Suicide & self-harm monitoring

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Suicide & self-harm monitoring data

Over 3,000 deaths by suicide occur each year in Australia
In 2020, there were 3,139 deaths by suicide—an average of about 9 deaths per day—with an age-standardised rate of 12.1 per 100,000 population.

Males are 3 to 4 times more likely to take their own life than females
In 2020, there were 2,384 male deaths at a rate of 18.6 per 100,000; there were 755 female deaths at a rate of 5.8 per 100,000. In 2020, the number of deaths by suicide was markedly higher for males than females in all reported age groups.

Females are more likely to attempt suicide than males or be hospitalised for intentional self-harm than males
Rates of ambulance attendances for suicide attempt and self-injury were higher for females than males. In 2020–21 females made up almost two-thirds (66%) of intentional self-harm hospitalisations.

There is no evidence to-date that the pandemic has affected the overall number of suicide deaths
Published data from the suicide registers in New South Wales, Victoria and Queensland show that the numbers of suspected deaths from suicide in 2020 and 2021 were similar to previous years.

Suicide is the leading cause of death for young people
Over one-third of deaths in Australians aged 15-24 were due to suicide in 2020.

Suicide rates are more than twice as high in young Indigenous Australians compared to non-Indigenous Australians
In 2016-2019, the age-specific rate of suicide deaths was 3.2 times higher in Indigenous Australians aged 0-24 and 2.7 times higher in those aged 25-44, than non-Indigenous Australians.

The highest proportion of deaths by suicide occur during mid-life
More than half of all deaths by suicide in 2020 (52%) occurred in people aged 30-59 (1,637 deaths).

Suicide rates are highest among middle aged and older males
Since 2008, the highest suicide rates have generally been among males aged 40-49 and over 85.

Results of a birth cohort analysis show trends in suicides have changed over time
Suicide rates for the most recently-born female cohorts are higher than those for earlier female cohorts at the same age while suicide rates for the most recently-born male cohorts are similar to, or lower than, earlier male cohorts at the same age.

Using linked data, the estimated suicide risk is higher among those with fewer years of education
Among males aged 25-54 with secondary school or no education, the cumulative suicide risk is 2.6 times higher than among males with a university degree. This gradient between highest and lowest levels of educational attainment for females was consistent with that seen for males—with a smaller ratio (1.6 times).

Suicide and Self-harm monitoring data

Suicide and Self-harm Monitoring brings together key statistical data on suicide and self-harm from multiple national sources that will be updated regularly as new data become available. Here, you can examine the data through interactive visualisations and read information on the demographics, trends, methods and risk factors of suicide and self-harm in Australia.

This website represents only one part of a comprehensive program of work on suicide and self-harm in Australia by the AIHW (for more information visit About the Suicide and Self-harm Monitoring System).

Why is it important to collect data about suicide and self-harm?
Monitoring of suicide and intentional self-harm—how many people harm themselves, when, where and how—can provide a better understanding of the nature of suicide and self-harm in Australia and help determine who may be at increased risk. Reporting of this data can raise community awareness of suicide and self-harm, further research, improve responses and support services for those that need them, and inform the design and targeting of suicide prevention activities.

Considerations when using these data

There are several considerations to keep in mind when examining suicide and self-harm data and information in Australia.

Deaths by suicide

The assembling and national reporting of deaths by suicide has up to an 18-month time lag. Deaths by suicide may be presented by year of occurrence of death or year of registration. Although reporting of deaths by suicide by year of death can provide more reliable information on trends in occurrence than reporting by year of registration, the latest data available may underestimate the number of deaths, especially those in the later months of the year, due to a lag in registration. For this reason, and unless otherwise specified, year of registration of death has been used to allow the latest year of data to be compared with previous years. In both cases, the latest years of data are coded with preliminary causes of death information and may underestimate causes of death that are usually certified by a coroner, including deaths by suicide. For more information on how deaths are registered, coded and updated, visit Technical notes.

Suspected deaths by suicide

Suicide registers that exist in several jurisdictions can provide more timely data on suspected deaths by suicide. Recent surveillance data from suicide registers are preliminary and may change over time, typically upon completion of the coronial investigation. Suicide registers have been established in New South Wales, Victoria, Queensland, Western Australia, South Australia and Tasmania. The AIHW partnered with several register data custodians to obtain up-to-date data on suicides across the jurisdictions. Due to the highly sensitive nature of coronial investigations, the AIHW will not publicly release jurisdictional data unless they have been published by the relevant data custodians.

Hospital admissions

Hospital admissions data are collated as an annual release with a 12-month lag.

Ambulance attendances

Ambulance data are currently available for some states and territories for selected months from 2018 to 2021 (visit Ambulance attendances: suicidal and self-harm behaviours), with monthly data from January 2021. In addition, monthly ambulance data for Victoria from January to March 2021 are also reported (visit COVID-19). Further information on the collection of data and sources is available in the Technical notes.

Issues with small numbers and the need for caution

Deaths by suicide are statistically rare events. Small numbers can raise privacy and confidentiality issues but also statistical concerns. For this report, values based on small numbers of deaths, hospitalisations for intentional self-harm or ambulance attendances have been suppressed in order to maintain data confidentiality, and/or avoid publishing statistics of low reliability. Visit Technical notes for further information.

The statistics on deaths by suicide reported here fluctuate from one period to the next—mostly due to small counts (and in the case of females, very small counts)—especially in many smaller subgroups (for example, individual age groups or small geographic areas). Estimates of rates are also subject to random variability. Statistics based on small numbers of deaths by suicide should be interpreted with caution and all rates and their comparison with rates in other populations should be reported in context. For further insight into the methodological challenges and statistical issues of monitoring suicide and self-harm, visit Suicide Mortality in Australia: Estimating and Projecting Monthly Variation and Trends From 2007 to 2018 and Beyond.

How to use the interactive data visualisations

- Due to large data sets, visualisations may take time to load.
- Visualisations are compatible with Chrome, Microsoft Edge and Firefox.
- Each panel may contain more than 1 visualisation. You can interact with the visualisations to see the specific data you are interested in by either selecting from the filter(s) at the bottom of the chart, or in the case of maps, from the pop up box by clicking on an area of interest.
- Hover over each data point to see the underlying data and, if available, further details.
- The Data downloads page provides the source data as Excel (.xlsx) files. The relevant source supplementary table is cited at the bottom of each visualisation.
- Each visualisation may be downloaded and exported or shared.
- A print friendly PDF of all pages of text and the default visualisations related to suicide and self-harm may also be downloaded—click on the 'Download all data pages' button. Visit Technical notes for information about data sources, data quality and methodology.

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Suicide & self-harm monitoring: Deaths by suicide in Australia

If at any point you feel worried about harming yourself while viewing the information on this website—or if you think someone else may be in danger—please stop reading and seek help.

Important points to remember about deaths by suicide:

Each statistic represents a person—with a family and community grieving for their loss
Although it is a relatively rare cause of death—in 2020, 1.9% of all deaths were by suicide—it can have devastating and long-lasting effects on those left behind.

The reasons people take their own life are complex
Suicide can affect anyone—regardless of their personal characteristics and family background—but some populations are at greater risk. There is also no single reason why a person chooses to end their life—the reasons are often complex. For information on risk factors see Behaviours and risk factors.

Deaths by suicide are preventable
Monitoring the number, trends and rates of suicide in Australia is key to understanding who is at risk and for the planning and targeting of suicide prevention activities.

It is our endeavour that by bringing together various data sources we can strengthen the evidence base to build a more coherent picture of suicide and self-harm in Australia in order to improve the effectiveness of suicide prevention.

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Suicide & self-harm monitoring

Deaths by suicide over time

Numbers and rates of deaths by suicide change over time as social, economic and environmental factors influence suicide risk. The data visualisations below provide an overview of the characteristics of people who have died by suicide in Australia since 1907, looking at trends and variations by sex and age—how many there were, how old they were when they died, and the methods used over time. This analysis may provide useful information on potentially preventable factors, such as restricting access to means of suicide and reducing the risks posed by social or economic factors. Over time, the accuracy and quality of the data collected have been influenced by a number of factors including changes in legislation, technology and a reduction in social stigma.

Suicide deaths by sex, Australia, 1907 to 2020.

The line graph shows age-standardised rates of suicide for males, females and persons from 1907 to 2020. Users can also choose to view the number of deaths by suicide and male to female rate ratios from 1907 to 2020 and median age at death by sex from 1964 to 2020. The data can be viewed for any period between the years for which data are available. The visualisation includes text boxes with numbers and rates of deaths by suicide in Australia in 2020 for persons, males and females. In 2020, there were 3,139 suicide deaths recorded at a rate of 12.1 per 100,000 population; there were 2,384 deaths by suicide for males, with a rate of 18.6 and 755 for females, with a rate of 5.8.

Numbers of deaths by suicide increased steadily over the first half of the 20th Century (from 461 in 1907 to 760 in 1950), with peaks and troughs in numbers of suicides corresponding with significant world events (see below). However, since the 1950s numbers of deaths by suicide increased more steeply over time—in part driven by population growth. Peaks in numbers of deaths by suicide occurred during the
Have suicide rates changed over time?

Between 1907 to 2020, age-standardised suicide rates in Australia ranged from 8.4 deaths per 100,000 population per year (in 1943 and 1944) to 18.4 in 1963.

- Suicide rates peaked in 1913 (18.0 deaths per 100,000 population), 1915 (18.2), 1930 (17.8), 1963 (18.4) and 1967 (17.7). These peaks tended to coincide with major social and economic events or changes, see Impact of social and economic events.
- Suicide rates tended to increase from 1907 to 1915 (from 16.9 to 18.2 deaths per 100,000 population). Rates then fluctuated throughout the late 1910s and early 1920s (from 13.1 deaths per 100,000 population in 1918 to 16.2 in 1920, returning to 12.8 in 1922), before increasing to a peak of 17.8 in 1930.
- Rates then declined throughout the 1930s and early 1940s, reaching a low of 8.4 deaths per 100,000 population in 1943 and 1944 (however, suicide rates for the war years may have been underestimated, see Impact of social and economic events below).
- Rates tended to increase throughout the 1950s, peaking at 18.4 deaths per 100,000 population in 1963. Rates remained high throughout the 1960s while the 1970s and early 1980s saw a decline in rates (from 15.4 deaths per 100,000 population in 1971 to 11.6 in 1984).
- Rates began to rise in 1985 and fluctuated from 14.3 in 1987 to 11.9 in 1993 with a recent peak of 14.8 in 1997. This was followed by sustained declines over the early 2000s, with a low of 10.2 per 100,000 population in 2006.
- After 2006, suicide rates began to rise, which is partly due to improvements in data quality and capture (see below). In 2020, the rate was 12.1 deaths per 100,000 population—down from a post-2006 high of 13.2 in 2017. It is important to note that deaths registered in 2020 and 2019 are preliminary and as such, are subject to revision (see below).

It is important to note that deaths by suicide were underestimated in the collection of routine deaths data, particularly in the years before 2006 (AIHW: Harrison et al 2009; De Leo, 2010; AIHW: Harrison & Henley 2015). Since then, the Australian Bureau of Statistics (ABS) has introduced a revisions process to improve data quality by enabling the revision of cause of death for open coroner’s cases over time. Deaths registered in 2020 and 2019 are preliminary and data for 2018 are revised and therefore, data for these years are subject to further revision by the Australian Bureau of Statistics. Data from 1907 to 2017 are final (for further information see Technical notes).

What’s changed in the last decade?

Please note: small numbers can result in large yearly variation in suicide rates. Caution is advised when making year to year comparisons.
- Over the last decade, the age-standardised suicide rate for males increased from 16.2 deaths per 100,000 population in 2011 to 18.6 in 2020. Female rates also increased from 5.1 deaths per 100,000 population in 2011 to 5.8 in 2020.

For detailed analysis of recent trends in suicide in Australia, see Suicide Mortality in Australia: Estimating and Projecting Monthly Variation and Trends From 2007 to 2018 and Beyond.

Impact of social and economic events

While the reasons for an individual’s suicide death are personal and often complex, overall peaks and troughs in rates and numbers of deaths by suicide historically coincide—more or less—with social and economic events.

Falls in the male suicide rate coincided with both World Wars 1 and 2. These falls are at least partly a statistical artefact due to the fact that deaths from all causes (including deaths by suicide) of Australian service personnel while overseas were not included in Australian death registration data, while population estimates were not adjusted to allow for the absence of these personnel (AIHW 2005; AIHW: Harrison & Henley 2014).

The highest annual age-standardised rate for males in the last century occurred in 1930 (29.8 deaths per 100,000 population), during the Great Depression—a period of high unemployment, particularly among males. The rise in both male and female suicide rates in the 1960s has been attributed, in part, to the unrestricted availability of barbiturate sedatives (Oliver & Hetzel 1972; Whitlock 1975). Subsequent falls in these rates in the late 1960s and early 1970s have in turn been attributed to the introduction of restrictions to the availability of these drugs in July 1967 (AIHW: Harrison & Henley 2014). While high rates of suicide in the late 1980s and early 1990s also coincided with a period of economic uncertainty in Australia, the social and economic disruption related to the COVID-19 pandemic has not seen an increase in the number of suspected deaths by suicide referred to coroners courts.

Males have consistently higher rates of suicide than females

Since 1907, the male age-standardised suicide rate has been consistently higher and more variable than the female rate. Variations in the overall suicide rate in Australia have been largely driven by changes in the male suicide rate.

The peak in overall suicide rates in 1930 was driven by an increase in male suicide rates, peaking at 29.8 deaths per 100,000 in 1930—the highest rate ever recorded. Similarly, the increase in overall suicide rates in the 1990s was also mainly driven by an increase in male rates. The peak in the 1960s reflects a rise in suicide rates for both males and females.

The male suicide rate ranged from a high of 5.6 times that of females in 1930 to lows of less than twice the female rate in the 1960s and early 1970s—mainly due to the marked rise in female suicide rates at this time. Since then, the male suicide rate has fluctuated around 3-4 times that of the female rate.
Although males are more likely to die by suicide, females are hospitalised for intentional self-harm (with and without suicidal intent) almost twice as frequently as males (see Intentional self-harm hospitalisations). Furthermore, ambulance attendance data reporting on attendances for suicide attempts between 2018 and 2020 suggest females are more likely to attempt suicide than males (see Ambulance attendances, suicidal and self-harm behaviours).

Patterns of suicide by age have changed over time

Age-specific suicide rates for males are higher than those for females across all reported age groups for all years. Use the year slider to see how patterns of suicide in males and females have changed in Australia over time. Hover over the graph to display the tooltip to see the trend in deaths by suicide by sex over time for each age group. The age distribution of deaths by suicide is similar for males and females. The highest proportion of deaths by suicide occur during mid-life. More than half of all deaths by suicide (52%) in 2020 occurred in people aged 30-59 (1,637 deaths) compared with 24% for those aged 15-29, and 23% for those aged 60 and over.

In 2020, the highest suicide rate for males occurred in those aged 85 and over (36.2 deaths per 100,000 population); however, the number of deaths by suicide recorded for this age group was low (74 deaths). High rates of suicide were also recorded in males aged 40-44 and 50-54 (both 27.1). Males aged between 40-54 accounted for over one quarter (27%) of deaths by suicide by males. The highest suicide rate for females was in those aged 45-49 (9.6 deaths per 100,000 population) accounting for the highest proportion of deaths by suicide for females (10.9%).

Suicide deaths by age and sex, Australia, 2019.

The bar chart shows the age-specific rates of suicide for males and females by age groups (five year age bands from 15-19, 20-24, etc to 80-84 and 85 and over). Users can choose to view numbers of deaths by suicide for males and females in these age groups. Data can also be viewed by year from 1907. In 2020, age-specific suicide rates were much higher in males than females for all age groups, and the highest rates were in males aged 85+ at 36.2 per 100,000 population and females aged 45-49 at 9.6 per 100,000 population.

For approximately the first half of the period 1907 to 2020, age-specific suicide rates in males generally increased with age; however, by the start of the 1990s this pattern had changed substantially with suicide rates highest in younger males aged 20-39 and males aged 80 and over. Since 2008, the highest suicide rates have been observed in middle-aged males (aged 40-49) and older males aged 85 and over; however, it should be noted that rates of death by suicide in males aged 85 and over have historically been based on relatively small numbers compared to other age groups and as such, the rates can be quite volatile over time and should be interpreted with caution.

Throughout 1907 to 2020, the lowest suicide rates in males were observed in those aged 15-19.

- From 1907 to 1970, suicide rates in males aged 15-19 were less than 10 deaths per 100,000 population. Rates then increased throughout the 1970s and 1980s peaking at 21.0 deaths per 100,000 population in 1988, while still remaining the lowest of the reported age groups.
- In 2020, the suicide rate for males aged 15-19 was 16.9 deaths per 100,000 population.
Males aged 20–24 had the second-lowest age-specific suicide rates of all males for most of the 20th Century; however, this changed from the late 1960s.

