From: Julie M
To: Community Support and Services Committee
Subject: Submission addressing the Public Health and Other Legislation (Extension of Expiring Provisions) Amendment Bill 2022
Date: Friday, 4 March 2022 9:58:37 AM
Attachments: Causes of Death, Australia, 2019 Australian Bureau of Statistics.pdf
COVID-19 Mortality in Australia Australian Bureau of Statistics (1).pdf

Julie Mallinson

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4th March 2022

Committee Secretary
Community and Support Services Committee
Parliament House
George Street
Brisbane QLD 4000

Dear Committee Secretary,

I have prepared this submission addressing aspects of the Public Health and Other Legislation (Extension of Expiring Provisions) Amendment Bill 2022. In particular, I have concerns with the temporary measures proposed that have been in the Bill:

- Amendments to the *Public Health Act 2005* to increase powers for emergency officers and the Chief Health Officer to limit, or respond to, the spread of COVID-19 in Queensland, support testing and quarantine requirements and authorise other public health measures;
- Amendments to the *Corrective Services Act 2006*, *Disaster Management Act 2003* and *Mental Health Act 2016* to support the public health response;
- A head of power in the *COVID-19 Emergency Response Act 2020* to make regulations to facilitate transitional arrangements for the temporary framework.

I have concerns because the official Australian Government data released in recent months does not support the extension to these pandemic powers granted to the Chief Health Officer and emergency officers.

The Australia Bureau of Statistics (ABS) published an article of the 15th February 2022 on COVID-19 Mortality in Australia. Over a two year period between January 2020 and 31st January 2022, there were 2,639 reported deaths of people had died with or from COVID-19.

Comparing this to the flu season in 2019 alone, a year before the COVID-19, the Australian Bureau of Statistics reported that influenza was the 9th highest cause of death in 2019, with 4,124

deaths of influenza report.

Therefore from the data presented, there have been less COVID-19 related deaths over a two year period compared to the influenza season in 2019 alone. These emergency pandemic measures were never implemented for an influenza season previously, where it is proven with the above ABS figures that influenza has caused more deaths in half the timeframe.

The median for those who had died from COVID-19 was 83.7 years (81.2 years for males and 86.0 years for females), which is above the national median age at death of 78.9 years for males and 84.6 years for females.
This statistic is also typically seen in an influenza year, with the median age of those who died of influenza in 2019 was 88.8 years. This demonstrates that COVID-19 is age-stratified much like influenza.

The Australian Bureau of Statistics demonstrates that COVID-19 causality and deaths are similar to a typical flu season. Therefore, there is no justification to extend the operation of essential public health measures implemented to facilitate Queensland's response to the COVID-19 pandemic. It could be argued that was no COVID-19 public health pandemic at all after examining the current Australian Bureau of Statistics data.

Yours sincerely,
Julie Mallinson

Supporting PDF files attached:

- Australian Bureau of Statistics - COVID Mortality in Australia – Webpage print-out
  https://www.abs.gov.au/articles/covid-19-mortality-australia
- Australian Bureau of Statistics - Causes of Death , Australia – 2019 - Webpage print-out
  https://www.abs.gov.au/statistics/health/causes-death/causes-death-australia/2019#australia-s-leading-causes-of-death-2019

This is not the latest release
View the latest release

Causes of Death, Australia

Statistics on the number of deaths, by sex, selected age groups, and cause of death classified to the International Classification of Diseases (ICD)

Reference period 2019

Released 23/10/2020

On this page

Key statistics

- Ischaemic heart disease was the leading cause of death, accounting for 10.8% of all deaths.
- Dementia overtook lung cancer as the 2nd leading cause of death for males.
- Intentional self-harm death rate was 12.9 per 100,000 people.
- Chronic lower respiratory disease is now the second leading cause of death of Aboriginal and Torres Strait Islander people, overtaking Diabetes.

Australia's leading causes of death, 2019

Additional Victorian registrations

Following investigations between the ABS and the Victorian Registry of Births, Deaths and Marriages, 2,812 additional registrations from 2017, 2018 and 2019 were identified that had not previously been provided to the ABS. These Registrations are in scope of the 2019 dataset and are included throughout the report and in totals. However, a time series adjustment has been applied to deaths due to suicide, assault and accidental drug overdoses to enable a more accurate comparison of mortality over time for these causes. As a result, some totals may not equal the sum of their components. See Technical note: Victorian additional registrations and time series adjustments for detailed information on this issue.

Leading causes of death

There were 169,301 registered and received deaths in Australia in 2019, an increase of 6.8% (10,808) from 2018.

For deaths registered and received in 2019:

- 52.2% of deaths were male (88,346) and 47.8% of deaths were female (80,955).
- The median age at death was 81.7 years (78.8 for males, 84.8 for females).
- The top five leading causes accounted for more than one-third of all registered deaths.

Identifying and comparing leading causes of death in populations is useful for tracking changes in patterns of mortality and identifying emerging trends. For more information related to the tabulation of leading causes, see the Methodology section of this publication.

Key statistics for 2019:

- The leading cause of death was Ischaemic heart disease.
- Dementia, including Alzheimer's disease was the second leading cause of death and had the highest median age at death at 89.1 (equal with cardiac arrhythmias).
- Cerebrovascular diseases, Cancer of the trachea, bronchus and lung and Chronic lower respiratory diseases round out the top five leading causes.
- Influenza and pneumonia was the 9th leading cause. Influenza deaths are linked to the severity of

flu seasons which can drive changes in ranking each year.

- Intentional self-harm was the 13th leading cause of death, with the lowest median age at death at 43.9.

In the ten years from 2010 to 2019:

- Deaths from Ischaemic heart diseases and Cerebrovascular diseases decreased by 16.0% and 11.7% respectively.
- Deaths from Dementia, including Alzheimer's disease increased by 66.8% (6,013 deaths).
- Deaths from Chronic lower respiratory diseases increased by 36.6% (2,243 deaths).
- Increases in numbers of deaths were recorded for all other leading causes in the top 20.

Leading causes of death, Australia - selected years - 2010, 2014, 2019 (a)(b)(c)(d)

	2010		2014		2019		Median Age (2019)
Cause of death and ICD code	no.	Rank	no.	Rank	no.	Rank	years
Ischaemic heart diseases (I20-I25)	21,721	1	20,199	1	18,244	1	84
Dementia, including Alzheimer's disease (F01, F03, G30)	9,003	3	11,967	2	15,016	2	89.1
Cerebrovascular diseases (I60-I69)	11,200	2	10,729	3	9,891	3	86.3
Malignant neoplasm of trachea, bronchus and lung (C33, C34)	8,102	4	8,252	4	8,821	4	74.3
Chronic lower respiratory diseases (J40-J47)	6,129	5	7,818	5	8,372	5	80.7
Malignant neoplasm of colon, sigmoid, rectum and anus (C18-C21, C26.0)(e)	5,247	6	5,289	6	5,410	6	77.6
Diabetes (E10-E14)	3,948	7	4,357	7	4,967	7	82
Malignant neoplasms of lymphoid, haematopoietic and related tissue (C81-C96)	3,936	8	4,275	8	4,793	8	78.5
Influenza and pneumonia (J09-J18)	2,373	15	2,879	13	4,124	9	88.8
Diseases of the urinary system (N00-N39)	3,315	10	3,136	10	3,903	10	87.2
Heart failure and complications and ill-defined heart disease (I50-I51)	3,470	9	3,447	9	3,648	11	88.6
Malignant neoplasm of prostate (C61)	3,236	11	3,102	11	3,611	12	82.4
Intentional self-harm (X60-X84, Y87.0)(f)(g)	2,480	13	2,922	12	3,318	13	43.9
Accidental falls (W00-W19)	1,691	18	2,399	16	3,298	14	87.4

	2010		2014		2019		Median Age (2019)
Malignant neoplasms of breast (C50)	2,866	12	2,844	14	3,261	15	72.3
Malignant neoplasm of pancreas (C25)	2,434	14	2,547	15	3,207	16	74.6
Cardiac arrhythmias (I47-I49)	1,532	21	2,136	18	2,408	17	89.1
Malignant neoplasm of liver and intrahepatic bile ducts (C22)	1,337	23	1,732	21	2,204	18	71.9
Hypertensive diseases (I10-I15)	1,732	17	2,229	17	2,177	19	88.2
Cirrhosis and other diseases of liver (K70-K76)	1,590	19	1,757	20	2,111	20	65
All causes	143,473		153,580		168,960		81.7

a. Causes listed are the top 20 leading causes of death for 2019, based on the WHO recommended tabulation of leading causes. See Mortality tabulations and methodologies for further information. . Groupings of deaths coded to Chapter XVIII: Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99) are not included in analysis, due to the unspecified nature of these causes. Furthermore, many deaths coded to this chapter are likely to be affected by revisions, and hence recoded to more specific causes of death as they progress through the revisions process.
b. See the Data quality section of the methodology for further information on specific issues related to interpreting time-series and 2019 data.
c. All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2010 and 2014 (final) and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).
d. Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.
e. The data presented for Malignant neoplasm of the colon, sigmoid, rectum and anus (C18-C21) includes deaths due to Malignant neoplasm of the intestinal tract, part unspecified (C26.0). Comparisons with data for this leading cause, and associated leading cause rankings, should therefore be made with caution. See Mortality tabulations and methodologies, Leading causes of death in the methodology section of this publication for further details.
f. The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
g. Care needs to be taken when interpreting data derived from Victorian coroner-referred deaths including suicide. See Technical note: Victorian additional registrations and time series adjustments for detailed information on this issue.

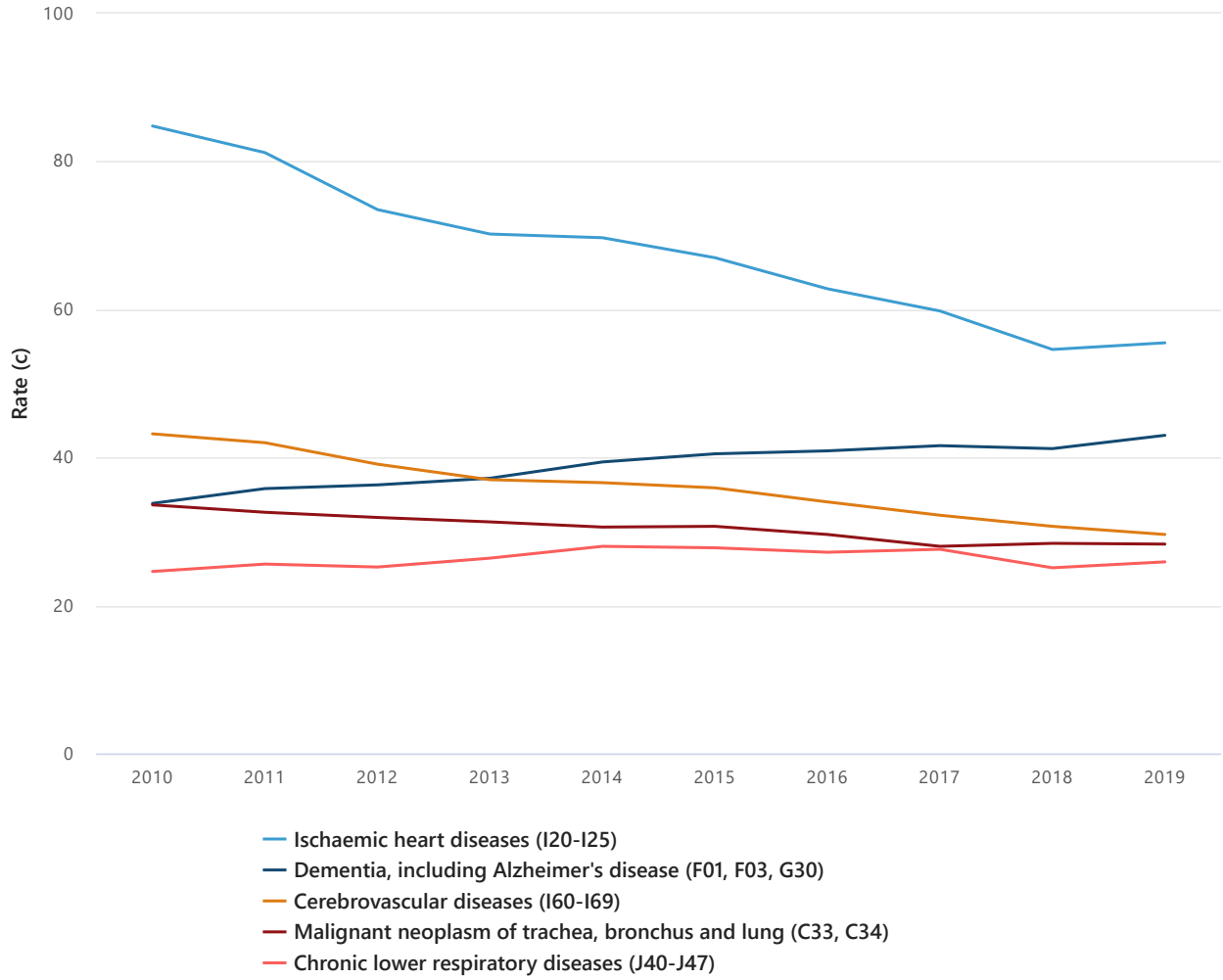
Age-standardised death rates

Age-standardised death rates (SDRs) enable the comparison of death rates over time as they account for changes in the size and age structure of the population. See the Methodology section of this publication for more information regarding age-standardised death rates. Refer to Mortality tabulations and methodologies, Age-standardised death rates (SDRs) in the Methodology section of this publication for more information.

Over the 10 years from 2010 to 2019:

- The SDR for Ischaemic heart diseases decreased by 34.6%.
- The SDR for Dementia, including Alzheimer's disease increased by 27.2%, narrowing the gap between the two leading causes of death.
- The SDR for Cerebrovascular diseases decreased by 31.5%, while that for Malignant neoplasms of trachea, bronchus and lung (lung cancer) decreased by 15.8%

Leading causes of death, age-standardised death rates, 2010-2019 (a)(b)(c)(d)(e)



a. Causes listed are the top 20 leading causes of death for 2019, based on the WHO recommended tabulation of leading causes. See Mortality tabulations and methodologies for further information. . Groupings of deaths coded to Chapter XVIII: Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99) are not included in analysis, due to the unspecified nature of these causes. Furthermore, many deaths coded to this chapter are likely to be affected by revisions, and hence recoded to more specific causes of death as they progress through the revisions process.

b. See the Data quality section of the methodology for further information on specific issues related to interpreting time-series and 2019 data.

c. Age-standardised death rate. Death rate per 100,000 estimated resident population as at 30 June (mid year). See

the glossary and the Mortality tabulations and methodologies section for further information.

d. All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2010 - 2016 (final), 2017 (revised), 2018 and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).
e. Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.

