0.1	0.1
Class XII Diseases of the skin and subcutaneous tissue (680–709)	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.8
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	3.7	4.4	4.1	3.3	4.3	3.9	3.1	4.7	4.0
Class IV Congenital anomalies (740–759)	5.5	5.0	5.2	5.1	4.7	4.9	5.2	4.1	4.6
Class XV Certain conditions originating in the perinatal period (760–779)	6.1	4.8	5.5	6.1	4.4	5.3	5.4	4.4	4.9
Class XVI Symptoms, signs and ill-defined conditions (780–799)	5.8	3.7	4.8	5.5	4.0	4.8	4.6	3.4	4.1
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	75.6	28.7	51.7	68.4	25.7	46.7	62.0	23.9	42.6
Accidents (E800–E949)	50.0	20.7	35.1	43.4	18.4	30.6	37.2	16.4	26.6
Motor vehicle traffic accidents (E810–E819)	26.6	10.7	18.6	20.9	8.5	14.6	16.4	7.4	11.8
Accidental falls (E880–E888)	7.2	5.2	6.1	7.4	5.2	6.2	6.5	4.4	5.4
Accidental drowning and submersion (E910)	2.8	0.8	1.8	2.6	0.8	1.7	2.5	0.9	1.7
Suicide (E950–E959)	21.5	5.6	13.4	20.7	4.9	12.7	21.1	5.3	13.1
Homicide (E960–E969)	2.9	1.9	2.4	2.8	1.7	2.3	2.2	1.4	1.8

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

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

Cause of death and ICD code	1994.....			1996.....			1997.....		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Class VIII Diseases of the respiratory system (460–519)	76.9	36.9	52.5	71.1	37.5	50.7	83.6	47.9	62.3
Pneumonia and influenza (480–487)	12.2	8.1	9.8	10.1	7.8	8.8	26.7	19.8	22.6
Chronic obstructive pulmonary disease and allied conditions (490–496)	54.3	23.8	35.6	51.0	24.3	34.7	45.1	22.1	31.4
Emphysema (492)	7.6	2.9	4.8	7.4	2.9	4.8	6.9	2.7	4.5
Asthma (493)	4.2	4.7	4.4	3.5	3.8	3.7	3.5	3.5	3.5
Class IX Diseases of the digestive system (520–579)	24.7	16.5	20.4	23.9	15.2	19.3	23.0	15.3	19.0
Diseases of oesophagus, stomach and duodenum (530–537)	5.0	3.3	4.0	3.9	2.9	3.3	3.5	2.8	3.1
Ulcer of stomach and duodenum (531–533)	3.8	2.7	3.2	2.9	2.2	2.5	2.4	2.0	2.2
Chronic liver disease and cirrhosis (571)	8.3	3.3	5.7	8.3	3.0	5.6	8.1	2.8	5.4
Class X Diseases of the genitourinary system (580–629)	13.8	9.5	10.9	12.9	9.7	10.8	13.4	10.1	11.3
Nephritis, nephrotic syndrome and nephrosis (580–589)	10.2	6.8	7.9	10.2	7.5	8.4	9.0	6.6	7.5
Renal failure (584–586)	9.0	5.2	6.6	9.0	6.0	7.1	7.8	5.3	6.2
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	0.0	0.2	0.1	..	0.1	0.1	..	0.1	0.1
Class XII Diseases of the skin and subcutaneous tissue (680–709)	1.2	1.0	1.1	0.8	0.9	0.8	1.1	0.8	0.9
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	3.0	4.8	4.1	2.9	4.6	3.9	2.3	3.7	3.1
Class IV Congenital anomalies (740–759)	4.7	3.9	4.3	4.0	3.5	3.7	4.6	4.0	4.3
Class XV Certain conditions originating in the perinatal period (760–779)	4.6	3.5	4.0	4.5	3.7	4.1	3.9	3.5	3.7
Class XVI Symptoms, signs and ill-defined conditions (780–799)	3.3	2.6	3.0	3.2	2.5	2.9	2.9	2.0	2.5
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	58.9	21.2	39.7	61.1	20.6	40.5	59.7	22.3	40.7
Accidents (E800–E949)	35.0	14.9	24.7	36.2	14.1	24.9	32.9	14.6	23.6
Motor vehicle traffic accidents (E810–E819)	15.8	6.5	11.0	15.8	5.8	10.7	13.8	6.0	9.9
Accidental falls (E880–E888)	6.2	4.4	5.2	6.5	4.3	5.3	5.9	4.5	5.1
Accidental drowning and submersion (E910)	2.3	0.5	1.4	2.1	0.6	1.4	2.3	0.6	1.5
Suicide (E950–E959)	20.7	4.7	12.6	21.3	4.9	13.0	23.4	6.1	14.6
Homicide (E960–E969)	2.4	1.4	1.9	2.5	1.1	1.8	2.3	1.2	1.8

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



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

Cause of death and ICD code	NUMBER OF DEATHS.....			PERCENTAGE OF TOTAL DEATHS.....		
	Males	Females	Persons	Males	Females	Persons
<b>All causes</b>	<b>67 752</b>	<b>61 598</b>	<b>129 350</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Infectious and parasitic diseases (001–139)	839	633	1 472	1.2	1.0	1.1
Intestinal infectious diseases (001–009)	23	31	54	(b)	0.1	(b)
Tuberculosis (010–018)	25	10	35	(b)	(b)	(b)
Whooping cough (033)	5	1	6	(b)	(b)	(b)
Meningococcal infection (036)	10	16	26	(b)	(b)	(b)
Tetanus (037)	—	1	1	..	(b)	(b)
Septicaemia (038)	311	359	670	0.5	0.6	0.5
Smallpox (050)	—	—	—	..	..	..
Measles (055)	—	—	—	..	..	..
Malaria (084)	1	—	1	(b)	..	(b)
Malignant neoplasms (140–208)	19 279	15 037	34 316	28.5	24.4	26.5
Stomach (151)	780	467	1 247	1.2	0.8	1.0
Colon (153)	1 860	1 682	3 542	2.7	2.7	2.7
Rectum, rectosigmoid junction and anus (154)	662	478	1 140	1.0	0.8	0.9
Trachea, bronchus and lung (162)	4 605	2 058	6 663	6.8	3.3	5.2
Female breast (174)	—	2 602	2 602	..	4.2	2.0
Cervix uteri (180)	—	300	300	..	0.5	0.2
Leukaemia (204–208)	690	526	1 216	1.0	0.9	0.9
Diabetes mellitus (250)	1 425	1 420	2 845	2.1	2.3	2.2
Nutritional marasmus (261)	—	5	5	..	(b)	(b)
Other protein–calorie malnutrition (262, 263)	28	51	79	(b)	0.1	0.1
Anaemias (280–285)	85	124	209	0.1	0.2	0.2
Meningitis (320–322)	21	20	41	(b)	(b)	(b)
Diseases of the circulatory system (390–459)	25 717	26 924	52 641	38.0	43.7	40.7
Acute rheumatic fever (390–392)	2	1	3	(b)	(b)	(b)
Chronic rheumatic heart disease (393–398)	123	222	345	0.2	0.4	0.3
Hypertensive disease (401–405)	448	687	1 135	0.7	1.1	0.9
Ischaemic heart disease (410–414)	15 565	13 486	29 051	23.0	21.9	22.5
Acute myocardial infarction (410)	9 087	8 040	17 127	13.4	13.1	13.2
Cerebrovascular disease (430–438)	4 879	7 254	12 133	7.2	11.8	9.4
Atherosclerosis (440)	221	389	610	0.3	0.6	0.5
Pneumonia (480–486)	2 060	2 747	4 807	3.0	4.5	3.7
Influenza (487)	91	119	210	0.1	0.2	0.2
Bronchitis, emphysema and asthma (490–493)	1 069	858	1 927	1.6	1.4	1.5
Ulcer of stomach and duodenum (531–533)	206	266	472	0.3	0.4	0.4
Appendicitis (540–543)	14	13	27	(b)	(b)	(b)
Chronic liver disease and cirrhosis (571)	764	287	1 051	1.1	0.5	0.8
Nephritis, nephrotic syndrome and nephrosis (580–589)	739	878	1 617	1.1	1.4	1.3
Hyperplasia of prostate (600)	51	—	51	0.1	..	(b)
Abortion (630–639)	—	—	—	..	..	..
Direct obstetric deaths (640–646, 651–676)	—	10	10	..	(b)	(b)
Congenital anomalies (740–759)	411	349	760	0.6	0.6	0.6
Certain conditions originating in the perinatal period (760–779)	336	284	620	0.5	0.5	0.5
Birth trauma (767)	18	15	33	(b)	(b)	(b)
Signs, symptoms and ill-defined conditions (780–799)	253	236	489	0.4	0.4	0.4
Accidents and adverse effects (E800–E949)	2 935	1 617	4 552	4.3	2.6	3.5
Motor vehicle traffic accidents (E810–E819)	1 240	561	1 801	1.8	0.9	1.4
Accidental falls (E880–E888)	486	639	1 125	0.7	1.0	0.9
Suicide (E950–E959)	2 146	577	2 723	3.2	0.9	2.1
Homicide (E960–E969)	215	114	329	0.3	0.2	0.3

(a) The classification is based on the Mortality List of Fifty Causes recommended by the Ninth Revision (1975) of the International Classification of Diseases. See Explanatory Notes, paragraph 13.

(b) Less than 0.05.



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

Cause of death and ICD code	NSW.....		Vic.....		Qld.....		SA.....	
	Males	Females	Males	Females	Males	Females	Males	Females
<b>Under 1 year</b>	<b>242</b>	<b>209</b>	<b>158</b>	<b>142</b>	<b>168</b>	<b>104</b>	<b>53</b>	<b>34</b>
Congenital anomalies (740–759)	63	60	52	52	44	39	16	9
Congenital anomalies of nervous system (740–742)	5	7	15	11	7	9	3	1
Congenital anomalies of circulatory system (745–747)	16	21	11	10	16	11	7	2
Congenital anomalies of respiratory system (748)	15	5	2	5	6	7	1	1
Certain conditions originating in the perinatal period (760–779)	116	118	70	62	78	41	24	16
Disorders relating to short gestation and unspecified low birthweight (765)	10	9	7	7	4	2	6	2
Hypoxia, birth asphyxia and other respiratory conditions (768–770)	18	11	17	7	6	5	3	1
Sudden death, cause unknown (798)	27	12	12	12	31	11	7	2
<b>1–14 years</b>	<b>147</b>	<b>89</b>	<b>88</b>	<b>81</b>	<b>91</b>	<b>51</b>	<b>32</b>	<b>22</b>
Malignant neoplasms (140–208)	31	16	18	18	11	6	5	9
Brain (191)	9	7	3	6	4	2	—	2
Lymphatic and haematopoietic tissue (200–208)	11	4	6	6	4	3	4	6
Diseases of the nervous system and sense organs (320–389)	9	14	8	6	9	3	5	—
Diseases of the circulatory system (390–459)	2	3	2	3	2	1	—	1
Congenital anomalies (740–759)	13	9	7	11	10	7	4	1
Accidents, poisonings and violence (E800–E999)	68	23	37	27	46	18	15	8
Motor vehicle traffic accidents (E810–E819)	22	8	11	14	20	6	4	1
Accidents caused by submersion, suffocation and foreign bodies (E910–E915)	21	8	8	6	11	5	3	2
<b>15–24 years</b>	<b>460</b>	<b>164</b>	<b>339</b>	<b>100</b>	<b>296</b>	<b>121</b>	<b>93</b>	<b>34</b>
Malignant neoplasms (140–208)	19	14	17	13	24	12	5	3
Lymphatic and haematopoietic tissue (200–208)	8	7	6	7	14	3	3	—
Drug dependence (304)	58	22	25	5	3	2	4	—
Diseases of the nervous system and sense organs (320–389)	16	4	17	7	6	5	3	2
Accidents, poisonings and violence (E800–E999)	313	87	246	54	242	78	68	23
Motor vehicle traffic accidents (E810–E819)	106	37	95	27	90	41	27	10
Suicide (E950–E959)	138	32	100	17	96	22	30	7
<b>25–44 years</b>	<b>1 469</b>	<b>683</b>	<b>999</b>	<b>484</b>	<b>811</b>	<b>377</b>	<b>315</b>	<b>166</b>
Malignant neoplasms (140–208)	189	267	138	182	117	123	40	62
Digestive organs and peritoneum (150–159)	45	35	40	19	35	14	7	14
Female breast (174)	—	100	—	70	—	41	—	18
Lymphatic and haematopoietic tissue (200–208)	34	32	32	18	24	8	8	6
Mental disorders (290–319)	184	32	124	28	28	8	20	10
Drug dependence (304)	166	27	115	23	17	5	14	9
Diseases of the circulatory system (390–459)	198	70	111	51	122	52	38	18
Ischaemic heart disease (410–414)	117	20	51	14	81	14	22	7
Acute myocardial infarction (410)	59	11	17	3	45	7	9	6
Diseases of the digestive system (520–579)	38	18	46	21	22	13	17	8
Chronic liver disease and cirrhosis (571)	28	15	28	11	17	9	9	6
Accidents, poisonings and violence (E800–E999)	634	193	446	129	415	118	165	46
Motor vehicle traffic accidents (E810–E819)	125	54	106	32	81	27	34	15
Suicide (E950–E959)	312	87	221	58	194	47	79	11
<b>45–54 years</b>	<b>1 407</b>	<b>845</b>	<b>984</b>	<b>605</b>	<b>803</b>	<b>495</b>	<b>336</b>	<b>177</b>
Malignant neoplasms (140–208)	455	472	337	367	259	290	119	95
Digestive organs and peritoneum (150–159)	147	91	104	79	61	51	39	20
Trachea, bronchus and lung (162)	75	51	65	45	73	48	25	13
Female breast (174)	—	156	—	123	—	96	—	27
Genitourinary organs (179–189)	36	72	30	49	16	31	8	13
Lymphatic and haematopoietic tissue (200–208)	57	25	42	25	28	22	11	10
Diseases of the circulatory system (390–459)	435	128	287	76	257	81	94	32
Ischaemic heart disease (410–414)	295	63	192	26	186	39	65	17
Acute myocardial infarction (410)	164	45	87	19	98	18	30	7
Cerebrovascular disease (430–438)	59	41	40	28	35	22	9	7
Diseases of the respiratory system (460–519)	52	35	26	17	31	19	11	7
Disease of the digestive system (520–579)	93	38	43	20	38	19	29	4
Chronic liver disease and cirrhosis (571)	73	24	29	11	29	11	21	2
Accidents, poisonings and violence (E800–E999)	214	87	171	57	133	39	53	14
Motor vehicle traffic accidents (E810–E819)	33	16	29	15	26	16	5	4
Suicide (E950–E959)	98	43	80	25	54	12	27	5

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>71</b>	<b>60</b>	<b>26</b>	<b>13</b>	<b>21</b>	<b>24</b>	<b>5</b>	<b>11</b>
Congenital anomalies (740–759)	20	22	11	2	4	6	2	4
Congenital anomalies of nervous system (740–742)	4	2	1	—	1	—	1	—
Congenital anomalies of circulatory system (745–747)	8	7	4	2	3	3	1	1
Congenital anomalies of respiratory system (748)	2	2	—	—	—	—	—	—
Certain conditions originating in the perinatal period (760–779)	27	24	8	5	11	8	1	4
Disorders relating to short gestation and unspecified low birthweight (765)	—	3	1	—	3	1	—	—
Hypoxia, birth asphyxia and other respiratory conditions (768–770)	14	4	1	—	4	2	—	1
Sudden death, cause unknown (798)	10	8	2	3	3	8	1	2
<b>1–14 years</b>	<b>50</b>	<b>17</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>15</b>	<b>6</b>	<b>1</b>
Malignant neoplasms (140–208)	6	4	1	2	—	—	—	—
Brain (191)	1	2	—	2	—	—	—	—
Lymphatic and haematopoietic tissue (200–208)	3	1	—	—	—	—	—	—
Diseases of the nervous system and sense organs (320–389)	3	—	1	2	—	—	—	—
Diseases of the circulatory system (390–459)	—	1	1	—	—	1	1	—
Congenital anomalies (740–759)	7	2	—	—	2	1	1	—
Accidents, poisonings and violence (E800–E999)	26	9	6	5	6	8	4	1
Motor vehicle traffic accidents (E810–E819)	9	3	—	—	3	3	1	—
Accidents caused by submersion, suffocation and foreign bodies (E910–E915)	9	3	3	1	3	3	2	—
<b>15–24 years</b>	<b>150</b>	<b>57</b>	<b>36</b>	<b>14</b>	<b>33</b>	<b>8</b>	<b>22</b>	<b>7</b>
Malignant neoplasms (140–208)	8	9	1	2	2	—	2	—
Lymphatic and haematopoietic tissue (200–208)	3	3	—	1	1	—	—	—
Drug dependence (304)	12	10	—	—	—	—	2	—
Diseases of the nervous system and sense organs (320–389)	4	3	3	2	2	1	—	—
Accidents, poisonings and violence (E800–E999)	109	28	21	5	20	4	16	6
Motor vehicle traffic accidents (E810–E819)	52	15	7	3	6	—	5	1
Suicide (E950–E959)	34	9	3	—	10	1	6	5
<b>25–44 years</b>	<b>437</b>	<b>200</b>	<b>77</b>	<b>47</b>	<b>114</b>	<b>60</b>	<b>65</b>	<b>33</b>
Malignant neoplasms (140–208)	61	71	8	19	6	8	12	10
Digestive organs and peritoneum (150–159)	18	4	1	4	—	—	2	2
Female breast (174)	—	27	—	3	—	2	—	1
Lymphatic and haematopoietic tissue (200–208)	11	9	1	1	2	—	3	—
Mental disorders (290–319)	37	11	1	—	2	—	2	1
Drug dependence (304)	34	7	1	—	1	—	2	1
Diseases of the circulatory system (390–459)	56	18	7	7	21	17	8	1
Ischaemic heart disease (410–414)	28	4	5	2	13	6	6	1
Acute myocardial infarction (410)	16	1	5	2	6	2	4	—
Diseases of the digestive system (520–579)	11	6	4	2	9	4	2	1
Chronic liver disease and cirrhosis (571)	9	4	2	1	8	3	2	1
Accidents, poisonings and violence (E800–E999)	213	57	49	13	55	18	32	8
Motor vehicle traffic accidents (E810–E819)	47	15	7	4	16	8	6	1
Suicide (E950–E959)	112	21	18	6	17	3	18	4
<b>45–54 years</b>	<b>366</b>	<b>231</b>	<b>114</b>	<b>63</b>	<b>81</b>	<b>59</b>	<b>43</b>	<b>54</b>
Malignant neoplasms (140–208)	136	144	44	34	19	21	17	34
Digestive organs and peritoneum (150–159)	54	30	11	11	4	3	8	2
Trachea, bronchus and lung (162)	23	16	18	3	6	7	1	5
Female breast (174)	—	55	—	8	—	4	—	14
Genitourinary organs (179–189)	4	13	3	3	1	4	2	5
Lymphatic and haematopoietic tissue (200–208)	13	14	3	3	1	1	2	2
Diseases of the circulatory system (390–459)	90	23	31	14	32	10	14	5
Ischaemic heart disease (410–414)	63	9	15	7	17	3	9	4
Acute myocardial infarction (410)	22	6	8	6	11	3	6	4
Cerebrovascular disease (430–438)	13	6	6	3	6	4	2	—
Diseases of the respiratory system (460–519)	12	7	5	6	6	4	2	1
Disease of the digestive system (520–579)	21	9	4	2	3	3	4	1
Chronic liver disease and cirrhosis (571)	16	8	4	2	2	3	3	—
Accidents, poisonings and violence (E800–E999)	60	21	15	2	8	6	2	5
Motor vehicle traffic accidents (E810–E819)	13	6	2	—	4	3	—	1
Suicide (E950–E959)	26	8	6	—	1	1	2	2