- From 1907 to 1966, suicide rates for males 20–24 were around 11 deaths per 100,000 population with peaks of 16.8 in 1914, 17.0 in 1958, and 19.1 in 1963 and a low of 1.9 in 1944.
- From the late 1960s to the late 1990s, suicide rates in this age group increased steadily to more than 26 deaths per 100,000 population, reaching a high of 43.1 deaths per 100,000 population in 1997.
- Rates fell steadily to 16.3 deaths per 100,000 population in 2009 but since have risen above 20 deaths per 100,000 to 24.9 in 2020.

A similar pattern was observed for those aged 25–29.

The pattern of age-specific suicide rates for middle-aged males (aged 40–59) was different to that of younger age groups, with the highest rates being observed in the first part of the 20th Century and then falling to lower levels.

- The highest age-specific suicide rate for middle-aged males was 64.9 deaths per 100,000 population in 1913 for males aged 50-54. Peaks of more than 56 deaths per 100,000 population were also seen in 1930 (56.6). Age-specific rates then fell to a low of 14.5 deaths per 100,000 population in 1944. Similar patterns were seen for 40-44, 45-49 and 55-59 age groups with the second highest age-specific rate of 63.9 deaths per 100,000 for males aged 55-59 in 1931 and the lowest age-specific rate of 10.5 deaths per 100,000 population for males aged 40-44 in 1944.
- Rates tended to increase throughout the 1950s and 1960s peaking again at 42.0 deaths per 100,000 population in 1966 for males aged 55-59, before falling to 19.1 in 1983. The greatest decline during this time period was seen for males aged 55-59 falling from 41.6 deaths per 100,000 population in 1968 to 18.4 in 1977.
- Since then, rates for these age groups have fluctuated to a high of 34.4 deaths per 100,000 population in 1987 for males aged 55-59 and a recent high of 33.8 in 2017 for males aged 45-49.

A similar pattern was seen in males aged 60 and older. It should be noted that the number of deaths by suicide recorded for older males historically has been low, particularly for males aged 75 and older. This causes fluctuation in the age-specific rates. Therefore, caution should be used when interpreting trends for these age groups over time.

- The age-specific suicide rate for males aged 60 and older was about 40 deaths per 100,000 population from 1907 to 1967.
- From 1968, suicide rates for males aged 60 and older generally fell. For example, suicide rates for males aged 65-69 fell to an all time low of 12.6 per 100,000 population in 2005. In 2020, the rate of suicide for males aged 65-69 was 17.5.

Age-specific suicide rates for females showed comparatively little variation over time—except for a peak in multiple age groups during the 1960s.

- For the first half of the 20th Century, age-specific rates in females aged 40-59 was about 9 deaths per 100,000 population, with peaks of 21.5 in 1915 and 21.2 in 1953, in the 55-59 age group. The highest rate recorded for females was 29.2 deaths per 100,000 population in 1963 for the 50-54 age group and remained around 20 until peaking a second time in 1967 at 27.1 for the 65-69 age group. Rates then fell to a low of 4.1 deaths per 100,000 population in 2004 and 2005 for females aged 55-59. Age-specific suicide rates have increased in this age group to 9.4 deaths per 100,000 population in 2019 and fell to 5.9 in 2020.
- Similar patterns were seen for females aged 20-39 and 60 and older, albeit with lower suicide rates.
- A different pattern has been observed in females aged 15-19. Suicide rates fluctuated from around 2 to 6 deaths per 100,000 population from 1907 to the late 1930s. The fluctuations in rates have been mainly due to small numbers of deaths by suicide in this age group. Rates then declined to around 1 to 2 deaths per 100,000 population during the 1940s and 1950s. Rates then increased in the 1960s to the late 1990s, fluctuating between 2 and 6 deaths per 100,000 population. Since then, suicide rates have increased to between 3 and 8 deaths per 100,000 population with the highest rate recorded in this age group in 2012 (8.3 deaths per 100,000 population). In 2020, the rate was 6.1 for females aged 15-19.

How have methods of suicide changed over time?

Understanding the methods used for suicide can play an important role in suicide prevention. These data are provided to inform discussion around restriction of access to means as a policy intervention for the prevention of suicide.

Please consider your need to read the following information. If this material raises concerns for you or if you need immediate assistance, please contact a crisis support service, available free of charge, 24 hours a day, 7 days a week.

Please consider the Mindframe guidelines [https://mindframe.org.au/suicide/communicating-about-suicide/mindframe-guidelines] if reporting on these statistics. The pattern of methods used for suicide has changed greatly, sometimes rapidly, over the last century as new methods have become available or as restrictions to the availability of some methods have been introduced. The methods of suicide used by males and females differed over the period 1907 to 2020; however, as males account for the majority of deaths by suicide the methods used by males have a greater influence on the overall pattern than the methods used by females.

The classification system used to code causes of deaths data, ICD-10, uses the term ‘mechanism’ to refer to the external cause of death. Throughout Suicide & self-harm monitoring ‘mechanism’ has been used in data visualisations, while the term ‘method’ has been used in the accompanying text.

Suicide deaths by sex and mechanism, Australia, 1907 to 2020.
The line graph shows age-standardised suicide rates by mechanism for poisons, gas, firearms, hanging and other mechanisms from 1907 to 2020. Users can also choose to view age-standardised rates and numbers of deaths by suicide, by sex and mechanism (including all mechanisms) from 1907 to 2020 and median age at death by sex and mechanism from 1964 to 2020. The data can be viewed for any period between the years for which data are available. The highest suicide rates by mechanism between 1907 and 2020 were for poisons in the 1960s, at around 7 to 8 deaths per 100,000 population falling steeply throughout the 1970s to below 3 from 1981. Around this time, suicide rates by hanging began to rise steeply, becoming the highest by mechanism after 1988 and more than doubling from 3.2 deaths per 100,000 population in 1988 to 7.2 in 2020.

Hanging (ICD-10 X70) has become the most common method of suicide in Australia and use of this method increased substantially over the last 25 years. Age-standardised rates of suicide by hanging remain much higher for males than females, but have increased for both sexes.

- Rates of suicide by hanging were relatively steady from 1930 to the late 1980s, with rates around 3 deaths per 100,000 population for males and lower for females. Prior to 1930, rates of suicide by hanging were volatile.
- From the late 1980s, rates of hanging increased as other methods of suicide (firearms and poisoning by gas) declined.
- Hanging became the most common method of suicide for males in 1989 and for females in 1997. Age-standardised suicide rates by hanging in males have more than doubled since then—from 5.7 per 100,000 population in 1989 to 12.5 in 2019, then falling to 11.4 in 2020. In 2020, hanging accounted for almost two-thirds (61%) of male deaths by suicide.
- Similarly, the rate of suicide by hanging increased more than 1.7 times in females from 1.9 deaths per 100,000 population in 1997 to 3.3 in 2019, then falling to 3.1 in 2020. In 2020, hanging caused half (52%) of all deaths by suicide in females, having increased steadily from 30% of deaths by suicide in 1997.

Use of firearms (ICD-10 X72–X75) was the most common method of suicide for males from 1907 to the late-1980s.

- In males, the rate of suicide by use of firearms was more than 5 deaths per 100,000 population per year for most of 1907 to 1993 (with a peak of 10.2 deaths per 100,000 population in 1914 and a fall below 5 deaths per 100,000 population in 1941 to 1946).
- In contrast, female rates of suicide by this method were low (less than 0.6 deaths per 100,000 population).
- Rates of suicide by use of firearms declined steeply for both males and females from 1987 and continued to decline from 1996, coinciding with the introduction of gun control restrictions and reforms.

In the 1920s, poisoning by gas (ICD-10 X67), largely due to carbon monoxide poisoning, became a new method of suicide in Australia with the introduction of the domestic gas supply and the motor vehicle to Australia.

- Rates of poisoning by gas peaked in 1963 in females (2.1 deaths per 100,000 population) and were also high for males (4.8). Rates then declined throughout the 1970s—this has been attributed to the replacement of toxic ‘town gas’ by less toxic gases in most of Australia at this time (AIHW: Harrison & Henley 2014).
- Rates of poisoning by gas subsequently increased again in the 1980s and 1990s, peaking for males (5.8 deaths per 100,000 population) and for a second time in females at a much lower level (1.2 deaths per 100,000 population) in 1997 as a result of the increasing use of motor vehicle exhaust gas (AIHW: Harrison & Henley 2014).
- A decline in poisoning by gas after 1997 was likely due to the introduction of emission controls that greatly reduced the amount of carbon monoxide permitted in the exhaust gas of new motor vehicles (AIHW: Harrison & Henley 2014).
Exposure to poisonous substances excluding gas (ICD-10 X60-X66, X68-X69) was the most common method of suicide for females from 1907 until 1997.

- For most of the first half of the 20th Century, rates of poisoning by substances (excluding gas) were approximately 2 deaths per 100,000 population in females; however, during the 1960s rates increased to 4 times that—peaking at 8.4 in 1967—before returning to previous levels in the 1980s.
- A similar peak in suicide rates by this method was seen in males, with rates more than doubling in the 1960s to a peak of 8.2 deaths per 100,000 population in 1963 before falling again in the 1970s and 1980s.
- These peaks in suicide rates due to poisonous substances (excluding gas) during the 1960s have been attributed mainly to the unrestricted availability of barbiturate sedatives (AIHW: Harrison & Henley 2014). These trends were not associated with compensatory falls in the use of other methods of suicide during this time. In July 1967, in response to concerns over misuse of these drugs, the supply of barbiturates was limited and deaths by suicide from poisoning (excluding gas) in both males and females declined soon after (AIHW: Harrison & Henley 2014).
- In 2020, poisoning by substances (excluding gas) was the second most common means of suicide among females with a rate of 1.6 deaths per 100,000 population—accounting for almost a third of female deaths by suicide each year for the last decade.

Age-standardised rates for suicides by other methods (ICD-10 X71, X76-X84, Y87.0) are only available from 1964.

- Rates for these methods were relatively stable over the period 1964 to 2020 for both males and females.
- It is not possible to report on these different methods individually, as the numbers are too small to report for privacy or data reliability reasons.

References

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Birth cohort analysis of deaths by suicide

Analysing deaths by suicide according to the period in which people were born can provide additional insights to that obtained by examining suicide rates by period of death (see Deaths by suicide over time).

A ‘birth cohort’ is a group of people born within the same defined period. People in a birth cohort age together over time and experience the same events and changes in technology or cultural norms at the same age.

This birth cohort analysis relates deaths by suicide to period of birth (birth cohort) and age at death. It examines how suicide rates change within birth cohorts as they age and how they vary between birth cohorts when compared at the same age.

Data sources and methods

This analysis is based on data from the AIHW National Mortality Database, which holds records for deaths in Australia from 1964.

Suicide rates by age at death (5-year age groups; ages 10-14 years and older) were calculated for each birth cohort. Birth cohorts can be defined in terms of any range of birth dates for which data are available; the cohorts presented here are those born in each 5-year period from 1954-58 through to 2004-08. The earliest birth cohort, those born in 1954-58, can be followed for over 60 years. For more information on data sources and methods, see Suicide in Australia: Trends and analysis 1964 to 2018.

How do suicide rates change among birth cohorts?

The interactive data visualisation shows how suicide rates have changed as people in each birth cohort have aged—with each line representing a birth cohort. By comparing the earlier birth cohorts with those born more recently, see how the age groups most at risk change.


The line graph shows age-specific rates of suicide for 5-year birth cohorts from 1954-1958 to 2004-2008 by age at death from 15-19 to 60-64 for males by all mechanisms. Users can also choose to view suicide rates by sex, mechanism and age at death. The highest suicide rate was in males born 1969-1973 who died aged 25-29, followed by males in this cohort who died aged 20-24.
In the earlier male birth cohorts (born 1954–58 to 1974–78) peaks in suicide rates for each subsequent birth cohort tended to be higher and occur at successively younger ages of death—with peaks tending to coincide with deaths occurring in the 1990s (period of death). For more information, see Suicide deaths over time. Suicide rates in these cohorts then tended to decline as they aged.

For example, peak suicide rates in males born in:

- 1954–58 occurred at age 40–44 (29.4 deaths per 100,000 cohort members)
- 1959–63 occurred at age 35–39 (31.0)
- 1964–68 occurred at age 30–34 (34.0)
- 1969–73 occurred at age 25–29 (36.9)
- 1974–78 occurred at age 20–24 (33.4).

For the majority of the male cohorts born in the later years, from 1974–78 onwards, suicide rates were still rising at the end of the available data; the oldest people in these cohorts were aged 42–46 years in 2018.

Suicide rates in female cohorts were much lower than those of male cohorts and for the earlier born cohorts tended to increase as they aged.

- For example, the highest suicide rates in female cohorts were in those born in 1964–68 and 1969–73—the same cohorts that had the highest rates in males. However, peaks in suicide rates for these female cohorts tended to occur at older ages (9.7 and 9.5 at age 50–54 and 45–49, respectively) than in male cohorts (which peaked in early adulthood and then declined).

How do suicide rates vary between birth cohorts when compared at the same age?

The interactive data visualisation shows how suicide rates have changed for people of the same age, but born at different times—each line representing the same age group. By following the suicide rate of a specific age group, see how suicide rates have changed for people born between 1954 and 2008.


The line graph shows age-specific suicide rates for ages of death from 10–14 to 60–64, by 5-year birth cohorts from 1954–1958 to 2004–2008 by all mechanisms for females. Users can also choose to view suicide rates by sex, mechanism and for selected age-ranges at death. The rates of suicide among young females aged 15–19 at death showed the greatest change between the earliest and latest born cohorts for which data are available, almost doubling from 3.6 per 100,000 population in the 1954–1958 cohort to 6.4 in the 1999–2003 cohort, with some fluctuation in between these cohorts.
In females, the suicide rate at age 15–19 for those born most recently (1999-2003) was 1.8 times higher than the earliest cohort born in 1954-58. This pattern was not observed in males of the same age.

- For females born in 1999-2003, the suicide rate reached 6.4 deaths per 100,000 cohort members at age 15–19—considerably higher than females born in 1954-58 (3.6 deaths per 100,000 cohort members).

Suicide rates at age 45–49 have increased with each successive birth cohort in both males (from 24.1 in those born in 1954-58 to 29.5 deaths per 100,000 cohort members in those born in 1969-73) and females (from 6.7 to 9.5 deaths per 100,000 cohort members in the same cohorts).

Suicide rates across male cohorts compared at the same age show no clear pattern. Rates at younger ages of death (15–19 and 20–24) tended to be higher for those born prior to 1979-83 than in those born in more recent cohorts (1984-1988 onwards).

- For males born in 1984-88 the suicide rate at age 20–24 was almost half that of the cohort born in 1969-73 (18.0 deaths per 100,000 cohort members compared with 35.1).
- Rates of suicide at age 15–19 for males born in 1974-78 were 1.8 times higher than those with the lowest rate born in 1954-58 (18.0 deaths per 100,000 cohort members and 10.0, respectively). Rates at age 15–19 were 12.3 deaths per 100,000 cohort members in the most recent male birth cohort for which data are available (1999-2003).

**Trends in methods of suicide by birth cohort and age at death**

Understanding the methods used for suicide can play an important role in suicide prevention. These data are provided to inform discussion around restriction of access to means as a policy intervention for the prevention of suicide.

Please consider your need to read the following information. If this material raises concerns for you or if you need immediate assistance, please contact a crisis support service, available free of charge, 24 hours a day, 7 days a week.


The classification system used to code causes of deaths data, ICD-10, uses the term ‘mechanism’ to refer to the external cause of death. Throughout Suicide & self-harm monitoring ‘mechanism’ has been used in data visualisations, while the term ‘method’ has been used in the accompanying text.

The interactive data visualisations show which methods underlie changes in suicide rates as people in each birth cohort have aged (top visualisation)—and underlie changes in suicide rates for people of the same age, but born at different times (second visualisation).

Rates of suicide by hanging (ICD-10 X70):
• tended to increase for both male and female birth cohorts as the cohort aged (top visualisation).
• tended to increase in most age groups with each successive birth cohort in females; the pattern in males was less consistent (second visualisation). For example:
  • rates of suicide by hanging at ages 15-19 increased for each successive female birth cohort from a low of 0.1 per 100,000 cohort members in those born in the earliest cohort (1954-58) to a high of 4.9 in those born in the most recent cohort (1999-2003).
  • in the 2 most recently born female cohorts for which there are data available at ages 15-19 (born in 1994-98 and 1999-2003), rates of suicide by hanging were as high or higher than, rates at almost any other age in all other female cohorts.
  • for males, rates of suicide by hanging at ages 15-19 do not show the same pattern as females; rates in male cohorts increased up until those born in 1979-1983 and have since remained at about the same level (9.5 deaths per 100,000 cohort members for the latest birth cohort, born 1999-2003).