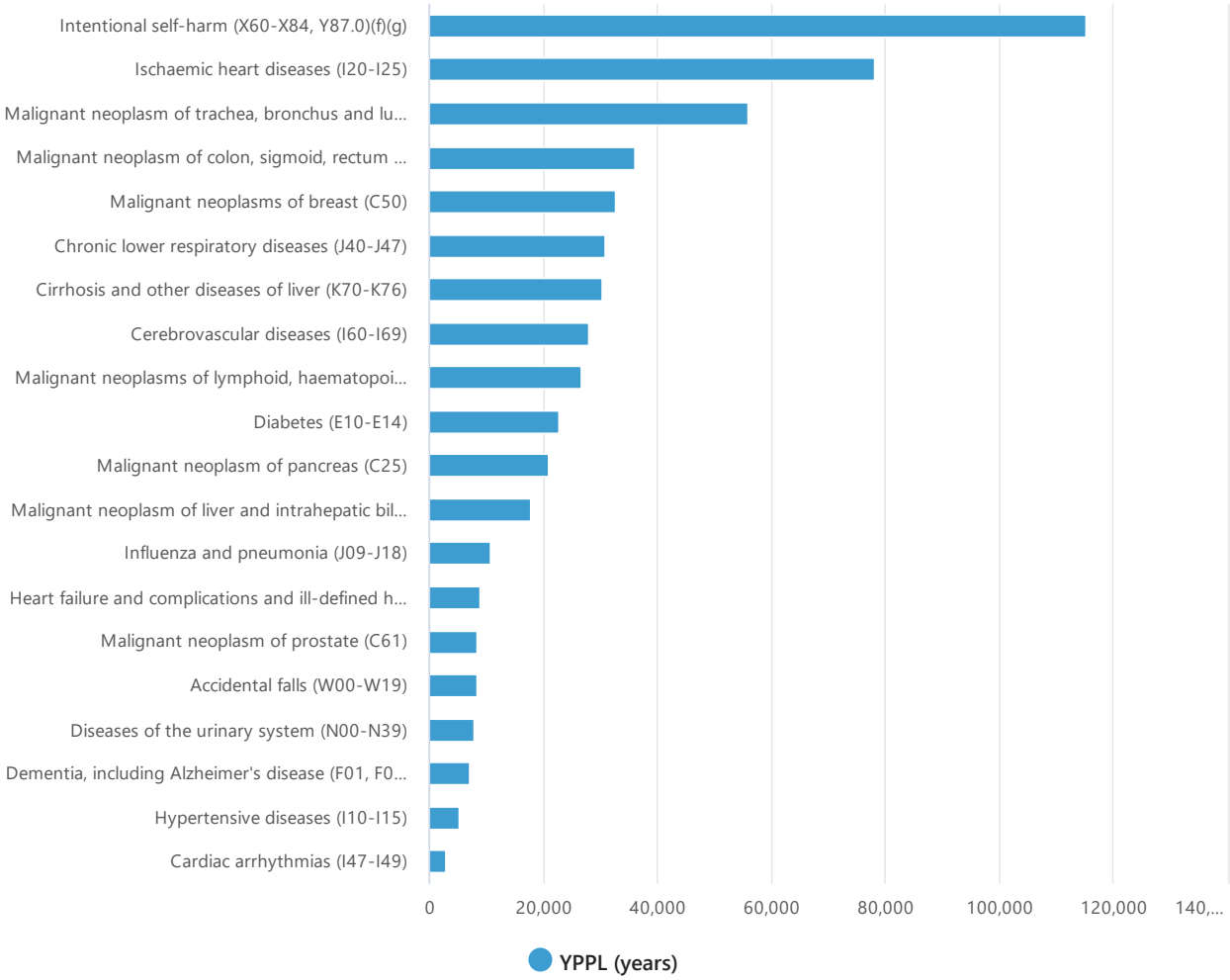
Years of potential life lost

Years of potential life lost (YPLL) is a measure of premature mortality which weights age at death to gain an estimate of how many years a person would have lived had they not died prematurely. Causes of death with a median age less than the life expectancy will have a higher number of YPLL. Refer to Mortality tabulations and methodologies - Years of potential life lost (YPLL) in the Methodology section of this publication for more information.

When considered in terms of premature mortality, the leading causes of death have a notably different profile. For deaths in 2019:

- Suicide accounted for the highest number of YPLL (115,221), with a particularly low median age at death (43.9) being a key contributing factor.
- Ischaemic heart disease accounted for the second highest number of YPLL (78,052). Heart disease accounts for the highest number of premature deaths and has a higher median age at death (84.0) than suicide.
- Many cancers have a lower median age at death than the standard life expectancy. Lung cancer, Colon cancer and Breast cancer are the third, fourth and fifth leading causes of potential life lost and have median ages at death of 74.3, 77.6, and 72.3, respectively.

Years of Potential Life Lost (YPLL) for leading causes (a)(b)(c)(d)(e)(f)(g)(h)



a. Causes listed are the top 20 leading causes of death for 2019, based on the WHO recommended tabulation of leading causes. See Mortality tabulations and methodologies for further information. Groupings of deaths coded to Chapter XVIII: Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99) are not included in analysis, due to the unspecified nature of these causes. Furthermore, many deaths coded to this chapter are likely to be affected by revisions, and hence recoded to more specific causes of death as they progress through the revisions process.

b. See the Data quality section of the methodology for further information on specific issues related to interpreting time-series and 2019 data.

c. The ranking of YPLL data presented in this table is based only on the top 20 causes of death. When considering

the full listing of leading causes of death, including those not in the leading 20, the YPLL ranking would be different. For further information on Years of Potential Life Lost, see the Mortality tabulations and methodologies, Years of potential life lost (YPLL) section in the Methodology of this publication

d. Causes of death data for 2019 are preliminary and subject to a revisions process. See Data quality, Revisions process in the Methodology of this publication for more information
e. Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.
f. The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
g. Care needs to be taken when interpreting data derived from Victorian coroner-referred deaths including suicide. See Technical note: Victorian additional registrations and time series adjustments for detailed information on this issue.
h. The data presented for Malignant neoplasm of the colon, sigmoid, rectum and anus (C18-C21) includes deaths due to Malignant neoplasm of the intestinal tract, part unspecified (C26.0). Comparisons with data for this leading cause, and associated leading cause rankings, should therefore be made with caution. See Mortality tabulations and methodologies, Leading causes of death in the methodology section of this publication for further details.

Leading causes of death by sex - Males

There were 88,346 male deaths in 2019. Key points relating to leading causes of male deaths include:

- Ischaemic heart disease was the top ranked cause of death (10,822 deaths) for males, with almost twice the number of deaths compared with the second ranked cause.
- Dementia, including Alzheimer's disease has now replaced Malignant neoplasm of trachea, bronchus and lung as the second leading cause of death for males.
- Between 2010 and 2019 the death rate for Dementia, including Alzheimer's disease increased by 30.9%.
- Between 2010 and 2019 the death rate for Malignant neoplasm of trachea, bronchus and lung decreased by 20.4%.
- Prostate cancer was the 6th ranked cause of death for males, accounting for 3,611 deaths.
- Suicide was the 10th leading cause, with males accounting for more than three-quarters (75.4%) of all intentional self-harm deaths.

Leading causes of death, males, Australia - selected years - 2010, 2014, 2019 (a)(b)(c)(d)(e)(f)

	2010		2014		2019		Rank (2019)
	no.	Rate (f)	no.	Rate (f)	no.	Rate (f)	

	2010		2014		2019		Rank (2019)
Ischaemic heart diseases (I20-I25)	11,723	111.5	11,106	91.5	10,822	76.0	1
Dementia, including Alzheimer's disease (F01, F03, G30)	2,920	29.1	4,106	34.7	5,424	38.1	2
Malignant neoplasm of trachea, bronchus and lung (C33, C34)	4,935	45.1	4,948	39.9	5,190	35.9	3
Chronic lower respiratory diseases (J40-J47)	3,230	30.9	4,168	34.6	4,242	29.6	4
Cerebrovascular diseases (I60-I69)	4,331	42.0	4,260	35.7	4,089	28.8	5
Malignant neoplasm of prostate (C61)	3,236	31.2	3,102	25.9	3,611	25.2	6
Malignant neoplasm of colon, sigmoid, rectum and anus (C18-C21, C26.0)(g)	2,857	26.3	2,851	23.1	2,932	20.5	7
Malignant neoplasms of lymphoid, haematopoietic and related tissue (C81-C96)	2,288	21.1	2,413	19.7	2,783	19.5	8
Diabetes (E10-E14)	1,991	18.8	2,219	18.3	2,731	19.1	9
Intentional self-harm (X60-X84, Y87.0)(e)(h)	1,914	17.5	2,208	18.8	2,502	19.8	10
Diseases of the urinary system (N00-N39)	1,493	14.6	1,344	11.2	1,837	12.9	11
Influenza and pneumonia (J09-J18)	1,039	10.2	1,309	10.9	1,800	12.7	12
Malignant neoplasm of pancreas (C25)	1,233	11.2	1,292	10.4	1,699	11.8	13
Accidental falls (W00-W19)	805	7.8	1,136	9.5	1,647	11.6	14
Heart failure and complications and ill-defined heart disease (I50-I51)	1,478	14.5	1,472	12.3	1,600	11.3	15
Malignant neoplasm of liver and intrahepatic bile ducts (C22)	888	8.0	1,131	8.9	1,460	10.0	16
Melanoma and other malignant neoplasms of skin (C43-C44)	1,297	11.9	1,381	11.3	1,406	9.9	17
Cirrhosis and other diseases of liver (K70-K76)	1,081	9.6	1,230	9.8	1,362	9.8	18
Parkinson's disease (G20)	758	7.5	1,001	8.5	1,332	9.4	19
Land transport accidents (V01-V89, Y85)	1,136	10.3	978	8.3	1,079	8.4	20

a. Causes listed are the top 20 leading causes of death for 2019, based on the WHO recommended tabulation of leading causes. See Mortality tabulations and methodologies for further information. Groupings of deaths coded to Chapter XVIII: Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99) are not included in analysis, due to the unspecified nature of these causes. Furthermore, many deaths coded to this chapter are likely to be affected by revisions, and hence recoded to more specific causes of death as they progress through the revisions process.

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f. Age-standardised death rate. Death rate per 100,000 estimated resident population as at 30 June (mid year). See the glossary and the Mortality tabulations and methodologies section for further information.
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h. The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.

Leading causes of death by sex - Females

There were 80,955 female deaths in 2019. Key points relating to leading causes of female deaths include:

- The top ranked cause of death among females was Dementia, including Alzheimer's disease, accounting for 9,592 deaths.
- Dementia deaths among females have increased by 26.6% since 2010. Females accounted for 63.9% of all dementia deaths.
- Ischaemic heart disease was the second leading cause among females in 2019, accounting for 7,422 deaths.
- Breast cancer was the 6th leading cause among females, accounting for 3,230 deaths.

Leading causes of death, females, Australia - selected years - 2010, 2014, 2019 (a)(b)(c)(d)(e)(f)

	2010		2014		2019		Rank (2019)
	no.	Rate (f)	no.	Rate (f)	no.	Rate (f)	
Dementia, including Alzheimer's disease (F01, F03, G30)	6,083	36.4	7,861	42.2	9,592	46.1	1
Ischaemic heart diseases (I20-I25)	9,998	62.8	9,093	50.9	7,422	37.7	2
Cerebrovascular diseases (I60-I69)	6,869	43.2	6,469	36.5	5,802	29.6	3
Chronic lower respiratory diseases (J40-J47)	2,899	20.4	3,650	23.2	4,130	23.1	4

	2010		2014		2019		Rank (2019)
Malignant neoplasm of trachea, bronchus and lung (C33, C34)	3,167	24.4	3,304	22.9	3,631	22.0	5
Malignant neoplasms of female breast (C50)	2,842	21.8	2,814	19.6	3,230	20.0	6
Malignant neoplasm of colon, sigmoid, rectum and anus (C18-C21, C26.0)(g)	2,390	17.4	2,438	16.0	2,478	14.2	7
Influenza and pneumonia (J09-J18)	1,334	8.2	1,570	8.5	2,324	11.4	8
Diabetes (E10-E14)	1,957	13.3	2,138	13.1	2,236	12.1	9
Diseases of the urinary system (N00-N39)	1,822	11.5	1,792	10.2	2,066	10.4	10
Heart failure and complications and ill-defined heart disease (I50-I51)	1,992	12.1	1,975	10.7	2,048	10.0	11
Malignant neoplasms of lymphoid, haematopoietic and related tissue (C81-C96)	1,648	12.1	1,862	12.4	2,010	11.6	12
Accidental falls (W00-W19)	886	5.5	1,263	7.0	1,651	8.2	13
Malignant neoplasm of pancreas (C25)	1,201	9.0	1,255	8.4	1,508	8.9	14
Cardiac arrhythmias (I47-I49)	983	6.0	1,316	7.2	1,458	7.0	15
Hypertensive diseases (I10-I15)	1,171	7.0	1,428	7.7	1,333	6.5	16
Malignant neoplasm of ovary (C56)	912	7.1	975	6.8	1,081	6.6	17
Nonrheumatic valve disorders (I34-I38)	706	4.5	845	4.7	920	4.6	18
Diseases of the musculoskeletal system and connective tissue (M00-M99)	800	5.3	816	4.8	894	4.7	19
Malignant neoplasm of uterus (C53-C55)	596	4.6	717	5.1	878	5.5	20

a. Causes listed are the top 20 leading causes of death for 2019, based on the WHO recommended tabulation of leading causes. See Mortality tabulations and methodologies for further information. Groupings of deaths coded to Chapter XVIII: Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99) are not included in analysis, due to the unspecified nature of these causes. Furthermore, many deaths coded to this chapter are likely to be affected by revisions, and hence recoded to more specific causes of death as they progress through the revisions process.

b. All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2010 and 2014 (final) and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).

c. Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.

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e. Care needs to be taken when interpreting data derived from Victorian coroner-referred deaths including suicide. See Technical note: Victorian additional registrations and time series adjustments for detailed information on this issue.

f. Age-standardised death rate. Death rate per 100,000 estimated resident population as at 30 June (mid year). See the glossary and the Mortality tabulations and methodologies section for further information.
g. The data presented for Malignant neoplasm of the colon, sigmoid, rectum and anus (C18-C21) includes deaths due to Malignant neoplasm of the intestinal tract, part unspecified (C26.0). Comparisons with data for this leading cause, and associated leading cause rankings, should therefore be made with caution. See Mortality tabulations and methodologies, Leading causes of death in the methodology section of this publication for further details.

Leading causes of death in Aboriginal and Torres Strait Islander people

Key statistics

- There were 3,435 registered and received deaths of Aboriginal and Torres Strait Islander people in 2019 (1,885 males and 1,550 females).
- The median age at death was 60.9 years, increasing from 57.1 years of age in 2010.
- Ischaemic heart disease was the leading cause of death (405 deaths).
- Chronic lower respiratory disease was the second leading cause of death, overtaking diabetes for the first time.