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>2 583</b>	<b>1 542</b>	<b>1 917</b>	<b>1 058</b>	<b>1 478</b>	<b>752</b>	<b>593</b>	<b>318</b>
Malignant neoplasms (140–208)	1 075	752	863	581	639	422	241	177
Digestive organs and peritoneum (150–159)	326	199	295	151	197	129	78	49
Colon (153)	122	90	93	51	76	61	25	22
Trachea, bronchus and lung (162)	286	118	244	95	188	67	64	26
Female breast (174)	—	173	—	136	—	73	—	44
Genitourinary organs (179–189)	102	94	79	64	72	55	29	22
Diseases of the circulatory system (390–459)	922	418	601	204	507	154	222	66
Ischaemic heart disease (410–414)	634	232	408	106	361	99	158	36
Acute myocardial infarction (410)	385	150	210	55	214	60	88	23
Cerebrovascular disease (430–438)	118	77	69	37	65	25	26	19
Diseases of the respiratory system (460–519)	158	105	97	73	81	55	36	21
Chronic obstructive pulmonary disease and allied conditions (490–496)	118	82	67	57	58	44	24	20
Diseases of the digestive system (520–579)	110	60	70	33	50	16	24	6
Accidents, poisonings and violence (E800–E999)	141	53	97	50	89	23	19	9
<b>65–74 years</b>	<b>6 071</b>	<b>3 714</b>	<b>4 248</b>	<b>2 652</b>	<b>2 900</b>	<b>1 626</b>	<b>1 546</b>	<b>980</b>
Malignant neoplasms (140–208)	2 268	1 409	1 672	1 104	1 108	583	579	419
Digestive organs and peritoneum (150–159)	657	392	519	340	304	177	158	138
Colon (153)	231	158	162	121	104	76	43	44
Trachea, bronchus and lung (162)	629	231	473	190	304	120	171	72
Female breast (174)	—	208	—	168	—	86	—	53
Genitourinary organs (179–189)	345	205	263	133	183	69	88	55
Lymphatic and haematopoietic tissue (200–208)	204	148	163	124	95	50	53	37
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	135	106	198	131	105	74	49	48
Diabetes mellitus (250)	97	68	154	106	79	57	42	33
Senile and presenile organic psychotic conditions (290)	15	16	12	8	17	6	4	1
Alzheimer's disease (3310)	17	24	12	6	3	9	2	8
Diseases of the circulatory system (390–459)	2 330	1 327	1 546	849	1 046	599	634	338
Ischaemic heart disease (410–414)	1 516	765	1 027	468	728	351	411	195
Acute myocardial infarction (410)	885	470	616	274	457	228	226	110
Cerebrovascular disease (430–438)	385	287	229	205	161	129	115	65
Diseases of the respiratory system (460–519)	661	369	358	239	310	136	126	82
Chronic obstructive pulmonary disease and allied conditions (490–496)	489	264	278	188	236	106	78	52
Diseases of the digestive system (520–579)	162	124	130	73	92	43	51	25
<b>75–84 years</b>	<b>7 485</b>	<b>6 896</b>	<b>5 455</b>	<b>5 194</b>	<b>3 508</b>	<b>3 141</b>	<b>2 041</b>	<b>1 891</b>
Malignant neoplasms (140–208)	2 037	1 458	1 469	1 154	913	675	542	398
Digestive organs and peritoneum (150–159)	498	420	440	387	228	227	159	120
Colon (153)	159	157	159	150	90	89	41	46
Trachea, bronchus and lung (162)	462	205	333	171	221	95	120	45
Female breast (174)	—	193	—	149	—	71	—	59
Genitourinary organs (179–189)	509	203	361	165	215	110	129	58
Prostate (185)	388	—	278	—	168	—	105	—
Lymphatic and haematopoietic tissue (200–208)	191	167	130	123	82	72	46	52
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	165	189	202	254	103	109	71	66
Diabetes mellitus (250)	122	134	167	212	85	85	60	53
Senile and presenile organic psychotic conditions (290)	54	72	39	57	25	26	5	13
Diseases of the nervous system and sense organs (320–389)	156	157	120	116	69	67	28	31
Hereditary and degenerative diseases of the central nervous system (330–337)	129	135	109	94	62	58	21	26
Alzheimer's disease (3310)	51	69	35	42	18	24	4	11
Diseases of the circulatory system (390–459)	3 301	3 458	2 361	2 484	1 662	1 595	926	922
Ischaemic heart disease (410–414)	1 946	1 799	1 388	1 295	1 035	838	515	475
Acute myocardial infarction (410)	1 159	1 133	857	800	651	537	306	303
Cerebrovascular disease (430–438)	684	941	481	628	358	441	203	256
Diseases of arteries, arterioles and capillaries (440–448)	210	157	151	140	102	89	61	34
Diseases of the respiratory system (460–519)	1 002	761	724	540	430	313	290	207
Chronic obstructive pulmonary disease and allied conditions (490–496)	530	360	406	252	249	157	134	81
Diseases of the digestive system (520–579)	192	193	145	172	75	106	45	63

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>661</b>	<b>357</b>	<b>228</b>	<b>162</b>	<b>87</b>	<b>58</b>	<b>78</b>	<b>50</b>
Malignant neoplasms (140–208)	289	189	91	91	23	19	33	25
Digestive organs and peritoneum (150–159)	99	47	24	24	6	6	13	7
Colon (153)	37	15	15	9	—	1	3	3
Trachea, bronchus and lung (162)	66	29	21	20	8	5	9	6
Female breast (174)	—	35	—	10	—	1	—	5
Genitourinary organs (179–189)	35	27	17	16	4	1	3	3
Diseases of the circulatory system (390–459)	189	72	80	31	29	15	35	13
Ischaemic heart disease (410–414)	132	49	54	14	15	6	25	10
Acute myocardial infarction (410)	73	30	40	7	8	3	17	8
Cerebrovascular disease (430–438)	14	13	13	11	7	5	4	2
Diseases of the respiratory system (460–519)	46	24	18	13	8	9	4	4
Chronic obstructive pulmonary disease and allied conditions (490–496)	31	19	13	12	4	6	4	3
Diseases of the digestive system (520–579)	33	13	9	4	3	1	1	—
Accidents, poisonings and violence (E800–E999)	39	16	10	3	8	4	1	3
<b>65–74 years</b>	<b>1 380</b>	<b>816</b>	<b>478</b>	<b>330</b>	<b>98</b>	<b>51</b>	<b>174</b>	<b>114</b>
Malignant neoplasms (140–208)	525	339	164	108	29	13	59	50
Digestive organs and peritoneum (150–159)	163	96	54	31	8	4	22	13
Colon (153)	56	37	17	9	—	1	11	6
Trachea, bronchus and lung (162)	146	62	40	24	7	3	11	11
Female breast (174)	—	50	—	15	—	1	—	5
Genitourinary organs (179–189)	72	52	32	11	5	2	11	6
Lymphatic and haematopoietic tissue (200–208)	33	25	15	10	1	1	4	9
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	54	45	10	17	6	1	6	3
Diabetes mellitus (250)	39	40	7	14	4	1	5	2
Senile and presenile organic psychotic conditions (290)	5	2	2	3	—	—	—	—
Alzheimer's disease (3310)	7	3	1	—	—	—	1	2
Diseases of the circulatory system (390–459)	514	243	200	120	29	19	73	38
Ischaemic heart disease (410–414)	344	130	133	67	12	10	50	18
Acute myocardial infarction (410)	196	79	86	42	9	4	30	13
Cerebrovascular disease (430–438)	88	71	30	22	8	6	16	12
Diseases of the respiratory system (460–519)	136	76	53	47	19	10	10	5
Chronic obstructive pulmonary disease and allied conditions (490–496)	95	48	41	36	14	7	5	4
Diseases of the digestive system (520–579)	38	33	6	10	2	4	6	3
<b>75–84 years</b>	<b>1 663</b>	<b>1 507</b>	<b>655</b>	<b>614</b>	<b>63</b>	<b>50</b>	<b>188</b>	<b>184</b>
Malignant neoplasms (140–208)	457	363	189	122	7	12	40	53
Digestive organs and peritoneum (150–159)	122	113	60	56	—	4	8	19
Colon (153)	38	34	23	18	—	1	1	8
Trachea, bronchus and lung (162)	115	55	48	13	4	2	7	4
Female breast (174)	—	35	—	13	—	1	—	8
Genitourinary organs (179–189)	109	50	37	11	1	1	11	8
Prostate (185)	79	—	30	—	1	—	6	—
Lymphatic and haematopoietic tissue (200–208)	41	43	19	15	1	2	8	6
Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	52	55	22	19	3	2	1	8
Diabetes mellitus (250)	39	33	18	14	3	2	1	5
Senile and presenile organic psychotic conditions (290)	13	25	4	2	—	—	—	—
Diseases of the nervous system and sense organs (320–389)	43	47	17	14	1	—	6	6
Hereditary and degenerative diseases of the central nervous system (330–337)	37	40	13	13	1	—	5	5
Alzheimer's disease (3310)	14	16	1	7	—	—	1	2
Diseases of the circulatory system (390–459)	693	671	277	312	28	28	93	75
Ischaemic heart disease (410–414)	378	343	151	138	17	11	49	26
Acute myocardial infarction (410)	235	208	82	82	13	5	26	15
Cerebrovascular disease (430–438)	158	194	67	82	9	8	21	25
Diseases of arteries, arterioles and capillaries (440–448)	59	32	14	24	—	2	10	5
Diseases of the respiratory system (460–519)	230	174	85	75	12	4	27	19
Chronic obstructive pulmonary disease and allied conditions (490–496)	111	73	46	36	7	2	20	10
Diseases of the digestive system (520–579)	37	47	16	18	6	—	8	7

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

Cause of death and ICD code	NSW.....		Vic.....		Qld.....		SA.....	
	Males	Females	Males	Females	Males	Females	Males	Females
<b>85 years and over</b>	<b>3 878</b>	<b>7 750</b>	<b>2 931</b>	<b>5 823</b>	<b>1 860</b>	<b>3 363</b>	<b>1 020</b>	<b>2 007</b>
Malignant neoplasms (140–208)	630	729	484	621	324	361	170	212
Digestive organs and peritoneum (150–159)	154	267	117	242	80	146	46	85
Genitourinary organs (179–189)	224	103	180	69	111	50	63	21
Diabetes mellitus (250)	56	98	62	142	40	55	22	27
Senile and presenile organic psychotic conditions (290)	53	160	38	125	28	83	5	18
Alzheimer's disease (3310)	38	125	25	76	10	39	6	26
Diseases of the circulatory system (390–459)	1 935	4 565	1 445	3 197	944	1 975	511	1 123
Ischaemic heart disease (410–414)	974	2 104	743	1 540	543	1 015	272	508
Acute myocardial infarction (410)	561	1 171	429	884	306	595	148	280
Cerebrovascular disease (430–438)	464	1 369	334	820	215	564	109	329
Diseases of arteries, arterioles and capillaries (440–448)	142	225	87	200	52	101	36	45
Diseases of the respiratory system (460–519)	634	946	461	740	249	361	159	290
Chronic obstructive pulmonary disease and allied conditions (490–496)	228	244	193	178	90	74	48	38
Diseases of the digestive system (520–579)	104	245	74	194	55	104	31	58
Diseases of the genitourinary system (580–629)	119	214	89	193	61	74	32	52
<b>All ages(a)</b>	<b>23 746</b>	<b>21 895</b>	<b>17 122</b>	<b>16 139</b>	<b>11 915</b>	<b>10 030</b>	<b>6 029</b>	<b>5 629</b>
Class I Infectious and parasitic diseases (001–139)	345	252	201	147	132	98	65	61
Class II Neoplasms (140–239)	6 804	5 210	5 080	4 101	3 439	2 526	1 721	1 412
Malignant neoplasms (140–208)	6 705	5 117	5 000	4 043	3 394	2 473	1 701	1 374
Trachea, bronchus and lung (162)	1 577	673	1 196	566	842	356	412	169
Melanoma of skin (172)	239	121	123	78	122	65	40	27
Female breast (174)	—	901	—	730	—	412	—	232
Genitourinary organs (179–189)	1 232	702	917	503	604	329	322	172
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	509	534	630	649	329	332	198	174
Diabetes mellitus (250)	343	338	478	484	247	235	154	125
Class IV Diseases of blood and blood-forming organs (280–289)	57	76	49	57	21	36	15	22
Class V Mental disorders (290–319)	586	577	420	495	192	217	93	150
Senile and presenile organic psychotic conditions (290)	125	249	92	194	71	115	15	33
Class VI Disease of the nervous system and sense organs (320–389)	468	519	350	386	201	218	72	116
Alzheimer's disease (3310)	110	228	73	128	33	73	12	46
Class VII Diseases of the circulatory system (390–459)	9 148	9 982	6 373	6 880	4 551	4 464	2 429	2 507
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	6 735	6 604	4 724	4 612	3 401	2 948	1 776	1 672
Ischaemic heart disease (410–414)	5 487	4 983	3 807	3 447	2 934	2 357	1 443	1 238
Acute myocardial infarction (410)	3 213	2 980	2 215	2 034	1 771	1 445	807	729
Cerebrovascular disease (430–438)	1 747	2 735	1 173	1 741	852	1 203	470	681
Class VIII Diseases of the respiratory system (460–519)	2 559	2 252	1 693	1 637	1 132	911	631	615
Pneumonia and influenza (480–487)	731	964	534	758	327	392	235	331
Chronic obstructive pulmonary disease and allied conditions (490–496)	1 417	988	963	703	662	401	295	196
Class IX Disease of the digestive system (520–579)	704	684	509	513	333	303	199	164
Chronic liver disease and cirrhosis (571)	291	109	173	70	110	37	78	24
Class X Diseases of the genitourinary system (580–629)	389	495	278	367	182	195	103	123
Nephritis, nephrotic syndrome and nephrosis (580–589)	266	311	203	250	94	112	78	79
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	—	6	—	2	—	2	—	—
Class XII Diseases of the skin and subcutaneous tissue (680–709)	37	43	21	28	13	18	1	11
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	66	162	58	127	36	81	16	39
Class XIV Congenital anomalies (740–759)	126	114	100	92	75	69	38	20
Class XV Certain conditions originating in the perinatal period (760–779)	117	121	69	63	79	41	24	16
Class XVI Symptoms, signs and ill-defined conditions (780–799)	69	61	38	54	58	50	18	24
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	1 759	807	1 253	541	1 142	469	406	175
Motor vehicle traffic accidents (E810–E819)	374	175	311	137	258	117	87	50
Accidental falls (E880–E888)	187	238	103	134	105	135	29	40
Suicide (E950–E959)	713	222	525	140	434	101	162	35

(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>996</b>	<b>1 787</b>	<b>340</b>	<b>588</b>	<b>26</b>	<b>31</b>	<b>82</b>	<b>217</b>
Malignant neoplasms (140–208)	183	195	45	67	5	5	13	19
Digestive organs and peritoneum (150–159)	48	74	9	33	1	2	5	9
Genitourinary organs (179–189)	56	26	17	12	4	1	4	—
Diabetes mellitus (250)	13	32	4	8	1	—	3	7
Senile and presenile organic psychotic conditions (290)	14	47	4	13	—	2	—	1
Alzheimer's disease (3310)	11	52	1	5	—	—	—	1
Diseases of the circulatory system (390–459)	466	913	193	338	9	12	42	113
Ischaemic heart disease (410–414)	251	420	96	131	2	6	23	43
Cerebrovascular disease (430–438)	108	285	37	89	2	3	11	35
Diseases of arteries, arterioles and capillaries (440–448)	31	39	19	33	1	—	—	7
Diseases of the respiratory system (460–519)	178	265	49	69	5	7	10	36
Chronic obstructive pulmonary disease and allied conditions (490–496)	58	40	20	12	3	4	2	6
Diseases of the digestive system (520–579)	32	63	9	21	—	1	4	8
Diseases of the genitourinary system (580–629)	34	54	7	17	—	1	3	5
<b>All ages(a)</b>	<b>5 774</b>	<b>5 033</b>	<b>1 966</b>	<b>1 843</b>	<b>535</b>	<b>356</b>	<b>663</b>	<b>671</b>
Class I Infectious and parasitic diseases (001–139)	61	48	18	17	14	7	7	9
Class II Neoplasms (140–239)	1 697	1 340	555	451	93	79	179	195
Malignant neoplasms (140–208)	1 666	1 314	543	445	92	78	176	191
Trachea, bronchus and lung (162)	388	184	134	63	25	18	30	28
Melanoma of skin (172)	44	31	7	7	1	—	4	4
Female breast (174)	—	228	—	54	—	10	—	35
Genitourinary organs (179–189)	277	179	107	57	15	10	31	24
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	163	175	52	52	24	13	13	21
Diabetes mellitus (250)	120	130	36	39	20	13	10	16
Class IV Diseases of blood and blood-forming organs (280–289)	26	13	2	4	5	—	3	3
Class V Mental disorders (290–319)	141	157	31	42	11	8	7	12
Senile and presenile organic psychotic conditions (290)	32	75	11	18	—	3	—	1
Class VI Disease of the nervous system and sense organs (320–389)	127	157	41	51	14	6	16	23
Alzheimer's disease (3310)	35	75	3	13	—	—	2	6
Class VII Diseases of the circulatory system (390–459)	2 012	1 945	793	821	153	103	268	245
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	1 458	1 258	575	526	106	68	196	154
Ischaemic heart disease (410–414)	1 196	955	454	359	77	42	162	102
Acute myocardial infarction (410)	668	565	268	198	49	21	92	66
Cerebrovascular disease (430–438)	388	573	154	211	37	30	54	74
Class VIII Diseases of the respiratory system (460–519)	618	556	214	215	53	42	57	71
Pneumonia and influenza (480–487)	224	278	70	97	14	11	15	33
Chronic obstructive pulmonary disease and allied conditions (490–496)	303	185	121	101	32	24	34	26
Class IX Disease of the digestive system (520–579)	176	171	48	58	25	14	25	20
Chronic liver disease and cirrhosis (571)	68	28	16	8	14	8	10	3
Class X Diseases of the genitourinary system (580–629)	91	122	30	35	7	11	12	16
Nephritis, nephrotic syndrome and nephrosis (580–589)	66	77	21	25	6	9	7	13
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	—	1	—	—	—	—	—	—
Class XII Diseases of the skin and subcutaneous tissue (680–709)	11	11	3	4	1	—	—	2
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	11	37	4	10	—	3	3	6
Class XIV Congenital anomalies (740–759)	40	34	17	5	10	8	5	7
Class XV Certain conditions originating in the perinatal period (760–779)	27	25	8	6	11	8	1	4
Class XVI Symptoms, signs and ill-defined conditions (780–799)	39	17	16	18	12	10	3	2
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	534	224	134	54	102	44	64	35
Motor vehicle traffic accidents (E810–E819)	144	55	21	7	32	15	13	6
Accidental falls (E880–E888)	37	62	16	22	5	3	3	7
Suicide (E950–E959)	206	49	40	11	33	5	29	13

(a) Including age not stated.