Rates of suicide by use of firearms (ICD-10 X72-X75) for both males and females peaked at younger ages (15-19 or 20-24) in all birth cohorts and then declined as cohorts aged (top visualisation). Suicide rates by this method tended to be lower for each successive birth cohort at all ages for which there are data available.

• Each more recently born male cohort (born 1969-73 to 1989-93) had successively lower suicide rates by use of firearms at age 20-24 (7.3, 3.6, 1.5, 1.0 and 0.8 deaths per 100,000 cohort members).
• A similar pattern was seen for female cohorts; however, rates were low.

Rates of suicide due to exposure to poisons excluding gas (ICD-10 X60-X66, X68-X69) in female cohorts were similar to that of male cohorts throughout the period 1964 to 2018 (0-3.6 deaths per 100,000 cohort members compared with 0-4.3, respectively)—unlike that of other suicide methods (top visualisation). Rates of suicide by this method were still rising for most male and female cohorts at the end of the available data.

Reference

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Suicide & self-harm monitoring

Deaths by suicide, by states and territories

Patterns of deaths by suicide between states and territories can reveal insights that may be masked by results for the whole of Australia. Variations in the rates of deaths by suicide across states and territories may help to highlight different risk factors and assist in better targeting of suicide prevention activities. For example, differences in the ratio of urban to regional and remote areas may explain some of the differences across states and territories given that the rates of suicide tend to be higher in regional and remote areas, see Suicide by remoteness areas.

Information based on the deceased’s usual state or territory of residence is available for deaths registered after 1979. Deaths by suicide may be presented by either year of death or by year of registration. Reporting by year of death can provide more reliable information on trends in occurrence than reporting by year of registration; however, the latest data available underestimates the occurrence of recent deaths due to a lag in registration, for more information, see Technical notes. Here, statistics based on both year of registration of death and year of occurrence of death are presented.

Suicide deaths by states and territories, Australia, 1979 to 2020.

The line graph shows age-standardised suicide rates by year of registration for all states and territories and Australia from 1979 to 2020. Users can choose to view age-standardised suicide rates, numbers of deaths by suicide, year-on-year change in age-standardised suicide rate and year-on-year change in numbers of deaths by suicide, by year of registration and year of death. Data can be viewed for any period between 1979 and 2020. During this period, rates in the Northern Territory tended to be the highest and were the most variable, ranging from slightly above the national rate in 1999 (14.3 deaths per 100,000 population compared with 13.2) to nearly 3 times the national rate in 2007 (29.8 compared with 10.6).
How do suicide rates vary across states and territories?
From 1979 to 2020, age-standardised suicide rates based on death registrations:

- tended to be lower for New South Wales and Victoria than the overall Australian suicide rate while rates for all other jurisdictions tended to be higher
- tended to be highest in the Northern Territory (ranging from 14.2 in 2013 to 29.8 deaths per 100,000 population in 2007); however, it was one of the jurisdictions with the lowest number of deaths by suicide (from a high of 56 in 2014 to a low of 7 in 1982).

In 2020:

- the age-standardised suicide rate ranged from 10.1 per 100,000 population in Victoria to 20.4 per 100,000 in the Northern Territory.

Age-standardised suicide rates allow for comparisons between states and territories by adjusting for differences in age structures and population size. Rates fluctuate over time—particularly in the smaller jurisdictions—due to the small number of deaths by suicide that are registered each year. Caution is advised when comparing state and territory data. Differences in coronial processes, data processing or coding practices should also be taken into consideration when comparing data across jurisdictions and over time.

In 1979, the highest number of deaths by suicide was in:
- New South Wales (539 deaths), followed by Victoria (462), Queensland (296), South Australia (178) and Western Australia (116).

By 2020, the highest number of deaths by suicide was in:
- New South Wales (876), followed by Queensland (759), Victoria (694), Western Australia (381) and South Australia (234).

However, it should be noted that New South Wales and Victoria have the largest populations in Australia and the populations of both Queensland and Western Australia increased considerably from 1979 to 2020.

What is the effect of reporting deaths by suicide by year of occurrence?
The data for age-standardised rates and number of suicide deaths are broadly similar when analysed by year of death or year of registration. Minor differences arise due to the elapsed time prior to registration with recent years showing some differences due to incomplete coronial processes and registrations.
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Australian prevalence estimates of suicidal behaviours

If at any point you feel worried about harming yourself while viewing the information on this website—or if you think someone else may be in danger—please stop reading and seek help.

Suicidal behaviours are defined as thinking about or planning taking one’s own life (suicidal ideation) or attempting suicide.

Understanding the prevalence of suicidal behaviours in Australia is important as this may help to reduce stigma, increase help-seeking behaviour and improve suicide prevention activities.

Many people experience thoughts of suicide:

- In 2020-21 1 in 6 (16.7% or around 3.3 million) of Australians aged 16-85 had serious thoughts about taking their own life at some point in their lives (ABS 2022).

Yet, while thinking about suicide is common, not everyone goes on to develop a suicide plan or take their own lives. Despite this, it is important to take seriously any person seeking assistance because of suicidal thoughts.

People who experience suicidal ideation and make suicide plans are at increased risk of suicide attempts and those who experience all forms of suicidal thoughts and behaviours are at greater risk of dying by suicide (see Psychosocial risk factors and suicide).

The National Suicide and Self-harm Monitoring Project has funded the collection of data on suicidal behaviours through the National Ambulance Surveillance System. This system uses coded ambulance clinical records from jurisdictional ambulance services across Australia to capture information related to ambulance attendances for mental health and self-harm behaviours (see Ambulance attendances).

However, not all people with suicidal behaviours will make contact with these services. Instead, an indication of the prevalence of these behaviours in the community may be derived from surveys of representative samples of the population.

A program of surveys, the National Survey of Mental Health and Wellbeing, began in Australia in the late 1990s. The most recent of these surveys was conducted in 2007. In 2020 the National Study of Mental Health and Wellbeing was introduced as a component of the wider Intergenerational Health and Mental Health Study. The National Study of Mental Health and Wellbeing is being undertaken in two cohorts in 2020-21 and 2021-22 and will measure the 12-month and lifetime prevalence of mental illnesses in Australia for the first time since the 2007 National Survey of Mental Health and Wellbeing.

Results for the 2020-21 cohort were released by the Australian Bureau of Statistics on 22 July 2022 (ABS 2022). The 95% confidence intervals for estimated numbers and proportions, are included in brackets against the results reported below. The results are not directly comparable with those from the 2007 National Survey of Mental Health and Wellbeing as different questions were used.

Results from the 2020-21 cohort of the National Study of Mental Health and Wellbeing (ABS 2022) indicate that:

- over 1.5 million (1.3-1.7 million) or 7.7% (6.7-8.7%) of Australians aged 16-85 had made a suicide plan and almost 950,000 (802,500-1.1 million) or 4.8% (4.1-5.5%) had attempted suicide during their lifetime
- females were more likely to be suicidal than males, with a higher prevalence of suicidal thoughts or behaviours in their lifetime (18.7% [16.5-20.9%], compared with 14.5% [12.4-16.6%], respectively) . These findings are in contrast to the data on deaths by suicide, which show that males are more likely than females to die by suicide; visit Deaths by suicide over time
- young people and adults aged 16-34 reported the highest prevalence of suicidal thoughts or behaviours in the 12 months before the administration of the study (5.2% [3.8-6.6%] of people aged 16-34)
- in their lifetime, 38.0% (36.5-39.5%) of Australians aged 16-85 were close to someone who took or attempted to take their own life, while 5.9% (4.9-6.9%) were close to someone who took or attempted to take their own life in the 12 months prior to the study.

For full results visit National Study of Mental Health and Wellbeing (https://www.abs.gov.au/statistics/health/mental-health/national-study-mental-health-and-wellbeing/latest-release). Please note that some of the 12-month prevalence estimates for suicidal thoughts and behaviours have high relative standard error (RSE) and margin of error (MOE), and thus wide confidence intervals and greater uncertainty. These results should be interpreted with caution. Refer to the ABS technical notes on interpretation of results with high RSEs & MOEs (visit National Study of Mental Health and Wellbeing methodology (https://www.abs.gov.au/methodologies/national-study-mental-health-and-wellbeing-methodology/2020-21)).
The 2021-22 cohort of the National Study of Mental Health and Wellbeing commenced in December 2021 and will conclude in late 2022.

Reference


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Suicide deaths by suicide

In Australia, the coroners court in each state and territory is responsible for investigating suspected deaths by suicide. Several jurisdictions have established a suicide surveillance system to collect and report timely data and information on suicide deaths, including New South Wales, Victoria, Queensland, South Australia and Tasmania. Real-time data from suicide registers are valuable for evidence-based response, research and policy in suicide prevention locally, and across national and international levels.

Data on suspected deaths by suicide in 2020 and 2021 have been released for Victoria and New South Wales from their respective suicide registers. The interim Queensland Suicide Register has released data for 2020. At this time, the numbers of deaths in 2020 and 2021 suspected to be from suicide are similar to previous years. These are discussed further in the next section.

It is important to note that suicide is not influenced or caused by one factor— but results from a complex interaction between multiple risk factors (Leske et al. 2020).

The data from suicide registers are based on initial police reports and other information available at the time of referral to the coroner. As such, they are not directly comparable with cause of death data released by the Australian Bureau of Statistics, which are based on final coronial determinations. However, the differences are generally small. For example, in the case of the Victorian Suicide Register (VSR):

> ...analyses have shown that over time, the VSR coding team are consistently 95% accurate or better in identifying the cohort of deaths that are ultimately determined to be suicides (Coroners Court 2021).

The state and territory suicide registers also differ from each other in their processes and counting rules for identifying suspected suicide deaths. Therefore, data from one register cannot be directly compared with those from another.

For more information on suicide register data custodians, visit [Data sources](/suicide-self-harm-monitoring/research-information/crisis-support).

To facilitate comprehensive suicide surveillance across Australia, the AIHW is working with other state and territory governments to establish a suicide register in their respective jurisdiction. Visit [Data development activities](/suicide-self-harm-monitoring/research-information/crisis-support) to read more.

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Data from suicide registers

Suspected deaths by suicide in Victoria

The Coroners Court of Victoria established the Victorian Suicide Register in 2012 and publishes monthly data reports on suspected deaths by suicide.

The *Monthly Suicide Data Report* for August 2022 shows that the number of deaths in Victoria suspected to be from suicide in 2021 (693) was similar in 2020 (698), 2019 (699) and 2018 (697) (Coroners Court 2022a).

The monthly data show considerable variation (see Figure 1 below), however, as can be seen in Figure 2 below ‘these monthly fluctuations tend to even out over the course of a year. This demonstrates the importance of not attributing too much significance to the suicide frequency in any one month’ (Coroners Court 2020). The variation between months ‘usually results from random factors rather than underlying systemic issues or emerging clusters. The data therefore should be interpreted cautiously, with great care taken in drawing conclusions about any apparent increase or decrease that is observed’ (Coroners Court 2021).

Figure 1: Number of suspected deaths by suicide in Victoria, by month, January 2016 to August 2022

Figure 2: Cumulative number of suspected deaths by suicide in Victoria, by month, January 2016 to August 2022
Data for each year from 2016-2021 show that in Victoria (Coroners Court 2021, 2022a):

- around three-quarters of suspected deaths by suicide are among males
- the majority of suspected deaths by suicide for both males and females occur among those aged between 25 and 54
- around two-thirds of suspected deaths by suicide occur in metropolitan locations.

From 1 January to 31 August 2022, 473 suspected suicide deaths were reported in Victoria. This is compared to 452 for the same period in 2021, 477 in 2020, and 465 in 2019 (Coroners Court 2022a).

The Coroners Court of Victoria has also published data on suicides of Aboriginal and Torres Strait Islander people. The number of suspected or confirmed deaths by suicide in 2021 for Indigenous Australians in Victoria was 35, compared to 20 in 2020, 21 in 2019, 16 in 2018. Between 2009-2019, there were between 6 and 17 deaths by suicide (noting that data for this period are unreliable). The Coroners Court of Victoria notes that based on the historical context, this does not appear to be a result of random effects or fluctuation in the data (Coroners Court 2022b).

There was a marked difference between sex, with the number of suspected suicides among Indigenous males rising from 12 in 2020 to 25 in 2021 compared to a rise from 8 to 10 for Indigenous females over the same period (Coroners Court 2022b).

Suspected deaths by suicide in Queensland

The Australian Institute for Suicide Research and Prevention (AISRAP) at Griffith University manages the Queensland Suicide Register (QSR) and the interim Queensland Suicide Register (iQSR). The QSR contains data on confirmed deaths by suicide from 1990-2017 and iQSR contains data on suspected deaths by suicide from 2018 onwards (Leske et al. 2021). AISRAP publishes a report on suicides in Queensland annually.

Due to the time needed to complete coronial investigations, it can take several years for a death to be confirmed as suicide and entered into the QSR. Until this time, data on deaths where suicide is suspected are available from the iQSR. Data from the iQSR show that 791 suspected deaths by suicide occurred in Queensland in 2020 (Leske et al. 2021). Of these deaths, 779 were among residents of Queensland (Leske et al. 2021), compared with 757 suspected deaths in 2019 (Leske et al. 2020).

AISRAP has estimated monthly age-standardised suspected suicide rates for residents of Queensland from 1990 to 2020, taking into account population growth for more meaningful comparisons between years. Figures 3 and 4 show monthly age-standardised rates of suspected deaths by suicide from January 2015 to August 2020 (data supplied by AISRAP 2020).

While there are fluctuations by month, the estimated age-standardised suspected suicide rate for Queensland residents in 2020 (15.1 per 100,000 population) was similar to 2019 (14.9) and lower than the average of the past 5 years (15.5) (Leske et al. 2021). However, when looking at males and females separately, the estimated suspected suicide rate for males increased from 2019 to 2020 (from 22.9 to 24.0 per 100,000 population), while the rate for females decreased (from 7.3 in 2019 to 6.6 in 2020). The estimated rates for both males and females in 2020 remained lower than in 2017 (25.7 for males and 8.1 for females) (Leske et al. 2021).

Figure 3: Age-standardised suspected deaths by suicide rate per 100,000, Queensland males, by month, January 2015 to August 2020
Data from the iQSR for 2020 show that of the 779 Queensland residents who died by suspected suicide (Leske et al. 2021):

- around 78% were male and 22% were female
- the majority of suspected deaths by suicide for both males and females occurred among those aged between 20 and 59
- more than half (around 58%) of suspected deaths by suicide occurred in major cities, compared with regional, remote and very remote areas.

Of the 791 suspected deaths by suicide that occurred in Queensland in 2020, 66 (8.3%) of those were among Aboriginal and Torres Strait Islander people (Leske et al. 2021).

While the COVID-19 pandemic does not appear to have affected suicide rates in Queensland, Leske et al. (2021) reported that between 1 March and 31 December 2020 the pandemic appeared to be a contributing factor in 53 of 639 suspected suicides (8.3%), according to police reports. For more information see: COVID-19.

**Suspected deaths by suicide in New South Wales**

The New South Wales Suicide Monitoring System is a collaboration between NSW Health, the Department of Communities and Justice (DCJ), the State Coroner and NSW Police, which was established in October 2020. NSW Health publishes monthly reports on suspected deaths by suicide occurring in New South Wales.

The latest report for July 2022 found there were 918 suspected deaths by suicide in New South Wales in 2021. This is higher than the number of deaths reported for 2020 (901) but lower than for 2019 (946) (NSW Health 2022). Figures 5 and 6 below show the monthly frequencies of suspected deaths by suicide and cumulative monthly number of suspected deaths by suicide, respectively, from 1 January 2019 to 31 July 2022.

**Figure 5: Number of suspected deaths by suicide in New South Wales, by month, January 2019 to July 2022**
In each year from 2019 to 2021 (NSW Ministry of Health 2022):

- around three-quarters of suspected deaths by suicide were among males
- more than half of all suspected deaths by suicide occurred among those aged between 25 and 54
- around half of suspected deaths by suicide occurred among residents of Greater Sydney, with the remainder comprising residents of the rest of NSW and a small number of interstate/overseas residents.

From 1 January 2022 to 31 July 2022, there were 586 suspected deaths by suicide recorded in NSW, compared with 537 suspected suicide deaths recorded during the same period in 2021, 506 recorded in 2020, and 504 in 2019 (NSW Ministry of Health 2022).