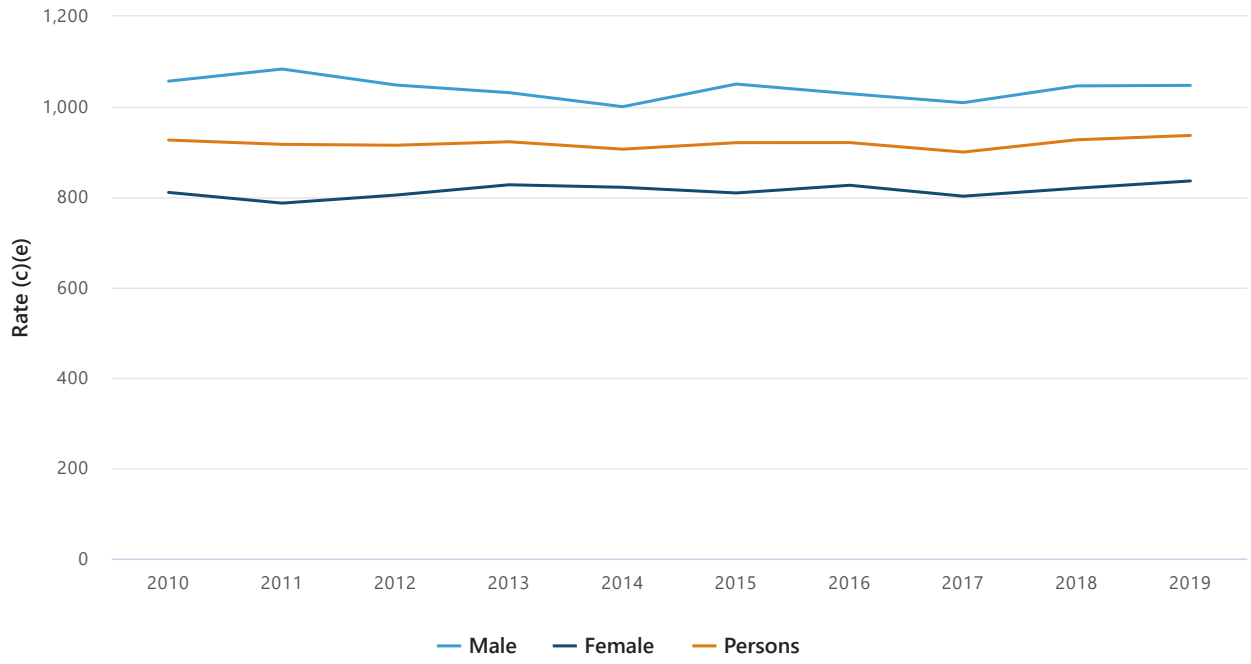
> Data reported in this article are compiled by jurisdiction of usual residence for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory only. Data for Victoria, Tasmania and the Australian Capital Territory have been excluded in line with national reporting guidelines. For further information see Deaths of Aboriginal and Torres Strait Islander people in the Methodology section of this publication.

Age-standardised death rates over time

In 2019 the age-standardised death rate (SDR) was 936.7 deaths per 100,000. Over the 10 years from 2010-2019:

- The SDR was consistently higher for males than females.
- The SDR remained relatively stable.

All causes of death, age-standardised death rates, Aboriginal and Torres Strait Islander people, 2010-2019 (a)(b)(c)(d)(e)(f)



a. All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2010 - 2016 (final), 2017 (revised), 2018 and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).
b. See the Data quality section of the Methodology for further information on specific issues related to interpreting time-series and 2019 data.
c. Age-standardised death rate. Death rate per 100,000 estimated resident population as at 30 June (mid year). See the glossary and the Mortality tabulations and methodologies section for further information.
d. Data reported in this article are compiled by jurisdiction of usual residence for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory only. Data for Victoria, Tasmania and the Australian Capital Territory have been excluded in line with national reporting guidelines. For further information see Deaths of Aboriginal and Torres Strait Islander people in the Methodology section of this publication.
e. Rates presented in this table have been calculated using Aboriginal and Torres Strait Islander population estimates and projections based on the 2016 Census. As a result, these rates may differ from those previously published. See the Mortality tabulations and methodologies section of the Methodology for further information.
f. Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the Methodology for further information.

Top five leading causes of death

In order to better enable comparison of death rates over time, five year aggregate death rates for the periods 2010-2014 and 2015-2019 are included for the leading causes of death in Aboriginal and Torres Strait Islander people.

The top five leading causes of death accounted for over one third (38.1%) of all deaths. Key points for the leading causes include:

- Ischemic heart disease is the leading cause of death, and the SDR has decreased by 8.1% between 2010-2014 and 2015-2019.
- Chronic lower respiratory diseases are now the second leading cause of death, with the death rate increasing by 18.5% between 2010-2014 and 2015-2019.
- Diabetes is now the third leading cause of death, and the SDR has decreased by 9.5% between 2010-2014 and 2015-2019.

Four of the five leading causes of death are the same for males and females, although the rank of some causes differ. Differences in the leading causes of death for males include:

- The second leading cause of death was Intentional self-harm.
- Malignant neoplasm of trachea, bronchus and lung (lung cancer) has increased by 16.4% between 2010-14 and 2015-19, and is the fourth leading cause of death.

Top 5 leading causes of death, age-standardised death rates, Aboriginal and Torres Strait Islander people, 2010-2019 (a)(b)(c)(d)(e)(f)(g)(h)

Cause of death and ICD code	2010		2014		2019		2010-2014	2015-2019
	No.	Rate(b)(c)	No.	Rate(b)(c)	No.	Rate(b)(c)	Rate(b)(c)	Rate(b)(c)
Persons								
Ischaemic heart diseases (I20-I25)	312	129.6	357	121.3	405	113.1	126.9	116.6
Chronic lower respiratory diseases (J40-J47)	106	57.0	177	78.9	266	83.2	64.4	76.3
Diabetes (E10-E14)	181	76.2	216	83.0	239	70.1	82.2	74.4
Malignant neoplasm of trachea, bronchus and lung (C33, C34)	110	50.0	153	51.6	205	61.3	53.8	58.2
Intentional self-harm (X60-X84, Y87.0)(e)	107	19.9	148	22.4	195	27.1	21.3	24.6
All Causes	2,311	926.5	2,730	906.3	3,435	936.7	917.6	922.8
Males								
Ischaemic heart diseases (I20-I25)	213	187.8	234	166.1	257	144.5	171.3	150.1
Intentional self-harm (X60-X84,Y87.0)(e)	81	33.4	104	32.8	137	39.4	31.6	37.6
Chronic lower respiratory diseases (J40-J47)	52	61.5	87	96.2	126	90.5	77.0	83.0
Malignant neoplasm of trachea, bronchus and lung (C33-C34)	64	64.6	76	58.1	111	73.2	62.1	72.3
Diabetes mellitus (E10-E14)	89	77.6	95	80.4	103	62.2	81.5	72.3
All Causes	1,296	1,056.9	1,473	1,000.4	1,885	1,047.6	1,042.1	1,038.2
Females								
Ischaemic heart diseases (I20-I25)	99	82.7	123	84.9	148	85.2	90.5	87.7
Chronic lower respiratory diseases (J40-J47)	54	53.6	90	67.7	140	78.1	55.7	71.4
Diabetes mellitus (E10-E14)	92	73.8	121	85.1	136	76.3	82.6	75.7
Malignant neoplasm of trachea, bronchus and lung (C33, C34)	46	38.3	77	46.5	94	51.7	47.5	46.9
Cerebrovascular diseases (I60-I69)	68	69.1	66	56.1	66	42.0	59.9	42.5
All Causes	1,015	810.6	1,257	821.9	1,550	836.0	811.9	820.2

(a) Causes listed are the top 5 leading causes of death for all Aboriginal and Torres Strait Islander deaths registered in 2019, based on WHO recommended tabulation of leading causes. See Mortality tabulations and methodologies for further information.

(b) Age-standardised death rate. Death rate per 100,000 estimated resident population as at 30 June (mid year). See the glossary and the Mortality tabulations and methodologies section for further information.

(c) Rates presented in this table have been calculated using Aboriginal and Torres Strait Islander population estimates and projections based on the 2016 Census. As a result, these rates may differ from those previously published. See the Mortality tabulations and methodologies section of the methodology for further information.

(d) See the Data quality section of the methodology for further information on specific issues related to interpreting time-series and 2019 data.

(e) The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in

interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
(f) All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2010 - 2016 (final), 2017 (revised), 2018 and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).
(g) Data reported in this article are compiled by jurisdiction of usual residence for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory only. Data for Victoria, Tasmania and the Australian Capital Territory have been excluded in line with national reporting guidelines. For further information see Deaths of Aboriginal and Torres Strait Islander people in the Methodology section of this publication.
(h) Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.

Closing the Gap

Measures of mortality relating to Aboriginal and Torres Strait Islander people are key inputs into the Closing the Gap strategy. This government initiative sees work undertaken with Aboriginal and Torres Strait Islander communities to reduce disadvantage across areas such as life expectancy, mortality, education and employment. In July 2020 all Australian governments committed to new targets under the National Agreement on Closing the Gap (Australian Government, 2020). Mortality data will continue to inform progress against these new targets.

Death rates for Aboriginal and Torres Strait Islander people are generally higher than those for non-Indigenous people. Among the top 20 leading causes of death:

- The highest rate ratios were recorded for Diabetes, Chronic lower respiratory diseases, Accidental poisonings and Cirrhosis and other diseases of the liver.
- Only Malignant neoplasms of lymphoid, haematopoietic and related tissue had a higher death rate among non-Indigenous people.

Top 20 leading causes of death, Aboriginal and Torres Strait Islander people and non-indigenous people, 2019 (a)(b)(c)(d)(e)(f)(g)(h)(i)(j)(k)

Cause of Death and ICD Code	Aboriginal and Torres Strait Islander no. deaths	Aboriginal and Torres Strait Islander Rate (b)(f)	Non-Indigenous no. deaths	Non-Indigenous Rate (b)(f)	Rate Ratio (g)	Rate Difference (h)
All Causes	3,435	936.7	114,322	544.0	1.7	392.7

Cause of Death and ICD Code	Aboriginal and Torres Strait Islander no. deaths	Aboriginal and Torres Strait Islander Rate (b)(f)	Non-Indigenous no. deaths	Non-Indigenous Rate (b)(f)	Rate Ratio (g)	Rate Difference (h)
Ischaemic heart diseases (I20-I25)	405	113.1	12,184	57.3	2.0	55.8
Chronic lower respiratory diseases (J40-J47)	266	83.2	5,633	26.1	3.2	57.1
Diabetes (E10-E14)	239	70.1	3,214	15.1	4.6	55.0
Malignant neoplasm of trachea, bronchus and lung (C33, C34)	205	61.3	6,053	28.0	2.2	33.3
Intentional self-harm (X60-X84, Y87.0)(c)	195	27.1	2,202	12.7	2.1	14.4
Cerebrovascular diseases (I60-I69)	134	44.6	6,922	32.5	1.4	12.0
Dementia and Alzheimer's disease (F01, F03, G30)	103	51.9	10,481	49.0	1.1	2.9
Cirrhosis and other diseases of liver (K70-K76)	101	20.3	1,373	6.8	3.0	13.5
Accidental poisoning (X40-X49)	91	15.4	819	4.9	3.2	10.5
Land transport accidents (V01-V89, Y85)(d)	87	13.2	890	5.0	2.6	8.2
Diseases of the urinary system (N00-N39)	83	26.7	2,460	11.5	2.3	15.2
Malignant neoplasm of liver and intrahepatic bile ducts (C22)	65	16.3	1,484	6.9	2.4	9.4

Cause of Death and ICD Code	Aboriginal and Torres Strait Islander no. deaths	Aboriginal and Torres Strait Islander Rate (b)(f)	Non-Indigenous no. deaths	Non-Indigenous Rate (b)(f)	Rate Ratio (g)	Rate Difference (h)
Malignant neoplasm of colon, sigmoid, rectum and anus (C18-C21, C26.0)(e)	62	19.9	3,741	17.7	1.1	2.2
Certain conditions originating in the perinatal period (P00-P96)	60	4.7	358	2.3	2.0	2.4
Malignant neoplasm of pancreas (C25)	56	16.1	2,178	10.1	1.6	6.0
Influenza and pneumonia (J09-J18)	54	14.4	2,763	13.0	1.1	1.4
Malignant neoplasms of lymphoid, haematopoietic and related tissue (C81-C96)	46	13.9	3,338	15.6	0.9	-1.8
Malignant neoplasms of female breast (C50)	45	12.8	2,227	10.8	1.2	2.0
Heart failure and complications and ill-defined heart disease (I50-I51)	34	14.4	2,208	10.4	1.4	4.0
Malignant neoplasm of prostate (C61)	33	12.1	2,447	11.3	1.1	0.8

a. Causes listed are the top 20 leading causes of death for 2019, based on the WHO recommended tabulation of leading causes. See Mortality tabulations and methodologies for further information. Groupings of deaths coded to Chapter XVIII: Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99) are not included in analysis, due to the unspecified nature of these causes. Furthermore, many deaths coded to this chapter are likely to be affected by revisions, and hence recoded to more specific causes of death as they

progress through the revisions process.

b. Age-standardised death rate. Death rate per 100,000 estimated resident population as at 30 June (mid year). See the glossary and the Mortality tabulations and methodologies section for further information.
c. The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
d. The data presented for Land transport accidents includes ICD-10 codes V01-V89 and Y85. See Mortality tabulations and methodologies for further information.
e. The data presented for Malignant neoplasm of the colon, sigmoid, rectum and anus (C18-C21) includes deaths due to Malignant neoplasm of the intestinal tract, part unspecified (C26.0). Comparisons with data for this leading cause, and associated leading cause rankings, should therefore be made with caution. For more information see Mortality tabulations and methodologies
f. Rates presented in this table have been calculated using Aboriginal and Torres Strait Islander population estimates and projections based on the 2016 Census. As a result, these rates may differ from those previously published. See the Mortality tabulations and methodologies section of the methodology for further information.
g. The rate ratio is the rate for Aboriginal and Torres Strait Islander persons divided by the non-Indigenous rate.
h. The rate difference is the rate Aboriginal and Torres Strait Islander persons less the non-Indigenous rate.
i. Data reported in this article are compiled by jurisdiction of usual residence for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory only. Data for Victoria, Tasmania and the Australian Capital Territory have been excluded in line with national reporting guidelines. For further information see Deaths of Aboriginal and Torres Strait Islander people in the Methodology section of this publication.
j. All causes of death data from 2006 onward are subject to a revisions process. See the Data quality section of the methodology for more information
k. Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.

Smoking related lung disease

Life expectancy is an overarching target in the Closing the Gap strategy. Smoking has been identified as a factor that contributes to the gap in life expectancy alongside other social and behavioural risk factors (AHMAC, as cited in Commonwealth of Australia, 2020, p. 78). In 2018-19 just over 41% of the Aboriginal and Torres Strait Islander population aged 15 years and over were current smokers, with the smoking rate as high as 56.4% in remote areas (ABS, 2019).

Smoking causes a range of health conditions, including lung diseases. Chronic lower respiratory diseases and Malignant neoplasms of the trachea, bronchus and lung continue to be two of the leading causes of death for Aboriginal and Torres Strait Islander people. Both of these lung diseases:

- Feature in the top five leading causes for both males and females in 2019.
- Recorded increased death rates between 2010-2014 and 2015-2019.

Whilst smoking rates have decreased over time, the development of smoking related illnesses can have delayed onset from smoking initiation. It is expected that some smoking related diseases among Aboriginal and Torres Strait Islander people will peak over the next decade (Lovett et al, 2017).

