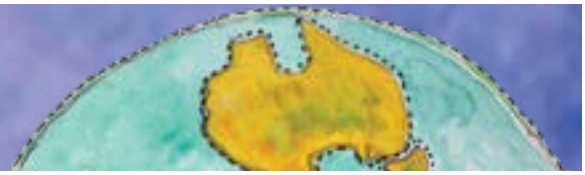
3.2 Leading causes of death in Australia



SNAPSHOT

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Examining leading causes of death can help us to understand health in different populations and population groups. Exploring changes over time can help us to evaluate the effects of health policies, interventions, and new treatments.

Changes in the pattern of causes of death may also reflect changes in behaviours, exposures, and social and environmental circumstances.

About deaths data

Causes of death are documented on death certificates completed by medical practitioners or coroners, and coded using the World Health Organization (WHO) International Statistical Classification of Diseases and Related Health Problems (ICD) by the Australian Bureau of Statistics.

The ICD allows for the categorisation of causes of death into disease groups in a way that is meaningful for public health purposes. The AIHW uses the disease groups recommended by WHO (Becker et al. 2006) with minor modifications to suit the Australian context.

'Leading causes of death' analyses are based solely on what is called the *underlying cause of death*, which, broadly, is the disease or injury that initiated the train of events leading to death. Most deaths, however, are the result of more than one contributing disease or condition (see Chapter 3 'Multiple causes of death in Australia').

What are the leading underlying causes of death in Australia?

- There were 146,932 deaths in Australia in 2011.
- The leading underlying cause of death was coronary heart disease, accounting for 11,733 male deaths and 9,780 female deaths (Figure 3.2).
- For males the next most common causes of death were lung cancer (4,959 deaths) and cerebrovascular diseases (which include stroke) (4,427 deaths).
- For females the next most common causes of death were cerebrovascular diseases (6,824 deaths), and dementia and Alzheimer disease (6,596 deaths).

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Have leading causes of death changed over time?

- For both males and females, the 5 leading causes of death were the same in 2001 and 2011, albeit with different rankings (Figure 3.2).
- The leading cause of death in both years was coronary heart disease, accounting for 20% of deaths in 2001 and 15% in 2011.
- For males, the largest changes in leading causes of death from 2001 to 2011 were the rise of dementia and Alzheimer disease from 13th to 6th place, and the fall of land transport accidents from 9th to 17th place.
- For males, 2 leading external causes of death (land transport accidents and suicides) fell in rank over this period while many cancer causes of death rose in rank (lung, prostate and pancreatic cancers, and cancers with unknown or ill-defined site).
- For females, many leading cancer causes of death (breast, colorectal, pancreatic and ovarian) fell in rank over this period—for example, breast cancer fell from 3rd in 2001 to 5th in 2011. Meanwhile, lung cancer deaths rose in rank, from 5th in 2001 to 4th in 2011.

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Figure 3.2

Rank	% Male deaths	Leading causes of death, males, 2001	Leading causes of death, males, 2011	% Male deaths
1	20.8	Coronary heart disease (I20–I25)	Coronary heart disease (I20–I25)	15.6
2	7.3	Cerebrovascular diseases (I60–I69)	Lung cancer (C33, C34)	6.6
3	7.0	Lung cancer (C33, C34)	Cerebrovascular diseases (I60–I69)	5.9
4	4.8	Chronic obstructive pulmonary disease (COPD) (J40–J44)	Prostate cancer (C61)	4.4
5	4.1	Prostate cancer (C61)	Chronic obstructive pulmonary disease (COPD) (J40–J44)	4.4
6	3.9	Colorectal cancer (C18–C21)	Dementia and Alzheimer disease (F00–F03,G30)	4.3
7	2.9	Suicide (X60–X84)	Colorectal cancer (C18–C21)	3.0
8	2.5	Diabetes (E10–E14)	Diabetes (E10–E14)	2.9
9	2.1	Land transport accidents (V01–V89)	Cancer, unknown, ill-defined (C26, C39, C76–C80)	2.6
10	1.8	Heart failure and complications and ill-defined heart diseases (I50–I51)	Suicide (X60–X84)	2.3
11	1.8	Cancer, unknown, ill-defined (C26, C39, C76–C80)	Heart failure and complications and ill-defined heart diseases (I50–I51)	1.9
12	1.8	Influenza and pneumonia (J09–J18)	Pancreatic cancer (C25)	1.6
13	1.8	Dementia and Alzheimer disease (F00–F03,G30)	Kidney failure (N17–N19)	1.6
14	1.4	Pancreatic cancer (C25)	Influenza and pneumonia (J09–J18)	1.5
15	1.2	Cirrhosis and other diseases of the liver (K70–K76)	Cirrhosis and other diseases of the liver (K70–K76)	1.4
16	1.2	Lymphomas (C81-C85, C96)	**Melanoma (C43)**	1.4
17	1.2	Kidney failure (N17–N19)	Land transport accidents (V01–V89)	1.3
18	1.2	Leukaemia (C91–C95)	**Liver cancer (C22)**	1.3
19	1.2	Aortic aneurysm and dissection (I71)	Leukaemia (C91–C95)	1.2
20	1.1	Stomach cancer (C16)	**Oesophageal cancer (C15)**	1.2
	71.0	**Leading 20 causes**	**Leading 20 causes**	**66.4**
	66,835	**Total deaths**	**Total deaths**	**75,330**