References
Suicide & self-harm monitoring

Ambulance attendances: suicidal and self-harm behaviours

The complete extent of non-fatal suicidal and self-harming behaviours in the community is unknown in Australia. Surveys suggest that many people do not seek medical treatment for self-harm injuries. In addition, suicidal ideation and self-harm can be difficult to identify in national administrative data sets, due to the classifications used. Data on hospitalisations due to intentional self-harm under-report the true incidence of these behaviours in the community, as only those with serious physical or mental health issues are admitted to hospital for further treatment. It is not possible to identify those presenting to Emergency Departments with intentional self-harm and suicide ideation in the national data, though some states and territories have developed methodologies to do so, such as algorithms using information from free-text fields and local codes.

Clinical data from ambulance attendances have the potential to provide a more complete picture of suicidal and self-harm behaviours in Australia, and to identify opportunities for improved intervention or postvention - importantly - at a stage when further harm may be prevented.

The National Ambulance Surveillance System (NASS) is a world-first public health monitoring system providing timely and comprehensive data on ambulance attendances in Australia. The NASS is a partnership between Turning Point, Monash University and jurisdictional ambulance services across Australia. The NASS is funded by the AIHW as a component of the National Suicide and Self-harm Monitoring Project to collate and code monthly ambulance attendances data for participating states and territories for self-harm behaviours (suicidal ideation, suicide attempt, death by suicide, self-injury).
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Ambulance attendances: suicidal and self-harm behaviours

The ambulance attendance data includes 1-month per quarter snapshots from Victoria (Vic), Tasmania (Tas) and the Australian Capital Territory (ACT) from March 2018 to December 2021, New South Wales (NSW) from March 2018 to September 2021, and Queensland (Qld) from March 2020 to September 2021. AIHW began receiving monthly data for NSW, Vic, Qld, Tas and the ACT from January 2021.

See Data development activities to learn more about the ongoing developments relating to ambulance attendance data funded through this project.

Self-harm related ambulance attendances are included if self-harm occurred in the preceding (past 24 hours) or during the ambulance attendance, with 4 categories of self-harm related ambulance attendances defined and coded as:

- self-injury (non-fatal intentional injury without suicidal intent)
- suicidal ideation (thinking about killing oneself without acting on the thoughts)
- suicide attempt (non-fatal intentional injury with suicidal intent, regardless of likelihood of lethality)
- suicide (fatal intentional injury with suicidal intent).

Suicide, suicide attempt and suicidal ideation are considered mutually exclusive; however, self-injury could be simultaneously coded with any other self-harm case category.

The number of attendances related to suicide is under-represented as ambulances do not attend all deaths. Furthermore, when they do attend there may be insufficient information to determine suicidal intent at the scene. Rates of death by suicide have not been calculated because of small numbers, which may affect the reliability of the estimates.

For more information, see Data sources - National Ambulance Surveillance System (NASS).

How many ambulance attendances for suicidal and self-harm behaviours?

In 2020, ambulances attended a total of around 33,000 incidents involving suicidal thoughts and behaviours (suicidal ideation or suicide attempt) in the NSW, Vic, Qld, Tas and the ACT during the months of March, June, September and December. Over one third (36%) of these attendances occurred in NSW, in line with the population distribution between those jurisdictions.

Taking into consideration the population differences of the above 5 jurisdictions, the rate of ambulance attendances per 100,000 population for suicidal ideation in 2020 were:

- 103.3 in NSW (around 8,400 attendances)
- 90.9 in Vic (nearly 6,100 attendances)
- 130.9 in Qld (around 6,800 attendances)
- 52.0 in Tas (about 280 attendances)
- 93.2 in the ACT (about 400 attendances).

(Supplementary table National Ambulance Surveillance System—self-harm behaviours AMB S1).

Attendance rates for suicide attempts (by comparison, were lower than ideation in all 5 jurisdictions. Rates of attendances for suicide attempts per 100,000 population in 2020 were:

- 41.3 in NSW (nearly 3,400 attendances)
- 50.2 in Vic (nearly 3,400 attendances)
- 72.4 in Qld (over 3,700 attendances)
- 46.1 in Tas (about 250 attendances)
- 60.5 in the ACT (about 260 attendances).

Self-injury accounted for a relatively smaller number of attendances. These behaviours could be solely present in an attendance or present in conjunction with other suicidal and self-harm behaviours.
In 2020, ambulances in NSW, Vic, Qld, Tas and the ACT attended a total of around 6,400 incidents involving self-injury during the months of March, June, September and December; 38% of which occurred in NSW.

In 2020, the rate of ambulance attendances per 100,000 population with self-injury present was:

- 29.8 in NSW (over 2,400 attendances)
- 25.3 in Vic (nearly 1,700 attendances)
- 38.3 in Qld (nearly 2,000 attendances)
- 17.0 in Tas (about 90 attendances)
- 36.4 in the ACT (over 150 attendances).

(Supplementary table National Ambulance Surveillance System—self-harm behaviours S1).

**Gender variations**

There are distinct differences between genders when examining deaths by suicide and intentional self-harm hospitalisations; higher rates of deaths by suicide are seen in males compared with females (see Deaths by suicide over time) while females have higher rates of hospitalisations for intentional self-harm (see Intentional self-harm hospitalisations).

Ambulance attendances however, provide further context to these gender differences. Ambulance attendances capture if the intent of the self-harm was suicidal and therefore can provide information on the extent of these behaviours in the community.

In general, in 2020:

- Rates of ambulance attendances for suicide attempt and self-injury were higher for females than males.
- In the ACT, the rate of attendances for suicidal ideation was higher for females than males, while in NSW the rate for males was higher.
- The rates in Vic, Qld and Tas were not substantially different between males and females.

The interactive data visualisation shows ambulance attendances for males and females by each attendance type and for each of the five participating states and territories.


The vertical bar graph shows the crude rate and number of ambulance attendances for self-injury, suicidal ideation and suicide attempt for males and females in New South Wales, Victoria, Queensland, Tasmania and the Australian Capital Territory for the combined quarterly snapshot months in 2020. Users can choose to view crude rates and numbers of attendances for New South Wales, Victoria, Queensland, Tasmania or the Australian Capital Territory for all or selected self-harm behaviours. Females generally had higher attendance rates and numbers for self-harm behaviours, with the exception of suicidal ideation in New South Wales and Tasmania. The highest crude rate of attendances for females and males was for suicidal ideation Queensland.

In 2020, rates of ambulance attendances for suicide attempt and self-injury were between 1.4 and 2.6 times higher for females than males.

Ambulance attendance rates per 100,000 population for females involving a suicide attempt in 2020 were:
- 48.1 compared to 33.9 for males, in NSW
- 63.5 compared to 36.0 for males, in Vic
- 90.0 compared to 53.6 for males, in Qld
- 59.7 compared to 30.7 for males, in Tas
- 77.4 compared to 41.3 for males, in the ACT.

**Age and gender variation**

The interactive data visualisation below illustrates the distribution of self-harm related ambulance attendances for both males and females by age. For this visualisation, ambulance attendance data from 2020 in NSW, Vic, Qld, Tas and the ACT have been combined.

In general, in 2020 there were higher numbers of attendances for self-harm behaviours in the younger age groups for both males and females. Attendance numbers generally decreased with increasing age.

In 2020:
- Attendances for self-injury and suicidal ideation were highest in the 15-19 age group for both males (around 470 and 1,400 attendances respectively) and females (around 1,100 and 2,100 attendances).
- Attendances for suicide attempts were highest in the 20-24 age group for males (over 620 attendances) and the 15-19 age group for females (over 1,500).


The bar chart shows the distribution of the number of ambulance attendances for suicide attempts by age group for males and females, for combined quarterly snapshot data collected in New South Wales, Victoria, Queensland, Tasmania and the Australian Capital Territory in March, June, September and December 2020. Users can choose to view ambulance attendance numbers by age group for self injury, suicidal ideation and suicide attempt. The number of attendances for suicide attempts generally decreased with increasing age group from 15-19 and 20-24 for both males and females. Self-harm behaviour attendances were generally higher in females than males, across all age groups.

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**Ambulance attendances for suicidal and self-harm behaviours over time**

Trends in suicidal and self-harm behaviours - especially recent trends - are a matter of public and policy interest. However, interpretation of trends and changes in rates is complicated by large variations due to small numbers in some instances and, thus, large confidence intervals.

The following time series visualisations are based on 1-month per quarter snapshots between March 2018 and December 2021 currently reported from Vic, Tas, and the ACT, between March 2018 and September 2021 from NSW, and between March 2020 and September 2021 for Qld. These data are thus not representative of total attendances in a quarter, year or total attendances in Australia.

Caution is advised when making month to month comparisons. To identify trends in 1-month per quarter snapshot data, it is advised to compare the same months over a number of years to allow for any seasonal effects and variations at different times of year. When comparing changes to estimates over time it is advised to ‘Show error bars’ on the visualisation. These show the 95% confidence interval for
the crude rate which can vary widely in the case of small populations, such as for Tas and the ACT. As such, caution is advised when making trend comparisons for Tas and the ACT.

AIHW began receiving monthly data for NSW, Vic, Qld, Tas and the ACT from January 2021. The latest monthly data is for December 2021, except for NSW and Qld which is only reported until September 2021. These data are provided as additional visualisations in the below section. The visualisations will be updated over time and currently show no discernible trends.

Attendances for suicidal ideation
Across the snapshot months between March 2018 and December 2021 (March 2018 to September 2021 for NSW, March 2020 to September 2021 for Qld), the rate of ambulance attendances for suicidal ideation (per 100,000 population):

- decreased in NSW from 21.0 in September 2018 to 20.6 in September 2021
- increased in Vic from 17.8 in September 2018 to 25.6 in September 2020, followed by a decline to 15.5 in December in 2021
- increased in Qld from 30.6 in March 2020 to 34.9 in March 2021, decreasing slightly to 31.6 in September 2021
- increased in Tas from 11.5 in December 2020 to 20.3 in December 2021
- increased in the ACT from 12.4 in March 2018 to 25.5 in March 2021.

Attendances for suicide attempts
Comparing the same months across the years, the rate of ambulance attendances for suicide attempts (per 100,000 population):

- decreased in NSW from 9.9 in September 2018 to 8.4 in September 2021
- decreased in Vic from 14.9 in December 2019 to 9.6 in December 2021
- decreased in Qld in from 19.7 in September 2020 to 17.4 in September 2021.

Attendances for self-injury
Comparing the same months across the years, the rate of ambulance attendances for self-injury (per 100,000 population):

- increased in NSW from 5.4 in September 2018 to 6.9 in September 2021
- increased in Vic from 4.9 in September 2018 to 6.8 September 2021
- decreased slightly in Qld from 9.6 in June 2020 to 7.4 in June 2021, increasing to 9.7 in December 2021
- increased in Tas from 1.9 in June 2019 to 6.7 in June 2021
- increased in the ACT from 3.8 in June 2018 to 10.4 in June 2021.

Ambulance attendances for self-harm behaviours, selected states and territories, snapshot months, 2018-2021.
The line graph shows the crude rate and number of ambulance attendances for self-harm behaviours for quarterly snapshot data collected in Victoria, New South Wales, Tasmania and the Australian Capital Territory in March, June, September and December 2018, 2019, 2020 and 2021 (New South Wales data until September 2021. Note NSW data in not available for June 2021). It also includes quarterly snapshot data for Queensland from March 2020 to September 2021.
sers can choose to view ambulance attendance by self-injury, suicidal ideation and suicide attempt. The crude rate and number of attendances for all suicide behaviours increased over the time period for all selected states and territories, with notable dips in June in 2018 and 2019 in New South Wales. Suicidal ideation had the highest number and rate of attendances over the time period. While self-injury had the lowest number and rate of attendances over the time period, it had the largest increase of the suicidal behaviours.
Monthly data for ambulance attendance rates by self-harm behaviour in 2021 shows:

- a downward trend in NSW for self-injury, suicidal ideation and suicide attempt
- a decline in Vic for suicidal ideation and suicide attempt
- a slight decline in Qld for suicidal ideation


The line graph shows the crude rate and number of ambulance attendances for self-harm behaviours for monthly snapshot data collected in Victoria, Tasmania and the Australian Capital Territory from January to December 2021. It also shows these data for Queensland and New South Wales from January 2021 to September 2021. Data for New South Wales June 2021 is unavailable.

The graph shows ambulance attendance by self-injury, suicidal ideation and suicide attempt. Users can choose to show one jurisdiction at a time. Suicide ideation had the highest number and rate of attendances over the time period, while self-injury had the lowest. There are no discernible trends as of yet.
Patterns by gender over time

Across the snapshot months from March 2018 and December 2021 (March 2018 to September 2021 for NSW, March 2020 to September 2021 for Qld), the ambulance attendance rates for:

- suicide attempt were higher in females than males in NSW, Vic, and Qld. There was no significant difference between attendances rates for suicide attempt in Tas and the ACT
- suicide attempt decreased in both males and females for NSW between September 2019 and September 2021 and Vic between December 2019 and December 2021, and increased in the ACT between December 2018 and December 2021 for females. There were no significant changes for Qld and Tas
- self-injury were higher in females than males in Qld. There was no significant difference between females and males in NSW, Vic, Tas, and the ACT
- suicidal ideation across NSW, Vic, Qld and Tas tended to be similar for females and males.
Monthly data from 2021 for ambulance attendance rates for self-harm behaviour by gender shows:

- a general decline in NSW for suicidal ideation and suicide attempt for females and males
- a general decline in Vic for suicidal ideation and suicide attempt for females and males
- no discernible trends in Qld

Ambulance attendances for self-harm behaviours by gender, selected states and territories, January–December 2021

The line graph shows the crude rate and number of ambulance attendances for self-harm behaviours by gender (males and female) for monthly data collected in Victoria, Tasmania and the Australian Capital Territory from January, to December 2021 New South Wales and Queensland from January to September 2021. Data for New South Wales June 2021 is unavailable. Users can choose to view ambulance attendances by self-injury, suicidal ideation and suicide attempt. There are no discernible trends as of yet.
Patterns by age and gender over time

There is a distinct variation in ambulance attendances for suicidal and self-harm behaviours between age groups 0–24, 25–44, 45–64 and 65+ years.

Across the snapshot months from March 2018 to September 2021, in NSW, Vic, the ACT and Tas combined, attendance rates for:

- self-injury were higher in females than males in the 0–24 age group, with marked increases in females since June 2018
- suicidal ideation were higher in females compared to males in the 0–24 age group, but higher in males in the 25–44 age group for most snapshot months
- suicide attempt were higher for females than males in the 0–24 age group.


The line graph shows the crude rate and number of ambulance attendances for self-harm behaviours by age group (0–24, 25–44, 45–64 and 65+ years) for quarterly snapshot data collected in New South Wales, Victoria, Tasmania and the Australian Capital Territory from 2018 March to September 2021 (Note June 2021 data are not available).

Users can choose to view ambulance attendances by self-injury, suicidal ideation and suicide attempt. Attendance rates and numbers for self-harm behaviours were much higher over the time period in females aged 0–24 years, compared to males in the same age group. This gap narrowed as the age group increased. The exception is the 25–44 and the 45-64 year age groups for suicidal ideation, where the attendance rates and numbers are higher for males than females.
Understanding the methods used in a person’s death by suicide or suicide attempt can play an important role in its prevention. These data are provided to inform discussion around restriction of access to means as a policy intervention for the prevention of suicide and self-harm.

Please consider your need to read the following information. If this material raises concerns for you or if you need immediate assistance, please contact a crisis support service, available free of charge, 24 hours a day, 7 days a week.


Across the selected months from March 2018 to December 2020:

- Most ambulance attendances for suicide attempts were due to alcohol and other drugs.
- The proportion of attendances for suicide attempts by alcohol and other drugs declined (64.0% to 59.9%) while the use of ‘other’ methods increased (41.2% to 43.8%) (note the proportion of attendances for suicide attempts due to other methods is combined due to small numbers).
- Attendances for suicide attempts due to hanging were stable (3.8% to 4.3%).
- Most ambulance attendances for death by suicide were due to hanging.
- The proportion of attendances for death by suicide due to hanging decreased (53.8% to 50.5%) while attendances due to ‘other’ methods increased (34.6% to 36.4%).
- Attendances for death by suicide due to alcohol and other drugs increased from 10.3% to 15.0%.