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

<i>Cause of death and ICD code</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>
1988				
<b>All causes</b>	<b>788.4</b>	<b>727.4</b>	<b>732.0</b>	<b>714.9</b>
Malignant neoplasms (140–208)	188.1	185.4	173.9	174.5
Trachea, bronchus and lung (162)	38.3	38.3	37.4	34.6
Diabetes mellitus (250)	10.6	16.0	11.6	12.4
Senile and presenile organic psychotic conditions (290)	7.0	10.6	8.3	6.6
Diseases of the nervous system and sense organs (320–389)	13.1	15.5	10.6	11.9
Hereditary and degenerative diseases of the central nervous system (330–337)	9.2	11.3	7.8	8.6
Diseases of the circulatory system (390–459)	380.9	317.3	338.0	347.7
Ischaemic heart disease (410–414)	214.2	176.1	203.4	203.3
Acute myocardial infarction (410)	148.5	114.3	138.0	150.6
Cerebrovascular disease (430–438)	89.9	72.0	75.1	75.6
Diseases of arteries, arterioles and capillaries (440–448)	20.1	20.3	18.0	20.0
Diseases of the respiratory system (460–519)	57.1	57.5	56.7	51.7
Pneumonia and influenza (480–487)	9.0	10.3	10.2	15.4
Chronic obstructive pulmonary disease and allied conditions (490–496)	41.7	40.7	39.6	32.0
Diseases of the digestive system (520–579)	26.6	25.9	26.1	23.5
Accidents (E800–E949)	34.8	35.0	37.1	30.6
Motor vehicle traffic accidents (E810–E825)	17.7	20.2	19.6	18.1
Suicide (E950–E959)	12.8	12.7	15.2	12.9
1997				
<b>All causes</b>	<b>627.7</b>	<b>621.8</b>	<b>618.2</b>	<b>612.7</b>
Malignant neoplasms (140–208)	167.4	175.5	169.1	168.5
Trachea, bronchus and lung (162)	32.2	34.7	35.0	32.2
Diabetes mellitus (250)	9.4	18.4	14.0	15.1
Senile and presenile organic psychotic conditions (290)	4.7	4.8	4.9	2.3
Diseases of the nervous system and sense organs (320–389)	13.6	13.9	11.8	10.0
Hereditary and degenerative diseases of the central nervous system (330–337)	9.7	9.7	8.3	7.1
Diseases of the circulatory system (390–459)	254.8	238.7	248.7	247.1
Ischaemic heart disease (410–414)	140.9	132.0	147.1	136.1
Acute myocardial infarction (410)	83.6	77.3	89.7	78.0
Cerebrovascular disease (430–438)	58.6	51.8	56.0	56.6
Diseases of arteries, arterioles and capillaries (440–448)	13.8	13.8	13.4	12.6
Diseases of the respiratory system (460–519)	64.2	59.9	56.9	62.2
Pneumonia and influenza (480–487)	21.6	22.1	19.3	26.9
Chronic obstructive pulmonary disease and allied conditions (490–496)	33.1	31.1	30.5	25.9
Diseases of the digestive system (520–579)	19.0	19.2	17.8	19.2
Accidents (E800–E949)	22.4	21.4	26.4	22.7
Motor vehicle traffic accidents (E810–E825)	9.1	10.0	11.7	9.5
Suicide (E950–E959)	14.8	14.3	15.8	13.2

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

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

<i>Cause of death and ICD code</i>	WA	Tas.	NT	ACT
1988				
<b>All causes</b>	<b>718.1</b>	<b>795.4</b>	<b>1 092.4</b>	<b>682.0</b>
Malignant neoplasms (140–208)	185.8	198.2	173.6	191.6
Trachea, bronchus and lung (162)	40.3	44.2	43.0	39.5
Diabetes mellitus (250)	12.8	12.3	14.7	7.8
Senile and presenile organic psychotic conditions (290)	8.1	13.9	3.6	4.9
Diseases of the nervous system and sense organs (320–389)	16.9	14.1	11.8	11.5
Hereditary and degenerative diseases of the central nervous system (330–337)	13.4	9.7	4.0	9.5
Diseases of the circulatory system (390–459)	322.7	369.4	365.6	309.0
Ischaemic heart disease (410–414)	194.5	206.2	185.9	152.7
Acute myocardial infarction (410)	129.6	142.9	112.7	100.0
Cerebrovascular disease (430–438)	71.9	75.4	62.4	63.9
Diseases of arteries, arterioles and capillaries (440–448)	18.2	28.2	5.8	32.2
Diseases of the respiratory system (460–519)	55.8	57.3	162.7	61.2
Pneumonia and influenza (480–487)	13.7	9.7	53.7	20.1
Chronic obstructive pulmonary disease and allied conditions (490–496)	36.7	43.9	81.8	32.3
Diseases of the digestive system (520–579)	25.8	29.3	29.6	23.6
Accidents (E800–E949)	31.7	35.3	99.9	23.4
Motor vehicle traffic accidents (E810–E825)	17.0	18.8	65.7	14.7
Suicide (E950–E959)	13.7	15.9	18.5	10.4
1997				
<b>All causes</b>	<b>601.9</b>	<b>679.6</b>	<b>991.0</b>	<b>597.9</b>
Malignant neoplasms (140–208)	170.6	181.5	206.8	158.2
Trachea, bronchus and lung (162)	33.5	37.1	51.5	25.1
Diabetes mellitus (250)	14.8	13.8	37.0	12.5
Senile and presenile organic psychotic conditions (290)	5.6	4.7	4.9	0.5
Diseases of the nervous system and sense organs (320–389)	15.5	16.9	20.6	16.7
Hereditary and degenerative diseases of the central nervous system (330–337)	11.5	12.4	8.5	11.4
Diseases of the circulatory system (390–459)	217.2	277.9	348.8	243.7
Ischaemic heart disease (410–414)	119.2	142.0	164.1	123.5
Acute myocardial infarction (410)	69.0	82.6	98.9	73.0
Cerebrovascular disease (430–438)	52.1	62.4	95.7	62.8
Diseases of arteries, arterioles and capillaries (440–448)	13.0	20.4	13.3	14.6
Diseases of the respiratory system (460–519)	64.4	75.1	141.6	60.2
Pneumonia and influenza (480–487)	26.3	27.9	33.6	23.5
Chronic obstructive pulmonary disease and allied conditions (490–496)	28.1	40.3	87.7	27.6
Diseases of the digestive system (520–579)	19.1	18.7	41.1	20.4
Accidents (E800–E949)	26.5	24.7	53.7	19.4
Motor vehicle traffic accidents (E810–E825)	11.8	6.6	24.6	6.4
Suicide (E950–E959)	14.2	10.8	21.5	13.4

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



## 1.8 UNDERLYING CAUSE, Indigenous People(a)

Cause of death and ICD code	INDIGENOUS.....				NON-INDIGENOUS DEATHS.....			
	Males	Females	Persons	Proportion of total deaths	Males	Females	Persons	Proportion of total deaths
	no.	no.	no.	%	no.	no.	no.	%
SOUTH AUSTRALIA								
<b>All causes</b>	<b>89</b>	<b>43</b>	<b>132</b>	<b>100.0</b>	<b>5 940</b>	<b>5 586</b>	<b>11 526</b>	<b>100.0</b>
Malignant neoplasms (140–208)	9	4	13	9.8	1 692	1 371	3 063	26.6
Diabetes mellitus (250)	5	5	10	7.6	151	124	275	2.4
Mental disorders (290–319)	8	1	9	6.8	84	149	233	2.0
Diseases of the circulatory system (390–459)	21	13	34	25.8	2 406	2 490	4 896	42.5
Ischaemic heart disease (410–414)	11	7	18	13.6	1 432	1 231	2 663	23.1
Cerebrovascular disease (430–438)	6	1	7	5.3	465	681	1 146	9.9
Diseases of the respiratory system (460–519)	9	6	15	11.4	623	609	1 232	10.7
Diseases of the digestive system (520–579)	7	2	9	6.8	192	162	354	3.1
Certain conditions originating in the perinatal period (760–779)	1	1	2	1.5	23	15	38	0.3
All other medical conditions (remainder of 001–799)	10	5	15	11.4	382	498	880	7.6
Accidents, poisonings and violence (E800–E999)	19	6	25	18.9	387	168	555	4.8
Motor vehicle traffic accidents (E810–E819)	6	3	9	6.8	81	46	127	1.1
Suicide (E950–E959)	5	1	6	4.5	157	34	191	1.7
Other external causes (remainder of E800–E999)	8	2	10	7.6	149	88	237	2.1
WESTERN AUSTRALIA								
<b>All causes</b>	<b>207</b>	<b>144</b>	<b>351</b>	<b>100.0</b>	<b>5 567</b>	<b>4 889</b>	<b>10 456</b>	<b>100.0</b>
Malignant neoplasms (140–208)	30	15	45	12.8	1 636	1 299	2 935	28.1
Diabetes mellitus (250)	7	19	26	7.4	116	115	231	2.2
Mental disorders (290–319)	8	6	14	4.0	133	151	284	2.7
Diseases of the circulatory system (390–459)	69	38	107	30.5	1 943	1 904	3 847	36.8
Ischaemic heart disease (410–414)	41	14	55	15.7	1 155	941	2 096	20.0
Cerebrovascular disease (430–438)	11	8	19	5.4	377	565	942	9.0
Diseases of the respiratory system (460–519)	19	15	34	9.7	599	541	1 140	10.9
Diseases of the digestive system (520–579)	13	8	21	6.0	163	163	326	3.1
Certain conditions originating in the perinatal period (760–779)	3	5	8	2.3	24	20	44	0.4
All other medical conditions (remainder of 001–799)	28	19	47	13.4	449	491	940	9.0
Accidents, poisonings and violence (E800–E999)	30	19	49	14.0	504	205	709	6.8
Motor vehicle traffic accidents (E810–E819)	10	6	16	4.6	134	49	183	1.8
Suicide (E950–E959)	5	4	9	2.6	201	45	246	2.4
Other external causes (remainder of E800–E999)	15	9	24	6.8	169	111	280	2.7
NORTHERN TERRITORY								
<b>All causes</b>	<b>242</b>	<b>216</b>	<b>458</b>	<b>100.0</b>	<b>293</b>	<b>140</b>	<b>433</b>	<b>100.0</b>
Malignant neoplasms (140–208)	22	32	54	11.8	70	46	116	26.8
Diabetes mellitus (250)	18	12	30	6.6	2	1	3	0.7
Mental disorders (290–319)	4	4	8	1.7	7	4	11	2.5
Diseases of the circulatory system (390–459)	84	63	147	32.1	69	41	110	25.4
Ischaemic heart disease (410–414)	39	22	61	13.3	38	20	58	13.4
Cerebrovascular disease (430–438)	21	16	37	8.1	16	14	30	6.9
Diseases of the respiratory system (460–519)	23	27	50	10.9	30	14	44	10.2
Diseases of the digestive system (520–579)	9	12	21	4.6	16	2	18	4.2
Certain conditions originating in the perinatal period (760–779)	10	6	16	3.5	1	2	3	0.7
All other medical conditions (remainder of 001–799)	41	35	76	16.6	27	11	38	8.8
Accidents, poisonings and violence (E800–E999)	31	25	56	12.2	71	19	90	20.8
Motor vehicle traffic accidents (E810–E819)	14	8	22	4.8	18	7	25	5.8
Suicide (E950–E959)	9	2	11	2.4	24	3	27	6.2
Other external causes (remainder of E800–E999)	8	15	23	5.0	29	9	38	8.8

(a) Only these States and Territories have Indigenous death registration data considered to be of publishable standard. See Explanatory Notes, paragraph 22 for further explanation.

## SECTION 2 MULTIPLE CAUSE OF DEATH .....

### NUMBER OF CAUSES CODED PER DEATH

#### Overall pattern

Multiple causes of death include all causes and conditions reported on the death certificate (see Glossary for details). Causes of death which occur as a result of accidents, poisoning and violence (i.e. external causes) are classified according to the circumstances leading to fatal injury, for example, motor vehicle traffic accidents. Multiple cause data for external causes of death also include the nature of injury or poisoning, as well as any other conditions, reported on the death certificate.

In 1997, a total of 366,481 causes were coded for the 129,350 deaths registered giving an average 2.8 causes per death. More than one cause was coded for about 82% of deaths. The majority of deaths (54%) involved two or three causes.

#### DEATHS, Number of Causes Reported

Number of causes	Deaths	Proportion of total deaths	Causes	Proportion of total causes
	no.	%	no.	%
1	23 464	18.1	23 464	6.4
2	37 355	28.9	74 710	20.4
3	32 569	25.2	97 707	26.7
4	19 804	15.3	79 216	21.6
5	9 491	7.3	47 455	12.9
6	4 156	3.2	24 936	6.8
7	1 551	1.2	10 857	3.0
8	633	0.5	5 064	1.4
9	202	0.2	1 818	0.5
10 or more	125	0.1	1 254	0.3
<b>Total</b>	<b>129 350</b>	<b>100.0</b>	<b>366 481</b>	<b>100.0</b>

#### Age

The mean number of causes per death varied with the age of the deceased (see table 2.1). The variation was related to changes in the leading causes of deaths with age and the likelihood that these causes would have more than one contributory condition reported on the death certificate.

The mean number of causes per death was 2.7 during infancy. Most deaths in this age group are due to perinatal conditions (related to pregnancy and the birth process) and congenital anomalies which usually involve a number of medical conditions (see table 1.1).

*Age continued*

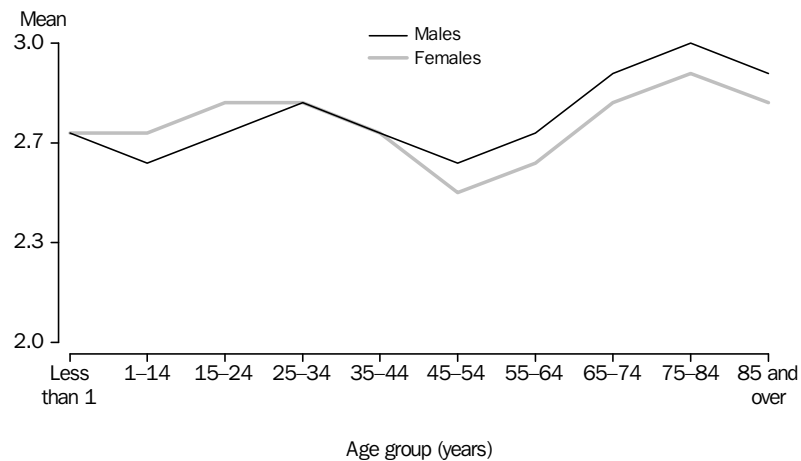
The mean number of causes per death was higher for those aged 15–34 years than those aged under 15 years (see table 2.1). This was due to the higher proportion of deaths attributed to external causes in this age group. As mentioned on the preceding page, death certificates for these deaths frequently report, not only the underlying circumstance, but one or more injuries suffered in the accident, poisoning or violence. The decrease in the mean number of causes per death in the 45–54 years age group was largely a result of a lower proportion of deaths due to external causes.

From age 55 onwards, chronic conditions gained importance as causes of death. These conditions were, in general, reported with a number of coexisting conditions resulting in an increase in the mean number of causes per death associated with the ageing process. However, for persons 85 years and over, the mean number of causes per death decreased slightly. This may reflect an under reporting of contributory conditions on death certificates, arising from either difficulty in accurately diagnosing coexisting diseases or a tendency to report only the major cause of death in this age group.

*Sex*

The overall mean number of causes per death for males and females was similar (2.9 for males compared with 2.8 for females). However, the mean number of causes per death varied by age group for both males and females (see table 2.1). Males aged 35 years and over had a higher mean number of causes per death than females. These differences were statistically significant.

MEAN NUMBER OF CAUSES PER DEATH, Age and Sex

*Underlying cause*

The mean number of causes per death varied widely for different underlying causes of death (see table 2.2), from 1.2 for signs, symptoms and ill-defined conditions to 4.1 for diseases of the musculoskeletal system. Infective and parasitic diseases, endocrine, nutritional and other metabolic diseases each recorded a mean number of causes per death, noticeably higher than the overall mean. Specific causes with a high mean number of causes per death included accidental falls (4.3), drug dependence (4.2), diabetes (3.8), and rheumatic heart disease (3.6).

## LEADING MULTIPLE CAUSES

## Comparison with leading underlying causes

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

Malignant neoplasms, ischaemic heart disease and cerebrovascular diseases remained the three leading causes, when ranked according to the number of times that they were mentioned on the death certificate (i.e. as leading multiple causes). These three causes together accounted for 35% of the total number of multiple causes. By comparison, these causes were identified as the underlying cause for 58% of the total deaths.

The causes with higher multiple cause than underlying cause rankings were, in general, reported as contributory causes, and included pneumonia and influenza, hypertensive disease, and nephritis, nephrotic syndrome and nephrosis. Diabetes was one of several causes which received a lower ranking when all causes were included.

## LEADING MULTIPLE CAUSES OF DEATH

Cause of death and ICD code	Multiple cause.....			Underlying cause	
	no.	%	rank	%	rank
Malignant neoplasms (140–208)	50 544	14.4	1	26.5	1
Malignant neoplasms of trachea bronchus and lung (162)	7 239	2.1	..	5.1	..
Ischaemic heart disease (410–414)	50 352	14.3	2	22.5	2
Cerebrovascular disease (430–438)	21 511	6.1	3	9.4	3
Pneumonia and influenza (480–487)	16 426	4.7	4	3.9	5
Chronic obstructive pulmonary diseases and allied conditions (490–496)	14 904	4.2	5	5.0	4
Hypertensive diseases (401–405)	12 019	3.4	6	0.9	17
Nephritis, nephrotic syndrome and nephrosis (580–589)	10 845	3.1	7	1.3	11
Accidents and adverse effects (E800–E949)	10 345	2.9	8	3.5	6
Diseases of arteries, arterioles and capillaries (440–448)	9 876	2.8	9	2.3	7
Diabetes (250)	9 638	2.7	10	2.1	8
<b>All causes</b>	<b>350 959</b>	<b>100.0</b>	<b>..</b>	<b>100.0</b>	<b>..</b>

## The pattern of selection of underlying from multiple causes

Some causes are more frequently selected as underlying causes than others. A simple way of examining this selection is to produce ratios of multiple causes to underlying causes, i.e. by dividing the total number of times a given cause is mentioned on the death certificate by the number of times that cause is selected as the underlying cause. A ratio of 1.0 indicates the given cause is always selected as the underlying cause. A high ratio indicates that the cause is more likely to be a contributory cause than an underlying one.

The pattern of selection of underlying from multiple causes *continued*

Causes which had ratios close to 1.0 included accidental and violent deaths, (mainly motor vehicle traffic accidents, suicide and homicide), HIV/AIDS, and acute myocardial infarction and many types of cancers with clearly defined primary sites.

Causes of death with high ratios were generally those that were non-fatal diseases by themselves, but could increase the risk of death in association with another condition. These causes included hypertensive disease (10.6), diseases of the blood-forming organs (8.9), atherosclerosis (8.3) and infectious and parasitic diseases (5.0). Diabetes also exhibited a high ratio (3.4), being reported as a contributory cause for some 6,800 deaths (see table 2.3).

## CAUSE ASSOCIATIONS

### General pattern

Those causes which were frequently reported in association with the five leading underlying causes of death are presented in table 2.5. In this publication the data have been presented for all ages, although there are important age differences for cause associations. Data in the table show disease associations only when the given cause is selected as the underlying cause.

### Malignant neoplasms (ICD code 140–208)

Where malignant neoplasms was the underlying cause, the most commonly associated cause was pneumonia and influenza which was reported in 2,720 of these deaths (8% of all cancer deaths). Other causes of importance were: ischaemic heart disease (6% of cancer deaths); chronic obstructive pulmonary disease (6%); nephritis, nephrotic syndrome and nephrosis (4%), and diabetes mellitus (3%).

### Ischaemic heart disease (ICD code 410–414)

Ischaemic heart disease was often associated with one or more causes in its own category (circulatory diseases). Hypertensive disease was the most frequently mentioned associated cause (16% of deaths due to ischaemic heart disease). Other major causes were: chronic obstructive pulmonary disease (10%), diseases of arteries, arterioles and capillaries (also 10%), diabetes (9%) and cerebrovascular disease (8%).

### Cerebrovascular disease (ICD code 430–438)

Hypertensive disease was the most frequently reported associated condition in deaths due to cerebrovascular disease (21% of these deaths). Other important causes were: diseases of the arteries, arterioles and capillaries, mainly atherosclerosis, (12% of deaths due to cerebrovascular disease); pneumonia and influenza (12%); and ischaemic heart disease (9%).

## EXTERNAL CAUSES OF DEATH

### Multiple causes and injuries coded

The multiple cause data for external causes includes the external cause (ICD codes E800–E999), the nature of injury (ICD code N800–N999) and natural causes (ICD code 001–799). In 1997 there were 7,737 deaths due to external causes. For these deaths there were a total of 24,049 multiple causes coded yielding an average of 3.11 causes coded per external cause of death.

Multiple causes and injuries coded *continued*

Overall there were slightly more external causes (8,256) than there were deaths due to them (7,737). This was because for some deaths there was more than one external cause reported on the death certificate. For instance, more than one method of suicide or homicide reported on the death certificate.

For all deaths due to external causes 10,869 injuries and poisonings were coded, giving a mean of 1.4 injuries and poisonings per death. The mean number of natural causes reported was 0.6, because they were not reported in all deaths due to external causes.