Leading underlying causes of death, males and females, Australia, 2001 compared with 2011

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Figure 3.2 (continued)

Rank	% Male deaths	Leading causes of death, males, 2001	Leading causes of death, males, 2011	% Male deaths
1	20.0	Coronary heart disease (I20–I25)	Coronary heart disease (I20–I25)	13.7
2	11.8	Cerebrovascular diseases (I60–I69)	Cerebrovascular diseases (I60–I69)	9.5
3	4.2	Breast cancer (C50)	Dementia and Alzheimer disease (F00–F03,G30)	9.2
4	4.2	Dementia and Alzheimer disease (F00–F03,G30)	Lung cancer (C33, C34)	4.4
5	3.9	Lung cancer (C33, C34)	Breast cancer (C50)	4.1
6	3.5	Colorectal cancer (C18–C21)	Chronic obstructive pulmonary disease (COPD) (J40–J44)	3.6
7	3.4	Chronic obstructive pulmonary disease (COPD) (J40–J44)	Diabetes (E10–E14)	2.8
8	3.1	Heart failure and complications and ill-defined heart diseases (I50–I51)	Heart failure and complications and ill-defined heart diseases (I50–I51)	2.8
9	2.5	Influenza and pneumonia (J09–J18)	Colorectal cancer (C18–C21)	2.6
10	2.3	Diabetes (E10–E14)	Cancer, unknown, ill-defined (C26, C39, C76–C80)	2.5
11	2.0	Cancer, unknown, ill-defined (C26, C39, C76–C80)	Influenza and pneumonia (J09–J18)	1.9
12	1.4	Kidney failure (N17–N19)	Kidney failure (N17–N19)	1.7
13	1.4	Pancreatic cancer (C25)	Hypertensive diseases (I10–I15)	1.7
14	1.4	Ovarian cancer (C56)	Pancreatic cancer (C25)	1.7
15	1.3	Hypertensive diseases (I10–I15)	Cardiac arrhythmias (I47–I49)	1.4
16	1.2	Lymphomas (C81-C85, C96)	**Accidental falls (W00–W19)**	1.3
17	1.0	Diseases of the musculoskeletal system and connective tissue (M00–M99)	Ovarian cancer (C56)	1.3
18	1.0	Cardiac arrhythmias (I47–I49)	Diseases of the musculoskeletal system and connective tissue (M00–M99)	1.1
19	0.9	Leukaemia (C91–C95)	**Septicaemia (A40–A41)**	1.1
20	0.9	Perinatal and congenital conditions (P00–96, Q00–Q99 excl. P28.5)	**Non-rheumatic valve disorders (I34–I38)**	1.1
	71.2	**Leading 20 causes**	**Leading 20 causes**	**69.5**
	61,709	**Total deaths**	**Total deaths**	**71,602**

Source: AIHW National Mortality Database.

Notes

1. Rankings are based on number of deaths; a decline in rank does not necessarily indicate a decline in the number of deaths.
2. Codes refer to the International Classification of Diseases, 10th revision (ICD-10).
3. Data for 2011 are based on the preliminary version of cause of death data and are subject to further revision by the ABS. Causes of death that are likely to be affected by the revisions process are particular external causes of death, such as suicide and land transport accidents. Revised and finalised data may reflect higher counts of both suicide and land transport accidents.
4. Coloured lines point to the cause as ranked in 2011; causes in bold indicate they have moved into the leading 20 causes in 2011 while those in grey have moved out since 2001.

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Do leading causes of death vary depending on where you live?

- Coronary heart disease was the leading cause of death in all areas, from *Major cities* to *Very remote*, in 2009–2011.
- Diabetes ranked higher as a cause of death among people living in *Remote* and *Very remote* areas compared with regional and city areas.
- Cerebrovascular diseases, and dementia and Alzheimer disease ranked higher among diseases causing death in *Major cities*, and *Inner regional* and *Outer regional* areas compared with the more remote areas.
- Land transport accidents ranked more highly with increasing remoteness—they were not in the top 15 in *Major cities* or *Inner regional* areas, but ranked 13th in *Outer regional* areas, 8th in *Remote* areas and 4th in *Very remote* areas.
- Deaths from suicide accounted for a greater proportion of all deaths in *Remote* and *Very remote* areas, 4% and 3%, respectively, compared with 2% or less in other areas.
- Causes of death that ranked in the leading 15 causes of death in *Remote* and *Very remote* areas and not in *Major cities* and regional areas include perinatal and congenital conditions, cirrhosis and other diseases of the liver and unknown and ill-defined causes.

What is missing from the picture?

Socioeconomic factors such as highest level of education achieved and main occupation are known to be associated with mortality and particular causes of death. This information is not collected in Australian deaths data.

The leading causes of death presented here are based purely on counts of deaths in a particular year; the extra impact of early deaths due to particular causes is not assessed. Burden of disease analyses do, however, quantify the effects of diseases and injuries in terms of 'healthy life' lost due to premature death or disability (see Chapter 4 'Burden of disease').

Where do I go for more information?

More information on deaths and leading causes of death in Australia, including by different age groups, is available on the AIHW website www.aihw.gov.au/deaths.

Information on variations in leading causes of death by socioeconomic status, remoteness and other socio-demographic variables will be available in a forthcoming AIHW publication *Mortality inequalities in Australia*.

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