Ambulance attendances for deaths by suicide and suicide attempts, by method

The line graph separates the number and crude rate of ambulance attendances into the two groups: suicide attempt and death by suicide. Within these groups, attendance by the three modality (method) categories is shown. The modality categories are ‘alcohol and other drugs’, ‘hanging’ and ‘other’ (includes wound/laceration/penetrating injury, inhalation, firearm, drowning, jumping from height, vehicular impact, poison, burning, asphyxia, other and unknown). This is shown for grouped quarterly snapshot data collected in New South Wales, Victoria, Tasmania and the Australian Capital Territory in March, June, September and December in 2018, 2019 and 2020, and in March and June 2021. For suicide attempts, all modality methods remained relatively stable over the time period, with a small increase in ‘other’, and a small decrease in alcohol and other drugs and hanging. For deaths by suicide, alcohol and other drugs and ‘other’ decreased, while hanging increased. Hanging had the highest proportion of attendance for deaths by suicide over the time period, while the proportion of attendances for alcohol and other drugs was highest for suicide attempts.
Content warning:
The data in this visualisation might be distressing to some readers as it contains data on the modality of suicide deaths and attempts. Please consider your need to read the following information. If this material raises concerns for you or if you need immediate assistance, please contact a crisis support service, available free of charge, 24 hours a day, 7 days a week.

Please consider the Mindframe guidelines if reporting on these statistics.

Proceed to visualisation

References

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Suicide & self-harm monitoring: Intentional self-harm hospitalisations

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What is intentional self-harm?

Intentional self-harm is often defined as deliberately injuring or hurting oneself, with or without the intention of dying. Intentional self-harm comes in many forms, and affects people from different backgrounds, ages and lifestyles. The reasons for self-harm are different for each person and are often complex.

The term ‘intentional self-harm’ in the National Hospital Morbidity Database (NHMD) provides information on patients admitted to hospital for self-poisoning or self-injury, with or without suicidal intent—and therefore includes both suicide attempts and non-suicidal self-harming behaviours.

Most people who self-harm do not go on to end their lives—but previous self-harm is a strong risk factor for suicide. Therefore, monitoring of intentional self-harm is key to suicide prevention.

What are the sources of data on intentional self-harm?

Understanding the scale of the problem of intentional self-harm in Australia is difficult because many cases of self-harm are unreported, unless medical treatment is required.

- Only those patients admitted to hospital for intentional self-harm are currently routinely reported in national data sets.
- Presentations to hospital emergency departments relating to suicide attempts or intentional self-harm cannot be easily identified in the current national emergency department data collection.
- Data collections from general practitioners or mental health services do not routinely capture patients treated for intentional self-harm.
- Data are available from ambulance attendance records and national population surveys (see below).

Improving self-harm data

The NHMD is the national source of hospitalisation data in Australia. Data on the patient’s diagnosis, interventions and ‘external cause’ (including intentional self-harm) are reported to the NHMD by all states and territories using the International statistical classification of diseases and related health problems, 10th revision, Australian modification (ICD-10-AM) and the Australian Classification of Health Interventions (ACHI). The World Health Organization’s Eleventh revision of the International Classification of Diseases (ICD-11)—yet to be adopted in Australia—has the capability to classify the intent of the external cause of an injury.

In recognition of the need for better data around suicide and self-harm, the AIHW is currently working with key stakeholders, including the Mental Health Information Strategy Standing Committee and Emergency Department data custodians to develop a nationally consistent method to identify and collect data on suicide-related ED presentations.

National survey data

One nationally representative survey to collect data on self-harm is the Australian Child and Adolescent Survey of Mental Health and Wellbeing. In this survey, data on self-harm are available for adolescents aged 12-17. The 2007 National Survey of Mental Health and Wellbeing also includes questions on previous suicidal behaviour. This survey provides lifetime prevalence estimates of mental disorders for Australians aged 16-85.

COVID-19

The data reported are up to 30 June 2021, as such these data include the initial COVID-19 period.

Last updated 12/07/2022 v7.0
Intentional self-harm hospitalisations by states & territories

Hospitalisations data for patients with intentional self-harm injuries includes those with and without suicidal intent. For further information see Technical notes.

How do intentional self-harm hospitalisations vary across states and territories?

In 2020–21:

- there were more than 29,900 hospitalisations due to intentional self-harm in Australia, with the highest proportion (31.7%) in Queensland
- the rate of intentional self-harm hospitalisations varied between states and territories in 2020–21, with the Northern Territory reporting the highest rate (238 hospitalisations per 100,000 population), which is more than double the national rate (116 hospitalisations per 100,000 population)
- the lowest rate was recorded in New South Wales (77 hospitalisations per 100,000 population).

Reporting is based on a patient’s usual residence, not necessarily where they received treatment.


The line graph shows rates of intentional self-harm hospitalisations from 2008–09 to 2020–21 for each state and territory and the total for Australia. Users can also choose to view age-specific rate, numbers and proportion of hospitalisations for intentional self-harm by states and territory by sex and specific age groups. Over the majority of the time period, the Northern Territory had the highest rates of intentional self-harm hospitalisations, except for 2009–2010 where the rates in South Australia (146.8 per 100,000) were slightly higher than Northern Territory (146.6). Rates in the Northern Territory increased from 162.4 per 100,000 population in 2008–09 to 238.1 in 2020–21. In 2020–21, Queensland had the second highest rate at 183.1 hospitalisations per 100,000 population. The total rate for Australia in 2020–21 was 116.3 per 100,000 population.
How have rates of intentional self-harm hospitalisations changed over time by state and territory?

Throughout 2008–09 to 2020–21, rates of intentional self-harm hospitalisations in Queensland, South Australia and the Northern Territory were consistently higher than that of the national rate.

From 2008–09 to 2020–21 the highest rates of hospitalisations due to intentional self-harm in Australia were generally in the Northern Territory.

Over this period, rates of hospitalisations due to intentional self-harm in the Northern Territory increased nearly 1.5 times from 162 hospitalisations per 100,000 population to 238.

The most notable changes between 2008–09 and 2020–21 were seen in young females.

- The rate of intentional self-harm hospitalisations for Northern Territory females in the 0-24 age group more than tripled (from 98 hospitalisations per 100,000 population in 2008-09 to 357 in 2020-21).
- In Queensland the rate has more than doubled for females in this age group (158 per 100,000 population in 2008-09 to 383 in 2020-21).
- In addition, rates of intentional self-harm hospitalisations for males aged 24 and below in the Northern Territory almost doubled from 90 hospitalisations per 100,000 population in 2008-09 to 166 in 2020-21.

Variation in hospital admission policy and practices between states and territories may have contributed to differences in the reporting of hospitalisation data, for further information see data quality statement [https://meteor.aihw.gov.au/content/index.phtml/itemId/724188].

- New South Wales reported an increase in the number of hospitalisations due to intentional self-harm in 2016-17, before decreasing from 2017-18 to 2020-21.
- Queensland reported a similar pattern in decreases between 2017-18 and 2019-20 but had an increase in 2020-21.
- Between 2011-12 and 2012-13, Victoria reported a substantial decrease in the number of hospitalisations due to intentional self-harm from more than 6,700 (120 hospitalisations per 100,000) to around 4,500 (78 hospitalisations per 100,000). This may reflect a change in Victoria’s emergency department admission policy, for further information see data quality statement [https://meteor.aihw.gov.au/content/index.phtml/itemId/724188].
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Intentional self-harm hospitalisations by age groups

Hospitalisations data for patients with intentional self-harm injuries includes those with and without suicidal intent. For further information see Technical notes.

Rates of hospitalisations for intentional self-harm are higher for females

In 2020–21:

- two thirds of hospitalisations for intentional self-harm injuries were female (66%, or over 19,800 hospitalisations)
- the rate of intentional self-harm hospitalisations was higher for females than males (153 per 100,000 population compared with 79 per 100,000 population)
- the rate for females aged 0–14 increased from 41 per 100,000 population in 2019–20 to 70 per 100,000 population in 2020–21.

This is the opposite of what is seen in deaths by suicide, where rates are higher for males than for females (see Deaths by suicide over time). This may, in part, be due to differences between methods used by males and females - with males tending to use more lethal methods than females.


The bar chart shows the age-specific rates of intentional self-harm hospitalisations for males and females for specific age groups and all ages combined in 2020–21. Users can also view age-specific rate, numbers and the proportion of hospitalisations for intentional self-harm by sex for each age group and year from 2008–09 to 2020–21. In 2020–21, females had higher rates of hospitalisation for intentional self-harm than males up to age 75–79. The highest rates for females were in the 15–19 years age group (697.7 hospitalisations per 100,000 population) and the 15–19 years age group for males (173.5).
Rates of hospitalisations for intentional self-harm are higher for young people

Between 2008–09 and 2020–21, the rates of intentional self-harm hospitalisations were consistently high for young people. The highest rates in 2020–21 were recorded for:

- females aged 15–19 (698 per 100,000 population), followed by females aged 20–24 (363 per 100,000 population).

The highest rates for males also occurred in these younger age groups but rates were at least 2-fold lower than those of females. For example, in 2020–21:

- the highest rate of self-harm hospitalisations was 173 per 100,000 population for males aged 15–19, while those aged 20–24 reported 166 per 100,000 population).

During this period, there was a steady increase in the rates for both males and females aged 15–19, (see Intentional self-harm hospitalisations among young people).
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Intentional self-harm hospitalisations by method

Understanding the methods used for intentional self-harm can play an important role in its prevention. These data are provided to inform discussion around restriction of access to means as a policy intervention for the prevention of suicide and self-harm.

Please consider your need to read the following information. If this material raises concerns for you or if you need immediate assistance, please contact a crisis support service, available free of charge, 24 hours a day, 7 days a week.


The classification system used to code hospital admissions data, ICD-10-AM, uses the term ‘mechanism’ to refer to the external cause of a self-inflicted injury. Throughout Suicide & self-harm monitoring ‘mechanism’ has been used in data visualisations, while the term ‘method’ has been used in the accompanying text.

Hospitalisations data for patients with intentional self-harm injuries includes those with and without suicidal intent. For further information see Technical notes.

Hospitalisations for intentional self-harm, by age, sex and mechanism, Australia, 2008-09 to 2020-21.

The line graph shows the age-specific rates of intentional self-harm hospitalisations for persons of all ages from 2008-09 to 2020-21 by method of self-harm. Users can also choose to view age-specific rate, numbers, and proportion of hospitalisations for intentional self-harm by sex for each age group. From 2008-09 to 2020-21, the highest rates of intentional self-harm hospitalisations by method were for self-poisoning by drugs in the nonopioid analgesics, antipyretics and antirheumatics drugs category, which has been the highest rate of mechanism also in 2012-13 and 2016-17. For all other years anti-epileptic, sedative-hypnotic, anti-parkinsonism and psychotropic drugs was the highest category. The third highest rates during the 10-year period were for self-injury with sharp object.
Most intentional self-harm hospitalisations are due to poisoning by pharmaceutical drugs

Between 2008-09 and 2020-21, the 2 most common methods of self-harm resulting in hospitalisation were:

- **intentional self-poisoning by anti-epileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs (X61)**, responsible for 40% of hospitalisations for intentional self-harm in 2020-21. Benzodiazepines are included in this category.
  - In 2020-21, around 8,000 females were hospitalised as a result of this method of self-harm, compared with about 3,800 males.
- **intentional self-poisoning by nonopioid analgesics, antipyretics and antirheumatics (X60)**, responsible for 22% of intentional self-harm hospitalisations in 2020-21.
  - This category includes anti-inflammatory drugs, such as ibuprofen, antipyretics (for example, aspirin and paracetamol) and antirheumatics (some of which are used to treat arthritis).
  - More than 3 times as many hospitalisations were among females due to this method of self-harm in 2020-21 compared to male hospitalisations (over 5,300 and around 1,200 hospitalisations, respectively).

Contact with sharp objects (X78) was another common method of self-harm resulting in hospitalisation.

- Contact with sharp objects accounted for 13% of all intentional self-harm hospitalisations in 2020-21, with more hospitalisations among females than males for this method of self-inflicted injury (over 2,100 and over 1,600 hospitalisations, respectively).

Hanging (X70) and Gas (X67) were the only methods of intentional self-harm that resulted in more male hospitalisations of than female in 2020-21 (507 and 314 hospitalisations, and 133 and 33 hospitalisations, respectively).
Suicide & self-harm monitoring: Populations & age groups

Suicide and self-harm can affect people of all ages (except very young children), races, ethnicities, sexual orientations and occupations. However, a number of subgroups are particularly important to examine in depth because their risk of suicide or self-harm is higher than that of other populations, the impact on the community is different or they have specific requirements for culturally appropriate suicide prevention or postvention services.

- Although deaths by suicide occur more often in older age groups, it is the leading cause of death in Australian children and adolescents. Deaths by suicide at any age have profound effects on the families, friends and communities of those that die, but arguably, these effects are even greater when the person is young (see Suicide among young people).
- Similarly to employment in general, serving in the Australian Defence Force (ADF) seems to be protective against suicide as rates in both serving and reserve men are lower than that of all Australian men. However, for ex-servicemen suicide rates are higher than the general population (see Australian Defence Force suicide monitoring).
- The suicide rate in Aboriginal and Torres Strait Islander peoples is twice that of the non-Indigenous population (see Suicide & Indigenous Australians)—although rates vary by community, age group and sex. The high rates experienced by Indigenous Australians are due to multiple, complex and interrelated social, cultural and historical influences, including colonisation, relocation of people to missions and reserves, transgenerational grief and trauma resulting from the removal of children, racism and continued socioeconomic disadvantage. However, it is important to acknowledge that Indigenous Australians may never experience suicidal behaviours or thoughts and aspects unique to their culture can be important protective factors against suicidal or self-harming behaviours.

Understanding differences in numbers and rates of suicide, intentional self-harm and suicidal behaviours in these populations is essential for more effective suicide prevention.

Other population groups identified as priority populations for suicide prevention in Australia include lesbian, gay, bisexual, transgender or intersex (LGBTI) populations and culturally and linguistically diverse (CALD) communities. It is currently not possible to discern these groups in the available suicide and intentional self-harm data sets; however, through the National Suicide and Self-harm Monitoring Project the AIHW is looking to expand data collection on these, and other population groups (see About for information on the project).
Suicide & self-harm monitoring

Deaths by suicide among young people

Suicide is the leading cause of death among Australians aged 15-24 (see Deaths in Australia). The proportion of deaths by suicide is relatively high among children and young people due to the fact these age groups do not tend to die from other causes.

In 2020:

- 381 Australian young people (aged 18-24) took their own lives
- 99 deaths by suicide occurred among children and adolescents (aged 5-17) with the majority occurring in those aged 15-17 (74% in 2020)
- deaths by suicide represented 31% of all deaths in young people aged 15-17 and 39% of all deaths in those aged 18-24--up from about one-quarter (25%) of all deaths in these age groups in 2010. In children aged 14 and below the proportion of deaths by suicide is low compared with the 2 older age groups; in 2020 deaths by suicide represented 12% of all deaths in this age group.

Suicide deaths of children and young people, Australia, 2010 to 2020.

The line graph shows the age-specific rates of suicide for children and young people aged 14 and below, 15-17 and 18-24 from 2010 to 2020. Users can also choose to view the number of deaths by suicide and deaths by suicide as a proportion of all causes of death for each age group over the period. The highest rates of suicide across the period were for young people aged 18-24, which increased from 10.8 deaths per 100,000 population in 2010 to a high of 16.4 in 2020.
Throughout 2010 to 2020, age-specific suicide rates:

- were higher for young adults (aged 18-24) than adolescents (aged 15-17) and children (aged 14 and below)
- increased in young people aged 18-24 (from 10.8 deaths per 100,000 population in 2010 to 16.4 in 2020) while remaining relatively stable for those aged 15-17 (7.9 to 8.3 deaths per 100,000 population)
- ranged from 0.5 deaths per 100,000 population in 2010 to 0.8 in children aged 14 and below.
Intentional self-harm hospitalisations among young people

Hospitalisations data for patients with intentional self-harm injuries includes those with and without suicidal intent. For further information see the Technical notes.

The data presented here are for children and young people aged between 0 and 24, grouped into 3 age ranges: 14 and below, 15–19 and 20–24 years. For children, especially those aged under 10, it is difficult to determine whether a self-inflicted injury was done with intent to self-harm.


The line graph shows age-specific rates of intentional self-harm hospitalisations for young people aged 14 and below, 15–19 and 20–24 from 2008–09 to 2020–21. Users can also choose to view age-specific rate, numbers and proportion of hospitalisations for intentional self-harm by sex for each age group. Between 2008–09 and 2020–21, rates of intentional self-harm hospitalisations were highest for young people aged 15–19 ranging from 245.6 per 100,000 population in 2008–09 to 430.2 in 2020–21.