References

Australian Bureau of Statistics. (2019). National Aboriginal and Torres Strait Islander Health Survey: Data download Health risk factors - weight circumference, smoking, alcohol consumption, substance use. Retrieved from https://www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/national-aboriginal-and-torres-strait-islander-health-survey/latest-release#data-download

Australian Government. (2020). National Agreement on Closing the Gap.Retrieved from https://www.closingthegap.gov.au/sites/default/files/files/national-agreement-ctg.pdf

Commonwealth of Australia. (2020). Closing the Gap Report 2020,Canberra, Australia: Department of Prime Minister and Cabinet.

Lovett, R., Thurber, K. A., & Maddox, R. (2017). The Aboriginal and Torres Strait Islander smoking epidemic: what stage are we at, and what does it mean? Public Health Research & Practice.24(4): e2741733. https://doi.org/10.17061/phrp2741733

Intentional self-harm (suicides), key characteristics

Key statistics

- The time series for Victorian and national suicides has been adjusted and will not match previously published data. Refer to the call out box for more information.
- There were 3,318 registered suicides.
- Suicide occurred at a rate of 12.9 suicides per 100,000 people.
- Suicide was the 13th leading cause of death.

Additional Victorian death registrations

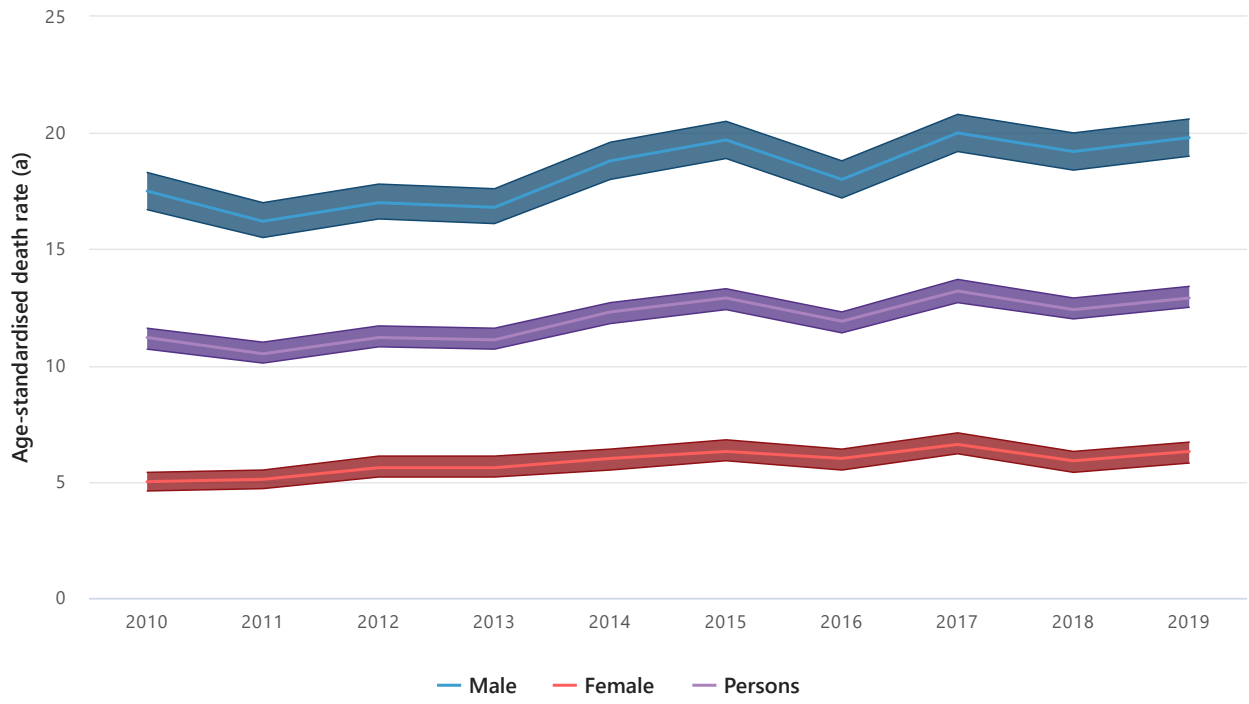
Following investigations between the ABS and the Victorian Registry of Births, Deaths and Marriages, 2,812 additional registrations from 2017, 2018 and 2019 were identified that had not previously been provided to the ABS. These Registrations are in scope of the 2019 dataset and are included throughout the report and in totals. However, a time series adjustment has been applied to deaths due to suicide, assault and accidental drug overdoses to enable a more accurate comparison of mortality over time for these causes. As a result, some totals may not equal the sum of their components. See Technical note: Victorian additional registrations and time series adjustments for detailed information on this issue.

Intentional self-harm deaths by sex

In order to measure changes in suicide over time, age-standardised death rates for males, females and the total population are presented in the graph below. The graph includes upper and lower bound data points to provide an insight into the variability associated with the recorded suicide rates and help to show whether differences in recorded rates are statistically significant.

- Male suicides make up three-quarters of all suicides.
- There were 2,502 male suicides (19.8 males per 100,000) and 816 female suicide deaths (6.3 females per 100,000).
- The rate of suicide for males has increase over the past 10 years from 17.5 in 2010 to 19.8 in 2019.
- Over the same period the rate of suicide for females increased from 5.0 to 6.3.
- Suicide is the 10th leading cause of death for males and the 22nd leading cause for females.
- The median age of death due to suicide was 43.9 years of age for males and 44.0 years of age for females.

Age-standardised death rates for intentional self-harm, 2010-2019 (a)(b)(c)(d)(e)(f)



a. Age-standardised death rate. Death rate per 100,000 estimated resident population as at 30 June (mid year). See the glossary and the Mortality tabulations and methodologies section for further information.
b. The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
c. All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2010 - 2016 (final), 2017 (revised), 2018 and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).
d. See the Data quality section of the methodology for further information on specific issues related to interpreting time-series and 2019 data
e. Care needs to be taken when interpreting data derived from Victorian coroner-referred deaths including suicide. See Technical note: Victorian additional registrations and time series adjustments for detailed information on this issue.
f. Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.

Intentional self-harm deaths by states and territories

Administrative factors

When considering changes in counts or rates of suicide deaths for particular jurisdictions it is important to understand the range of administrative factors which can influence the flow of data. Lags between when deaths occur and when they are registered can influence the count of deaths, while the flow of information between Coroners courts, Registries, the National Coronial Information System and the ABS can influence what information is available to specify a particular cause of death. For more information see the sub-sections Scope and coverage and Mortality coding, Coding of coroner certified deaths in the Methodology section of this publication.

- Increases in numbers of suicide deaths were recorded between 2018 and 2019 for all states except Queensland.
- New South Wales, Victoria and Queensland account for almost three-quarters of registered suicides.
- The Northern Territory recorded the highest suicide death rate of 21.0 followed by Tasmania at 19.5.
- The 2019 suicide death rate in Tasmania was the highest recorded over the last 10 years.

Number of suicide deaths, by state or territory of usual residence, 2010-2019 (a)(b)(c)(d)(e)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
NSW	674	617	727	718	832	839	822	929	899	937
Vic(d)	558	526	514	533	658	678	637	710	685	717
Qld	588	578	631	676	658	761	688	812	786	784
SA	197	212	198	203	243	234	221	226	212	251
WA	313	309	367	336	367	402	373	418	383	418
Tas.	64	74	71	74	69	84	93	80	78	108
NT	45	44	48	33	56	48	46	51	47	50
ACT	41	33	24	37	38	46	28	58	47	53
Australia	2,480	2,393	2,580	2,610	2,922	3,093	2,909	3,285	3,138	3,318

a. All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are

'final', they are no longer revised. Affected data in this table are: 2010 - 2016 (final), 2017 (revised), 2018 and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).

b. The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
c. See the Data quality section of the methodology for further information on specific issues related to interpreting time-series and 2019 data
d. Care needs to be taken when interpreting data derived from Victorian coroner-referred deaths including suicide. See Technical note: Victorian additional registrations and time series adjustments for detailed information on this issue.
e. Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.

Age-standardised death rates for suicide, by state or territory of usual residence, 2010-2019 (a)(b)(c)(d)(e)(f)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	Rate(a)	Rate(a)	Rate(a)	Rate(a)	Rate(a)	Rate(a)	Rate(a)	Rate(a)	Rate(a)	Rate(a)
NSW	9.3	8.4	9.8	9.5	10.8	10.9	10.5	11.6	11.1	11.4
Vic(e)	10.1	9.2	9.0	8.9	10.9	11.1	10.1	11.0	10.4	10.7
Qld	13.4	12.9	13.9	14.6	14.0	16.0	14.2	16.5	15.8	15.4
SA	11.8	12.9	11.7	11.9	14.4	13.3	13.0	12.9	12.0	13.9
WA	13.6	12.9	15.0	13.5	14.5	15.6	14.5	16.2	14.7	16.0
Tas.	13.0	14.1	13.7	14.2	12.8	16.2	17.1	15.6	14.5	19.5
NT	18.8	18.5	19.1	14.2	21.8	20.3	19.2	20.2	19.5	21.0
ACT	11.3	9.3	6.2	9.6	9.8	11.4	7.2	14.1	11.0	12.4
Australia	11.2	10.5	11.2	11.1	12.3	12.9	11.9	13.2	12.4	12.9

a. Age-standardised death rate. Death rate per 100,000 estimated resident population as at 30 June (mid year). See the glossary and the Mortality tabulations and methodologies section for further information.
b. The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
c. All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2010 - 2016 (final), 2017 (revised), 2018 and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).
d. See the Data quality section of the methodology for further information on specific issues related to interpreting time-series and 2019 data
e. Care needs to be taken when interpreting data derived from Victorian coroner-referred deaths including suicide. See Technical note: Victorian additional registrations and time series adjustments for detailed information on this issue.
f. Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding

sections of the methodology for further information.

Intentional self-harm by age and sex

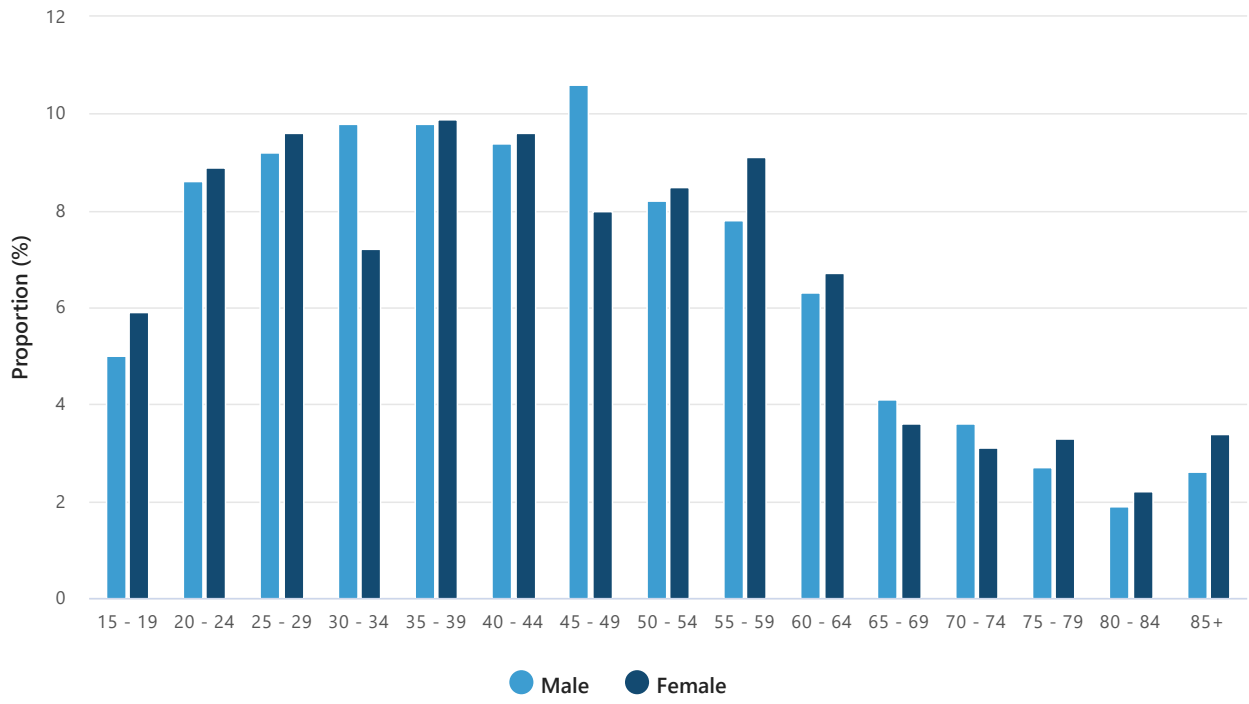
The following sections cover various age and sex breakdowns of suicide. Understanding how suicide manifests across these key demographics is important in helping to target policies and prevention activities.

Intentional self-harm by age and sex: age distribution

The graph below shows the age distribution of suicides and provides an insight into the proportion of those deaths that occurred within each age cohort. The age distribution of suicide for both males and females is similar despite there being considerable difference in the number of suicide deaths for each sex.

- The highest proportion of suicides occur among young and middle aged cohorts, while the proportion is lower in older age cohorts.
- More than half of all suicides in 2019 (54.7%) occurred between the ages of 30 and 59.
- The median age at death for suicide was 43.9 years of age, compared to 81.7 years of age for all deaths.
- Over one-third of all deaths in people aged 15-24 are due to suicide.