The mean number of injuries and causes per death was higher for females (3.49) than males (2.94). This was largely a result of natural causes being reported more frequently in female than male deaths attributed to external causes. These natural causes may or may not be associated with the external cause of death.

## EXTERNAL CAUSES OF DEATH, Injuries and Natural Causes

MULTIPLE CAUSES CODED TO.....					
Sex	Number of deaths	External cause(a) (E800–E999)	Injuries & poisoning(b) (N800–N999)	Natural causes(c) (001–799)	All multiple causes(d)
NUMBER OF DEATHS					
Males	5 393	5 665	7 365	2 835	15 865
Females	2 344	2 591	3 504	2 089	8 184
<b>Persons</b>	<b>7 737</b>	<b>8 256</b>	<b>10 869</b>	<b>4 924</b>	<b>24 049</b>
MEAN NUMBER OF MULTIPLE CAUSES PER EXTERNAL DEATH					
Males	5 393	1.05	1.37	0.53	2.94
Females	2 344	1.11	1.49	0.89	3.49
<b>Persons</b>	<b>7 737</b>	<b>1.07</b>	<b>1.40</b>	<b>0.64</b>	<b>3.11</b>

(a) Some deaths due to external causes had more than one external cause (i.e. multiple attempts of suicides or homicides).

(b) Injuries and poisonings coded in deaths due to external causes.

(c) Natural causes (ICD-9 codes 001–779) reported in death attributed to external causes (e.g. accidental death where pneumonia also reported on the death certificate).

(d) External cause, injuries and natural causes.

## Nature of injury

The nature of injuries reported for external causes of death can be examined by whether the events leading to the injury were accidental or intentional (see table 2.6).

About 31% of the 10,869 injuries reported on the death certificates could not be classified to categories providing a detailed description of the nature of injury: 16% were coded to 'certain traumatic conditions' (ICD codes N958–N959), and 15% to 'other and unspecified' category (ICD codes N990–N995) (see table 2.6). Almost all injuries (94%) reported for drowning deaths were coded to 'other and unspecified'. Almost one-third of injuries due to traffic accidents were coded to 'certain traumatic conditions' (see table 2.6).

The type of injury reported varied with the nature of the event causing it. For example, most fractures (95%) were due to accidents, mainly falls (60%) and motor vehicle traffic accidents (30%). The major injuries reported for motor vehicle accidents were intracranial injury (ICD codes N850–N854), internal injury of chest, abdomen and pelvis (ICD codes N860–N869) and fractures (ICD codes N800–N829). These accounted respectively for 22%, 21% and 15% of all injuries coded for motor vehicle traffic accidents.

About 82% of poisonings were related to drugs or medicaments and biological substances. A further 15% had resulted from toxic effects of substances of nonmedical sources. Injuries caused in suicides and homicides largely reflect the method involved. For instance, over half of the deaths from suicide were reported as due to toxic effects of substances (ICD codes N980–N989) and poisoning by drugs and medicaments.

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

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

Age group (years)	Mean conditions per death	Total deaths	Total	1	2	3	4	5	6 or more
	no.	no.	%	%	%	%	%	%	%
MALES									
<b>All ages(a)</b>	<b>2.9</b>	<b>67 752</b>	<b>100.0</b>	<b>17.8</b>	<b>29.2</b>	<b>24.8</b>	<b>15.2</b>	<b>7.6</b>	<b>5.4</b>
Under 1	2.7	744	100.0	24.5	27.6	23.1	14.5	6.0	4.3
1-14	2.6	438	100.0	12.6	48.2	18.7	10.5	6.8	3.2
15-24	2.7	1 429	100.0	7.3	50.9	22.5	10.4	4.6	4.3
25-34	2.8	1 888	100.0	11.1	43.4	21.7	11.2	7.0	5.6
35-44	2.7	2 399	100.0	17.6	37.6	21.2	11.2	6.8	5.7
45-54	2.6	4 134	100.0	26.4	31.6	20.2	11.7	5.7	4.5
55-64	2.7	7 625	100.0	24.9	28.3	22.1	12.9	6.7	5.1
65-74	2.9	16 896	100.0	19.6	26.7	24.1	16.0	7.8	5.8
75-84	3.0	21 058	100.0	15.2	27.0	27.0	16.7	8.3	5.8
85 and over	2.9	11 133	100.0	14.1	28.9	27.4	16.7	8.2	4.7
FEMALES									
<b>All ages(a)</b>	<b>2.8</b>	<b>61 598</b>	<b>100.0</b>	<b>18.5</b>	<b>28.6</b>	<b>25.6</b>	<b>15.4</b>	<b>7.0</b>	<b>4.9</b>
Under 1	2.7	597	100.0	22.9	29.0	23.5	13.2	6.4	5.0
1-14	2.7	288	100.0	16.3	39.6	21.9	9.4	7.6	5.2
15-24	2.8	505	100.0	11.1	43.6	19.0	14.3	6.1	5.9
25-34	2.8	751	100.0	18.6	35.7	20.4	11.7	5.5	8.1
35-44	2.7	1 299	100.0	25.4	30.1	20.6	11.9	6.1	6.0
45-54	2.5	2 529	100.0	30.7	29.4	18.6	11.3	5.3	4.7
55-64	2.6	4 297	100.0	28.9	26.9	20.4	12.7	5.8	5.2
65-74	2.8	10 284	100.0	21.6	26.2	23.1	15.8	7.7	5.5
75-84	2.9	19 478	100.0	16.3	27.3	26.8	16.6	7.8	5.3
85 and over	2.8	21 566	100.0	15.3	30.3	28.2	15.6	6.6	4.1
PERSONS									
<b>All ages(a)</b>	<b>2.8</b>	<b>129 350</b>	<b>100.0</b>	<b>18.1</b>	<b>28.9</b>	<b>25.2</b>	<b>15.3</b>	<b>7.3</b>	<b>5.2</b>
Under 1	2.7	1 341	100.0	23.8	28.2	23.3	13.9	6.2	4.6
1-14	2.7	726	100.0	14.0	44.8	20.0	10.1	7.2	4.0
15-24	2.7	1 934	100.0	8.3	49.0	21.6	11.4	5.0	4.7
25-34	2.8	2 639	100.0	13.2	41.2	21.3	11.4	6.6	6.3
35-44	2.7	3 698	100.0	20.3	34.9	21.0	11.4	6.5	5.8
45-54	2.5	6 663	100.0	28.0	30.7	19.6	11.5	5.5	4.6
55-64	2.6	11 922	100.0	26.3	27.8	21.5	12.8	6.4	5.2
65-74	2.8	27 180	100.0	20.4	26.5	23.7	15.9	7.7	5.7
75-84	2.9	40 536	100.0	15.7	27.1	26.9	16.7	8.0	5.5
85 and over	2.9	32 699	100.0	14.9	29.8	27.9	16.0	7.2	4.3

(a) Including age not stated.



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

Underlying cause of death and ICD code	REPORTED WITH.....					Mean number of causes
	Reported alone	One other cause	Two other causes	Three other causes	Four or more other causes	
MALES						
<b>All causes</b>	<b>12 045</b>	<b>19 761</b>	<b>16 822</b>	<b>10 329</b>	<b>8 795</b>	<b>2.9</b>
Class I Infectious and parasitic diseases (001–139)	130	178	208	141	182	3.2
Class II Neoplasms (140–239)	6 518	5 582	3 893	2 060	1 518	2.4
Malignant neoplasms (140–208)	6 468	5 528	3 801	2 014	1 468	2.3
Lip, oral cavity and pharynx (140–149)	151	132	88	45	32	2.3
Digestive organs and peritoneum (150–159)	1 971	1 506	1 059	524	421	2.3
Oesophagus (150)	233	202	111	62	44	2.3
Stomach (151)	301	212	155	57	55	2.2
Colon (153)	649	515	378	170	148	2.3
Rectum, rectosigmoid junction and anus (154)	238	180	117	65	62	2.3
Liver and intrahepatic bile ducts (155)	114	96	116	64	46	2.7
Pancreas (157)	325	223	117	67	40	2.1
Trachea, bronchus and lung (162)	1 446	1 414	932	508	305	2.3
Bone, connective tissue, skin and breast (170–175)	342	319	181	100	63	2.3
Melanoma of skin (172)	223	196	76	53	32	2.1
Breast (174, 175)	6	4	3	3	1	2.4
Genitourinary organs (179–189)	1 152	992	702	361	298	2.4
Ovary and other uterine adnexa (183)	—	—	—	—	—	..
Prostate (185)	803	707	492	260	186	2.4
Bladder (188)	168	142	123	56	62	2.5
Other and unspecified sites (190–199)	678	574	316	176	125	2.2
Brain (191)	352	144	64	31	13	1.7
Lymphatic and haematopoietic tissue (200–208)	538	443	433	254	202	2.6
Leukaemia (204–208)	166	176	153	114	81	2.7
Benign and unspecified neoplasms (210–239)	50	54	92	46	50	3.1
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	43	297	591	507	497	3.8
Diabetes mellitus (250)	23	208	456	383	355	3.8
Class IV Diseases of blood and blood-forming organs (280–289)	10	32	48	40	48	3.7
Class V Mental disorders (290–319)	129	331	415	266	335	3.4
Senile and presenile organic psychotic conditions (290)	61	120	87	46	32	2.7
Drug dependence (304)	28	9	153	102	181	4.1
Class VI Disease of the nervous system and sense organs (320–389)	204	419	343	188	135	2.8
Hereditary and degenerative diseases of the central nervous system (330–337)	143	316	245	109	83	2.7
Alzheimer's disease (3310)	47	104	68	34	15	2.5
Class VII Diseases of the circulatory system (390–459)	3 547	7 057	7 124	4 483	3 506	3.0
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	2 397	5 092	5 418	3 447	2 617	3.0
Rheumatic fever and rheumatic heart disease (390–398)	5	22	32	31	35	3.7
Hypertensive disease (401–405)	66	147	122	65	48	2.8
Ischaemic heart disease (410–414)	2 011	4 175	4 463	2 805	2 111	3.0
Acute myocardial infarction (410)	791	2 703	2 821	1 638	1 134	3.0
Diseases of pulmonary circulation and other forms of heart disease (415–429)	343	816	866	594	455	3.1
Cerebrovascular disease (430–438)	845	1 494	1 268	723	549	2.8
Diseases of arteries, arterioles and capillaries (440–448)	275	381	354	244	284	3.1
Atherosclerosis (440)	15	56	74	40	36	3.2
Aortic aneurysm (441)	248	281	171	115	107	2.6

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

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

Underlying cause of death and ICD code	REPORTED WITH.....					Mean number of causes
	Reported alone	One other cause	Two other causes	Three other causes	Four or more other causes	
Class VIII Diseases of the respiratory system (460–519)	906	2 074	1 983	1 160	837	2.9
Pneumonia and influenza (480–487)	428	740	535	274	174	2.6
Chronic obstructive pulmonary disease and allied conditions (490–496)	353	1 062	1 184	706	525	3.1
Emphysema (492)	56	172	188	100	75	3.0
Asthma (493)	62	87	90	38	29	2.7
Class IX Diseases of the digestive system (520–579)	160	421	500	420	523	3.6
Diseases of oesophagus, stomach and duodenum (530–537)	19	64	74	57	81	3.6
Ulcer of stomach and duodenum (531–533)	17	51	52	34	52	3.5
Chronic liver disease and cirrhosis (571)	65	184	189	164	162	3.4
Class X Diseases of the genitourinary system (580–629)	63	192	311	243	281	3.7
Nephritis, nephrotic syndrome and nephrosis (580–589)	60	148	209	156	166	3.5
Renal failure (584–586)	56	127	175	133	143	3.5
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	—	—	—	—	—	..
Class XII Diseases of the skin and subcutaneous tissue (680–709)	—	14	20	21	32	4.1
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	2	23	54	44	70	4.1
Arthropathies and related disorders (710–719)	1	20	35	21	37	3.9
Class IV Congenital anomalies (740–759)	55	97	108	73	78	3.2
Class XV Certain conditions originating in the perinatal period (760–779)	27	101	97	69	42	3.1
Class XVI Symptoms, signs and ill-defined conditions (780–799)	224	23	4	1	1	1.2
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	27	2 920	1 123	613	710	2.9
Accidents (E800–E949)	25	1 321	632	401	556	3.2
Motor vehicle traffic accidents (E810–E819)	12	690	263	125	150	2.9
Accidental falls (E880–E888)	2	62	98	116	208	4.3
Accidental drowning and submersion (E910)	1	145	43	18	10	2.5
Suicide (E950–E959)	1	1 450	419	158	118	2.5
Homicide (E960–E969)	1	117	56	29	12	2.7

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

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

Underlying cause of death and ICD code	REPORTED WITH.....					
	Reported alone	One other cause	Two other causes	Three other causes	Four or more other causes	Mean number of causes
FEMALES						
<b>All causes</b>	<b>11 419</b>	<b>17 594</b>	<b>15 747</b>	<b>9 475</b>	<b>7 363</b>	<b>2.8</b>
Class I Infectious and parasitic diseases (001–139)	68	143	165	126	131	3.3
Class II Neoplasms (140–239)	5 681	4 270	2 851	1 478	1 036	2.3
Malignant neoplasms (140–208)	5 635	4 195	2 776	1 438	993	2.2
Lip, oral cavity and pharynx (140–149)	66	41	44	17	8	2.2
Digestive organs and peritoneum (150–159)	1 743	1 194	766	399	287	2.2
Oesophagus (150)	121	87	46	23	22	2.2
Stomach (151)	210	125	77	30	25	2.0
Colon (153)	617	472	314	165	114	2.3
Rectum, rectosigmoid junction and anus (154)	167	144	82	48	37	2.3
Liver and intrahepatic bile ducts (155)	74	53	40	23	17	2.3
Pancreas (157)	394	205	122	60	35	2.0
Trachea, bronchus and lung (162)	715	583	424	210	126	2.3
Bone, connective tissue, skin and breast (170–175)	1 215	955	545	266	180	2.2
Melanoma of skin (172)	145	111	43	19	15	2.0
Breast (174, 175)	998	762	466	227	149	2.2
Genitourinary organs (179–189)	740	548	382	182	127	2.3
Ovary and other uterine adnexa (183)	311	204	131	59	40	2.1
Prostate (185)	—	—	—	—	—	..
Bladder (188)	96	61	50	19	23	2.3
Other and unspecified sites (190–199)	598	461	280	162	123	2.3
Brain (191)	271	103	42	16	10	1.6
Lymphatic and haematopoietic tissue (200–208)	523	381	313	191	137	2.4
Leukaemia (204–208)	134	157	105	73	57	2.6
Benign and unspecified neoplasms (210–239)	46	75	75	40	43	3.0
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	44	290	639	511	505	3.7
Diabetes mellitus (250)	21	198	481	374	346	3.7
Class IV Diseases of blood and blood-forming organs (280–289)	12	58	54	46	42	3.3
Class V Mental disorders (290–319)	266	610	410	202	170	2.7
Senile and presenile organic psychotic conditions (290)	137	292	161	61	38	2.4
Drug dependence (304)	8	3	32	26	54	4.4
Class VI Disease of the nervous system and sense organs (320–389)	357	500	350	161	106	2.5
Hereditary and degenerative diseases of the central nervous system (330–337)	277	405	265	109	56	2.4
Alzheimer's disease (3310)	164	215	121	46	22	2.2
Class VII Diseases of the circulatory system (390–459)	3 474	7 742	7 836	4 721	3 151	2.9
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	1 845	4 850	5 323	3 470	2 348	3.1
Rheumatic fever and rheumatic heart disease (390–398)	2	54	69	50	48	3.6
Hypertensive disease (401–405)	89	213	199	105	81	2.9
Ischaemic heart disease (410–414)	1 271	3 577	4 134	2 746	1 758	3.1
Acute myocardial infarction (410)	736	2 338	2 505	1 540	921	3.0
Diseases of pulmonary circulation and other forms of heart disease (415–429)	510	1 089	1 020	621	508	2.9
Cerebrovascular disease (430–438)	1 396	2 375	1 997	952	534	2.6
Diseases of arteries, arterioles and capillaries (440–448)	205	401	377	211	201	3.0
Atherosclerosis (440)	28	125	132	69	35	2.9
Aortic aneurysm (441)	161	191	130	57	44	2.4

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

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

Underlying cause of death and ICD code	REPORTED WITH.....					Mean number of causes
	Reported alone	One other cause	Two other causes	Three other causes	Four or more other causes	
Class VIII Diseases of the respiratory system (460–519)	983	2 052	1 723	891	650	2.8
Pneumonia and influenza (480–487)	620	1 119	670	265	192	2.4
Chronic obstructive pulmonary disease and allied conditions (490–496)	231	703	834	506	353	3.1
Emphysema (492)	29	105	91	53	38	2.9
Asthma (493)	76	102	119	62	50	2.8
Class IX Diseases of the digestive system (520–579)	172	444	513	362	437	3.4
Diseases of oesophagus, stomach and duodenum (530–537)	36	90	111	58	79	3.3
Ulcer of stomach and duodenum (531–533)	33	73	71	40	49	3.2
Chronic liver disease and cirrhosis (571)	29	76	75	52	55	3.3
Class X Diseases of the genitourinary system (580–629)	74	243	424	325	296	3.6
Nephritis, nephrotic syndrome and nephrosis (580–589)	68	171	268	189	182	3.5
Renal failure (584–586)	67	150	224	153	141	3.4
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	2	5	3	1	—	2.3
Class XII Diseases of the skin and subcutaneous tissue (680–709)	1	18	33	30	34	3.8
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	10	78	116	119	140	3.9
Arthropathies and related disorders (710–719)	10	54	73	69	80	3.8
Class IV Congenital anomalies (740–759)	47	91	94	61	56	3.1
Class XV Certain conditions originating in the perinatal period (760–779)	25	86	81	52	40	3.1
Class XVI Symptoms, signs and ill-defined conditions (780–799)	195	36	3	0	2	1.2
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	8	928	452	389	567	3.5
Accidents (E800–E949)	5	512	307	319	474	3.8
Motor vehicle traffic accidents (E810–E819)	5	338	103	52	63	2.8
Accidental falls (E880–E888)	0	36	123	185	295	4.6
Accidental drowning and submersion (E910)	0	38	10	8	3	2.6
Suicide (E950–E959)	2	331	113	57	74	2.9
Homicide (E960–E969)	1	68	23	11	11	2.7