Young people have the highest rates of hospitalisation for intentional self-harm

In 2020–21:

- the age-specific hospitalisation rate due to intentional self-harm was lowest for children aged 14 and below (39 per 100,000 population)
the rate for young people aged 15-19 was 430 hospitalisations per 100,000 population, while the rate for those aged 20-24 was lower (263)
the rate for females aged 0-14 increased from 41 hospitalisations per 100,000 population in 2019-20 to 70 in 2020-21
the age and sex-specific rate was highest for females aged 15-19 (698 hospitalisations per 100,000 population), followed by females aged 20-24 (363)
rates for young males were lower across all ages. The lowest rate was for males aged under 14 was 9 hospitalisations per 100,000 population followed by 166 and 173 for males aged 20-24 and 15-19, respectively.

Rates of intentional self-harm hospitalisations for girls and young females are rising
From 2008-09 to 2020-21:

- there has been a greater than 3-fold increase to the rate of intentional self-harm hospitalisations in females aged 14 and below (from 19 hospitalisations per 100,000 population to 70)
- the rate of intentional self-harm hospitalisations in females aged 15-19 has risen from 374 hospitalisations per 100,000 population to 698, and the rate for females aged 20-24 has increased from 295 to 363
- rates of intentional self-harm hospitalisations for males have also increased over this period but not to the same extent as those of females; the greatest increase was in the 15-19 age group (from 124 hospitalisations per 100,000 population to 173).
Deaths by suicide amongst Indigenous Australians

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For further information about Aboriginal and Torres Strait Islander peoples’ wellbeing, mental health and suicide prevention, see the Indigenous Mental Health & Suicide Prevention Clearinghouse (https://www.indigenousmhspc.gov.au/) managed by the AIHW. This website was developed in consultation with experts in Indigenous mental health and suicide prevention, practitioners and policy makers. It brings together key research to improve the evidence base on Indigenous mental health and suicide prevention.

Age-standardised suicide rates among Aboriginal and Torres Strait Islander people are substantially higher than those in non-Indigenous Australians. Reducing deaths by suicide and suicidal behaviour among Indigenous Australians is an issue of major concern for many Indigenous communities and a public health priority for all Australian governments.

Numbers of deaths by suicide and age-standardised rates are reported for New South Wales, Queensland, Western Australia, South Australia and the Northern Territory only (see Technical notes for further information).

How do suicide rates differ between Indigenous and non-Indigenous Australians?

From 2001 to 2020, age-standardised rates:

- fluctuated in Indigenous males from a low of 25.1 deaths per 100,000 population (75 deaths) in 2008 to 42.9 (147 deaths) in 2020
could not be reported for some years for Indigenous females due to small numbers of deaths by suicide; however, for those years that can be reported, rates fluctuated from 7.2 deaths per 100,000 population (22 deaths) in 2006 to 15.2 (58 deaths) in 2019 for Indigenous people ranged from 1.4 to 2.4 times that of non-Indigenous Australians.

In 2020:
- suicide accounted for 5.5% of all deaths of Aboriginal and Torres Strait Islander peoples while the comparable proportion for non-Indigenous Australians was 1.9%
- one-quarter (25%) of all deaths by suicide in Indigenous people were female, this was greater than that seen in the non-Indigenous population (23% females).

Kreisfeld and Harrison (2020) found that over the period 2001–02 to 2015–16, there was an annual average rise of 0.4% in suicide rates for Indigenous males, while over the most recent 5-year period (2011–12 to 2015–16) the annual rate for Indigenous males increased by an average of 6.6%; however, these changes in rates were not statistically significant (see Glossary). For Indigenous females, over the period 2001–02 to 2015–16, modelling showed a statistically significant annual average rise in suicide rates of 5.8%; however, over the most recent 5-year period 2011–12 to 2015–16, rates fell by 2.5% per year, although this finding was not statistically significant (AIHW: Kreisfeld & Harrison 2020).

Caution should be exercised when analysing trends in deaths by suicide for Indigenous Australians due to data quality issues, including the under-identification of Aboriginal and Torres Strait Islander people in deaths data and the uncertainties in estimating and projecting the size and structure of the Indigenous population over time. Numbers of deaths by suicide and age-standardised rates are reported 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 (see Technical notes for further information). It is also important to remember that age-standardised rates based on only a small number of deaths by suicide will exhibit a large amount of variation and that increases in numbers of deaths by suicide and rates should be treated with caution as improvements in identifying Indigenous status among deaths data may (at least in part) account for the rise in case numbers and rates.

Suicide rates are more than twice as high in young Indigenous Australians compared to non-Indigenous Australians

Suicide contributes to premature mortality in Indigenous Australians, especially in the younger age groups. Data from the National Mortality Database and the Australian Bureau of Statistics Causes of Death from 2016 to 2020 showed the rates of suicide deaths per 100,000 people among Indigenous Australians were 16.7 and 45.7 in those aged 0–24 and 25–44 years respectively. These rates were 3.2 and 2.8 times as high as in non-Indigenous Australians in the respective age groups (5.3 and 16.4 per 100,000 respectively). This difference was less pronounced in the 45–64 age group, with a suicide rate of 20.4 among Indigenous Australians compared to 17.2 in non-Indigenous Australians. However, non-Indigenous Australians had a higher suicide rate in the 65 and over age group than Indigenous Australians (12.8 compared to 7.7 per 100,000).

Suicide deaths also represent a higher proportion of deaths in young Indigenous Australians age groups compared to non-Indigenous Australians. From 2016 to 2020, almost a quarter (24%) of deaths in Indigenous Australians aged 0–24 were due to suicide, compared to 17% in non-Indigenous Australians. However, in older age groups, non-Indigenous Australians had a higher proportion of death by suicide than Indigenous Australians. For instance, about 5% of all deaths were attributed to suicide in non-Indigenous Australians aged 45–64 years, compared to 2% in Indigenous Australians.

Suicide deaths by Indigenous status and age groups, selected states and territories, 2016-2020.

This bar chart shows the death by suicide crude rates (per 100,000), number and per cent of all cause of deaths for Indigenous and non-Indigenous, by age group, from 2016-2020. Users can also choose to view by 5-year aggregates from 2001-2005 to 2016-2020. The crude rate of suicide deaths was higher among the Indigenous age groups compared to non-Indigenous, except in the 65 years and over group where non-Indigenous rates were higher. The number of suicides was higher in non-Indigenous people compared to Indigenous, due to differences in population sizes. The proportion of suicide deaths to all causes of deaths was highest in the Indigenous 0-24 age group and lowest in the Indigenous 65 years and older group.
In 2016 to 2020, the highest Indigenous suicide rates were in those aged 25–34 in Western Australia and the Northern Territory (88.1 and 54.0 deaths per 100,000 population) and in those aged 35–44 in New South Wales, Queensland and South Australia (33.8, 52.0 and 54.1 deaths per 100,000 population). In Queensland, Indigenous suicide rates in the 25–34 age group were also high compared to other age groups within the same state (47.1 per 100,000), only slightly lower than the 35–44 age group (52.0 per 100,000). In contrast, the 45 years and over group had the lowest Indigenous suicide rates, except in South Australia and New South Wales where those aged 0–24 had the lowest suicide rates.


This bar chart shows the age-specific rates (per 100,000) for deaths from suicide, for Indigenous and non-Indigenous people by age group, from 2016-2020. Users can choose to view by 5-year aggregates from 2001-2005 to 2016-2020. Users can also choose to view by New South Wales, Queensland, Western Australia, South Australia, Northern Territory and the total of these states and territories. In WA and the NT, Indigenous Australians aged 25-34 years had the highest age-specific rate suicide rate; in NSW, QLD and SA Indigenous 35-44 year olds had the highest rate. Non-Indigenous 0-24 year olds had the lowest age-specific suicide rate in all states and territories.
According to the ABS Causes of Deaths data, the aged-standardised suicide rate was higher among both male and female Indigenous Australians compared to their non-Indigenous counterparts, across all states and territories in 2016 to 2020, except in South Australia where the suicide rate for Indigenous females could not be reported. Nationally, suicide rates in Indigenous males and females were around double that of non-Indigenous. In Western Australia, suicide rates in Indigenous males (45.6 deaths per 100,000 population) were about twice that in non-Indigenous males (20.4), but in Indigenous females (20.9) were 3 times that of non-Indigenous females (6.9). Indigenous suicide rates in Western Australia vary between different regions. To address this, the Western Australia Mental Health Commission developed the Western Australian Suicide Prevention Framework 2021–2025 (https://www.mhc.wa.gov.au/media/2718/draft-suicide-prevention-action-plan-2021_2025.pdf), to guide government, non-government organisations and communities in preventing suicide in Western Australia (Government of Western Australia Mental Health Commission 2020).

Deaths from suicide, by Indigenous status, sex and selected states and territories, 2016-2020.

This bar chart shows the age-specific rates (per 100,000) for death by suicide among Indigenous and non-Indigenous people, by selected states and territories, from 2016-2020. Users can choose to view by 5-year aggregates from 2001-2005 to 2016-2020. Users can also choose to view by NSW, Qld, WA, SA, NT and the total of these selected states and territories. Age-standardised suicide rates were higher among Indigenous Australians compared to non-Indigenous across all states and territories. In 2016-2020, WA had the highest suicide rates (33.3 per 100,000) among Indigenous Australians and NSW had the lowest (19.8). Among non-Indigenous Australians, Qld had the highest suicide rate (14.6) and NSW had the lowest (10.5). The difference in suicide rates between Indigenous and non-Indigenous Australians was most pronounced in WA, where rates were 2.4 times higher in Indigenous (33.3) than non-Indigenous (13.6) Australians.
Suicide deaths by Indigenous status, sex and selected states and territories, 2016–2020

Age-standardised rate (per 100,000)

Note: Only data for NSW, Qld, WA, SA and NT are presented.
Source: ABS Causes of Death, Australia 2021
Supplementary Table: NMD S15

References


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Intentional self-harm hospitalisations & Indigenous Australians

Hospitalisations data for patients with intentional self-harm injuries includes those with and without suicidal intent. For further information see the Technical notes.

The quality of the hospital data provided for Indigenous status varies between states and territories. For further information, see the data quality statement (https://meteor.aihw.gov.au/content/index.phtml/itemId/724188) and the Technical notes.

Intentional self-harm hospitalisations, by age, sex and Indigenous status, Australia, 2008-09 to 2020–21.

The line graph shows age-specific rates of hospitalisations for intentional self-harm by age, sex and persons for Indigenous Australians. Users can choose to view age-specific rate, numbers and proportion of hospitalisations for intentional self-harm by sex and Indigenous status for each age group. Rates for young Indigenous females aged 15-19 increased steeply from 683.0 per 100,000 population in 2014-15 to 1164.7 in 2016-17, declined to 1041.8 in 2018-19, before increasing again to 1180.7 in 2019-20 and declining again in 2020-21 to 1132.9. This was the highest rate of all age-groups in 2020-21, well above the next highest rate of 740.3 per 100,000 population for Indigenous females aged 20-24. The rate for all Indigenous females generally increased across the period, with some fluctuations, from 235.5 in 2008-09 to 407.7 in 2020-21.

How common are hospitalisations for intentional self-harm among Indigenous Australians?
In 2020–21, the rate of intentional self-harm hospitalisations for Indigenous Australians (326 hospitalisations per 100,000 population) was about 3 times that of non-Indigenous Australians (108).

In 2020–21:

- the highest rate of hospitalised intentional self-harm for Indigenous Australians was in the 15–19 age group (746 hospitalisations per 100,000 population). The highest rate for non-Indigenous Australians was also recorded in the 15–19 age group but was close to half that of Indigenous Australians aged 15–19 (407)
- Indigenous females aged 15–19 recorded the highest rate of intentional self-harm hospitalisations (1,133 hospitalisations per 100,000 population), followed by those aged 20–24 (740)
- the highest rate of hospitalised intentional self-harm for Indigenous Australian males was in the 35–39 age-group (535 hospitalisations per 100,000 population), followed by those aged 45-49 (434) and 40-44 (426).

How have rates of intentional self-harm hospitalisations changed for Indigenous Australians?

From 2008–09 to 2020–21:

- the overall rate of hospitalised intentional self-harm for Indigenous Australians rose (from 203 hospitalisations per 100,000 population to 326)
- the rate of intentional self-harm hospitalisations for non-Indigenous Australians remained relatively steady over this period (from 114 hospitalisations per 100,000 population to 108).

Over this same period, the Indigenous suicide rate also rose (see, *Suicide & Indigenous Australians*).

Rates of hospitalisation for intentional self-harm have risen from 2008–09 to 2020–21 for both Indigenous females and males.

- Rates of hospitalised intentional self-harm for Indigenous females increased from 235 hospitalisations per 100,000 population in 2008–09 to 408 in 2020–21, while rates for Indigenous males rose from 170 hospitalisations per 100,000 population to 244.
- The greatest increase in rates was seen in Indigenous females aged 15–19 (more than doubling from 455 hospitalisations per 100,000 population in 2008–09 to 1,133 in 2020–21). Rates also increased more than 1.8 times for non-Indigenous females aged 15–19 during this period (from 365 per 100,000 population to 665)
- Rates also increased markedly in Indigenous females aged 20–24 (from 425 hospitalisations per 100,000 population to 740) and 40–44 (from 331 to 604).
Global Administrator

**Australian Defence Force suicide monitoring**

Historically, ex-serving ADF members have faced an increased risk of suicide. Reducing the rate of suicide remains a concern in the Australian community, and a priority for the Australian Government.

To increase understanding on the complex issue of suicide in serving and ex-serving ADF members, the AIHW has provided annual updates to monitor the incidence of suicide in permanent, reserve and ex-serving ADF members since 2017 (see Box 1). This work has been commissioned by the Department of Veterans’ Affairs.

**Rate of suicide by service status and sex, 2002-04 to 2017-19.**

The data can be viewed by selected veteran groups, with confidence intervals on or off, and up to two series can be compared at once. The graph shows the rate of suicide, per 100,000 population per year, for male permanent, male reserve, male ex-serving, and female ex-serving ADF members, for 3-year periods from 2002-04 to 2017-19. Of the four different data series, ex-serving males were consistently higher than the others in every year under analysis. Between the other three groups, these series are at a broadly similar level, with no one group being above the others.

**Figure 2: Rate of suicide by service status and sex, 2002-2004 to 2017-2019**

Select which data you want to view below and hover over a data point for detailed information.

Key findings

Permanent and reserve males are about half as likely to die by suicide as Australian males (51% and 48% lower respectively).
Overall, ex-serving ADF members are at a higher risk of suicide than other Australians, with males 24% more likely to die by suicide, and females 102% more likely (or about twice as likely). However, some subgroups of the ex-serving ADF members have different rates of suicide.

The suicide rate for ex-serving males who separate voluntarily is around one third of the rate of those who separate for involuntary medical reasons (73.1 compared with 22.2 per 100,000 population per year).

For more information see *Serving and ex-serving Australian Defence Force members who have served since 1985: suicide monitoring 2001 to 2019*.

**Box 1: Who is included in this report?**

**Permanent:** ADF members serving in a full time capacity in the Royal Australian Navy (Navy), Australian Army (Army) or the Royal Australian Air Force (Air Force) from 1 January 1985, and serving in a permanent capacity on 31 December 2019 or when they died.

**Reserve:** ADF members in the reserve forces for the Navy, Army or the Air Force from 1 January 1985 and who were in the reserve forces on 31 December 2019 or when they died. Most members leaving full-time service transition to the reserves (for a minimum of five years), unless prevented by medical or other reasons. The service status ‘Reserve’ includes members with a wide range of different experience and relationships to the ADF. For example, it includes personnel who have transitioned from full time service as well as both those who have joined in reserve capacity. Members provide service across a service spectrum that is based on their availability to render service. Some members may not render service in any capacity due to their personal circumstances, however they are liable to be called on by Government.

**Ex-serving:** ADF members in the fulltime or reserve services between 1 January 1985 and 31 December 2019, but who subsequently transitioned from Defence.
The use of mental health services, psychological distress, loneliness, suicide, ambulance attendances and COVID-19

While there has been a rise in the use of mental health services and an increase in psychological distress during the COVID-19 pandemic, the pandemic has not been associated with a rise in suspected deaths by suicide in 2020 and 2021, see Suspected deaths by suicide. Preliminary national mortality data published by the Australian Bureau of Statistics for 2019 and 2020 show that the rate of death by suicide in Australia was lower in 2020 (12.1 per 100,000 population) than in 2019 (12.9), see Deaths by suicide over time.

Deaths referred to the coroner where initial investigation points to suicide are referred to as ‘suspected deaths by suicide’. It can take a number of years for the coronial process to determine if suicide was the cause of death in a particular case. These data are not directly comparable with coroner-certified deaths as reported in Deaths by suicide in Australia or published by the Australian Bureau of Statistics as ‘Causes of Death, Australia’.