Suicide deaths by age and sex as a proportion of total suicide deaths, 2019 (a)(b)(c)(d)(e)



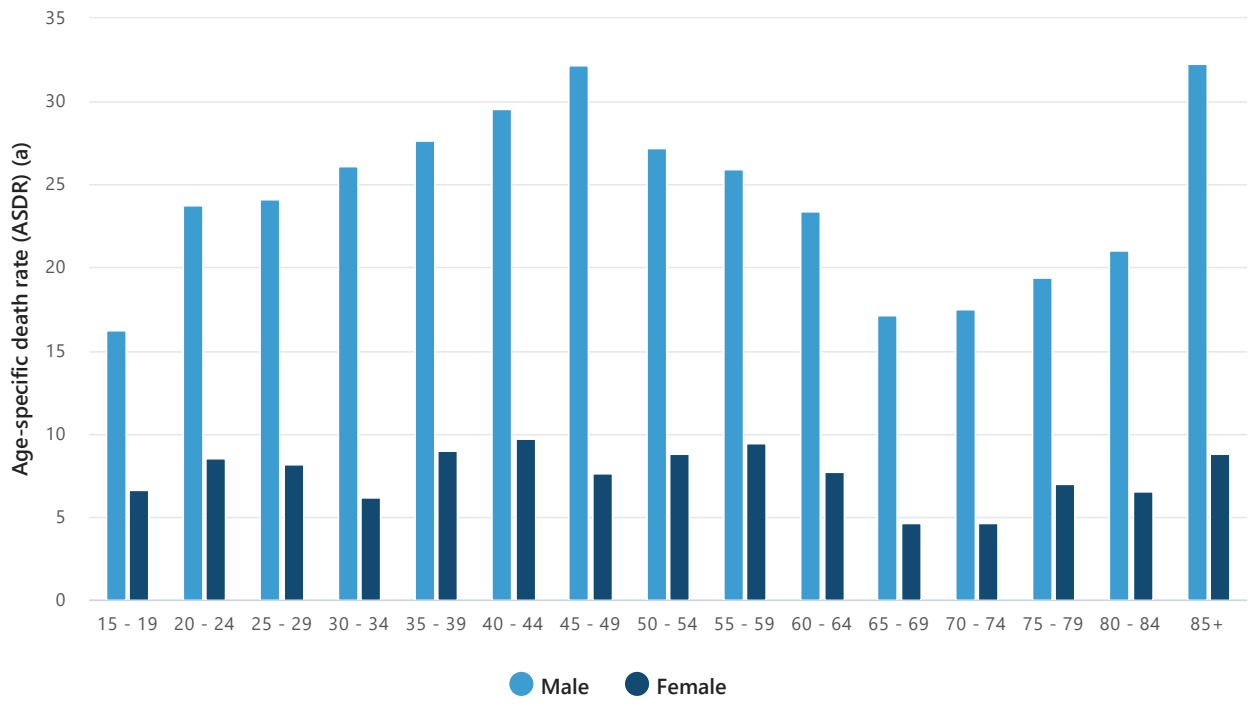
a. Causes of death data for 2019 are preliminary and subject to a revisions process. See the Data quality section of the methodology in this publication.
b. See the Data quality section of the methodology for further information on specific issues related to interpreting time-series and 2019 data
c. The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
d. Care needs to be taken when interpreting data derived from Victorian coroner-referred deaths including suicide. See Technical note: Victorian additional registrations and time series adjustments for detailed information on this issue.
e. Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.

Intentional self-harm by age and sex: age-specific death rates

Age-specific death rates (ASDRs) provide insights into how suicide manifests across age cohorts by relating the number of deaths to the size and structure of the underlying population.

- The highest age-specific suicide rate for all persons occurred in people aged 45-49 with 19.7 deaths per 100,000 population.
- The highest rate for males in 2019 was observed in those aged 85 years and older (32.3 deaths per 100,000 males), while accounting for a smaller proportion of all male suicide deaths (2.6%).
- Males aged 45-49 (the second highest ASDR) accounted for 10.6% of all male suicide deaths.
- The highest ASDR for females was recorded for those aged 40-44.

Age-specific death rates for intentional self-harm by sex, 2019 (a)(b)(c)(d)(e)(f)(g)



a. Age-specific death rates reflect the number of deaths for a specific age group, expressed per 100,000 of the estimated resident population as at 30 June (mid year) of that same age group (see the Glossary in this publication for further information).
b. Suicide deaths in the 0-14 year age group have been excluded because of the small number of deaths that occur within this age group.
c. Causes of death data for 2019 are preliminary and subject to a revisions process. See the Data quality section of the methodology in this publication.
d. See the Data quality section of the methodology for further information on specific issues related to interpreting time-series and 2019 data

e. The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
f. Care needs to be taken when interpreting data derived from Victorian coroner-referred deaths including suicide. See Technical note: Victorian additional registrations and time series adjustments for detailed information on this issue.
g. Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.

Intentional self-harm by age and sex: premature mortality

> Years of potential life lost (YPLL) measures the extent of 'premature' mortality, which is assumed to be any death between the ages of 1-78 years inclusive, and aids in assessing the significance of specific diseases or trauma as a cause of premature death. YPPL weights age at death to gain an estimate of how many years a person would have lived had they not died prematurely. For more information the Mortality tabulations and methodologies section of methodology for further information

- Suicide is the leading cause of death for people aged between 15-49 and the second leading cause of death for those aged between 50-54.
- Suicide accounts for the highest number of years of potential life lost among leading cause groups of conditions due to the higher proportion of deaths occurring within younger age groups. Conditions such as coronary heart disease account for more premature deaths than suicide, but less years of potential life lost.
- There were 115,221 years of life lost to suicide in 2019.
- On average, a person who died by suicide lost 36.7 years of life.

Intentional self-harm by age and sex: suicides of children

Deaths of children by suicide is an extremely sensitive issue. The number of deaths of children attributed to suicide can be influenced by coronial reporting practices. Reporting practices may lead to differences in counts across jurisdictions and this should be taken into account when interpreting tabulations and analysis of suicide deaths in children presented below. For more information on issues associated with the compilation and interpretation of suicide data, see Deaths due to intentional self-harm (suicide) in the Methodology section of this publication. For the purposes of the following analysis, children are defined as those aged between 5 and 17 years of age. The ABS is not aware of any recorded suicides of children under the age of 5 years.

The tabulation below provides information on suicide deaths in children over the last five years.

- There were 96 recorded suicides in this age group, with suicide remaining the leading cause of death of children in Australia.
- The child suicide rate for males was 3.0 per 100,000 (63 deaths), while for females it was 1.7 per 100,000 (33 deaths).
- Over 80% of child suicides in 2019 occurred between the ages 15 to 17.
- For the period 2015-2019, Northern Territory reported the highest rate of child suicide deaths, with 8.7 deaths per 100,000. All other states and territories reported rates ranging from 1.7 to 3.3 deaths per 100,000. For more information on child suicides in Australia See Datacube 11 in this publication.

Intentional self-harm in children aged 5-17 years, 2015-2019 (a)(b)(c)(d)(e)(f)(g)(h)

Age group (years)		2015	2015	2016	2016	2017	2017	2
		No./proportion	Rate(d)	No./proportion	Rate(d)	No./proportion	Rate(d)	N
5-17 years								
Males								
	Suicide	49	2.5	64	3.2	67	3.3	62
	All causes	298	15.2	280	14.1	271	13.4	264
	Proportion(e)	16.4	na	22.9	na	24.7	na	23.5
Females								
	Suicide	40	2.2	28	1.5	35	1.8	39
	All causes	217	11.7	161	8.6	198	10.4	186
	Proportion(e)	18.4	na	17.4	na	17.7	na	21
Persons								
	Suicide	89	2.3	92	2.4	102	2.6	101
	All causes	515	13.5	441	11.4	469	11.9	450
	Proportion(e)	17.3	na	20.9	na	21.7	na	22.4
All ages(e)		3 093	12.9	2 909	11.9	3285	13.2	3138

na Not Applicable

(a) All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2015 - 2016 (final), 2017 (revised), 2018 and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).

(b) The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.

(c) Child rates are expressed as age-specific death rates. The number of deaths for a specific age group, expressed per 100,000 of the estimated resident population as at 30 June (mid year) of that same age group. See the Glossary in this publication for further information.

(d) All ages rates are expressed as age-standardised rates. Death rate per 100,000 estimated resident population as at 30 June (mid year). See the glossary and the Mortality tabulations and methodologies section for further information.

(e) Intentional self-harm deaths as a proportion of all deaths in the 5-17 year age group.

(f) See the Data quality section of the methodology for further information on specific issues related to interpreting time-series and 2019 data

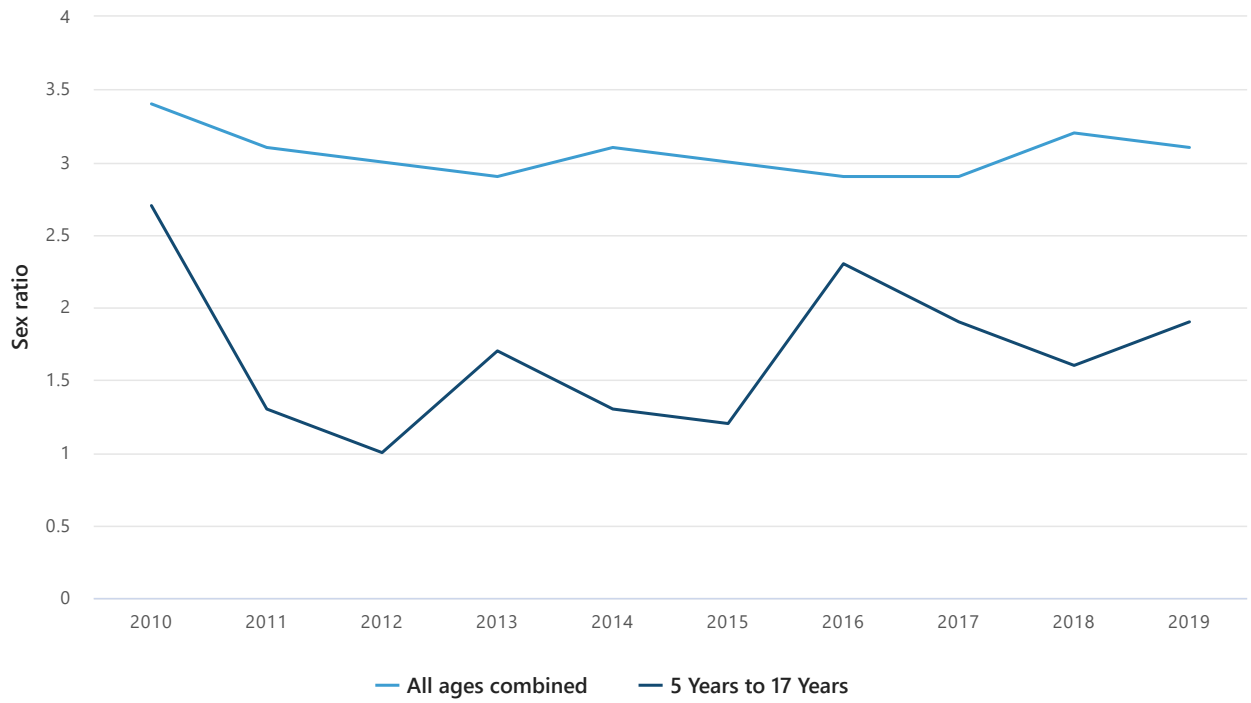
(g) Care needs to be taken when interpreting data derived from Victorian coroner-referred deaths including suicide. See Technical note: Victorian additional registrations and time series adjustments for detailed information on this issue.

(h) Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.

Sex ratios for suicides, defined as the number of male suicides per female suicide death, are provided in the graph below for child suicide and all suicide from 2010 to 2019. .

- In 2019, the sex ratio for child suicides was 1.9 male deaths for every female death, while for all ages combined it was 3.1 male deaths for every female death.
- The sex ratio for all suicides is consistently higher than that for child suicides.

Sex ratio differences for child suicide (5-17 years) and all suicide, 2010-2019 (a)(b)(c)(d)(e)



a. All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2010 - 2016 (final), 2017 (revised), 2018 and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).
b. The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
c. See the Data quality section of the methodology for further information on specific issues related to interpreting time-series and 2019 data
d. Care needs to be taken when interpreting data derived from Victorian coroner-referred deaths including suicide.

See Technical note: Victorian additional registrations and time series adjustments for detailed information on this issue.

e. Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.

Crisis helplines

Lifeline (http://www.lifeline.org.au/) : 13 11 14

Suicide Call Back Service (http://www.suicidecallbackservice.org.au/) - 1300 659 467

Kids Helpline (https://kidshelpline.com.au/) (for young people aged 5 to 25 years): 1800 55 1800

Intentional self-harm (suicide) in Aboriginal and Torres Strait Islander people

Key statistics:

- There were 195 Aboriginal and Torres Strait Islander people who died by suicide in 2019 (27.1 suicide deaths per 100,000 persons).
- The rate of suicide deaths has increased from 21.3 in 2010-2014 to 24.6 in 2015-2019.
- Suicide is the fifth leading cause of death for Aboriginal and Torres Strait Islander people.
- The median age at death due to suicide in Aboriginal and Torres Strait Islander people is 29.8 years.

Measures of mortality relating to Aboriginal and Torres Strait Islander people are key inputs into the Closing the Gap strategy, on which Australian Governments have worked together since 2009 to reduce disadvantage across areas such as life expectancy, mortality, education and employment. In July 2020, targets initially set in 2008 were revised, with a reduction in the suicide rate among Aboriginal and Torres Strait Islander people included as a specific target area.

> #### Methods for reporting on Aboriginal and Torres Strait Islander suicides
>
> Data reported in this article are compiled by jurisdiction of usual residence for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory only. Data for Victoria, Tasmania and the Australian Capital Territory have been excluded in line with national reporting guidelines. For further information see Deaths of Aboriginal and Torres Strait Islander people in the Methodology section of this publication.

Intentional self-harm by sex

- Suicide was the second leading cause of death for males and the seventh leading cause of death for females.
- Male suicides account for 70.3% of all Aboriginal and Torres Strait Islander suicides.
- The median age for Aboriginal and Torres Strait Islander suicide was 30.5 years of age for males and 27.0 years of age for females.
- The suicide rate for both males and females has increased over time.

Age-standardised death rates for suicide for Aboriginal and Torres Strait Islander people, 2010-2019 (a)(b)(c)(d)(e)(f)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010-2014	2015-20
Male	33.4	31.7	26.9	33.7	32.8	37	36.4	37.5	38.1	39.4	31.6	
Female	8.1	13.8	11.2	12.1	12.4	12.4	11.2	11.2	10.3	15.2	11.6	
Persons	19.9	22.6	18.9	22.7	22.4	24.2	23.5	24.1	24.1	27.1	21.3	

Footnote(s):
(a) All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2010 - 2016 (final), 2017 (revised), 2018 and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).
(b) The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
(c)Age-standardised death rate. Death rate per 100,000 estimated resident population as at 30 June (mid year). See the glossary and the Mortality tabulations and methodologies section for further information.
(d) Data reported in this article are compiled by jurisdiction of usual residence for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory only. Data for Victoria, Tasmania and the Australian Capital Territory have been excluded in line with national reporting guidelines. For further information see Deaths of Aboriginal and Torres Strait Islander people in the Methodology section of this publication.
(e) Rates presented in this table have been calculated using Aboriginal and Torres Strait Islander population estimates and projections based on the 2016 Census. As a result, these rates may differ from those previously published. See the Mortality tabulations and methodologies section of the methodology for further information.
(f) Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.

Intentional self-harm in Aboriginal and Torres Strait Islander people by states and territories

- Western Australia has consistently recorded the highest death rate over the last ten years.
- Suicide rates have increased in New South Wales and Queensland, whereas rates in South Australia, Western Australia and the Northern Territory have decreased.
- The lowest suicide rate was recorded in New South Wales at 19.3 deaths per 100,000.