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

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

Underlying cause of death and ICD code	REPORTED WITH.....					Mean number of causes
	Reported alone	One other cause	Two other causes	Three other causes	Four or more other causes	
PERSONS						
<b>All causes</b>	<b>23 464</b>	<b>37 355</b>	<b>32 569</b>	<b>19 804</b>	<b>16 158</b>	<b>2.8</b>
Class I Infectious and parasitic diseases (001–139)	198	321	373	267	313	3.3
Class II Neoplasms (140–239)	12 199	9 852	6 744	3 538	2 554	2.3
Malignant neoplasms (140–208)	12 103	9 723	6 577	3 452	2 461	2.3
Lip, oral cavity and pharynx (140–149)	217	173	132	62	40	2.3
Digestive organs and peritoneum (150–159)	3 714	2 700	1 825	923	708	2.3
Oesophagus (150)	354	289	157	85	66	2.2
Stomach (151)	511	337	232	87	80	2.1
Colon (153)	1 266	987	692	335	262	2.3
Rectum, rectosigmoid junction and anus (154)	405	324	199	113	99	2.3
Liver and intrahepatic bile ducts (155)	188	149	156	87	63	2.6
Pancreas (157)	719	428	239	127	75	2.0
Trachea, bronchus and lung (162)	2 161	1 997	1 356	718	431	2.3
Bone, connective tissue, skin and breast (170–175)	1 557	1 274	726	366	243	2.2
Melanoma of skin (172)	368	307	119	72	47	2.1
Breast (174, 175)	1 004	766	469	230	150	2.2
Genitourinary organs (179–189)	1 892	1 540	1 084	543	425	2.3
Ovary and other uterine adnexa (183)	311	204	131	59	40	2.1
Prostate (185)	803	707	492	260	186	2.4
Bladder (188)	264	203	173	75	85	2.5
Other and unspecified sites (190–199)	1 276	1 035	596	338	248	2.3
Brain (191)	623	247	106	47	23	1.7
Lymphatic and haematopoietic tissue (200–208)	1 061	824	746	445	339	2.5
Leukaemia (204–208)	300	333	258	187	138	2.7
Benign and unspecified neoplasms (210–239)	96	129	167	86	93	3.0
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	87	587	1 230	1 018	1 002	3.8
Diabetes mellitus (250)	44	406	937	757	701	3.8
Class IV Diseases of blood and blood-forming organs (280–289)	22	90	102	86	90	3.5
Class V Mental disorders (290–319)	395	941	825	468	505	3.0
Senile and presenile organic psychotic conditions (290)	198	412	248	107	70	2.5
Drug dependence (304)	36	12	185	128	235	4.2
Class VI Disease of the nervous system and sense organs (320–389)	561	919	693	349	241	2.6
Hereditary and degenerative diseases of the central nervous system (330–337)	420	721	510	218	139	2.5
Alzheimer's disease (3310)	211	319	189	80	37	2.3
Class VII Diseases of the circulatory system (390–459)	7 021	14 799	14 960	9 204	6 657	3.0
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	4 242	9 942	10 741	6 917	4 965	3.0
Rheumatic fever and rheumatic heart disease (390–398)	7	76	101	81	83	3.6
Hypertensive disease (401–405)	155	360	321	170	129	2.8
Ischaemic heart disease (410–414)	3 282	7 752	8 597	5 551	3 869	3.0
Acute myocardial infarction (410)	1 527	5 041	5 326	3 178	2 055	3.0
Diseases of pulmonary circulation and other forms of heart disease (415–429)	853	1 905	1 886	1 215	963	3.0
Cerebrovascular disease (430–438)	2 241	3 869	3 265	1 675	1 083	2.7
Diseases of arteries, arterioles and capillaries (440–448)	480	782	731	455	485	3.0
Atherosclerosis (440)	43	181	206	109	71	3.0
Aortic aneurysm (441)	409	472	301	172	151	2.5

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

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

Underlying cause of death and ICD code	REPORTED WITH.....					Mean number of causes
	Reported alone	One other cause	Two other causes	Three other causes	Four or more other causes	
Class VIII Diseases of the respiratory system (460–519)	1 889	4 126	3 706	2 051	1 487	2.8
Pneumonia and influenza (480–487)	1 048	1 859	1 205	539	366	2.5
Chronic obstructive pulmonary disease and allied conditions (490–496)	584	1 765	2 018	1 212	878	3.1
Emphysema (492)	85	277	279	153	113	3.0
Asthma (493)	138	189	209	100	79	2.8
Class IX Diseases of the digestive system (520–579)	332	865	1 013	782	960	3.5
Diseases of oesophagus, stomach and duodenum (530–537)	55	154	185	115	160	3.5
Ulcer of stomach and duodenum (531–533)	50	124	123	74	101	3.3
Chronic liver disease and cirrhosis (571)	94	260	264	216	217	3.4
Class X Diseases of the genitourinary system (580–629)	137	435	735	568	577	3.6
Nephritis, nephrotic syndrome and nephrosis (580–589)	128	319	477	345	348	3.5
Renal failure (584–586)	123	277	399	286	284	3.4
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	2	5	3	1	—	2.3
Class XII Diseases of the skin and subcutaneous tissue (680–709)	1	32	53	51	66	3.9
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	12	101	170	163	210	4.0
Arthropathies and related disorders (710–719)	11	74	108	90	117	3.8
Class IV Congenital anomalies (740–759)	102	188	202	134	134	3.2
Class XV Certain conditions originating in the perinatal period (760–779)	52	187	178	121	82	3.1
Class XVI Symptoms, signs and ill-defined conditions (780–799)	419	59	7	1	3	1.2
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	35	3 848	1 575	1 002	1 277	3.1
Accidents (E800–E949)	30	1 833	939	720	1 030	3.4
Motor vehicle traffic accidents (E810–E819)	17	1 028	366	177	213	2.9
Accidental falls (E880–E888)	2	98	221	301	503	4.5
Accidental drowning and submersion (E910)	1	183	53	26	13	2.5
Suicide (E950–E959)	3	1 781	532	215	192	2.6
Homicide (E960–E969)	2	185	79	40	23	2.7

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

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

Cause of death and ICD code	UNDERLYING CAUSE.....			MULTIPLE CAUSE(a).....			RATIO(b)
	Males	Females	Persons	Males	Females	Persons	Persons
<b>All causes</b>	<b>67 752</b>	<b>61 598</b>	<b>129 350</b>	<b>183 199</b>	<b>167 760</b>	<b>350 959</b>	<b>2.7</b>
Class I Infectious and parasitic diseases (001–139)	839	633	1 472	3 897	3 397	7 294	5.0
Class II Neoplasms (140–239)	19 571	15 316	34 887	29 198	22 559	51 757	1.5
Malignant neoplasms (140–208)	19 279	15 037	34 316	28 541	22 003	50 544	1.5
Lip, oral cavity and pharynx (140–149)	448	176	624	556	208	764	1.2
Digestive organs and peritoneum (150–159)	5 481	4 389	9 870	6 195	4 854	11 049	1.1
Oesophagus (150)	652	299	951	725	333	1 058	1.1
Stomach (151)	780	467	1 247	857	508	1 365	1.1
Colon (153)	1 860	1 682	3 542	2 100	1 870	3 970	1.1
Rectum, rectosigmoid junction and anus (154)	662	478	1 140	769	532	1 301	1.1
Liver and intrahepatic bile ducts (155)	436	207	643	494	233	727	1.1
Pancreas (157)	772	816	1 588	815	855	1 670	1.1
Trachea, bronchus and lung (162)	4 605	2 058	6 663	5 012	2 227	7 239	1.1
Bone, connective tissue, skin and breast (170–175)	1 005	3 161	4 166	1 216	3 942	5 158	1.2
Melanoma of skin (172)	580	333	913	660	382	1 042	1.1
Breast (174, 175)	17	2 602	2 619	29	3 247	3 276	1.3
Genitourinary organs (179–189)	3 505	1 979	5 484	5 051	2 274	7 325	1.3
Ovary and other uterine adnexa (183)	—	745	745	—	791	791	1.1
Prostate (185)	2 448	—	2 448	3 634	—	3 634	1.5
Bladder (188)	551	249	800	817	305	1 122	1.4
Other and unspecified sites (190–199)	1 869	1 624	3 493	7 521	6 502	14 023	4.0
Brain (191)	604	442	1 046	632	463	1 095	1.0
Lymphatic and haematopoietic tissue (200–208)	1 870	1 545	3 415	2 383	1 870	4 253	1.2
Leukaemia (204–208)	690	526	1 216	935	666	1 601	1.3
Benign and unspecified neoplasms (210–239)	292	279	571	657	556	1 213	2.1
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	1 935	1 989	3 924	7 772	7 723	15 495	3.9
Diabetes mellitus (250)	1 425	1 420	2 845	5 055	4 583	9 638	3.4
Class IV Diseases of blood and blood-forming organs (280–289)	178	212	390	1 738	1 732	3 470	8.9
Class V Mental disorders (290–319)	1 476	1 658	3 134	7 371	6 659	14 030	4.5
Senile and presenile organic psychotic conditions (290)	346	689	1 035	1 029	1 984	3 013	2.9
Drug dependence (304)	473	123	596	549	171	720	1.2
Class VI Disease of the nervous system and sense organs (320–389)	1 289	1 474	2 763	4 438	4 521	8 959	3.2
Hereditary and degenerative diseases of the central nervous system (330–337)	896	1 112	2 008	2 383	2 635	5 018	2.5
Alzheimer's disease (331.0)	268	568	836	662	1 316	1 978	2.4
Class VII Diseases of the circulatory system (390–459)	25 717	26 924	52 641	68 622	68 581	137 203	2.6
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	18 971	17 836	36 807	48 655	44 759	93 414	2.5
Rheumatic fever and rheumatic heart disease (390–398)	125	223	348	268	444	712	2.0
Hypertensive disease (401–405)	448	687	1 135	5 253	6 766	12 019	10.6
Ischaemic heart disease (410–414)	15 565	13 486	29 051	27 754	22 598	50 352	1.7
Acute myocardial infarction (410)	9 087	8 040	17 127	10 783	9 279	20 062	1.2
Diseases of pulmonary circulation and other forms of heart disease (415–429)	3 074	3 748	6 822	20 046	21 030	41 076	6.0
Heart failure (428)	1 041	1 662	2 703	7 633	9 680	17 313	6.4
Cerebrovascular disease (430–438)	4 879	7 254	12 133	9 226	12 285	21 511	1.8
Diseases of arteries, arterioles and capillaries (440–448)	1 538	1 395	2 933	5 182	4 694	9 876	3.4
Atherosclerosis (440)	221	389	610	2 374	2 661	5 035	8.3
Aortic aneurysm (441)	922	583	1 505	1 255	747	2 002	1.3

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

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

Excludes injury codes (ICD codes N800–N999).



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

Cause of death and ICD code	UNDERLYING CAUSE.....			MULTIPLE CAUSE(a).....			RATIO(b)
	Males	Females	Persons	Males	Females	Persons	Persons
Class VIII Diseases of the respiratory system (460–519)	6 960	6 299	13 259	23 822	19 581	43 403	3.3
Pneumonia and influenza (480–487)	2 151	2 866	5 017	8 324	8 102	16 426	3.3
Chronic obstructive pulmonary disease and allied conditions (490–496)	3 830	2 627	6 457	9 167	5 737	14 904	2.3
Emphysema (492)	591	316	907	1 247	569	1 816	2.0
Asthma (493)	306	409	715	824	1 048	1 872	2.6
Class IX Diseases of the digestive system (520–579)	2 024	1 928	3 952	7 326	6 377	13 703	3.5
Diseases of oesophagus, stomach and duodenum (530–537)	295	374	669	1 148	1 135	2 283	3.4
Ulcer of stomach and duodenum (531–533)	206	266	472	700	692	1 392	2.9
Chronic liver disease and cirrhosis (571)	764	287	1 051	1 455	546	2 001	1.9
Class X Diseases of the genitourinary system (580–629)	1 090	1 362	2 452	7 423	6 920	14 343	5.8
Nephritis, nephrotic syndrome and nephrosis (580–589)	739	878	1 617	5 700	5 145	10 845	6.7
Renal failure (584–586)	634	735	1 369	5 482	4 878	10 360	7.6
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	—	11	11	—	28	28	2.5
Class XII Diseases of the skin and subcutaneous tissue (680–709)	87	116	203	497	687	1 184	5.8
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	193	463	656	1 314	2 773	4 087	6.2
Arthropathies and related disorders (710–719)	114	286	400	692	1 395	2 087	5.2
Class IV Congenital anomalies (740–759)	411	349	760	710	588	1 298	1.7
Class XV Certain conditions originating in the perinatal period (760–779)	336	284	620	1 149	972	2 121	3.4
Class XVI Symptoms, signs and ill-defined conditions (780–799)(c)	253	236	489	9 408	9 539	18 947	38.7
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	5 393	2 344	7 737	8 514	5 123	13 637	1.8
Accidents (E800–E949)	2 935	1 617	4 552	5 983	4 362	10 345	2.3
Motor vehicle traffic accidents (E810–E819)	1 240	561	1 801	1 255	564	1 819	1.0
Accidental falls (E880–E888)	486	639	1 125	980	1 589	2 569	2.3
Accidental drowning and submersion (E910)	217	59	276	236	61	297	1.1
Suicide (E950–E959)	2 146	577	2 723	2 191	606	2 797	1.0
Homicide (E960–E969)	215	114	329	223	117	340	1.0

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

Excludes injury codes (ICD codes N800–N999).

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

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



## 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>735.0</b>	<b>661.3</b>	<b>698.0</b>	<b>735.0</b>	<b>661.3</b>	<b>698.0</b>
Class I Infectious and parasitic diseases (001–139)	9.1	6.8	7.9	42.3	36.5	39.4
Class II Neoplasms (140–239)	212.3	164.4	188.3	316.7	242.2	279.3
Malignant neoplasms (140–208)	209.1	161.4	185.2	309.6	236.2	272.7
Lip, oral cavity and pharynx (140–149)	4.9	1.9	3.4	6.0	2.2	4.1
Digestive organs and peritoneum (150–159)	59.5	47.1	53.3	67.2	52.1	59.6
Oesophagus (150)	7.1	3.2	5.1	7.9	3.6	5.7
Stomach (151)	8.5	5.0	6.7	9.3	5.5	7.4
Colon (153)	20.2	18.1	19.1	22.8	20.1	21.4
Rectum, rectosigmoid junction and anus (154)	7.2	5.1	6.2	8.3	5.7	7.0
Liver and intrahepatic bile ducts (155)	4.7	2.2	3.5	5.4	2.5	3.9
Pancreas (157)	8.4	8.8	8.6	8.8	9.2	9.0
Trachea, bronchus and lung (162)	50.0	22.1	36.0	54.4	23.9	39.1
Bone, connective tissue, skin and breast (170–175)	10.9	33.9	22.5	13.2	42.3	27.8
Melanoma of skin (172)	6.3	3.6	4.9	7.2	4.1	5.6
Breast (174, 175)	0.2	27.9	14.1	0.3	34.9	17.7
Genitourinary organs (179–189)	38.0	21.2	29.6	54.8	24.4	39.5
Ovary and other uterine adnexa (183)	..	8.0	4.0	..	8.5	4.3
Prostate (185)	26.6	..	13.2	39.4	..	19.6
Bladder (188)	6.0	2.7	4.3	8.9	3.3	6.1
Other and unspecified sites (190–199)	20.3	17.4	18.8	81.6	69.8	75.7
Brain (191)	6.6	4.7	5.6	6.9	5.0	5.9
Lymphatic and haematopoietic tissue (200–208)	20.3	16.6	18.4	25.9	20.1	22.9
Leukaemia (204–208)	7.5	5.6	6.6	10.1	7.2	8.6
Benign and unspecified neoplasms (210–239)	3.2	3.0	3.1	7.1	6.0	6.5
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	21.0	21.4	21.2	84.3	82.9	83.6
Diabetes mellitus (250)	15.5	15.2	15.4	54.8	49.2	52.0
Class IV Diseases of blood and blood-forming organs (280–289)	1.9	2.3	2.1	18.9	18.6	18.7
Class V Mental disorders (290–319)	16.0	17.8	16.9	80.0	71.5	75.7
Senile and presenile organic psychotic conditions (290)	3.8	7.4	5.6	11.2	21.3	16.3
Drug dependence (304)	5.1	1.3	3.2	6.0	1.8	3.9
Class VI Diseases of the nervous system and sense organs (320–389)	14.0	15.8	14.9	48.1	48.5	48.3
Hereditary and degenerative diseases of the central nervous system (330–337)	9.7	11.9	10.8	25.9	28.3	27.1
Alzheimer's disease (3310)	2.9	6.1	4.5	7.2	14.1	10.7
Class VII Diseases of the circulatory system (390–459)	279.0	289.1	284.1	744.4	736.3	740.3
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	205.8	191.5	198.6	527.8	480.5	504.1
Rheumatic fever and rheumatic heart disease (390–398)	1.4	2.4	1.9	2.9	4.8	3.8
Hypertensive disease (401–405)	4.9	7.4	6.1	57.0	72.6	64.9
Ischaemic heart disease (410–414)	168.9	144.8	156.8	301.1	242.6	271.7
Acute myocardial infarction (410)	98.6	86.3	92.4	117.0	99.6	108.3
Diseases of pulmonary circulation and other forms of heart disease (415–429)	33.3	40.2	36.8	217.5	225.8	221.6
Heart failure (428)	11.3	17.8	14.6	82.8	103.9	93.4
Cerebrovascular disease (430–438)	52.9	77.9	65.5	100.1	131.9	116.1
Diseases of arteries, arterioles and capillaries (440–448)	16.7	15.0	15.8	56.2	50.4	53.3
Atherosclerosis (440)	2.4	4.2	3.3	25.8	28.6	27.2
Aortic aneurysm (441)	10.0	6.3	8.1	13.6	8.0	10.8

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

(c) Rates are based on total deaths.

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

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

Cause of death and ICD code	UNDERLYING CAUSE.....			MULTIPLE CAUSE(b).....		
	Males	Females	Persons	Males	Females	Persons
Class VIII Diseases of the respiratory system (460–519)	75.5	67.6	71.5	258.4	210.2	234.2
Pneumonia and influenza (480–487)	23.3	30.8	27.1	90.3	87.0	88.6
Chronic obstructive pulmonary disease and allied conditions (490–496)	41.5	28.2	34.8	99.4	61.6	80.4
Emphysema (492)	6.4	3.4	4.9	13.5	6.1	9.8
Asthma (493)	3.3	4.4	3.9	8.9	11.3	10.1
Class IX Diseases of the digestive system (520–579)	22.0	20.7	21.3	79.5	68.5	73.9
Diseases of oesophagus, stomach and duodenum (530–537)	3.2	4.0	3.6	12.5	12.2	12.3
Ulcer of stomach and duodenum (531–533)	2.2	2.9	2.5	7.6	7.4	7.5
Chronic liver disease and cirrhosis (571)	8.3	3.1	5.7	15.8	5.9	10.8
Class X Diseases of the genitourinary system (580–629)	11.8	14.6	13.2	80.5	74.3	77.4
Nephritis, nephrotic syndrome and nephrosis (580–589)	8.0	9.4	8.7	61.8	55.2	58.5
Renal failure (584–586)	6.9	7.9	7.4	59.5	52.4	55.9
Class XI Complications of pregnancy, childbirth and the puerperium (630–676)	..	0.1	0.1	..	0.3	0.2
Class XII Diseases of the skin and subcutaneous tissue (680–709)	0.9	1.2	1.1	5.4	7.4	6.4
Class XIII Diseases of the musculoskeletal system and connective tissue (710–739)	2.1	5.0	3.5	14.3	29.8	22.1
Arthropathies and related disorders (710–719)	1.2	3.1	2.2	7.5	15.0	11.3
Class IV Congenital anomalies (740–759)	4.5	3.7	4.1	7.7	6.3	7.0
Class XV Certain conditions originating in the perinatal period (760–779)	3.6	3.0	3.3	12.5	10.4	11.4
Class XVI Symptoms, signs and ill-defined conditions (780–799)(c)	2.7	2.5	2.6	102.1	102.4	102.2
Class XVII Accidents, poisonings and violence (external causes) (E800–E999)	58.5	25.2	41.7	92.4	55.0	73.6
Accidents (E800–E949)	31.8	17.4	24.6	64.9	46.8	55.8
Motor vehicle traffic accidents (E810–E819)	13.5	6.0	9.7	13.6	6.1	9.8
Accidental falls (E880–E888)	5.3	6.9	6.1	10.6	17.1	13.9
Accidental drowning and submersion (E910)	2.4	0.6	1.5	2.6	0.7	1.6
Suicide (E950–E959)	23.3	6.2	14.7	23.8	6.5	15.1
Homicide (E960–E969)	2.3	1.2	1.8	2.4	1.3	1.8