Use of mental health services

Psychological distress

Data on deaths by suicide

Ambulance attendances

References

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Suicide & self-harm monitoring

Suicide & self-harm monitoring: Geography

Reporting deaths by suicide and hospitalisations for intentional self-harm at smaller, more ‘localised’ geographical areas, can reveal information that may be masked by reporting for the whole of Australia or by states and territories—allowing for a better understanding of suicidal behaviours for local communities, policymakers and researchers.

Although suicide has a significant impact on the community, it is a relatively rare cause of death in Australia meaning that depending on the level of geography considered, there may be areas where there are very few—or even no—deaths by suicide recorded in a given year. The number of hospitalisations for intentional self-harm are approximately 10 times that of deaths by suicide; however, further disaggregation (or breakdown) of the data by age or sex reduces the numbers of events able to be reported for each group in each small geographical area in a single year. Strict privacy and confidentiality controls or concerns regarding statistical reliability mean that small numbers (or rates based on them) cannot be publicly reported, thereby reducing the coverage of reportable data as smaller geographical areas are considered.

Numbers and age-standardised rates (where they could be reliably calculated) of deaths by suicide and hospitalisations for intentional self-harm have been reported by PHN area and Statistical Areas level 3 and 4. For the reporting of suicide and hospitalised intentional self-harm data by Statistical Area, the smallest possible geographical area has been used while still allowing for maximum coverage of reportable data across these small geographical areas.

This section also contains global statistics on suicide—intended to provide a broad view of the issue across the world.

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Deaths by suicide by remoteness areas

About 28% of the Australian population live in regional and remote areas—areas outside Australia’s major cities. There are many positive aspects about living in regional and remote areas, including higher levels of life satisfaction compared with those in urban areas (Wilkins 2015), increased community interconnectedness and social cohesion, and higher levels of community participation, volunteering and informal support from their communities (Ziersch et al. 2009). However, Australians living in these areas face unique challenges due to their geographic isolation, and often have poorer health and welfare outcomes than those living in major cities.

For further information on how the statistics reported here were calculated see Technical notes.

Suicide deaths by remoteness area, Australia, 2010 to 2020.

The line graph shows the age-standardised rates of suicide for Very Remote, Remote, Outer Regional and Inner Regional areas and Major Cities from 2010 to 2020. Users can also choose to view age-standardised rates and numbers of deaths by suicide for remoteness areas by sex. Between 2010 and 2020, residents of Very Remote areas had the highest rates of suicide, except for 2015, when the highest rates were in Remote areas, followed by Outer Regional areas and then Very Remote areas. Major Cities recorded the lowest rates of deaths by suicide over the period. Very Remote areas had 2.2 times the rate of Major Cities in 2020 (10.3 deaths per 100,000 population compared with 22.9).

Suicide deaths by sex and remoteness areas, Australia, 2010 to 2020

Are people in regional and remote areas at greater risk of deaths by suicide?

From 2010 to 2020:
numbers of deaths by suicide were highest in Major Cities and fell as remoteness increased, while age-standardised suicide rates tended to increase with the increasing remoteness.

- Suicide rates for residents of Major Cities were the lowest of all 5 remoteness areas each year and remained relatively stable over the period (ranging from 9.5 deaths per 100,000 population in 2011 to 11.7 in 2017).
- Suicide rates in Very Remote areas generally increased from 22.2 deaths per 100,000 population in 2010 to 29.4 in 2019, falling to 22.9 in 2020. Fluctuations in rates are due largely to the small population and small numbers of deaths by suicide in these areas.
- Suicide rates for residents of Inner Regional, Outer Regional and Remote areas also fluctuated over the period from 12.6, 14.4 and 17.5 deaths per 100,000 population to 15.1, 19.3 and 18.0, respectively.
- The greatest proportion of deaths by suicide occurred in Major Cities and remained relatively stable at 61-65% over the period.

In 2020:

- The age-standardised suicide rate for residents of Major Cities (10.3 deaths per 100,000 population) was lower than the national rate of 12.1 deaths per 100,000 population.
- Rates for residents of all other remoteness areas were above the national rate.
- The rate for residents of Very Remote areas (22.9 deaths per 100,000 population) was 2.2 times that of the rate for residents of Major Cities (10.3 deaths per 100,000 population); however, numbers of deaths were small (46 deaths in Very Remote areas and 1,954 in Major Cities).
- The proportion of deaths by suicide occurring in Major Cities in 2020 was 63%.

References


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Intentional self-harm hospitalisations by remoteness areas

Hospitalisations data for patients with intentional self-harm injuries includes those with and without suicidal intent. For further information see the Technical notes.

Understanding the geographical distribution of hospitalisations due to intentional self-harm based on patients’ area of usual residence (see Technical notes for more information) can help target suicide prevention activities to areas in need.


The line graph shows age-specific rates of intentional self-harm hospitalisations for Very Remote, Remote, Outer Regional, Inner Regional, Major Cities and Total remoteness areas for all ages combined from 2012–13 to 2020–21. Users can also choose to view age-specific rate, numbers and proportion of hospitalisations for intentional self-harm by remoteness area and specific age groups. Between 2012–13 to 2020–21, rates for all ages were highest for residents of Very Remote areas, except for 2017–18, when the highest rate was for residents of Remote areas. Residents of Major Cities recorded the lowest rates of intentional self-harm hospitalisations during this period.

Are people in regional and remote areas at greater risk of intentional self-harm hospitalisations?

In 2020–21:

Source: AIHW National Hospital Morbidity Database
Supplementary table: NHMD S16
Latest data: 2020–21 (annual release)
residents of Very Remote areas recorded a rate of 178 hospitalisations per 100,000 population, compared to that of residents in Major cities (107 per 100,000 population) which recorded the lowest rate.

- two-thirds of intentional self-harm hospitalisations were residents of Major cities (66%)
- young people aged 15-19 had the highest rates of intentional self-harm hospitalisations in each remoteness area except Very Remote where those aged 20-24 years old had the highest rate.
- the highest rate of intentional self-harm hospitalisations overall was in the 15-19 age group in Remote areas (724 hospitalisations per 100,000 population), followed by the same age group in Outer Regional areas (542 per 100,000 population).

A similar pattern was seen with deaths by suicide as age-standardised suicide rates tended to increase with remoteness of place of residence see Suicide by remoteness areas.

How have rates of intentional self-harm hospitalisations changed for remoteness areas?

Between 2012-13 and 2020-21:

- overall rates of intentional self-harm hospitalisations tended to increase in Very Remote areas (from 172 to 178 hospitalisations per 100,000 population), Remote areas (from 146 to 171 per 100,000 population) and Outer Regional areas (from 136 to 149 per 100,000 population)
- rates fell in Inner Regional areas (from 125 to 120 per 100,000 population), and Major Cities (111 to 107 per 100,000 population) over this period.
- the highest increases in rates of intentional self-harm hospitalisations occurred in those aged 15-19 in Remote and Outer Regional areas (from 465 to 724 hospitalisations per 100,000 population and 367 to 542 hospitalisations per 100,000 population respectively) and in 20-24 year olds in Very Remote areas (from 351 to 524 hospitalisations per 100,000).
Deaths by suicide, by Primary Health Network areas

Where people live can impact on their risk of suicide and also their access to services. Reporting rates or numbers of deaths by suicide at Primary Health Network (PHN) areas allows for more localised information that may provide a better understanding of the incidence of deaths by suicide in the local community and allow clinicians, policymakers and researchers to better plan services or suicide prevention activities.

PHNs are organisations that connect health services across a specific geographic area (PHN areas). There are 31 PHN areas that cover the whole of Australia with the boundaries defined by the Australian Government Department of Health (https://www1.health.gov.au/internet/main/publishing.nsf/content/phn-maps-aust). For further information on how the statistics reported here were calculated see Technical notes.

Suicide deaths by Primary Health Network areas, Australia, 2010 to 2020.

The line graph shows the age-standardised rates of suicide for Australia and the Adelaide Primary Health Network (PHN) area from 2010 to 2020. Unlabelled and greyed rates for other PHNs are also displayed on the graph to show the range of rates across all 31 PHNs in Australia from 2010 to 2020. Users can choose to view age-standardised rates and numbers of deaths by suicide by selected PHN. From 2010 to 2020, the age-standardised rates of deaths by suicide across PHN areas generally ranged between 5.5 and 22.3 per 100,000 population with the Australian rate ranging between 10.5 and 13.2 over the same period.
How do suicide rates vary among PHN areas?

In 2020:
- age-standardised rates and numbers of deaths by suicide varied across PHN areas, ranging from 5.9 deaths per 100,000 population in the Western Sydney PHN area to 20.9 in the Country Western Australia PHN area
- the greatest number of deaths by suicide occurred in the Hunter New England and Central Coast PHN (194), which also had the highest number of deaths since 2016.

Data are not published for PHN areas where there are small numbers of deaths by suicide due to privacy and confidentiality concerns or other concerns about the quality of the data (for example, age-standardised rates cannot be published for Western Queensland for most years).
Suicide & self-harm monitoring

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Intentional self-harm hospitalisations by PHN areas

Hospitalisations data for patients with intentional self-harm injuries includes those with and without suicidal intent. For further information see the Technical notes.

The reporting of rates of intentional self-harm hospitalisations by PHN areas can provide localised information to enable PHNs to identify and investigate areas requiring more coordination of care to patients, by working directly with key primary and secondary health care providers and hospitals.

Intentional self-harm hospitalisations, by age and sex, by Primary Health Network areas, Australia, 2020-21.

The distribution plot shows the age-specific rates of intentional self-harm hospitalisations for males and females by all ages and broad age groups (0-24, 25-44, 45-64, 65 and over) for Primary Health Networks (PHNs) in 2020-21. Users can also choose to view horizontal stacked bar charts showing numbers and proportion of intentional self-harm hospitalisations for PHNs by all ages and age groups by sex. Rates for all ages were lowest in the Northern Sydney PHN for males (36.2 per 100,000 population) and South Western Sydney PHN for females (63.5). Rates for all ages were highest in Western Queensland PHN for males (199.7) and for females (363.1).

How do rates of intentional self-harm hospitalisations vary across PHN areas?

The rates of hospitalisations for intentional self-harm in 2020-21 varied greatly by PHN area.
In 2020–21:
- the Western Queensland PHN area had the highest rate (279 hospitalisations per 100,000 population) South Western Sydney PHN area had the lowest rate (52) (Supplementary table National Hospital Morbidity Database NHMD S7)
- the rate per 100,000 population for Australia was 116.

In 2020–21, rates of intentional self-harm hospitalisation for females tended to be highest in those aged 24 and below.
- the highest rate of hospitalisation for intentional self-harm for females aged 24 and below was in the Western Queensland PHN area (583 per 100,000 population; 58 hospitalisations)
- the next highest rate for females aged 24 and below was in the Brisbane North PHN (502 per 100,000 population; 834 hospitalisations).

In 2020–21, rates of intentional self-harm hospitalisation for males tended to be highest in those aged 25–44.
- the Western Queensland PHN area reported the highest rate for males in the 25–44 age group (271 per 100,000 population; 23 hospitalisations) followed by Country SA PHN (269 per 100,000 population; 147 hospitalisations).
Suicide & self-harm monitoring

Deaths by suicide, by local areas

Suicide incidence data in local communities provide insight into small populations and the variability of suicide rates across Australia. This is particularly pertinent for suicide prevention activities.

Deaths by suicide data have been aggregated (pooled) over two 5 year periods (2014–18 and 2015–2019) at Statistical area level 3 (SA3) to maximise coverage, while still addressing privacy concerns. To allow for further disaggregation by sex, these data are reported at the Statistical area level 4 (SA4).

Direct estimates of suicide rates based on small numbers can be highly variable from year to year. Rates based on 20 or fewer deaths over the 5-year period in each small geographic area have not been reported due to privacy and confidentiality issues and statistical concerns. See Technical notes to ensure the data are interpreted appropriately.

How to use these maps

Use the zoom and search functions to explore the map. Click on an area in the map to view additional information. Change maps by clicking on the folder icon in the top right. The colour shading indicates different rates of deaths by suicide, with darker shades indicating a higher rate.

For the best experience, use Chrome, Edge or Firefox browsers. For more information on browser compatibility, see Supported browsers (https://doc.arcgis.com/en/web-appbuilder/create-apps/supported-browsers.htm)

Deaths by suicide by SA3 areas, Australia, 2015-19.

The map shows the crude rate and number of deaths by suicide for persons by all ages for SA3 areas in Australia aggregated over 5 years, 2015-19). Users can also choose to view maps showing crude rates and numbers of deaths by suicide for males and females by SA4 areas.

Over the 5-year period 2015-19, reportable suicide rates in persons at SA3 level were highest in Kimberley in Western Australia (35.4 deaths per 100,000 population) and a number of Queensland regions including Burnett (29.1), Outback - South (27.3), and Tablelands (East) - Kuranda (26.8). Reportable suicide rates were lowest in the SA3 areas of Kogarah - Rockdale and Parramatta (all areas in Sydney, New South Wales) (all about 6 deaths per 100,000 population) and Keilor in Victoria (6.3).
Over the 5-year period 2015-2019, reportable age-standardised suicide rates in persons at the SA3 level, were:

- highest in the SA3 areas of Kimberley in Western Australia (35.4 deaths per 100,000 population), and a number of Queensland regions including Burnett (29.1), Outback - South (27.3), and Tablelands (East) - Kuranda (26.8)
- lowest in the SA3 areas of Kogarah - Rockdale and Parramatta (both areas of Sydney, New South Wales) (each 6 deaths per 100,000 population) and Keilor in Victoria (6.3).

Over the same period (2015-2019), reportable suicide rates in males, at the SA4 level, were:

- highest in the SA4 areas of Wide Bay in Queensland (37.3 deaths per 100,000 population), Cairns in Queensland (35.4), Northern Territory - Outback and Queensland - Outback (both 34.7)
- lowest in the SA4 areas of Sydney - Ryde, Sydney - Inner South West, and Sydney - Parramatta (all New South Wales) (9.9, 10.2 and 10.4 deaths per 100,000 population, respectively).

For females, suicide rates over the 5-year period 2015-2019, at the SA4 level, were:

- highest in the SA4 areas of Western Australia - Outback (North) (14.4 deaths per 100,000 population), Queensland - Outback (13.0), Western Australia - Outback (South) (12.4) and Northern Territory - Outback (12.3)
- lowest in the SA4 areas of Sydney - South West, Sydney - Parramatta and Sydney - Blacktown (all New South Wales) (3.1, 3.2 and 3.5 deaths per 100,000 population, respectively).

The AIHW is committed to continually improving the quality, ease-of-use, and timeliness of its products. In this product, we are using a new data visualisation tool to present results by geographical areas using maps. We welcome any feedback on this new presentation and hope that it will provide useful insights into the topic. As this tool is a relatively new addition to our website, we will be continuing to work to enhance its use and would welcome any feedback.

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Suicide & self-harm monitoring

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Intentional self-harm hospitalisations by local areas

Hospitalisations data for patients with intentional self-harm injuries includes those with and without suicidal intent. For further information see the Technical notes.
The rates of hospitalisations for intentional self-harm in small geographic areas can provide insight into the incidence of intentional self-harm in local communities.

Statistical Areas Level 3 (SA3s) is a type of geographical classification defined by the Australian Bureau of Statistics (ABS) to provide a regional breakdown of Australia. There are 336 geographical areas which cover states and territories (excluding SA3s associated with overseas territories and other) with boundaries defined by the ABS. Each SA3 generally has a population of between 30,000 and 130,000 people. Allocation to an SA3 for hospitalisation data is based on the patient’s usual place of residence, rather than where they received treatment.

Variations in hospitalisation rates between geographical areas may be due to a range of factors. Crude hospitalisation rates at SA3s should be interpreted with caution as areas with small populations are more sensitive to changes in the number of hospitalisations.

How to use these maps

Use the zoom and search functions to explore the map. Click on an area in the map to view additional information. Change maps by clicking on the tab at the top. The colour shading indicates different rates of intentional self-harm hospitalisations, with darker shades indicating a higher rate.

For the best experience, use Chrome, Edge or Firefox browsers. For more information on browser compatibility, see Supported browsers.

Intentional self-harm hospitalisations by SA3 areas, Australia, 2019-20.

The map shows the crude rate and number of intentional self-harm hospitalisations for females by all ages for SA3 areas in Australia in 2019-20. Users can also choose to view maps showing the same data for males or for persons by broad age groups (0-24, 25-44 and 45 and over). In 2019-20, rates of hospitalisations for intentional self-harm for females ranged from 36 per 100,000 population in Shoalhaven (New South Wales) to 603 in Alice Springs (Northern Territory). For males, rates ranged from 15 hospitalisations per 100,000 population in Parramatta (New South Wales) to 605 in Caboolture Hinterland (Queensland).
Variation across local areas

In 2020–21, rates of hospitalisations for intentional self-harm across the more than 300 SA3s, varied widely.