Age-standardised death rates for suicide for Aboriginal and Torres Strait Islander people, by state or territory of usual residence, 2010-2014 and 2015-2019 (a)(b)(c)(d)(e)(f)

	2010-2014	2015-2019
New South Wales	10.8	19.3
Queensland	21.1	26.4
South Australia	24.6	20.3
Western Australia	38.1	34.6
Northern Territory	31.6	25.6
Total	21.3	24.6

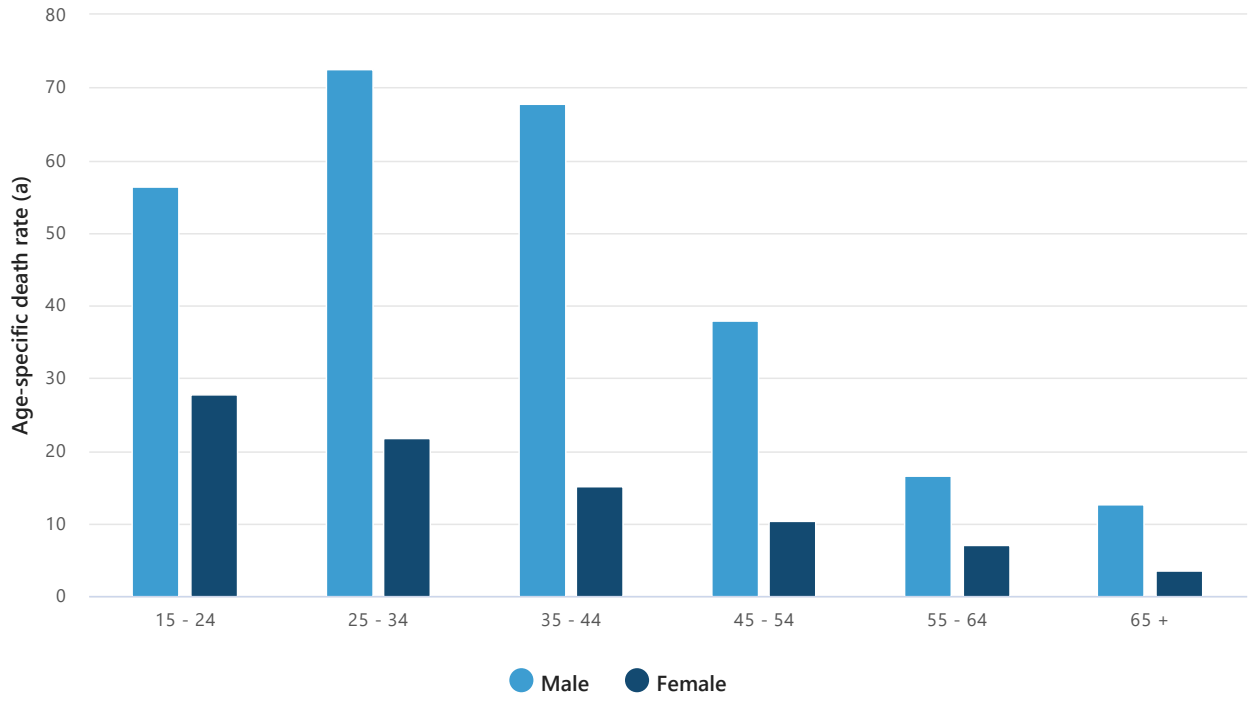
Footnote(s):
(a) All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2010 - 2016 (final), 2017 (revised), 2018 and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).
(b) The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
(c) Age-standardised death rate. Death rate per 100,000 estimated resident population as at 30 June (mid year). See the glossary and the Mortality tabulations and methodologies section for further information.
(d) Data reported in this article are compiled by jurisdiction of usual residence for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory only. Data for Victoria, Tasmania and the Australian Capital Territory have been excluded in line with national reporting guidelines. For further information see Deaths of Aboriginal and Torres Strait Islander people in the Methodology section of this publication.
(e) Rates presented in this table have been calculated using Aboriginal and Torres Strait Islander population estimates and projections based on the 2016 Census. As a result, these rates may differ from those previously published. See the Mortality tabulations and methodologies section of the methodology for further information.
(f) Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.

Intentional self-harm deaths: Age-specific death rates

Age-specific rates provide insights into how suicide manifests across age cohorts by relating the number of deaths to the size and structure of the underlying population.

- Most suicides in Aboriginal and Torres Strait Islander people occur between the ages of 15 and 44 (83.2%).
- The male suicide rate peaks between 25 and 34 years, at 72.5 deaths per 100,000.
- Female suicide is the highest among those aged 15-24 years and decreases with increasing age.

Age-specific death rates for intentional self-harm, by sex, 2015-2019 (a)(b)(c)(d)(e)(f)



Footnote(s):

(a) Age-specific death rate. Deaths per 100,000 of estimated mid-year population for each age group. See Glossary for further information.

(b) All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2015 - 2016 (final), 2017 (revised), 2018 and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).

(c) The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
(d) Data reported in this article are compiled by jurisdiction of usual residence for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory only. Data for Victoria, Tasmania and the Australian Capital Territory have been excluded in line with national reporting guidelines. For further information see Deaths of Aboriginal and Torres Strait Islander people in the Methodology section of this publication.
(e) Rates presented in this table have been calculated using Aboriginal and Torres Strait Islander population estimates and projections based on the 2016 Census. As a result, these rates may differ from those previously published. See the Mortality tabulations and methodologies section of the methodology for further information.
(f) Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.

Suicide of Aboriginal and Torres Strait Islander children- 5-17 years

- Suicide was the leading cause of death for Aboriginal and Torres Strait Islander children between 2015-2019.
- One-third (32.4%) of all Aboriginal and Torres Strait Islander child deaths occurred due to suicide in this period.
- Children aged 15-17 years accounted for almost 80% of all child suicides among Aboriginal and Torres Strait Islander people.
- Males and females each accounted for approximately half of all child suicide deaths.

For more information on intentional self-harm in Aboriginal and Torres Strait Islander children see Table 11.12 in Data Cube 11 in this publication.

Intentional self-harm by Indigenous status

Mortality data can provide important insights into population health concerns relevant to different groups within the Australian population. Patterns of death among Aboriginal and Torres Strait Islander people differ considerably to those of Non-Indigenous people, as is the case with suicide. Suicides rates for Aboriginal and Torres Strait Islander people are double that of Non-Indigenous people.

Standardised death rates for suicide by Indigenous status and sex, 2015-2019 (a)(b)(c)(d)(e)(f)(g)(h)

	Aboriginal and Torres Strait	Non-	Rate Ratio	Rate Difference

	Islander	Indigenous	(g)	(h)
Male	37.6	19.3	2.0	18.4
Female	12.1	6.0	2.0	6.1
Persons	24.6	12.5	2.0	12.1

Footnote(s):
(a) All causes of death data from 2006 onward are subject to a revisions process - once data for a reference year are 'final', they are no longer revised. Affected data in this table are: 2015 - 2016 (final), 2017 (revised), 2018 and 2019 (preliminary). See the Data quality section of the methodology and Causes of Death Revisions, 2016 Final Data (Technical Note) and 2017 Revised Data (Technical Note) in Causes of Death, Australia, 2018 (cat. no. 3303.0).
(b) The data presented for intentional self-harm includes ICD-10 codes X60-X84 and Y87.0. Care needs to be taken in interpreting figures relating to intentional self-harm. See the Deaths due to intentional self-harm (suicide) section of the methodology in this publication.
(c) Age-standardised death rate. Death rate per 100,000 estimated resident population as at 30 June (mid year). See the glossary and the Mortality tabulations and methodologies section for further information.
(d) Data reported in this article are compiled by jurisdiction of usual residence for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory only. Data for Victoria, Tasmania and the Australian Capital Territory have been excluded in line with national reporting guidelines. For further information see Deaths of Aboriginal and Torres Strait Islander people in the Methodology section of this publication.
(e) Rates presented in this table have been calculated using Aboriginal and Torres Strait Islander population estimates and projections based on the 2016 Census. As a result, these rates may differ from those previously published. See the Mortality tabulations and methodologies section of the methodology for further information.
(f) Changes in coding processes have been applied to 2019 data. See the Classifications and Mortality coding sections of the methodology for further information.
(g) The rate ratio is the rate for Indigenous persons divided by the non-Indigenous rate. Due to the effect of rounding, rates presented will not multiply exactly to ratio presented.
(h) The rate difference is the rate for Indigenous persons less the non-Indigenous rate.

Crisis Helplines

Lifeline: 13 11 14

Suicide Call Back Service - 1300 659 467

Kids Helpline (for young people aged 5 to 25 years): 1800 55 1800

Post-release changes

31 March 2021: A number of new materials were released which contain final 2017 data and revised 2018 data. These include:

- Technical note: Causes of death revisions, 2017 final data;
- Technical note: Causes of death revisions, 2018 revised data;
- Technical note: Updates to 2017 and 2018 suicide data; and
- Underlying causes of death (Australia), 2017 and 2018 revisions data cube

Data downloads

Notes

Introduction to data cubes

All Causes of Death, Australia, 2019 (3303.0) publication tables are available in these spreadsheets. The spreadsheets also include data which has been subject to the ABS revisions process. Data for 2010-2016 is final, data for 2017 is revised and data for 2018 and 2019 is preliminary.

Information on methodology, abbreviations and a glossary of terms can be accessed through the 'Causes of Death, Australia methodology' section.

Each worksheet in the files contains one table. There are 100 tables in total and these are listed below.

Tables in causes of death, Australia, 2019

Underlying causes of death (Australia)

1.1 Underlying cause of death, All causes, Australia, 2019
1.2 Underlying cause of death, All causes, Australia, 2010-2019
1.3 Underlying cause of death, Selected causes by age at death, Numbers and rates, Australia, 2019

Underlying causes of death (New South Wales)

2.1 Underlying cause of death, All causes, New South Wales, 2019
2.2 Underlying cause of death, All causes, New South Wales, 2010-2019
2.3 Underlying cause of death, Selected causes by age at death, Numbers and rates, New South Wales, 2019

Underlying causes of death (Victoria)

3.1 Underlying cause of death, All causes, Victoria, 2019
3.2 Underlying cause of death, All causes, Victoria, 2010-2019

3.3 Underlying cause of death, Selected causes by age at death, Numbers and rates, Victoria, 2019

Underlying causes of death (Queensland)

4.1 Underlying cause of death, All causes, Queensland, 2019

4.2 Underlying cause of death, All causes, Queensland, 2010-2019

4.3 Underlying cause of death, Selected causes by age at death, Numbers and rates, Queensland, 2019

Underlying causes of death (South Australia)

5.1 Underlying cause of death, All causes, South Australia, 2019

5.2 Underlying cause of death, All causes, South Australia, 2010-2019

5.3 Underlying cause of death, Selected causes by age at death, Numbers and rates, South Australia, 2019

Underlying causes of death (Western Australia)

6.1 Underlying cause of death, All causes, Western Australia, 2019

6.2 Underlying cause of death, All causes, Western Australia, 2010-2019

6.3 Underlying cause of death, Selected causes by age at death, Numbers and rates, Western Australia, 2019

Underlying causes of death (Tasmania)

7.1 Underlying cause of death, All causes, Tasmania, 2019

7.2 Underlying cause of death, All causes, Tasmania, 2010-2019

7.3 Underlying cause of death, Selected causes by age at death, Numbers and rates, Tasmania, 2019

Underlying causes of death (Northern Territory)

8.1 Underlying cause of death, All causes, Northern Territory, 2019

8.2 Underlying cause of death, All causes, Northern Territory, 2010-2019

8.3 Underlying cause of death, Selected causes by age at death, Numbers and rates, Northern Territory, 2019

Underlying causes of death (Australian Capital Territory)

9.1 Underlying cause of death, All causes, Australian Capital Territory, 2019

9.2 Underlying cause of death, All causes, Australian Capital Territory, 2010-2019

9.3 Underlying cause of death, Selected causes by age at death, Numbers and rates, Australian Capital Territory, 2019

Multiple causes of death (Australia)

10.1 Multiple causes of death, All causes, Number of deaths by number of causes reported, 2019
10.2 Multiple causes of death, Number of deaths by underlying cause and multiple cause mentions, 2019
10.3 Multiple causes of death, All Causes, Multiple Cause Counts of Deaths, 2019
10.4 Multiple causes of death, Number of deaths by selected underlying cause and top associated causes, 2019
10.5 Multiple causes of death, Number of deaths by selected associated cause and top underlying causes, 2019
10.6 Multiple causes of death, Number of deaths due to external causes by mechanism and nature of injury, 2019
10.7 Multiple causes of death, Number of deaths due to external causes by intent and nature of injury, 2019
10.8 Multiple causes of death, Nature of injury by age at death, numbers, percentages and rates, Australia, 2019

Intentional self-harm (suicide) (Australia)

11.1 Intentional self-harm, Number of deaths, 5 year age groups by sex, 2010-2019

11.2 Intentional self-harm, Age specific death rates, 5 year age groups by sex, 2010-2019

11.3 Intentional self-harm, Age specific death rates, 10 year age groups by sex, 2010-2019

11.4 Intentional self-harm by Indigenous status, 2015-2019

11.5 Intentional self-harm by mechanism, Number of deaths by sex, 2010-2019

11.6 Intentional self-harm, State and territory, Number of deaths, Age-standardised death rate, Rate ratio, Sex, 2010-2019

11.7 Intentional self-harm by State and territory of usual residence and Sex, Age-standardised death rates, 2010-2019

11.8 Intentional self-harm, Proportion of total deaths, 5 year age groups by sex, 2010-2019

11.9 Selected external causes of death, Mechanism by intent, 2019

11.10 Intentional self-harm, Number of deaths in children aged 5-17 years by age and sex, Australia, 2015-2019

11.11 Intentional self-harm, Number of deaths in children aged 5-17 years by age, state and territory of usual residence, 2015-2019

11.12 Intentional self-harm, Number of deaths in children aged 5-17 years by Aboriginal and Torres Strait Islander status, NSW, Qld, SA, WA and NT, 2015-2019

11.13 Intentional self-harm, Number of deaths in children aged 5-17 years by age and capital city areas/remainder of state, 2015-2019

11.14 Intentional self-harm, Number of deaths in children aged 5-17 years by mechanism and age, Australia, 2015-2019

11.15 Intentional self-harm, Region of usual residence. Number of deaths, 2015-2019

11.16 Intentional self-harm, Region of usual residence, Age-standardised death rates, 2015-2019

11.17 Intentional self-harm, Sex by age by multiple cause of death, Number and proportion of suicide deaths, 2015-2019

11.18 Suicide deaths recording at least one psychosocial risk factor, Number and proportion of suicide deaths, 10 year age groups by sex, Australia, 2017-2019

11.19 Most frequently occurring psychosocial risk factors by age group and sex, Number and proportion of suicide deaths, Australia, 2017-2019

11.20 Number of co-occurring psychosocial risk factors for suicide deaths, Australia, 2017-2019

11.21 Most frequently occurring associated causes including psychosocial risk factors, 20 year age groups by sex, Proportion of suicide deaths, Australia, 2017-2019

Deaths of Aboriginal and Torres Strait Islander Australians

12.1 Underlying causes of death, Leading causes by Aboriginal and Torres Strait Islander status, All persons, NSW, Qld, SA, WA and NT, 2019
12.2 Underlying causes of death, Leading causes by Aboriginal and Torres Strait Islander status, Males, NSW, Qld, SA, WA and NT, 2019
12.3 Underlying causes of death, Leading causes by Aboriginal and Torres Strait Islander status, Females, NSW, Qld, SA, WA and NT, 2019
12.4 Underlying causes of death, Leading causes by Aboriginal and Torres Strait Islander status, Numbers and Age Specific Death Rates, Males, Females and Persons, NSW, Qld, SA, WA and NT, 2015-2019