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

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

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

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

Underlying cause/associated cause and ICD code	Males.....		Females.....		Persons.....	
	no.	%	no.	%	no.	%
Malignant neoplasms (140–208)	19 279	100.0	15 037	100.0	34 316	100.0
Reported alone	6 468	33.5	5 635	37.5	12 103	35.3
Reported with						
Diabetes (250)	690	3.6	486	3.2	1 176	3.4
Ischaemic heart disease (410–414)	1 322	6.9	680	4.5	2 002	5.8
Pneumonia and influenza (480–487)	1 717	8.9	1 003	6.7	2 720	7.9
Chronic obstructive pulmonary disease and allied conditions (490–496)	1 399	7.3	561	3.7	1 960	5.7
Nephritis, nephrotic syndrome and nephrosis (580–589)	917	4.8	589	3.9	1 506	4.4
Diabetes mellitus (250)	1 425	100.0	1 420	100.0	2 845	100.0
Reported alone	23	1.6	21	1.5	44	1.5
Reported with						
Hypertensive disease (401–405)	284	19.9	343	24.2	627	22.0
Ischaemic heart disease (410–414)	780	54.7	666	46.9	1 446	50.8
Cerebrovascular disease (430–438)	284	19.9	318	22.4	602	21.2
Pneumonia and influenza (480–487)	112	7.9	121	8.5	233	8.2
Nephritis, nephrotic syndrome and nephrosis (580–589)	283	19.9	267	18.8	550	19.3
Hereditary and degenerative diseases of the central nervous system (330–337)	896	100.0	1 112	100.0	2 008	100.0
Reported alone	143	16.0	277	24.9	420	20.9
Reported with						
Ischaemic heart disease (410–414)	82	9.2	78	8.7	160	8.0
Cerebrovascular disease (430–438)	72	8.0	102	11.4	174	8.7
Pneumonia and influenza (480–487)	272	30.4	243	27.1	515	25.6
Ischaemic heart disease (410–414)	15 565	100.0	13 486	100.0	29 051	100.0
Reported alone	2 011	12.9	1 271	9.4	3 282	11.3
Reported with						
Malignant neoplasms (140–208)	979	6.3	533	4.0	1 512	5.2
Diabetes (250)	1 370	8.8	1 164	8.6	2 534	8.7
Hypertensive disease (401–405)	2 112	13.6	2 408	17.9	4 520	15.6
Cerebrovascular disease (430–438)	1 051	6.8	1 191	8.8	2 242	7.7
Diseases of arteries, arterioles and capillaries (440–448)	1 663	10.7	1 334	9.9	2 997	10.3
Pneumonia and influenza (480–487)	642	4.1	627	4.6	1 269	4.4
Chronic obstructive pulmonary disease and allied conditions (490–496)	1 895	12.2	1 105	8.2	3 000	10.3
Nephritis, nephrotic syndrome and nephrosis (580–589)	997	6.4	784	5.8	1 781	6.1
Cerebrovascular disease (430–438)	4 879	100.0	7 254	100.0	12 133	100.0
Reported alone	845	17.3	1 396	19.2	2 241	18.5
Reported with						
Hypertensive disease (401–405)	952	19.5	1 606	22.1	2 558	21.1
Ischaemic heart disease (410–414)	524	10.7	553	7.6	1 077	8.9
Diseases of arteries, arterioles and capillaries (440–448)	592	12.1	897	12.4	1 489	12.3
Pneumonia and influenza (480–487)	670	13.7	806	11.1	1 476	12.2
Diseases of arteries, arterioles and capillaries (440–448)	1 538	100.0	1 395	100.0	2 933	100.0
Reported alone	275	17.9	205	14.7	480	16.4
Reported with						
Hypertensive disease (401–405)	148	9.6	149	10.7	297	10.1
Ischaemic heart disease (410–414)	286	18.6	185	13.3	471	16.1
Cerebrovascular disease (430–438)	120	7.8	115	8.2	235	8.0
Chronic obstructive pulmonary disease and allied conditions (490–496)	154	10.0	75	5.4	229	7.8
Nephritis, nephrotic syndrome and nephrosis (580–589)	211	13.7	168	12.0	379	12.9

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

<i>Underlying cause/associated cause and ICD code</i>	<i>Males.....</i>		<i>Females.....</i>		<i>Persons.....</i>	
	<i>no.</i>	<i>%</i>	<i>no.</i>	<i>%</i>	<i>no.</i>	<i>%</i>
Pneumonia and influenza (480–487)	2 151	100.0	2 866	100.0	5 017	100.0
Reported alone	428	19.9	620	21.6	1 048	20.9
Reported with						
Hereditary and degenerative diseases of the central nervous system (330–337)	155	7.2	170	5.9	325	6.5
Ischaemic heart disease (410–414)	312	14.5	296	10.3	608	12.1
Cerebrovascular disease (430–438)	205	9.5	298	10.4	503	10.0
Chronic obstructive pulmonary disease and allied conditions (490–496)	176	8.2	128	4.5	304	6.1
Nephritis, nephrotic syndrome and nephrosis (580–589)	178	8.3	141	4.9	319	6.4
Chronic obstructive pulmonary disease and allied conditions (490–496)	3 830	100.0	2 627	100.0	6 457	100.0
Reported alone	353	9.2	231	8.8	584	9.0
Reported with						
Malignant neoplasms (140–208)	328	8.6	115	4.4	443	6.9
Hypertensive disease (401–405)	172	4.5	151	5.7	323	5.0
Ischaemic heart disease (410–414)	676	17.7	405	15.4	1 081	16.7
Cerebrovascular disease (430–438)	214	5.6	118	4.5	332	5.1
Pneumonia and influenza (480–487)	1 050	27.4	664	25.3	1 714	26.5
Nephritis, nephrotic syndrome and nephrosis (580–589)	191	5.0	125	4.8	316	4.9
Nephritis, nephrotic syndrome and nephrosis (580–589)	739	100.0	878	100.0	1 617	100.0
Reported alone	60	8.1	68	7.7	128	7.9
Reported with						
Diabetes (250)	54	7.3	61	6.9	115	7.1
Ischaemic heart disease (410–414)	168	22.7	203	23.1	371	22.9
Pneumonia and influenza (480–487)	114	15.4	91	10.4	205	12.7
Chronic obstructive pulmonary disease and allied conditions (490–496)	74	10.0	52	5.9	126	7.8

## 2.6 NATURE OF INJURY, By External Cause

ACCIDENTS.....							
<i>Nature of injury or poisoning and ICD code</i>	<i>Motor vehicle traffic accidents (E810–E819)</i>	<i>Accidental poisoning (E850–E869)</i>	<i>Accidental falls (E880–E888)</i>	<i>Accidents caused by fire and flames (E890–E899)</i>	<i>Accidental drowning and submersion (E910)</i>	<i>Other</i>	<i>Total</i>
MALES							
	%	%	%	%	%	%	%
<b>Total injuries (N800–N999)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Fractures (N800–N829)	14.4	—	41.5	—	1.3	6.8	15.3
Intracranial injury, excluding those with skull fracture (N850–N854)	23.9	—	22.7	—	2.2	15.3	18.2
Internal injury of chest, abdomen and pelvis (N860–N869)	21.0	—	3.0	—	—	13.7	12.9
Open wound (N870–N897)	1.0	—	0.5	—	—	2.0	1.3
Burns (N940–N949)	1.0	—	0.1	54.6	—	1.9	2.1
Certain traumatic complications and unspecified injuries (N958–N959)	32.2	0.8	19.2	6.2	0.4	16.9	21.8
Poisoning by drugs, medicaments and biological substances (N960–N979)	0.3	78.7	0.3	—	1.7	0.4	7.2
Toxic effects of substances chiefly non-medical as to source (N980–N989)	0.2	18.1	0.3	37.1	0.9	1.1	2.8
Other and unspecified effects of external causes (N990–N995)	0.6	0.3	0.8	1.0	92.7	17.2	8.9
	no.	no.	no.	no.	no.	no.	no.
Total injuries	1 990	376	766	97	232	902	4 363
FEMALES							
	%	%	%	%	%	%	%
<b>Total injuries (N800–N999)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Fractures (N800–N829)	16.9	—	57.3	2.4	—	4.1	28.8
Intracranial injury, excluding those with skull fracture (N850–N854)	18.1	—	10.0	—	—	9.1	11.5
Internal injury of chest, abdomen and pelvis (N860–N869)	20.4	—	0.4	—	—	10.4	8.8
Open wound (N870–N897)	1.2	—	0.6	—	—	2.9	1.0
Burns (N940–N949)	0.9	—	—	53.7	—	2.1	1.4
Certain traumatic complications and unspecified injuries (N958–N959)	34.4	—	15.4	7.3	—	10.8	19.9
Poisoning by drugs, medicaments and biological substances (N960–N979)	0.1	87.5	—	—	1.6	0.4	9.2
Toxic effects of substances chiefly non-medical as to source (N980–N989)	—	9.3	—	36.6	1.6	0.8	1.7
Other and unspecified effects of external causes (N990–N995)	0.3	0.4	0.3	—	96.7	12.0	3.8
	no.	no.	no.	no.	no.	no.	no.
Total injuries	925	257	957	41	61	241	2 482

2.6 NATURE OF INJURY, By External Cause *continued*

INTENTIONAL INJURY AND OTHER.....					
<i>Nature of injury or poisoning and ICD code</i>	<i>Suicide (E950–E959)</i>	<i>Homicide (E960–E969)</i>	<i>Other</i>	<i>Total</i>	<i>External causes</i>
MALES					
	%	%	%	%	%
<b>Total injuries (N800–N999)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Fractures (N800–N829)	1.7	2.9	—	1.8	9.8
Intracranial injury, excluding those with skull fracture (N850–N854)	3.6	22.7	3.2	5.5	13.0
Internal injury of chest, abdomen and pelvis (N860–N869)	1.9	7.1	—	2.3	8.6
Open wound (N870–N897)	13.5	44.7	8.3	16.5	7.5
Burns (N940–N949)	1.0	1.0	1.9	1.1	1.7
Certain traumatic complications and unspecified injuries (N958–N959)	6.9	8.1	4.5	6.9	15.7
Poisoning by drugs, medicaments and biological substances (N960–N979)	12.7	2.6	65.4	14.4	10.1
Toxic effects of substances chiefly non-medical as to source (N980–N989)	23.0	1.6	10.9	20.2	9.9
Other and unspecified effects of external causes (N996–N999)	34.2	6.1	3.2	29.7	17.4
	no.	no.	no.	no.	no.
Total injuries	2 537	309	156	3 002	7 365
FEMALES					
	%	%	%	%	%
<b>Total injuries (N800–N999)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Fractures (N800–N829)	1.0	3.7	1.8	1.5	20.8
Intracranial injury, excluding those with skull fracture (N850–N854)	2.5	16.0	3.6	4.7	9.5
Internal injury of chest, abdomen and pelvis (N860–N869)	1.9	6.1	1.8	2.5	7.0
Open wound (N870–N897)	4.0	42.3	1.8	10.0	3.6
Burns (N940–N949)	2.1	1.8	—	2.0	1.6
Certain traumatic complications and unspecified injuries (N958–N959)	6.6	8.6	5.5	6.8	16.1
Poisoning by drugs, medicaments and biological substances (N960–N979)	38.4	2.5	63.6	34.1	16.4
Toxic effects of substances chiefly non-medical as to source (N980–N989)	16.8	3.7	1.8	13.9	5.3
Other and unspecified effects of external causes (N996–N999)	25.7	8.0	12.7	22.2	9.2
	no.	no.	no.	no.	no.
Total injuries	804	163	55	1 022	3 504

2.6 NATURE OF INJURY, By External Cause *continued*

ACCIDENTS.....							
<i>Nature of injury or poisoning and ICD code</i>	<i>Motor vehicle traffic accidents (E810–E819)</i>	<i>Accidental poisoning (E850–E869)</i>	<i>Accidental falls (E880–E888)</i>	<i>Accidents caused by fire and flames (E890–E899)</i>	<i>Accidental drowning and submersion (E910)</i>	<i>Other</i>	<i>Total</i>
PERSONS							
	%	%	%	%	%	%	%
<b>Total injuries (N800–N999)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Fractures (N800–N829)	15.2	—	50.3	0.7	1.0	6.2	20.2
Intracranial injury, excluding those with skull fracture (N850–N854)	22.0	—	15.7	—	1.7	14.0	15.7
Internal injury of chest, abdomen and pelvis (N860–N869)	20.8	—	1.6	—	—	13.0	11.4
Open wound (N870–N897)	1.0	—	0.6	—	—	3.6	1.2
Burns (N940–N949)	1.0	—	0.1	54.3	—	1.9	1.8
Certain traumatic complications and unspecified injuries (N958–N959)	32.9	0.5	17.1	6.5	0.3	15.6	21.1
Poisoning by drugs, medicaments and biological substances (N960–N979)	0.2	82.3	0.1	—	1.7	0.4	7.9
Toxic effects of substances chiefly non-medical as to source (N980–N989)	0.1	14.5	0.1	37.0	1.0	1.0	2.4
Other and unspecified effects of external causes (N990–N995)	0.5	0.3	0.5	0.7	93.5	16.1	7.1
	no.	no.	no.	no.	no.	no.	no.
Total injuries	2 915	633	1 723	138	293	1 143	6 845

2.6 NATURE OF INJURY, By External Cause *continued*

INTENTIONAL INJURY AND OTHER.....					
<i>Nature of injury or poisoning and ICD code</i>	<i>Suicide (E950–E959)</i>	<i>Homicide (E960–E969)</i>	<i>Other</i>	<i>Total</i>	<i>External causes</i>
PERSONS					
	%	%	%	%	%
<b>Total injuries (N800–N999)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Fractures (N800–N829)	1.6	3.2	0.5	1.7	13.3
Intracranial injury, excluding those with skull fracture (N850–N854)	3.3	20.3	3.3	5.3	11.9
Internal injury of chest, abdomen and pelvis (N860–N869)	1.9	6.8	0.5	2.4	8.1
Open wound (N870–N897)	11.2	43.9	6.6	14.8	6.2
Burns (N940–N949)	1.3	1.3	1.4	1.3	1.6
Certain traumatic complications and unspecified injuries (N958–N959)	6.8	8.3	4.7	6.9	15.8
Poisoning by drugs, medicaments and biological substances (N960–N979)	18.9	2.5	64.9	19.4	12.1
Toxic effects of substances chiefly non-medical as to source (N980–N989)	21.5	2.3	8.5	18.6	8.4
Other and unspecified effects of external causes (N996–N999)	32.2	6.8	5.7	27.8	14.8
	no.	no.	no.	no.	no.
Total injuries	3 341	472	211	4 024	10 869



# 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 previous editions of this publication data relating to perinatal deaths have been based upon the World Health Organisation (WHO) recommended definition for compiling national perinatal statistics. This definition includes infants and fetuses weighing at least 500 g or having a gestational age of 22 weeks (see Explanatory Notes, paragraph 4). However, from 1997, the ABS has increased the coverage to infants and fetuses weighing at least 400 g or having a gestational age of at least 20 weeks. This change 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.

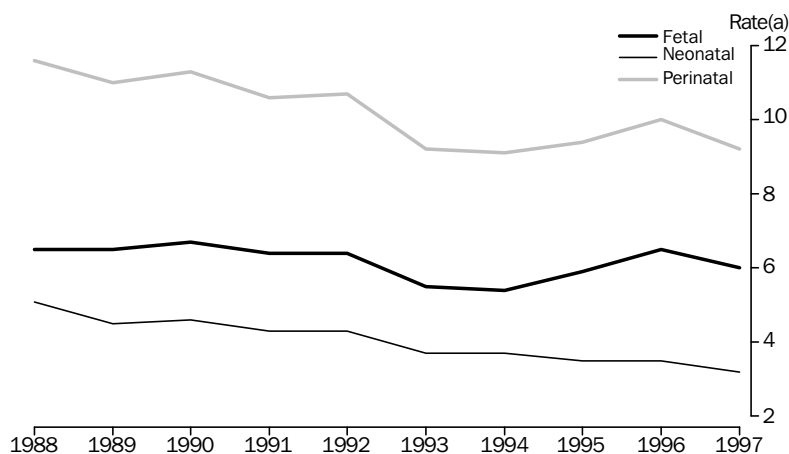
To assist in the transition to the available 400 g/20 weeks data, a number of tables also provide perinatal deaths information based on the 500 g/22 weeks definition. For those requiring more detailed statistics based on the 500 g/22 weeks definition, unpublished tables are available from the ABS.

### TRENDS IN PERINATAL DEATHS

From 1988 to 1994, both the number of perinatal deaths and the corresponding perinatal death rate declined. In 1995 and 1996 the number of deaths and the rate increased slightly, due solely to a rise in the number of fetal deaths for both years. In 1997, the rate declined to 9.2 deaths per 1,000 births based on 2,321 registered perinatal deaths.

From 1988 to 1997 the perinatal death rate for females has been consistently lower than that for males. However, these rates have exhibited similar trends.

#### PERINATAL, FETAL AND NEONATAL DEATH RATES



(a) Per 1,000 births.

## FETAL DEATHS

Between 1988 and 1997 the fetal death rate has fluctuated (see graph on previous page). By 1997 there were 1,516 fetal deaths giving a rate of 6.0 deaths per 1,000 births. Fetal deaths represent the majority of perinatal deaths. In 1997 fetal deaths accounted for 65% of the total perinatal deaths registered, maintaining the upward trend in their contribution to perinatal deaths over time (from 57% in 1988). Although the numbers of fetal deaths for both sexes have declined, males accounted for more than half the fetal deaths registered every year from 1988 to 1997.

## NEONATAL DEATHS

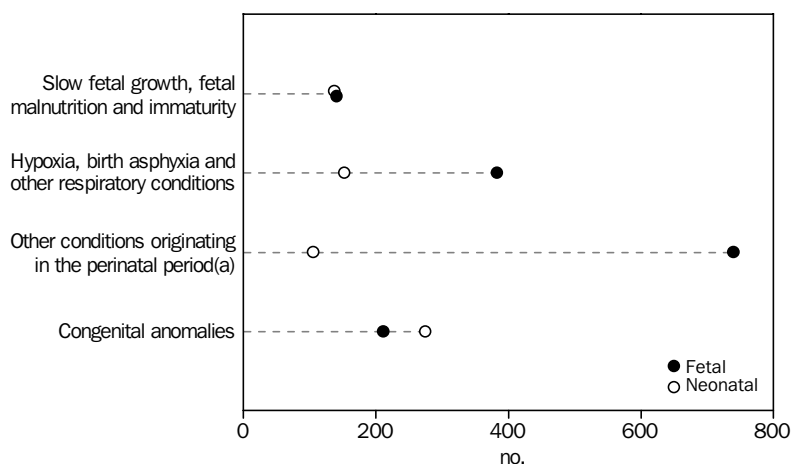
Between 1988 and 1997 the number of neonatal deaths decreased from 1,246 to 805. This resulted in a marked decline in the neonatal death rate from 5.1 to 3.2 per 1,000 live births. For 1996 and 1997, the neonatal death rate for females remained at 3.0 per 1,000 live births while the corresponding male rate fell from 3.9 to 3.4 per 1,000 live births.

## MAIN CONDITION CAUSING PERINATAL DEATH

The main causes of death differed for fetal and neonatal deaths. Hypoxia, birth asphyxia and other respiratory conditions was the group with the largest number of fetal deaths where a cause was known. This group accounted for a quarter of all fetal deaths. The leading specific cause within this group was asphyxia, or anoxia occurring before the onset of labour (301 fetal deaths). However, 49% of fetal deaths were assigned to the group 'Other conditions originating in the perinatal period'. Of the total 739 deaths in this group, 629 were assigned to cause unspecified (ICD code 779.9) (see table 3.5).

The leading group of causes of neonatal deaths was congenital anomalies which accounted for 34% of these deaths. Congenital anomalies of the heart and circulatory system accounted for the majority of this group (67 neonatal deaths). Hypoxia, birth asphyxia and other respiratory conditions accounted for 19% of neonatal deaths. A further 17% of neonatal deaths were due to slow fetal growth, fetal malnutrition and immaturity. The vast majority of neonatal deaths in this group (96%) were due to extreme immaturity.

PERINATAL DEATHS, Main Conditions in Fetus/Infant



(a) Includes unspecified cause of death.

## MAIN CONDITION IN MOTHER

A maternal condition was reported in 66% of perinatal deaths in 1997. For these deaths, complications of the placenta, cord and membranes were the most commonly mentioned conditions (43% of deaths). This group of conditions was reported in over four times as many fetal than neonatal deaths (537 compared with 123).

Maternal complications of pregnancy were mentioned in 30% of deaths where a maternal condition was reported. Multiple pregnancies were the most common maternal complication of pregnancy, being reported in 133 perinatal deaths. Half of all multiple pregnancies resulting in a perinatal death occurred between 22 and 27 completed weeks of gestation.

Maternal conditions which may have been unrelated to the present pregnancy were reported in 16% of perinatal deaths where a maternal condition was mentioned. These were more commonly reported in fetal than neonatal deaths.

## 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									
1988	822	651	1 473	669	495	1 164	1 491	1 146	2 637
1992	779	714	1 493	596	419	1 015	1 375	1 133	2 508
1993	668	577	1 245	511	375	886	1 179	952	2 131
1994	692	515	1 207	517	351	868	1 209	866	2 075
1995	681	602	1 283	467	344	811	1 148	946	2 094
1996	759	652	1 411	446	313	759	1 205	965	2 170
1997	692	588	1 280	408	310	718	1 100	898	1 998
RATE(b)									
1988	6.5	5.4	6.0	5.3	4.1	4.7	11.7	9.5	10.7
1992	5.7	5.5	5.6	4.4	3.3	3.8	10.1	8.8	9.4
1993	5.0	4.5	4.8	3.8	3.0	3.4	8.8	7.5	8.2
1994	5.2	4.1	4.7	3.9	2.8	3.4	9.1	6.9	8.0
1995	5.2	4.8	5.0	3.6	2.8	3.2	8.7	7.6	8.1
1996	5.8	5.3	5.5	3.4	2.5	3.0	9.2	7.8	8.5
1997	5.3	4.8	5.1	3.2	2.5	2.9	8.5	7.3	7.9

(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									
1988	895	727	1 622	715	531	1 246	1 610	1 258	2 868
1992	889	812	1 701	664	466	1 130	1 553	1 278	2 831
1993	765	674	1 439	563	409	972	1 328	1 083	2 411
1994	798	614	1 412	561	388	949	1 359	1 002	2 361
1995	805	707	1 512	514	394	908	1 319	1 101	2 420
1996	900	768	1 668	509	370	879	1 409	1 138	2 547
1997	829	687	1 516	443	362	805	1 272	1 049	2 321
RATE(b)									
1988	7.0	6.0	6.5	5.7	4.4	5.1	12.7	10.4	11.6
1992	6.5	6.3	6.4	4.9	3.6	4.3	11.4	9.9	10.7
1993	5.7	5.3	5.5	4.2	3.2	3.7	9.9	8.5	9.2
1994	6.0	4.9	5.4	4.2	3.1	3.7	10.2	8.0	9.1
1995	6.1	5.6	5.9	3.9	3.2	3.5	10.0	8.8	9.4
1996	8.8	6.2	6.5	3.9	3.0	3.5	10.7	9.2	10.0
1997	6.4	5.6	6.0	3.4	3.0	3.2	9.8	8.5	9.2

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

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

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

Year	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
NUMBER									
1988	1 042	678	463	210	259	91	74	51	<b>2 868</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>
RATE(b)									
1988	12.2	10.8	11.3	10.9	10.2	13.3	21.3	11.7	<b>11.6</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	17.0	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	8.6	9.1	8.2	8.1	11.6	15.5	6.6	<b>9.2</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								
1988	224	631	957	641	278	60	77	<b>2 868</b>
1992	202	591	843	744	302	75	74	<b>2 831</b>
1993	172	488	718	627	281	56	69	<b>2 411</b>
1994	155	461	651	651	311	68	64	<b>2 361</b>
1995	208	487	670	614	289	67	85	<b>2 420</b>
1996	189	490	699	684	319	92	74	<b>2 547</b>
1997	186	408	666	583	357	65	56	<b>2 321</b>
RATE(b)								
1988	15.9	11.8	10.0	10.3	14.2	21.7	..	<b>11.6</b>
1992	14.1	11.1	9.2	9.8	11.6	18.0	..	<b>10.7</b>
1993	13.0	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	16.3	10.2	8.0	7.9	9.5	13.4	..	<b>9.4</b>
1996	15.0	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>

(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>829</b>	<b>687</b>	<b>443</b>	<b>362</b>	<b>1 272</b>	<b>1 049</b>
MAIN CONDITION IN FETUS/INFANT						
Slow fetal growth, fetal malnutrition and immaturity (764, 765)	85	56	74	64	159	120
Slow fetal growth and fetal malnutrition (764)	45	33	3	2	48	35
Extreme immaturity (765.0)	38	22	71	62	109	84
Birth trauma (767)	2	1	26	21	28	22
Birth injury to brain, spine or spinal cord (767.0, 767.4)	1	1	26	21	27	22
Hypoxia, birth asphyxia and other respiratory conditions (768–770)	209	174	90	63	299	237
Fetal death from asphyxia or anoxia before onset of labour or at unspecified time (768.0)	154	147	—	—	154	147
Fetal death from asphyxia or anoxia during labour (768.1)	47	20	—	—	47	20
Fetal distress or birth asphyxia in liveborn infant (768.2–768.6)	—	—	29	21	29	21
Respiratory distress syndrome (769)	—	—	24	18	24	18
Massive aspiration syndrome (770.1)	3	2	1	1	4	3
Atelectasis (770.4–770.5)	—	—	10	5	10	5
Fetal and neonatal haemorrhage (772)	12	16	21	24	33	40
Intraventricular haemorrhage (772.1)	1	1	18	21	19	22
Other conditions originating in the perinatal period (766, 771, 773–779)	398	341	63	43	461	384
Infections specific to the perinatal period (771)	11	8	21	17	32	25
Hydrops fetalis not due to isoimmunization (778.0)	16	11	9	2	25	13
Unspecified (779.9)	337	292	6	7	343	299
Congenital anomalies (740–759)	120	92	144	130	264	222
Anencephalus and similar anomalies (740)	3	8	7	8	10	16
Spina bifida (741)	4	4	2	4	6	8
Congenital hydrocephalus (742.3)	12	3	9	3	21	6
Heart and circulatory system (745–747)	15	16	39	28	54	44
Respiratory system (748)	1	—	21	17	22	17
Genital organs and urinary system (752, 753)	13	8	14	6	27	14
Musculoskeletal system and limbs (754–756)	10	6	14	21	24	27
Chromosomal anomalies (758)	28	24	16	24	44	48
MAIN CONDITION IN MOTHER						
Maternal conditions which may be unrelated to present pregnancy (760)	95	86	29	30	124	116
Maternal hypertensive disorders (760.0)	42	28	14	16	56	44
Maternal complications of pregnancy (761)	101	74	173	118	274	192
Incompetent cervix (761.0)	9	2	17	18	26	20
Polyhydramnios (761.3)	6	5	9	2	15	7
Multiple pregnancy (761.5)	38	32	37	26	75	58
Complications of placenta, cord and membranes (762)	292	245	63	60	355	305
Placenta praevia (762.0)	1	—	2	5	3	5
Other placental separation and haemorrhage (762.1)	98	80	32	29	130	109
Other and unspecified morphological and functional abnormalities of placenta (762.2)	63	38	—	1	63	39
Prolapsed cord (762.4)	13	5	1	3	14	8
Other compression of umbilical cord (762.5)	58	53	—	2	58	55
Other complications of labour and delivery (763)	63	55	30	15	93	70
Breech delivery and extraction (763.0)	3	3	5	1	8	4
No maternal condition reported	278	227	148	139	426	366

(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>309</b>	<b>671</b>	<b>390</b>	<b>426</b>	<b>383</b>	<b>71</b>	<b>2 321</b>
MAIN CONDITION IN FETUS/INFANT							
Slow fetal growth, fetal malnutrition and immaturity (764, 765)	75	140	28	23	3	1	279
Slow fetal growth and fetal malnutrition (764)	5	24	26	22	2	1	83
Extreme immaturity (765.0)	70	116	1	—	—	—	193
Birth trauma (767)	—	4	7	13	20	4	50
Birth injury to brain, spine or spinal cord (767.0, 767.4)	—	4	7	12	20	4	49
Hypoxia, birth asphyxia and other respiratory conditions (768–770)	48	153	76	96	125	22	536
Fetal death from asphyxia or anoxia before onset of labour or at unspecified time (768.0)	17	51	55	77	80	8	301
Fetal death from asphyxia or anoxia during labour (768.1)	12	11	4	12	20	8	67
Fetal distress or birth asphyxia in liveborn infant (768.2–768.6)	4	19	4	4	16	2	50
Respiratory distress syndrome (769)	6	29	7	—	—	—	42
Massive aspiration syndrome (770.1)	—	—	—	1	4	2	7
Atelectasis (770.4–770.5)	2	13	—	—	—	—	15
Fetal and neonatal haemorrhage (772)	7	32	11	10	12	—	73
Intraventricular haemorrhage (772.1)	2	27	8	1	2	—	41
Other conditions originating in the perinatal period (766, 771, 773–779)	104	241	157	162	127	33	845
Infections specific to the perinatal period (771)	6	26	12	5	5	1	57
Hydrops fetalis not due to isoimmunization (778.0)	1	11	12	12	2	—	38
Unspecified (779.9)	81	159	121	137	106	20	642
Congenital anomalies (740–759)	71	98	104	105	84	9	486
Anencephalus and similar anomalies (740)	—	7	6	7	3	—	26
Spina bifida (741)	4	5	2	2	1	—	14
Congenital hydrocephalus (742.3)	4	5	4	6	6	1	27
Heart and circulatory system (745–747)	10	11	11	25	35	3	98
Respiratory system (748)	—	9	13	9	7	1	39
Genital organs and urinary system (752, 753)	9	6	8	13	4	—	41
Musculoskeletal system and limbs (754–756)	9	9	9	11	12	1	51
Chromosomal anomalies (758)	24	24	27	13	2	—	92
MAIN CONDITION IN MOTHER							
Maternal conditions which may be unrelated to present pregnancy (760)	39	83	47	39	24	4	240
Maternal hypertensive disorders (760.0)	19	35	21	15	10	—	100
Maternal complications of pregnancy (761)	98	234	69	37	10	1	466
Incompetent cervix (761.0)	22	24	—	—	—	—	46
Polyhydramnios (761.3)	—	5	6	6	4	1	22
Multiple pregnancy (761.5)	22	60	24	21	—	—	133
Complications of placenta, cord and membranes (762)	83	197	110	129	108	20	660
Placenta praevia (762.0)	2	3	1	1	1	—	8
Other placental separation and haemorrhage (762.1)	29	78	51	41	29	8	239
Other and unspecified morphological and functional abnormalities of placenta (762.2)	11	23	22	23	17	4	102
Prolapsed cord (762.4)	5	7	1	3	4	1	22
Other compression of umbilical cord (762.5)	6	9	9	40	43	5	113
Other complications of labour and delivery (763)	33	54	19	22	17	11	163
Breech delivery and extraction (763.0)	1	4	3	—	3	—	12
No maternal condition reported	56	103	145	199	224	35	792

(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>721</b>	<b>266</b>	<b>413</b>	<b>654</b>	<b>22</b>	<b>2 321</b>
MAIN CONDITION IN FETUS/INFANT							
Slow fetal growth, fetal malnutrition and immaturity (764, 765)	42	157	26	28	22	1	279
Slow fetal growth and fetal malnutrition (764)	—	11	22	26	22	1	83
Extreme immaturity (765.0)	42	145	4	—	—	—	193
Birth trauma (767)	—	4	4	14	26	2	50
Birth injury to brain, spine or spinal cord (767.0, 767.4)	—	4	4	13	26	2	49
Hypoxia, birth asphyxia and other respiratory conditions (768-770)	23	177	47	91	189	4	536
Fetal death from asphyxia or anoxia before onset of labour or at unspecified time (768.0)	9	56	35	74	122	3	301
Fetal death from asphyxia or anoxia during labour (768.1)	6	16	2	10	32	1	67
Fetal distress or birth asphyxia in liveborn infant (768.2-768.6)	3	21	2	4	19	—	50
Respiratory distress syndrome (769)	—	36	5	1	—	—	42
Massive aspiration syndrome (770.1)	—	—	—	—	7	—	7
Atelectasis (770.4-770.5)	4	10	1	—	—	—	15
Fetal and neonatal haemorrhage (772)	2	36	11	5	18	1	73
Intraventricular haemorrhage (772.1)	1	28	10	—	1	1	41
Other conditions originating in the perinatal period (766, 771, 773-779)	61	246	121	166	220	10	845
Infections specific to the perinatal period (771)	3	28	12	3	8	1	57
Hydrops fetalis not due to isoimmunization (778.0)	5	11	12	7	2	—	38
Unspecified (779.9)	47	155	84	150	186	5	642
Congenital anomalies (740-759)	65	97	53	99	161	2	486
Anencephalus and similar anomalies (740)	2	1	6	8	8	1	26
Spina bifida (741)	4	6	1	1	2	—	14
Congenital hydrocephalus (742.3)	5	5	3	6	8	—	27
Heart and circulatory system (745-747)	7	11	6	15	54	1	98
Respiratory system (748)	1	8	10	9	11	—	39
Genital organs and urinary system (752, 753)	7	7	4	12	11	—	41
Musculoskeletal system and limbs (754-756)	7	10	5	8	21	—	51
Chromosomal anomalies (758)	22	25	7	18	17	—	92
MAIN CONDITION IN MOTHER							
Maternal conditions which may be unrelated to present pregnancy (760)	16	94	37	41	48	1	240
Maternal hypertensive disorders (760.0)	2	39	20	22	17	—	100
Maternal complications of pregnancy (761)	60	265	63	50	24	1	466
Incompetent cervix (761.0)	14	32	—	—	—	—	46
Polyhydramnios (761.3)	—	3	5	9	5	—	22
Multiple pregnancy (761.5)	7	67	18	28	12	—	133
Complications of placenta, cord and membranes (762)	49	204	79	131	188	5	660
Placenta praevia (762.0)	1	4	1	1	1	—	8
Other placental separation and haemorrhage (762.1)	21	84	30	50	54	—	239
Other and unspecified morphological and functional abnormalities of placenta (762.2)	4	14	15	30	36	2	102
Prolapsed cord (762.4)	2	10	1	4	4	1	22
Other compression of umbilical cord (762.5)	—	8	9	24	69	2	113
Other complications of labour and delivery (763)	32	57	15	19	36	2	163
Breech delivery and extraction (763.0)	—	5	3	1	3	—	12
No maternal condition reported	39	101	72	172	358	13	792

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

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

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

Particulars	NSW.....		Vic.....		Qld.....		SA.....	
	Males	Females	Males	Females	Males	Females	Males	Females
FETAL DEATHS								
<b>Weight at delivery (grams)</b>	<b>317</b>	<b>251</b>	<b>188</b>	<b>145</b>	<b>151</b>	<b>120</b>	<b>54</b>	<b>55</b>
400-499	47	24	27	22	27	19	12	16
500-999	79	66	45	35	39	39	11	9
1 000-1 999	54	42	31	26	33	21	8	14
2 000-2 999	61	62	29	31	32	24	10	6
3 000 or more	67	56	42	25	18	16	13	10
Not stated	9	1	14	6	2	1	—	—
<b>Period of gestation (weeks)</b>	<b>317</b>	<b>251</b>	<b>188</b>	<b>145</b>	<b>151</b>	<b>120</b>	<b>54</b>	<b>55</b>
Less than 22	32	14	26	11	20	9	6	12
22-27	82	60	49	41	45	37	16	12
28-36	104	80	53	51	56	39	18	18
37-41	92	88	58	40	30	32	13	13
42 or more	4	2	1	2	—	1	1	—
Not stated	3	7	1	—	—	2	—	—
<b>Age group of mother (years)</b>	<b>317</b>	<b>251</b>	<b>188</b>	<b>145</b>	<b>151</b>	<b>120</b>	<b>54</b>	<b>55</b>
Less than 20	20	15	5	4	14	14	4	4
20-24	56	46	32	19	39	16	6	9
25-29	102	77	48	46	41	45	20	15
30-34	80	53	59	40	30	27	16	21
35-39	52	49	32	25	22	15	6	6
40 or more	7	6	8	9	3	2	2	—
Not stated	—	5	4	2	2	1	—	—
NEONATAL DEATHS								
<b>Age at death</b>	<b>155</b>	<b>138</b>	<b>99</b>	<b>90</b>	<b>97</b>	<b>62</b>	<b>25</b>	<b>18</b>
Less than 1 hour	30	31	14	24	24	12	11	2
1 hour to under 1 day	54	50	34	25	25	22	6	5
1 day to under 1 week	44	32	29	21	27	16	5	4
1 week to under 4 weeks	27	25	22	20	21	12	3	7
<b>Weight at delivery (grams)</b>	<b>155</b>	<b>138</b>	<b>99</b>	<b>90</b>	<b>97</b>	<b>62</b>	<b>25</b>	<b>18</b>
400-499	7	15	14	16	7	8	6	2
500-999	64	56	36	19	41	24	8	9
1 000-1 999	23	21	14	16	18	7	5	2
2 000-2 999	16	20	17	17	13	11	3	3
3 000 or more	38	24	17	19	18	11	3	1
Not stated	7	2	1	3	—	1	—	1
<b>Period of gestation (weeks)</b>	<b>155</b>	<b>138</b>	<b>99</b>	<b>90</b>	<b>97</b>	<b>62</b>	<b>25</b>	<b>18</b>
Less than 22	9	5	8	7	7	3	6	1
22-27	59	66	37	28	37	27	8	9
28-36	38	27	27	25	28	11	6	4
37-41	38	33	27	28	24	19	5	3
42 or more	1	2	—	2	1	—	—	—
Not stated	10	5	—	—	—	2	—	1
<b>Age group of mother (years)</b>	<b>155</b>	<b>138</b>	<b>99</b>	<b>90</b>	<b>97</b>	<b>62</b>	<b>25</b>	<b>18</b>
Less than 20	12	12	4	10	9	6	4	2
20-24	25	21	17	9	27	14	3	2
25-29	41	42	19	22	27	19	5	4
30-34	33	32	29	29	20	16	6	7
35-39	33	20	19	11	11	6	6	2
40 or more	5	5	3	4	3	1	1	1
Not stated	6	6	8	5	—	—	—	—

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

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

Particulars	WA.....		Tas.....		NT.....		ACT.....	
	Males	Females	Males	Females	Males	Females	Males	Females
FETAL DEATHS								
<b>Weight at delivery (grams)</b>	<b>64</b>	<b>71</b>	<b>27</b>	<b>21</b>	<b>16</b>	<b>17</b>	<b>12</b>	<b>7</b>
400-499	9	9	5	2	2	2	—	—
500-999	16	18	3	4	7	6	2	2
1 000-1 999	13	9	4	5	—	2	5	1
2 000-2 999	8	21	7	3	1	3	2	2
3 000 or more	18	12	8	6	2	3	3	2
Not stated	—	2	—	1	4	1	—	—
<b>Period of gestation (weeks)</b>	<b>64</b>	<b>71</b>	<b>27</b>	<b>21</b>	<b>16</b>	<b>17</b>	<b>12</b>	<b>7</b>
Less than 22	6	6	2	2	1	2	—	—
22-27	17	21	4	5	9	6	2	2
28-36	20	21	7	6	2	4	8	2
37-41	20	23	13	8	3	5	2	3
42 or more	1	—	1	—	—	—	—	—
Not stated	—	—	—	—	1	—	—	—
<b>Age group of mother (years)</b>	<b>64</b>	<b>71</b>	<b>27</b>	<b>21</b>	<b>16</b>	<b>17</b>	<b>12</b>	<b>7</b>
Less than 20	9	6	1	1	3	3	1	1
20-24	14	13	6	2	4	3	2	3
25-29	17	15	13	10	5	6	2	—
30-34	12	27	6	2	2	2	3	2
35-39	11	8	—	2	1	2	4	1
40 or more	1	1	—	1	—	—	—	—
Not stated	—	1	1	3	1	1	—	—
NEONATAL DEATHS								
<b>Age at death</b>	<b>36</b>	<b>31</b>	<b>16</b>	<b>6</b>	<b>12</b>	<b>11</b>	<b>3</b>	<b>6</b>
Less than 1 hour	1	6	3	1	2	4	1	1
1 hour to under 1 day	15	9	5	—	4	3	—	1
1 day to under 1 week	9	8	6	2	3	2	2	3
1 week to under 4 weeks	11	8	2	3	3	2	—	1
<b>Weight at delivery (grams)</b>	<b>36</b>	<b>31</b>	<b>16</b>	<b>6</b>	<b>12</b>	<b>11</b>	<b>3</b>	<b>6</b>
400-499	—	7	—	1	1	2	—	—
500-999	13	6	6	—	1	4	1	2
1 000-1 999	5	5	3	—	1	1	—	1
2 000-2 999	8	7	3	1	2	—	1	2
3 000 or more	8	6	1	2	3	—	1	1
Not stated	2	—	3	2	4	4	—	—
<b>Period of gestation (weeks)</b>	<b>36</b>	<b>31</b>	<b>16</b>	<b>6</b>	<b>12</b>	<b>11</b>	<b>3</b>	<b>6</b>
Less than 22	—	1	—	—	—	—	—	—
22-27	12	11	7	1	2	7	—	2
28-36	8	5	4	—	2	—	2	3
37-41	12	10	1	4	5	—	1	1
42 or more	—	2	1	—	—	—	—	—
Not stated	4	2	3	1	3	4	—	—
<b>Age group of mother (years)</b>	<b>36</b>	<b>31</b>	<b>16</b>	<b>6</b>	<b>12</b>	<b>11</b>	<b>3</b>	<b>6</b>
Less than 20	5	5	1	2	4	2	1	2
20-24	4	5	3	1	3	4	—	—
25-29	9	8	3	2	2	—	—	1
30-34	13	6	5	—	1	2	1	1
35-39	3	5	2	—	—	—	1	2
40 or more	—	1	1	—	—	—	—	—
Not stated	2	1	1	1	2	3	—	—