12.5 Underlying causes of death, Leading causes by Aboriginal and Torres Strait Islander status, NSW, Qld, SA, WA and NT, 2015-2019
12.6 Underlying causes of death, Leading causes by Aboriginal and Torres Strait Islander status and Sex, NSW, Qld, SA, WA and NT, 2019
12.7 Underlying causes of death, Leading causes by Aboriginal and Torres Strait Islander status and Sex, NSW, 2019
12.8 Underlying causes of death, Leading causes by Aboriginal and Torres Strait Islander status and Sex, Qld, 2019
12.9 Underlying causes of death, Leading causes by Aboriginal and Torres Strait Islander status and Sex, WA, 2019
12.10 Underlying causes of death, Leading causes by Aboriginal and Torres Strait Islander status and Sex, NT, 2019

Causes of death by year of occurrence (Australia)

13.1 Underlying cause of death, All causes, Year of Occurrence, Australia, 2009-2019
13.2 Underlying cause of death, All causes, Year of Occurrence, New South Wales, 2009-2019
13.3 Underlying cause of death, All causes, Year of Occurrence, Victoria, 2009-2019
13.4 Underlying cause of death, All causes, Year of Occurrence, Queensland, 2009-2019
13.5 Underlying cause of death, All causes, Year of Occurrence, South Australia, 2009-2019
13.6 Underlying cause of death, All causes, Year of Occurrence, Western Australia, 2009-2019
13.7 Underlying cause of death, All causes, Year of Occurrence, Tasmania, 2009-2019
13.8 Underlying cause of death, All causes, Year of Occurrence, Northern Territory, 2009-2019
13.9 Underlying cause of death, All causes, Year of Occurrence, Australian Capital Territory, 2009-2019

Perinatal deaths (Australia)

14.1 Fetal, neonatal and perinatal deaths, Australia, 2010-2019
14.2 Fetal deaths by state and territory of usual residence of mother, 2010-2019
14.3 Neonatal deaths by state and territory of usual residence of mother, 2010-2019
14.4 Perinatal deaths by state and territory of usual residence of mother, 2010-2019
14.5 Fetal deaths by main condition in fetus by sex, Australia 2015-2019
14.6 Fetal deaths by main condition in mother by sex, Australia 2015-2019
14.7 Neonatal deaths by main condition in infant by sex, Australia, 2015-2019
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2017 and 2018 revisions

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15.2 Underlying causes of death, All causes, Australia, preliminary and revised data, 2018

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1. Underlying causes of death (Australia)

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[730.36 KB]

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2. Underlying causes of death (New South Wales)

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3. Underlying causes of death (Victoria)

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[609.87 KB]

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4. Underlying causes of death (Queensland)

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5. Underlying causes of death (South Australia)

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7. Underlying causes of death (Tasmania)

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[535 91 KB]

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10. Multiple causes of death (Australia)

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11. Intentional self-harm (suicide) (Australia)

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13. Causes of death by year of occurrence (Australia)

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14. Perinatal deaths (Australia)

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All data cubes

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Previous catalogue number

This release previously used catalogue number 3303.0

Methodology

Causes of Death, Australia methodology, 2019

Australian Bureau of Statistics

COVID-19 Mortality in Australia

COVID-19 deaths that occurred by 31 January 2022 that have been registered and received by the ABS

Released 15/02/2022

Source: Provisional Mortality Statistics, Jan 2020 - Oct 2021

On this page

Key Statistics

- 2,639 deaths where people died with or from COVID-19 that occurred by 31 January 2022 have been registered and received by the ABS. The ABS expects to receive further registrations for this period from the jurisdictional Registries of Births, Deaths and Marriages.

- The majority (2,556 deaths) of these 2,639 deaths were due directly to COVID-19.
- There were a further 83 people who died of other causes (e.g. cancer) but were COVID-19 positive at the time of death.
- Chronic cardiac conditions were the most common pre-existing chronic condition for those who had COVID-19 certified as the underlying cause of death.

> The number of deaths published in this report are provisional and will increase as additional registrations are received by the ABS.
>
> Deaths due to COVID-19 are coded to ICD-10 codes U07.1 and U07.2 using rules in accordance with the most current advice from the World Health Organization.
>
> Deaths in this article on COVID-19 occur up to 31 January 2022.
>
> Deaths in this article are sourced from the civil registration system. The data is not directly comparable with data sourced from health surveillance systems.

Deaths due to COVID-19 in Australia

The Coronavirus Disease 2019 (COVID-19) is a respiratory infection caused by a new coronavirus. On 11 March 2020 the World Health Organization (WHO) declared COVID-19 to be a pandemic.

There are 2,639 death registrations that have been received by the ABS where an individual is certified as having died from or with COVID-19 between the start of the pandemic and 31 January 2022. Approximately 1% of the 273,901 death registrations received by the ABS and certified by a doctor in Australia during the pandemic period are of people who have died with or from COVID-19. This number of deaths is a preliminary figure and represents only deaths where the death registration process through the jurisdictional Registries of Births, Deaths and Marriages (the civil registration system) has been completed. The number of deaths of people who have died with or from COVID-19 during this time period will increase as additional registrations are received by the ABS.

Data published by the ABS is collected through the civil registration system and is not directly comparable with that released from disease surveillance systems which are designed to release information rapidly on both infections and mortality.

Information about mortality sourced from the registration-based system takes longer to receive than information reported through the surveillance system, but it is more comprehensive and can provide important additional insights into deaths from COVID-19. Cause of death information is sourced from the Medical Certificate of Cause of Death (MCCD), which enables identification of the underlying cause of death and other associated causes. These data sources also provide demographic information about the decedent (e.g. age, sex and country of birth).

Certification of COVID-19 on the MCCD in Australia

There were 2,704 deaths which occurred and were registered by 31 January 2022 and had COVID-19 written as a term on the death certificate. Of these 2,704 deaths, 2,556 were deaths due to COVID-19, including:

- 2,519 which were directly due to acute COVID-19 infection with the virus being laboratory confirmed.
- 20 deaths that were due to long term effects of COVID-19 (e.g. long COVID-19).
- 17 deaths that were certified as being due to suspected COVID-19 with the virus not confirmed in a laboratory at the time of certification.

These 2,556 deaths are considered to be "due to" COVID-19 and are included in underlying cause mortality tabulations in this report.

Other deaths that had COVID-19 as a term on the death certificate included:

- 83 deaths which were COVID-19 related. This is where the person died with COVID-19 (confirmed or suspected) but it was not the underlying cause of death.
- 50 deaths which had a negative COVID-19 result recorded on the death certificate. When a negative COVID-19 test result is recorded on a death certificate an ICD-10 code of 'Z03.8 Examination and observation for other specified reasons' is assigned to capture the information communicated by the doctor. These deaths are not included in COVID-19 mortality reporting.
- 13 deaths which occurred in people who had COVID-19 but recovered. These mentions of COVID-19 on the death certificate are captured with an ICD-10 code of "U08.9 Personal history of COVID-19". These deaths are not included in COVID-19 mortality reporting.

Coding of COVID-19 from the MCCD

Australian cause of death data is coded to the International Classification of Diseases, 10th revision which is governed by the WHO. Case definitions, certification guidelines and coding rules have been implemented for international use.

A death directly due to COVID-19 is defined by the WHO as a death resulting from a clinically compatible illness, in a probable or confirmed COVID-19 case, unless there is a clear alternative cause of death that cannot be related to COVID disease (e.g. trauma). There should be no period of complete recovery from COVID-19 between illness and death.

In response to the emergence of COVID-19 the WHO issued new emergency codes to be used when coding causes of death for statistical purposes.

- U07.1 COVID-19 virus identified

This code is used when COVID-19 is confirmed by laboratory testing.

- U07.2 COVID-19 virus not identified

This code is used for suspected or clinical diagnoses of COVID-19 where testing is not completed or inconclusive.

- U08 Personal history of COVID-19

This code is used when a person has recovered from COVID-19 and no long term effects have been certified as contributing to an individual's death. These deaths are not included in COVID-19 mortality tabulations.

- U09 Post COVID-19 condition

This code is used to link long term conditions including chronic lung conditions that are the result of the virus. These deaths are included in COVID-19 mortality tabulations.

- U10 Multisystem inflammatory syndrome associated with COVID-19

This code is used to identify people who have died from COVID-19 where the virus has led to a multi-inflammatory response syndrome. There have been no deaths due to this disorder in Australia.

A further code 'Z03.8 Examination for observation and other specified reasons' can be used to record a negative test result in order to capture this information on the death certificate. These deaths are not tabulated as being due to COVID-19.

The international rules and guidance for selecting the underlying cause of death for statistical

tabulation apply when COVID-19 is reported on a death certificate. COVID-19 is not considered as due to, or as an obvious consequence of, other diseases and conditions. These rules are also applied to cause of death coding for Influenza and selected other infectious diseases. Further, there is no provision in the classification to link COVID-19 to other causes or modify its coding in any way.

Almost all deaths due to COVID-19 in Australia have laboratory confirmation of the virus. Of the 2,556 registered COVID-19 deaths occurring by 31 January 2022, 2,539 (99.3%) were coded to U07.1, (laboratory confirmed) COVID-19, virus identified. There were 17 (0.7%) deaths where the doctor certified that it was a suspected case of COVID-19 with no laboratory confirmation recorded at the time the MCCD was completed.

Deaths due to COVID-19: Year and month of occurrence

The table below shows the number of registered deaths due to COVID-19 over the course of the pandemic by month of occurrence.

- The number of deaths occurring in November and December 2021 and January 2022 is not reflective of the true total and will increase as additional death registrations are received by the ABS. Other time periods may also change if the death registration process has been delayed.
- Cumulatively, the highest number of deaths occurred during the Delta and Omicron waves. This differs across jurisdictions.

Deaths due to COVID-19 by year and month of occurrence (a)(b)(c)(d)(e)

Year of death occurrence	January	February	March	April	May	June	July	August	September	Octol
2020	0	0	23	78	12	3	145	473	146	
2021	2	1	1	2	0	0	13	90	299	
2022	422	na	na	na	na	na	na	na	na	

a. This table only includes information on registered deaths due to COVID-19. Numbers of deaths will differ to disease surveillance systems.

b. Information on deaths due to COVID-19 include deaths that occurred and were registered by 31 January 2022.

c. All deaths due to COVID-19 in this report have been coded to ICD-10 code U07.1 COVID-19, virus identified or U07.2, virus not identified as the underlying cause of death.

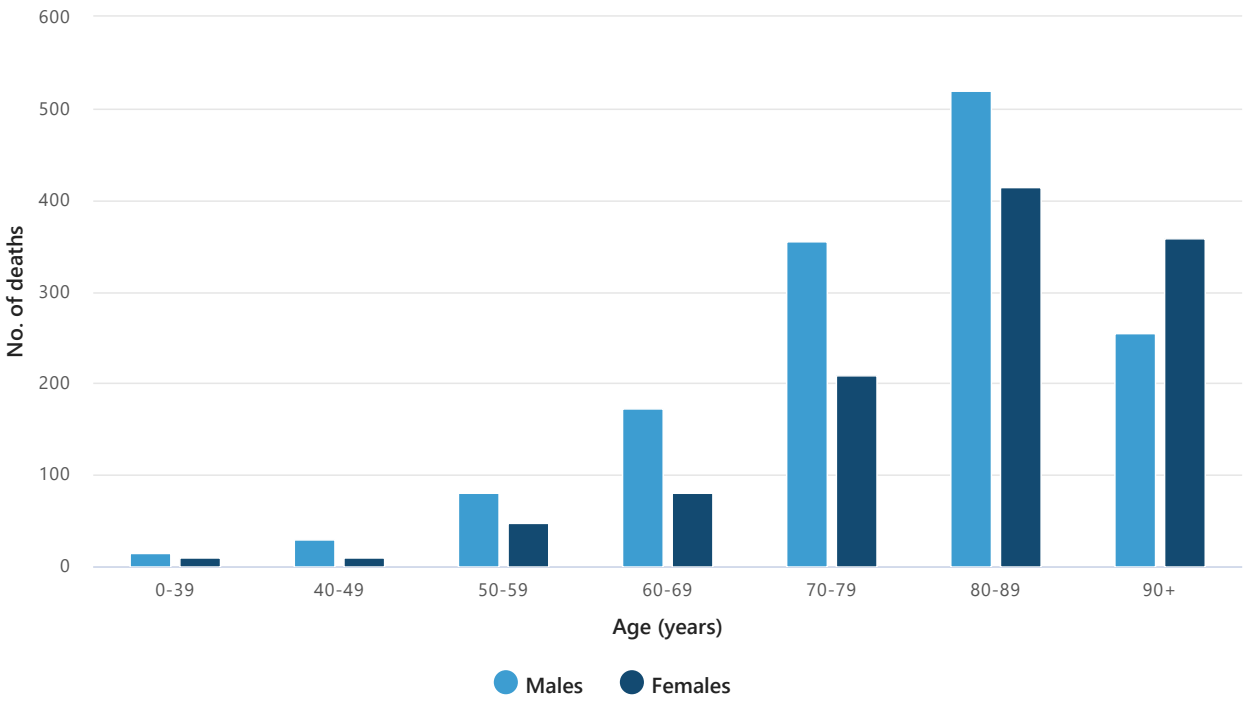
d. This data is provisional and will change as additional data is received.

e. Refer to methodology for more information regarding the data in this graph.

Deaths due to COVID-19: Age and sex

- Males had a higher number of registered deaths (1,428) due to COVID-19 than females (1,128 deaths).
- The highest number of COVID-19 deaths occurred among those aged 80-89 years (934). This was true for both males and females.
- Males aged under 80 years had a higher number of deaths than females (653 compared with 356).
- The median age for those who died from COVID-19 was 83.7 years (81.2 years for males, 86.0 years for females).

COVID-19 registered deaths by age and sex (a)(b)(c)(d)(e)



a. This graph only includes information on registered deaths due to COVID-19. Numbers of deaths will differ to disease surveillance systems.
b. Information on deaths due to COVID-19 include all deaths due to the disease that occurred and were registered by 31 January 2022.
c. Deaths due to COVID-19 in this report have an underlying cause of either ICD-10 code U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified.
d. This data is considered to be provisional and subject to change as additional data is received.
e. Refer to methodology for more information regarding the data in this graph.

Deaths due to COVID-19: State of registration

As of 31 January 2022, the majority of registered deaths due to COVID-19 had occurred in Victoria (1,557). Additional deaths due to COVID-19 for this time period are expected to be received in coming months for most jurisdictions as death registrations are finalised.

Number and proportion of COVID-19 deaths by state of registration (a)(b)(c)(d)(e)

	COVID-19 deaths (no.)	Proportion of total COVID-19 deaths (%)
NSW	864	33.8
Vic	1,557	60.9
Qld	69	2.7
SA	22	0.9
WA	10	0.4
Tas	18	0.7
NT	0	na
ACT	16	0.6
Aus	2,556	100.0

a. This table only includes information on registered deaths due to COVID-19. Numbers of deaths will differ to disease surveillance systems.
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d. This data is provisional and will change as additional data is received.
e. Refer to methodology for more information regarding the data in this graph.