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

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

Particulars	NSW.....		Vic.....		Qld.....		SA.....	
	Males	Females	Males	Females	Males	Females	Males	Females
PERINATAL DEATHS								
<b>Age at death</b>	<b>155</b>	<b>138</b>	<b>99</b>	<b>90</b>	<b>97</b>	<b>62</b>	<b>25</b>	<b>18</b>
Less than 1 hour	30	31	14	24	24	12	11	2
1 hour to under 1 day	54	50	34	25	25	22	6	5
1 day to under 1 week	44	32	29	21	27	16	5	4
1 week to under 4 weeks	27	25	22	20	21	12	3	7
<b>Weight at delivery (grams)</b>	<b>472</b>	<b>389</b>	<b>287</b>	<b>235</b>	<b>248</b>	<b>182</b>	<b>79</b>	<b>73</b>
400-499	54	39	41	38	34	27	18	18
500-999	143	122	81	54	80	63	19	18
1 000-1 999	77	63	45	42	51	28	13	16
2 000-2 999	77	82	46	48	45	35	13	9
3 000 or more	105	80	59	44	36	27	16	11
Not stated	16	3	15	9	2	2	—	1
<b>Period of gestation (weeks)</b>	<b>472</b>	<b>389</b>	<b>287</b>	<b>235</b>	<b>248</b>	<b>182</b>	<b>79</b>	<b>73</b>
Less than 22	41	19	34	18	27	12	12	13
22-27	141	126	86	69	82	64	24	21
28-36	142	107	80	76	84	50	24	22
37-41	130	121	85	68	54	51	18	16
42 or more	5	4	1	4	1	1	1	—
Not stated	13	12	1	—	—	4	—	1
<b>Age group of mother (years)</b>	<b>472</b>	<b>389</b>	<b>287</b>	<b>235</b>	<b>248</b>	<b>182</b>	<b>79</b>	<b>73</b>
Less than 20	32	27	9	14	23	20	8	6
20-24	81	67	49	28	66	30	9	11
25-29	143	119	67	68	68	64	25	19
30-34	113	85	88	69	50	43	22	28
35-39	85	69	51	36	33	21	12	8
40 or more	12	11	11	13	6	3	3	1
Not stated	6	11	12	7	2	1	—	—

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

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

Particulars	WA.....		Tas.....		NT.....		ACT.....	
	Males	Females	Males	Females	Males	Females	Males	Females
PERINATAL DEATHS								
<b>Age at death</b>	<b>36</b>	<b>31</b>	<b>16</b>	<b>6</b>	<b>12</b>	<b>11</b>	<b>3</b>	<b>6</b>
Less than 1 hour	1	6	3	1	2	4	1	1
1 hour to under 1 day	15	9	5	—	4	3	—	1
1 day to under 1 week	9	8	6	2	3	2	2	3
1 week to under 4 weeks	11	8	2	3	3	2	—	1
<b>Weight at delivery (grams)</b>	<b>100</b>	<b>102</b>	<b>43</b>	<b>27</b>	<b>28</b>	<b>28</b>	<b>15</b>	<b>13</b>
400–499	9	16	5	3	3	4	—	—
500–999	29	24	9	4	8	10	3	4
1 000–1 999	18	14	7	5	1	3	5	2
2 000–2 999	16	28	10	4	3	3	3	4
3 000 or more	26	18	9	8	5	3	4	3
Not stated	2	2	3	3	8	5	—	—
<b>Period of gestation (weeks)</b>	<b>100</b>	<b>102</b>	<b>43</b>	<b>27</b>	<b>28</b>	<b>28</b>	<b>15</b>	<b>13</b>
Less than 22	6	7	2	2	1	2	—	—
22–27	29	32	11	6	11	13	2	4
28–36	28	26	11	6	4	4	10	5
37–41	32	33	14	12	8	5	3	4
42 or more	1	2	2	—	—	—	—	—
Not stated	4	2	3	1	4	4	—	—
<b>Age group of mother (years)</b>	<b>100</b>	<b>102</b>	<b>43</b>	<b>27</b>	<b>28</b>	<b>28</b>	<b>15</b>	<b>13</b>
Less than 20	14	11	2	3	7	5	2	3
20–24	18	18	9	3	7	7	2	3
25–29	26	23	16	12	7	6	2	1
30–34	25	33	11	2	3	4	4	3
35–39	14	13	2	2	1	2	5	3
40 or more	1	2	1	1	—	—	—	—
Not stated	2	2	2	4	3	4	—	—

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

## EXPLANATORY NOTES .....

### INTRODUCTION

**1** This publication contains summary statistics on causes of death for the general population, together with selected statistics on perinatal deaths. These statistics have been compiled from data made available to the ABS by the Registrar of Births, Deaths and Marriages in each State and Territory. Statistics of perinatal deaths for years prior to 1994 were published separately in *Perinatal Deaths, Australia* (Cat. no. 3304.0), which has been discontinued.

### SCOPE AND COVERAGE

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

**3** In 1988 revisions were made to the Northern Territory legislation to enable the registration of a death prior to the certification of cause. As a result, deaths registered in the Northern Territory in 1988 included a number of deaths which would not necessarily have been registered in 1988 under the former legislation. This should be borne in mind when comparing statistics for 1988 and later years with statistics for earlier years.

#### Perinatal death statistics

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

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

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

**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.

Perinatal death statistics *continued*

**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 of perinatal death is determined by the State or Territory of usual residence of the mother. Statistics compiled on a State or Territory of registration basis are available on request.

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

## CAUSE OF DEATH CLASSIFICATION USED

**11** The causes of death, both underlying and multiple, in this publication are classified according to the ICD-9 which was adopted for world-wide use from 1979 (see Glossary for definition of underlying and multiple cause). For underlying cause of death, accidental and violent deaths are classified according to the external cause, that is, to the circumstances of the accident or violence which produced the fatal injury rather than to the nature of the injury. As ICD-9 does not directly accommodate the coding of AIDS and AIDS-related deaths, the ABS has adopted, for these diseases from 1996 onwards, ICD-9 Clinically Modified which allows for a more detailed classification.

**12** As ICD-9 does not directly accommodate the coding of AIDS and AIDS-related deaths, the ABS has adopted, for these diseases from 1996 onwards, ICD-9 Clinically Modified codes which allow for a more detailed classification. From 1988 to 1995 in cases where AIDS was the underlying cause it was coded to ICD-9 deficiency of cell-mediated immunity (279.1) while for 1996 and 1997 all AIDS-related deaths were coded to ICD-9 CM HIV infection (042–044). In table 1.3 AIDS-related deaths have been reported as ICD-9 CM HIV infection (042–044) for all years. All data on AIDS in this publication refer to AIDS-related deaths. For a death to be AIDS-related, AIDS had to be mentioned on the death certificate as either the underlying cause, the immediate cause, an intervening cause, or simply a condition which was reported as contributing to death, but which did not necessarily directly relate to the underlying cause. Consequently, the AIDS-related deaths presented in table 1.3 differ from all other causes of death in that table. The numbers presented for all the other causes in table 1.3 are based on underlying cause only.



CAUSE OF DEATH CLASSIFICATION USED *continued*

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

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

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

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

**16** 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.

## Perinatal statistics

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

## AGE GROUPS

**18** Prior to 1994 the oldest age group used in *Causes of Death, Australia* (Cat. no. 3303.0) , was the 75 years and over age group. Since the 1994 publication this age group has been disaggregated to enable identification of the 75–84 years age group and the 85 and over age groups. This is the result of the increased number of deaths occurring in these older age groups. Data for earlier years are available on request.

## DATA QUALITY

**19** 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. (Guidelines for the provision of cause of death information are made available to medical practitioners by the ABS.) 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 ABS by individual Registrars for compilation into aggregate statistics shown in this publication.

DATA QUALITY *continued*

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

**21** Since 1993 all processing of cause of death information for Australia has been centralised in the Queensland office of the ABS. Centralised processing is considered to lead to more consistency in coding and improved data quality.

## Indigenous deaths

**22** This publication includes Indigenous deaths data for South Australia, Western Australia and the Northern Territory. Due to the very small number of Indigenous deaths in the Australian Capital Territory, no figures are published. It is estimated that more than 90% of Indigenous deaths in these States and Territories are identified. While other States have provision for the identification of Indigenous deaths on their death registration forms, deaths for these States are considered to be under identified. Queensland commenced identifying Indigenous deaths in its registration process from 1996. As causes of death data are published on a State of usual residence basis, deaths of South Australian, Western Australian, Northern Territory and Australian Capital Territory residents which occur in other States may be identified less completely than if the deaths had been registered in their home State or Territory.

## POPULATIONS

**23** The crude and age-specific death rates and years of potential life lost (YPLL) shown in this publication have been compiled using estimates of resident populations based on 1996 Population Census final data.

**24** Appendix 2 provides details of the number of live births registered and the estimated age and mean resident populations which have been used to calculate the rates shown in this publication. The appendix figures also enable further rates to be calculated.

## ACKNOWLEDGMENT

**25** 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

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

## UNPUBLISHED DATA

**27** 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.

**28** 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.

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

## EFFECTS OF ROUNDING

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

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

## GENERAL

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

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

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

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

The following variables are available for both underlying and multiple causes of death (see Glossary):

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

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

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

## APPENDIX 2

## DATA USED IN CALCULATING RATES .....

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

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

Sex	1988	1997
Males	126 223	129 179
Females	119 970	122 663
<b>Persons</b>	<b>246 193</b>	<b>251 842</b>

(a) Used to calculate infant death rates.

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

Sex	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Males	44 647	31 248	24 024	9 383	12 810	3 098	1 812	2 132	129 179
Females	42 509	29 484	22 941	8 979	11 966	2 909	1 776	2 076	122 663
<b>Persons</b>	<b>87 156</b>	<b>60 732</b>	<b>46 965</b>	<b>18 362</b>	<b>24 776</b>	<b>6 007</b>	<b>3 588</b>	<b>4 208</b>	<b>251 842</b>

(a) Used to calculate infant death rates.

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

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

Year	Under 1	1-14	15-24	25-44	45-54	55-64	65-74	75-84	85 and over	All ages
MALES										
1988	125 702	1 771 280	1 391 527	2 609 322	854 872	736 431	504 961	216 965	37 885	<b>8 248 945</b>
1997	129 403	1 880 349	1 361 556	2 865 952	1 207 416	792 712	616 527	298 840	65 261	<b>9 218 016</b>
FEMALES										
1988	119 812	1 682 237	1 341 966	2 561 405	812 633	733 594	596 839	334 920	99 813	<b>8 283 219</b>
1997	122 698	1 787 886	1 305 694	2 874 144	1 176 759	782 610	679 296	434 322	150 822	<b>9 314 231</b>
PERSONS										
1988	245 514	3 453 517	2 733 493	5 170 727	1 667 505	1 470 025	1 101 800	551 885	137 698	<b>16 532 164</b>
1997	252 101	3 668 235	2 667 250	5 740 096	2 384 175	1 575 322	1 295 823	733 162	216 083	<b>18 532 247</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.....

	Sex	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Live births	Males	44 633	31 243	24 015	9 375	12 807	3 096	1 810	2 132	<b>129 136</b>
	Females	42 490	29 470	22 933	8 975	11 960	2 907	1 775	2 076	<b>122 609</b>
Stillbirths(b)	Males	317	188	151	54	64	27	16	12	<b>829</b>
	Females	251	145	120	55	71	21	17	7	<b>687</b>
Total	Males	44 950	31 431	24 166	9 429	12 871	3 123	1 826	2 144	<b>129 965</b>
	Females	42 741	29 615	23 053	9 030	12 031	2 928	1 792	2 083	<b>123 296</b>
	Persons	87 691	61 046	47 219	18 459	24 902	6 051	3 618	4 227	<b>253 261</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 the delivery.

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

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

	Sex	Under 20	20-24	25-29	30-34	35-39	40 and over	Not stated	Total
Live births	Males	6 362	21 576	42 538	38 895	16 975	2 734	56	<b>129 136</b>
	Females	5 942	20 457	39 954	37 283	16 302	2 618	53	<b>122 609</b>
Stillbirths(b)	Males	57	159	248	208	128	21	8	<b>829</b>
	Females	48	111	214	174	108	19	13	<b>687</b>
Total	Males	6 419	21 735	42 786	39 103	17 103	2 755	64	<b>129 965</b>
	Females	5 990	20 568	40 168	37 457	16 410	2 637	66	<b>123 296</b>
	Persons	12 409	42 303	82 954	76 560	33 513	5 392	130	<b>253 261</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.....		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
1988	126 198	119 948	246 146	895	727	1 622	127 093	120 675	247 768
1992	135 568	128 510	264 078	889	812	1 701	136 457	129 322	265 779
1993	133 530	126 617	260 147	765	674	1 439	134 295	127 291	261 586
1994	132 578	125 370	257 948	798	614	1 412	133 376	125 984	259 360
1995	131 393	124 708	256 101	805	707	1 512	132 198	125 415	257 613
1996	130 503	123 184	253 687	900	768	1 668	131 403	123 952	255 355
1997	129 136	122 609	251 745	829	687	1 516	129 965	123 296	253 261

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

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

**500 GRAMS/22 WEEKS GESTATION**

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

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

	Sex	STATE OR TERRITORY OF USUAL RESIDENCE.....								
		NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Live births	Males	44 626	31 229	24 008	9 369	12 807	3 096	1 809	2 132	<b>129 101</b>
	Females	42 475	29 453	22 925	8 973	11 953	2 906	1 773	2 076	<b>122 557</b>
Stillbirths(b)	Males	269	155	123	42	55	22	14	12	<b>692</b>
	Females	227	120	101	39	60	19	15	7	<b>588</b>
Total	Males	44 895	31 384	24 131	9 411	12 862	3 118	1 823	2 144	<b>129 793</b>
	Females	42 702	29 573	23 026	9 012	12 013	2 925	1 788	2 083	<b>123 145</b>
	Persons	87 597	60 957	47 157	18 423	24 875	6 043	3 611	4 227	<b>252 938</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 the delivery.



**A3.5 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>
1988	126 152	119 912	246 064	822	651	1 473	126 974	120 563	247 537
1992	135 500	128 463	263 963	779	714	1 493	136 279	129 177	265 456
1993	133 478	126 583	260 061	668	577	1 245	134 146	127 160	261 306
1994	132 534	125 333	257 867	692	515	1 207	133 226	125 848	259 074
1995	131 346	124 658	256 004	681	602	1 283	132 027	125 260	257 287
1996	130 440	123 127	253 567	759	652	1 411	131 199	123 779	254 978
1997	129 101	122 557	251 658	692	588	1 280	129 793	123 145	252 938

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

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

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

### MULTIPLE CAUSES OF DEATH STATISTICS

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

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

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

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

MULTIPLE CAUSES OF DEATH STATISTICS *continued*

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

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

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

### INTRODUCTION

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

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

### COMPARISON OF AUTOMATIC AND MANUAL CODING

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

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

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

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

COMPARISON OF AUTOMATIC AND MANUAL CODING *continued*

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

**A5.1 COMPARABILITY FACTORS**

<i>Cause of death and ICD code</i>	<i>Comparability factor</i>
<b>All causes</b>	<b>1.00</b>
Class I Infectious and parasitic diseases (001–139)	1.05
Class II Neoplasms (140–239)	0.99
Malignant neoplasms (140–208)	0.99
Lip, oral cavity and pharynx (140–149)	1.04
Digestive organs and peritoneum (150–159)	0.99
Oesophagus (150)	0.99
Stomach (151)	0.99
Colon (153)	1.00
Rectum, rectosigmoid junction and anus (154)	0.99
Liver and intrahepatic bile ducts (155)	1.04
Pancreas (157)	1.00
Trachea, bronchus and lung (162)	1.00
Bone, connective tissue, skin and breast (170–175)	0.98
Melanoma of skin (172)	0.99
Breast (174, 175)	0.99
Genitourinary organs (179–189)	0.99
Ovary and other uterine adnexa (183)	1.01
Prostate (185)	0.99
Bladder (188)	0.97
Other and unspecified sites (190–199)	0.99
Brain (191)	0.99
Lymphatic and haematopoietic tissue (200–208)	1.00
Leukaemia (204–208)	0.96
Benign and unspecified neoplasms (210–239)	0.90
Class III Endocrine, nutritional and metabolic diseases and immunity disorders (240–279)	0.97
Diabetes mellitus (250)	0.94
Class IV Diseases of blood and blood-forming organs (280–289)	1.12
Class V Mental disorders (290–319)	0.84
Senile and presenile organic psychotic conditions (290)	0.38
Drug dependence (304)	1.03
Class VI Disease of the nervous system and sense organs (320–389)	0.88
Hereditary and degenerative diseases of the central nervous system (330–337)	0.86
Alzheimer's disease (3310)	0.84
Class VII Diseases of the circulatory system (390–459)	0.98
All heart disease (393–398, 402, 404, 410–414, 415, 416, 420–429)	0.99
Rheumatic fever and rheumatic heart disease (390–398)	0.89
Hypertensive disease (401–405)	0.93
Ischaemic heart disease (410–414)	0.99
Acute myocardial infarction (410)	0.99
Diseases of pulmonary circulation and other forms of heart disease (415–429)	0.99
Heart failure (428)	0.94
Cerebrovascular disease (430–438)	0.95
Diseases of arteries, arterioles and capillaries (440–448)	0.99
Atherosclerosis (440)	0.88
Aortic aneurysm (441)	0.99

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

<i>Cause of death and ICD code</i>	<i>Comparability factor</i>
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

## 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>596 078</b>	<b>305 722</b>
Malignant neoplasms (cancer) (140–208)	148 707	122 888
Accidents (E800–E949)	97 524	32 957
Motor vehicle traffic accidents (E810–E819)	51 505	20 084
Ischaemic heart disease (410–414)	81 575	23 843
Suicide (E950–E959)	77 176	19 253
Cerebrovascular disease (stroke) (430–438)	18 192	12 522
Drug dependence (304)	21 843	5 885
Chronic obstructive pulmonary disease and allied conditions (including asthma, emphysema and bronchitis) (490–496)	15 828	11 203
Chronic liver disease and cirrhosis (571)	12 138	4 444
Diabetes mellitus (250)	8 846	5 657
Pneumonia and influenza (480–487)	5 543	3 721
Diseases of arteries, arterioles and capillaries (including atherosclerosis and aortic aneurysm) (440–448)	5 353	2 340
Hereditary and degenerative diseases of the central nervous system (330–337)	4 185	3 355

(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, these are described below.

The equation is:

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

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 1996 population

$N_x$  = number of persons aged  $x$  years in the 1996 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 tables 1, 3 and 14 (total all ages only).
- *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.
- *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 in a particular age/sex group—see tables 3 and 14.
- *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 tables 3 and 14.

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.)

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<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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