Deaths due to COVID-19: Associated causes of death

COVID-19 was the underlying cause of death for 2,556 registered deaths that have been received by the ABS occurring up to 31 January 2022. The WHO defines the underlying cause of death as the disease or condition that initiated the train of morbid events leading to death. Diseases and conditions reported on the MCCD that are not the underlying cause of death are referred to as associated causes. Associated causes can be either:

- Conditions listed in the causal sequence (the chain of events leading to death); or
- Pre-existing chronic conditions, often listed in Part II of the MCCD as 'other conditions relevant to the death'.

Examining conditions in the causal sequence can provide insights into how a disease progresses and leads to death. Examining pre-existing chronic conditions provides an understanding of risk factors that might contribute to death from a particular disease. Both can inform health prevention and intervention policies.

Most deaths due to COVID-19 have other conditions listed on the death certificate (91.4%). The table

below shows that just under half of all certificates had both a causal sequence and pre-existing conditions listed on the certificate.

On average, deaths due to COVID-19 had 2.7 other diseases and conditions certified alongside the virus.

Number of deaths due to COVID-19 that had associated conditions (a)(b)(c)(d)(e)

Reported with:	No. of deaths	Percent (%)
Reported alone on certificate	220	8.6
Reported with causal sequence of events only	560	21.9
Reported with pre-existing chronic conditions only	604	23.6
Reported with causal sequence of events and pre-existing chronic conditions	1,172	45.9

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c. Deaths due to COVID-19 in this report have an underlying cause of either ICD-10 code U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified.
d. This data is provisional and will change as additional data is received.
e. Refer to methodology for more information regarding the data in this graph.

Deaths due to COVID-19: Associated causes, conditions in the causal sequence

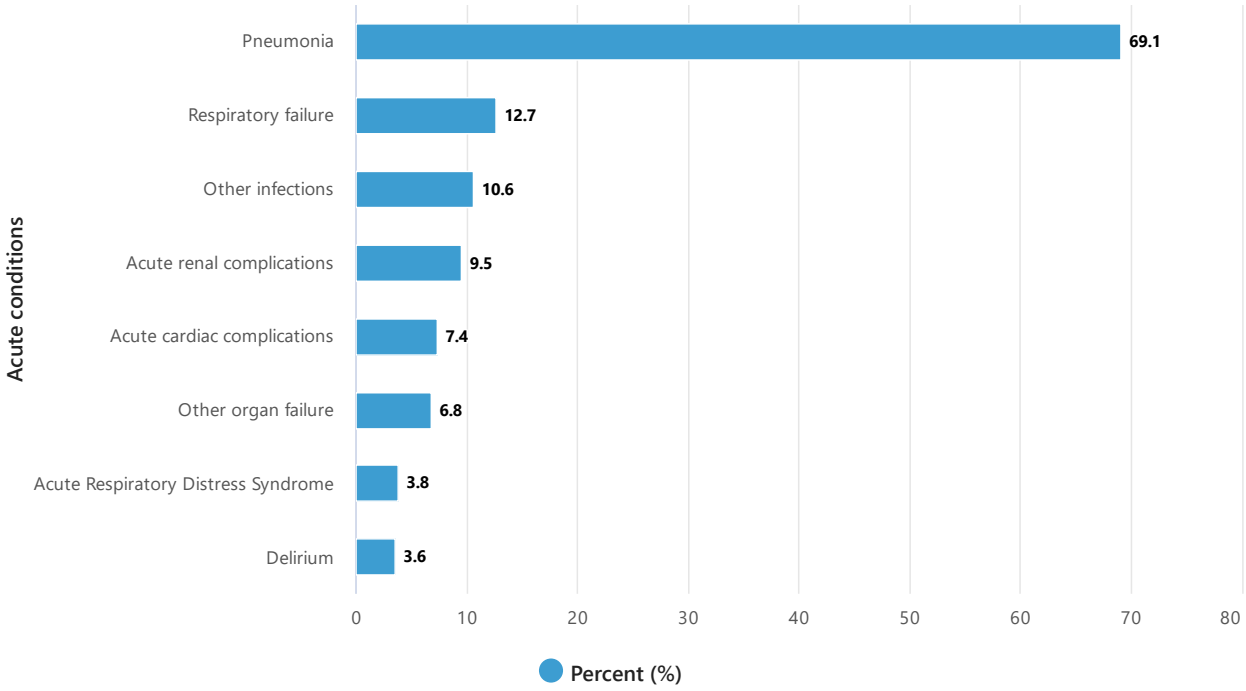
COVID-19 is a respiratory illness that weakens the immune system causing inflammation. This commonly leads to poor respiratory outcomes such as viral pneumonia and secondary infection. Other manifestations such as acute kidney injury and cardiac complications have also been reported but these are less common.

Disease progressions was described in a causal sequence by the certifier in 1,732 (67.8%) of the 2,556 deaths due to COVID-19 outlined in this report. Among these 1,732 deaths:

- Acute respiratory diseases were the most commonly certified diseases listed as a consequence of COVID-19.
- Pneumonia was present as a consequence of COVID-19 in over two-thirds of deaths where a causal sequence was certified by a doctor.

- Other acute outcomes including infections (e.g. sepsis) and renal complications were certified in 10.6% and 9.5% of deaths respectively.

Most commonly certified acute disease outcomes of COVID-19 (a)(b)(c)(d)(e)



a. This graph only includes information on registered deaths due to COVID-19. Numbers of deaths will differ to disease surveillance systems.
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d. This data is provisional and will change as additional data is received.
e. Refer to methodology for more information regarding the data in this graph.

Deaths due to COVID-19: Associated causes, pre-existing chronic conditions

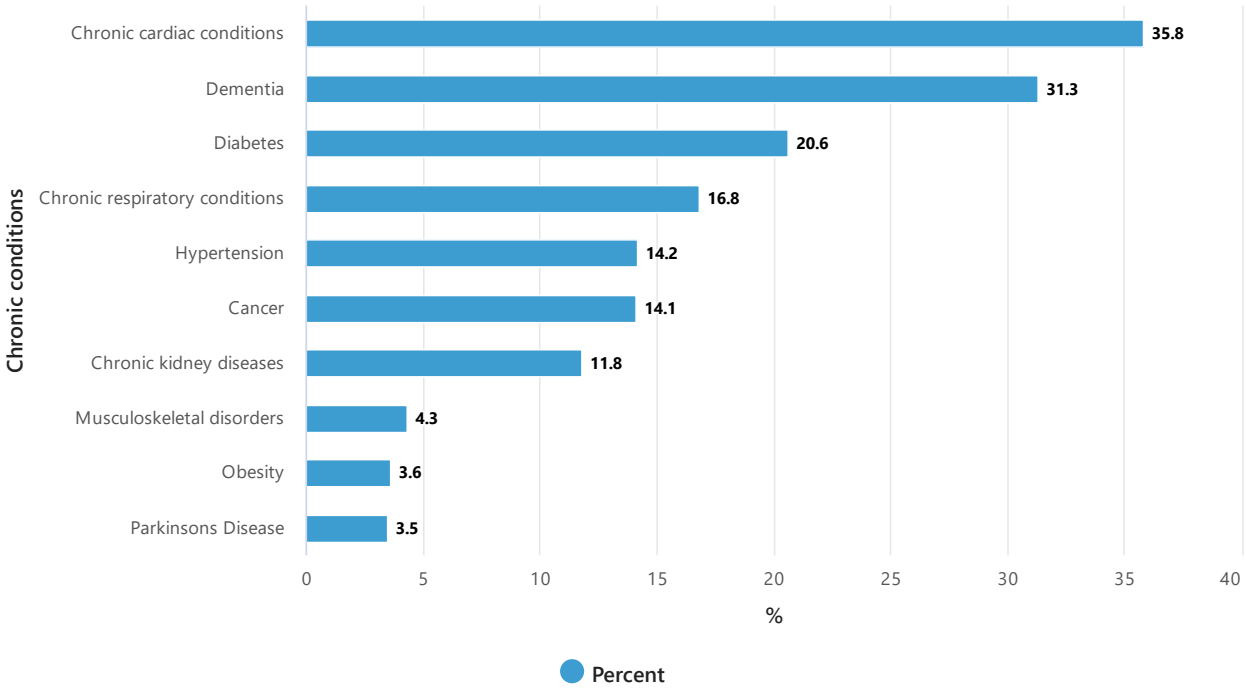
People with pre-existing chronic conditions have greater risk of developing severe illness from

COVID-19. While pre-existing chronic conditions do not cause COVID-19, they increase the risk of COVID-19 complications and therefore increase the risk of death.

Pre-existing chronic conditions were reported on death certificates for 1,776 (69.5%) of the 2,556 deaths due to COVID-19 deaths outlined in this report. Of these 1,776 deaths:

- Chronic cardiac conditions including coronary atherosclerosis, cardiomyopathies and atrial fibrillation were the most commonly certified co-morbidities, present in 35.8% of the 1,776 deaths.
- Dementia including Alzheimer's disease was certified in over 30% of deaths due to COVID-19.
- Diabetes, a condition that weakens the immune system was certified as a pre-existing condition in 20.6% of deaths with a chronic condition mentioned.
- Cancer was a pre-existing condition in 14.1% of the 1,776 deaths. Blood and lymph cancers (e.g. leukaemia) were the most commonly certified cancer type among those deaths.
- The type of comorbidities most commonly present in Australian deaths due to COVID-19 are consistent with those reported internationally.

Pre-existing chronic conditions certified with COVID-19 deaths (a)(b)(c)(d)(e)



a. This graph only includes information on registered deaths due to COVID-19. Numbers of deaths will differ to disease surveillance systems.
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c. All deaths due to COVID-19 in this report have been coded to ICD-10 code U07.1 COVID-19, virus identified or U07.2, virus not identified as the underlying cause of death.
d. This data is provisional and will change as additional data is received.
e. Refer to methodology for more information regarding the data in this graph.

Death due to COVID-19: Country of birth

- Those who died of COVID-19 with a country of birth overseas, had an age-standardised death rate close to three times that of people who were born in Australia (6.8 deaths per 100,000 people versus 2.3 deaths).
- Those with a country of birth in the Middle East had the highest age-standardised death rate at 29.3 deaths per 100,000 people.

- Those with a country of birth in the United Kingdom and Ireland had the lowest age-standardised death rate at 2.1 per 100,000 people.
- Those born in the Eastern European region had the highest median age at death at 91.8 years. Those born in the Oceania and Antarctic region (excluding Australia) had the lowest median age at death at 70.7 years.

Country of birth of those who have died from COVID-19 (a)(b)(c)(d)(e)(f)

Country of birth	No. of deaths	Age-standardised death rate	Median age at death (years)
Australia	907	2.3	84.3
Overseas born	1,640	6.8	83.0
Oceania and Antarctica	141	8.2	70.7
North-West Europe	220	2.3	85.5
United Kingdom and Ireland	158	2.1	85.6
Other North-West Europe	62	3.1	85.0
Southern and Eastern Europe	732	11.1	85.8
Southern Europe	244	8.3	86.6
South Eastern Europe	410	14.5	84.1
Eastern Europe	78	8.2	91.8
North Africa and the Middle East	288	24.7	78.7
North Africa	39	13.4	79.5
Middle East	249	29.3	78.6
South-East Asia	94	4.8	74.0
North-East Asia	45	2.9	84.3
Southern and Central Asia	58	4.9	78.0
Americas	35	4.9	77.2
Sub-Saharan Africa	27	3.4	71.5

a. This table only includes information on registered deaths due to COVID-19. Numbers of deaths will differ to disease surveillance systems.
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d. This data is provisional and will change as additional data is received.
e. Refer to methodology for more information regarding the data in this graph.
f. The country of birth of the deceased is coded to and presented on the Standard Australian Classification of Countries (SACC).

Deaths due to COVID-19: socio-economic status (SEIFA)

Socio-economic indexes rank areas in Australia according to relative socio-economic advantage and disadvantage.

- The number of people who died due to COVID-19 was over 3 times higher in those in quintile 1 (most disadvantaged) than those in quintile 5 (least disadvantaged). This was true for both males and females.
- Proportions and numbers of COVID-19 mortality were similar for both males and females across each quintile.
- People living in the least disadvantaged areas (quintile 5) had the lowest numbers of deaths due to COVID-19.

SEIFA (IRSD) quintile of those who died by COVID-19 (a)(b)(c)(d)(e)(f)

SEIFA Quintile	Males	Percent (%) of male deaths due to COVID-19	Females	Percent (%) of female deaths due to COVID-19
1 (lowest)	510	35.7	429	38.0
2	330	23.1	241	21.4
3	242	16.9	191	16.9
4	202	14.1	175	15.5
5 (highest)	136	9.5	92	8.2

a. This table only includes information on registered deaths due to COVID-19. Numbers of deaths will differ to disease surveillance systems.
b. Information on deaths due to COVID-19 include all deaths due to the disease that occurred and were registered by 31 January 2022.
c. Deaths due to COVID-19 in this report have an underlying cause of either ICD-10 code U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified.
d. This data is provisional and will change as additional data is received.
e. Refer to methodology for more information regarding the data in this graph.
f. Data for SEIFA (IRSD) quintiles have been calculated using a meshblock to SEIFA (IRSD) correspondence.

COVID-19 related-deaths (dying with COVID-19)

For death registrations received by the ABS up to 31 January 2022 there were 83 people who died with COVID-19 rather than directly from the virus itself. In this article, these deaths are referred to as COVID-19 related deaths.

A COVID-19 related death is one where there is a disease or injury pathway to death that is not directly caused by the virus. For example, a person may have late stage cancer that has metastasised extensively causing organ damage leading to death. This person may also have contracted COVID-19. While the virus may have negatively impacted health in an immuno-compromised person, the virus itself did not cause the terminal event leading to death (e.g. organ failure caused by

metastases). In this example, the underlying cause of death would be recorded as cancer and COVID-19 would be considered an associated cause of death.

The majority of recorded COVID-19 related-deaths (74 deaths, 89.2%) occurred during the Delta and Omicron waves. There were 9 COVID-19 related deaths (11.8%) recorded during wave 1 and 2 of the pandemic in Australia. The number of COVID-19 related-deaths is expected to increase as additional registrations are received by the ABS.

Of the 83 people who died with COVID-19, cancer was the most common underlying cause of death. Lung cancer was the most common primary site of cancer. Circulatory system diseases, encompassing chronic cardiac conditions was the second most common underlying cause of death in COVID-19 related deaths.

Most common underlying cause in COVID-19 related-deaths (a)(b)(c)(d)(e)

Underlying cause of death	No. of deaths	Proportion (%)
Cancer	32	38.6
Circulatory system diseases	17	20.5
Dementia including Alzheimers	10	12.0
Falls	8	9.6
Other conditions	16	19.3
Total deaths	83	100

a. This table includes information on registered deaths. Numbers of deaths will differ to disease surveillance systems.

b. Information on deaths include deaths that occurred and were registered by 31 January 2022.

c. COVID-19 related-deaths have an associated cause of either ICD-10 code U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified.

d. This data is provisional and will change as additional data is received.

e. Refer to methodology for more information regarding the data in this table.

Post-release updates

18/02/2022: Further clarifying text was added to key statistics.