- for females, rates of hospitalisation ranged from 35 per 100,000 population in Queanbeyan (New South Wales) to 711 in Beenleigh (Queensland).
- for males, rates ranged from 12 hospitalisations per 100,000 population in Strathfield - Burwood - Ashfield (New South Wales) to 738 in Caboolture Hinterland (Queensland).

Rates of intentional self-harm hospitalisations for different age groups also varied widely between SA3s.

- rates of hospitalisations for intentional self-harm for those aged 24 and below ranged from 17 hospitalisations per 100,000 population in Merrylands - Guildford (New South Wales) to 771 in Caboolture Hinterland (Queensland)
- for the 25–44 age group, rates ranged from 28 hospitalisations per 100,000 population in Parramatta (New South Wales) to 1,022 in Caboolture Hinterland (Queensland)
- for those aged 45 and over, rates ranged from 19 hospitalisations per 100,000 population in Ku-ring-gai (New South Wales) to 437 in East Arnhem (Northern Territory).
Suicide & self-harm monitoring

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International estimates of death by intentional self-harm

Global statistics on suicide provide a broad view of the issue across the world and provide a means of evaluation to allow governments, policy makers and researchers to learn from each other to improve suicide prevention planning and decision making. The intent in providing this information is to contribute to an informed, open debate about ways to prevent suicide in Australia—not to create comparisons ranking suicide rates around the world.

These data are estimates based on modelling assumptions from the most recent update to the Global Burden of Disease Study (GBD 2019) and are sourced from the Global Health Data Exchange (GHDx), a data catalogue created and supported by the Institute for Health Metrics and Evaluation (IHME). For further information see Global Health Data Exchange [http://ghdx.healthdata.org/] and IHME Global burden of disease [http://www.healthdata.org/gbd/2019].

The interactive data visualisation below allows you to view the most recent data (rates of suicide and years of life lost) from Australia, Organisation for Economic Co-operation and Development (OECD) member countries, G20 nations (19 member nations plus the remaining 24 European Union nations individually represented) and World Health Organization regions. You can view data for any country or region using the ‘multiple values’ selector.


This line graph shows the self-harm measures from 1990-2020, in OECD countries, G20 countries and WHO regions. Users can filter the graph in various ways, including viewing the age-standardised rate or Years of Life Lost (YLL) due to deliberate self-harm, viewing the latest year of data only and filtering by age groups and sex. Users can also compare Australia to OECD countries, G20 countries and WHO regions. Overall, Australia tracks slightly above the averages of OECD countries, G20 countries and WHO regions in 2020. The average age-standardised suicide rate has declined steadily in OECD countries, G20 countries and WHO regions.
Data are presented as deaths or years of life lost due to death by intentional self-harm. The terms self-harm and suicide are used interchangeably. It should be noted that this terminology is different to that used in other sections of the Suicide & self-harm monitoring website, where the term self-harm refers to non-fatal injury rather than death. The ICD-10 codes used here include: X60-X64.9, X66-X84.9, Y87.0 which are slightly different to those reported in other sections of Suicide & self-harm monitoring.

International rates of deaths due to self-harm should be interpreted with caution as the quality of mortality data can vary between countries and there is a lack of consistency in methods of death registration. Also, due to stigma associated with suicide—and the fact that it is illegal in some countries—some countries are likely to underestimate suicide rates and this may bring into question the reliability of suicide-related statistics (particularly in countries with low reported suicide rates).

Overall, there has been a reduction in suicide rates since 1990 driven mostly by declines in Europe and South East Asia. Across other regions, suicide rates have remained relatively stable.

Suicide rates by country

Of OECD nations in 2019, age-standardised suicide rates ranged from 2.8 per 100,000 in Turkey to 23.9 per 100,000 in Lithuania. Australia’s 2019 estimated suicide rate (10.4 per 100,000 population) was in the middle of OECD countries (18 of 36) and was similar to those reported in Canada, Czech Republic, New Zealand, and Sweden. The suicide rates in Austria and the United States were higher at 11.3 and 11.7 per 100,000 of the population respectively. Suicide rates have been rising in the United States prior to 2020 (see Deaths of despair).

Similarly, in comparison with G20 nations in 2019, Australia was 23 of 43 (19 members nations plus remaining 24 European Union nations individually represented).

Suicide is more common in males than females in all countries

Suicide rates for males and females can be explored for any country or region on the interactive visualisations by selecting the drop down options for sex.

In 2019, in OECD countries, rates for males varied from 4.4 per 100,000 in Turkey to 42.2 in Lithuania, while female suicide rates ranged from 1.3 per 100,000 in Greece to 11.8 in the Republic of Korea. Again, Australia was in between with suicide rates of 16.2 per 100,000 for males and 4.8 per 100,000 for females.

Suicide rates by age

Suicide is one of the leading causes of death in young people in Australia; however, this does not necessarily mean suicide is more likely to occur in young people than in older age groups—it is largely a reflection of the fact that older Australians also die from many other causes.
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Suicide & self-harm monitoring: Behaviours & risk factors

Risk factors are behaviours or aspects of lifestyle, environmental exposures or inherited characteristics that can interact to influence people's risk of suicidal behaviours. Therefore, looking at risk factors at a population level can help target assistance.

It is important to remember that the presence of one or more of these risk factors cannot predict or explain suicide or intentional self-harm as each person's experience is unique. Experiencing any of these risk factors does not necessarily mean a person has—or ever will—attempt suicide, but establishing whether a person has any of these risk factors can help determine whether they are at increased risk. Also, some people will have suicidal thoughts without having a history of any risk factors.

Risk factors and behaviours can be modifiable (change over time; for example, illicit drug use) or non-modifiable (permanent or constant; for example, a personal history of self-harm). They can also be background factors (such as a childhood history of abuse) or recent stressful life events. The presence of these factors and their influence is different from person to person over their lifetime and can vary by sex, culture and other characteristics.

Information on these risk factors in Australians has been obtained from a number of sources by making greater use of existing data sets or by integrating multiple data sets. This includes:

- the presence of psychosocial factors (for example, a past history of self-harm; relationship problems; legal issues; bereavement; unemployment; homelessness; and disability) in deaths by suicide obtained by manual review of reports and coronial findings held by the National Coronial Information System (NCIS) by the Australian Bureau of Statistics
- the effect of differences in educational attainment and labour force status in deaths by suicide obtained by integrating the ABS Causes of Death data set with that of the Census 2011
- risk factors associated with suicide and self-inflicted injuries included in the Australian Burden of Disease Study 2015 (to be updated with 2019 data as soon as possible as per the recent AIHW report The health impact of suicide and self-inflicted injuries in Australia, 2019).

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Behavioural risk factor burden for suicide and self-inflicted injuries

The National Suicide and Self-harm Monitoring Project provided funding for the AIHW to produce a report on The health impact of suicide and self-inflicted injuries in Australia, 2019. The report estimates the combined impact of people dying prematurely from suicide and the direct health impacts on individuals living with injury due to self-harm. Note that the estimates do not take into consideration the potential mental health issues associated with self-harm or the effects suicide and self-harm can have on people’s families, friends and communities. Through detailed data visualisations the report presents time series data for the Australian population by age, sex and key population groups. The contribution of various modifiable risk factors to disease burden is also estimated.

Data on risk factors associated with suicide and self-inflicted injuries from the Australian Burden of Disease Study 2015 are included below. These visualisations will be updated and other information added with new data from The health impact of suicide and self-inflicted injuries in Australia, 2019 in the near future. In the meantime, please see the full report.

According to the AIHW’s Australian Burden of Disease Study 2015, suicide and self-inflicted injuries was the third leading cause of premature death from injury or disease, accounting for an estimated 5.7% of the total years of life lost in Australia (AIHW, 2019). Moreover, suicide and self-inflicted injuries is the leading cause of premature death in young males and females aged 15-24 and in those aged 25-44. See Burden of disease for further information.

What is burden of disease?

Burden of disease analysis measures the impact of living with illness and injury and dying prematurely. The method uses the summary measure ‘disability-adjusted life years (or DALY) to measure the years of healthy life lost by combining premature death (years of life lost; YLL) with years lived with disability (YLD). For further information including a more comprehensive explanation of the methodology and data sources used, see Australian Burden of Disease Study: methods and supplementary material 2015.

The burden of suicide and self-inflicted injuries due to behavioural risk factors, known as attributable burden, has also been estimated in the Australian Burden of Disease Study. These estimates reflect the amount of burden that could have been avoided if all people in Australia were not exposed to the risk factor.


The horizontal stacked bar graph shows the estimated number of disability-adjusted life years (DALYs) of suicide and self-inflicted injuries attributable to various behavioural risk factors by age and sex in Australia in 2015. Users can also choose to view the attributable years of life lost (YLL), the attributable years lived with disability (YLD), and the results of previous studies in 2003 and 2011. ‘Child abuse and neglect’ during childhood was estimated to be responsible for the greatest number of attributable DALY for suicide and self-inflicted injuries in both males and females in Australia in 2015.
Child abuse and neglect' during childhood was:

- consistently the leading behavioural risk factor contributing to the years of healthy life lost due to suicide and self-inflicted injuries in both males and females in 2003, 2011 and 2015
- associated with 23% of the years of healthy life lost due to suicide and self-inflicted injuries in males (about 24,000 DALYs) and 33% of the years of healthy life lost due to suicide and self-inflicted injuries in females (about 11,000 DALYs) in 2015 with the vast majority of these years of healthy life lost due to premature death.

In males, the second and third leading risk factors contributing to the years of healthy life lost due to suicide and self-harm were 'alcohol use' and 'illicit drug use' across all years of the Australian Burden of Disease Study 2015. In 2015:

- 'Alcohol use' was responsible for 17% of the years of healthy life lost due to suicide and self-inflicted injuries in males (about 17,000 DALYs)
- 'Illicit drug use' was responsible for 15% (about 16,000 DALYs).

For females, the second greatest contributor to the years of healthy life lost due to suicide and self-harm was 'intimate partner violence' (estimated in females only) which was consistent over time (2003, 2011 and 2015).

- 'Intimate partner violence' contributed 19% of the years of healthy life lost due to suicide and self-inflicted injuries in females (about 6,600 DALYs) in 2015.

Burden (YLL, YLD, DALY) of suicide and self-inflicted injuries attributable to selected risk factors, by age group and sex, Australia, 2003, 2011 and 2015.

This series of column graphs shows the same data as the previous visualisation with the data organised in a different way. The estimated number of disability-adjusted life years (DALY) of suicide and self-inflicted injuries attributable to selected behavioural risk factors is presented in males by age, in 2015. Users can also choose to view the data by sex, by attributable years of life lost (YLL), attributable years lived with disability (YLD) and by the results of previous studies in 2003 and 2011. The majority of attributable burden for each behavioural risk factor was experienced in ages 15-54, peaking at 25-34 years in males in 2015.
In 2015, ‘Child abuse and neglect’ during childhood was the greatest contributor to the years of healthy life lost due to suicide and self-inflicted injuries in both males and females in all age groups except those aged 85 and over; however, the majority of the burden was experienced in ages 15–54, with the number of DALYs for females being fairly similar across these age groups (about 2,000-2,500 DALYs) but peaking at age 25–34 for males (6,000 DALYs).

Similarly, the majority of the years of healthy life lost due to suicide and self-inflicted injuries attributable to ‘alcohol use’ or ‘illicit drug use’ was experienced in ages 15–54, peaking at 25–34 for males and 15–24 for females.

The years of healthy life lost due to suicide and self-inflicted injuries in females that were attributable to ‘intimate partner violence’ increased with age and peaked in the 45–54 age group.

Reference

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Psychosocial risk factors and deaths by suicide

Capturing information on risk factors relating to deaths by suicide can highlight areas of a person’s life experience that may need additional attention to provide the most effective suicide prevention interventions. However, it is important to note that the presence of one or more of these risk factors in an individual’s life does not necessarily mean they will have suicidal behaviours. The vast majority of people who experience these risk factors will not experience suicidal behaviours.

As part of the National Suicide and Self-harm Monitoring Project the AIHW has funded the Australian Bureau of Statistics (ABS) to identify and code (using ICD-10) psychosocial risk factors for deaths referred to a coroner, including deaths by suicide.

In 2020, the ABS added codes for the capture of the COVID-19 pandemic as a risk factor based on how it was described as part of the coronial investigation:

- F41.8 Pandemic-related anxiety and stress
- Z29.0 Isolation or quarantine (hotel or home), and
- Z29.9 Prophylactic measures put in place through health directives for pandemic response, including closure of business and stay at home measures.

Although there was a 5.4% reduction in the number of deaths by suicide from 2019 to 2020, there were 99 people who died by suicide in 2020 (3.2% of all suicides) who had the COVID-19 pandemic mentioned in either a police or pathology report, or a coronial finding. However, for people who died by suicide and had the COVID-19 pandemic mentioned as a risk factor, it did not appear as an isolated risk (they had, on average, 5 risk factors and 3 psychosocial risk factors). It is important to remember that circumstances relating to suicide are complex and multifaceted and a combination of multiple factors contribute to a person taking their own life rather than a single reason.

In 2020, of those who died by suicide with issues relating to the COVID-19 pandemic as a risk factor:

- almost 60% also had mood disorders, including depression
- over 50% also had problems relating to employment or unemployment
- 25 also had problems related to the social environment, including social isolation

When COVID-19 was mentioned as a risk factor it manifested in different ways. For some people direct impacts from the pandemic, such as job loss, lack of financial security, family and relationship pressures, and not feeling comfortable with accessing health care were noted. For others, a general concern or anxiety about the pandemic and societal changes were stated or anxiety about contracting the virus itself.

From 2017 to 2020, around two-thirds of all deaths by suicide had at least one or more psychosocial risk factor identified. The types of psychosocial risk factors associated with deaths by suicide were age dependent and differed throughout the lifespan.

Most frequently occurring psychosocial risk factors in coroner-certified suicide deaths by age and sex, Australia, 2020.

The horizontal bar graph shows the proportion of coroner-certified deaths by suicide with psychosocial risk factors identified in males in Australia in 2020. The user can choose to view the data by sex, by age groups, and by the number of deaths by suicide with psychosocial risk factors identified. The risk factor identified in the greatest proportion of coroner-certified deaths by suicide in males at all ages was a ‘personal history of self-harm’ followed by ‘disruption of family by separation and divorce’. Data for 2017, 2018 and 2019 are also available to view.
Most frequently occurring psychosocial risk factors in coroner-certified suicide deaths, by age and sex, Australia, 2020

From 2017 to 2020:
- the most commonly identified risk factor for males and females in all age groups except those 65 and over was a ‘personal history of self-harm’.
- ‘Limitation of activities due to disability’ was the most commonly identified risk factor in males and females aged 65 and over.
- ‘Disruption of family by separation and divorce’ and ‘problems in relationship with spouse or partner’ were generally the second- and third-most common risk factors in males and females aged under 55.
- ‘Problems related to other legal circumstances’ was also a common risk factor in males aged 25–34, 35–44 and 45–54 (associated with more than 10% of deaths by suicide).
- ‘Other problems relating to economic circumstances’ also emerged as a common risk factor in middle-aged males (45–54 and 55–64; associated with more than 10% of deaths by suicide in these age groups).
- ‘Disappearance and death of a family member’ was also identified as a frequently occurring psychosocial risk factor in males and females.
- ‘Prophylactic measure for pandemic response’ (including closure of business and stay at home measures) appeared as a one of the most frequently occurring psychosocial risk factors in males aged 55-64 (associated with 4% of deaths by suicide in 2020) and females aged 25-34, 55-64 and older (associated with 4% to 6% of deaths by suicide in these age groups in 2020).

There is no national standard for the collection of data on psychosocial factors—each state and territory has its own legislation and processes relating to coroner-certified deaths meaning that the type of information collected and held by the NCIS database differs slightly by jurisdiction. Also, due to the method used for the collection of data, protective factors are not included.

The ABS reviewed and coded psychosocial risk factors (defined as social processes and social structures which can have an interaction with individual thought, behaviour and/or health outcomes) associated with deaths by suicide in 2017 through a review of police, toxicology and pathology reports and coronial findings held by the NCIS. The AIHW is working with the ABS to continue this work and embed psychosocial risk factors in future national mortality data sets.

References


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Social and economic factors and deaths by suicide

There is growing evidence that social factors, including education, employment status, income level and wealth, play an important role in determining the risk of suicide in high income countries (Blakely et al, 2003).

A combination of factors contribute to someone considering suicide. Although some social factors may be associated with an increased risk of suicide, they cannot be considered a direct cause.

Understanding how social factors affect the risk of suicide is important to better inform strategies to reduce suicide in Australia and may help in the planning of more effective evidence-based prevention and intervention programs.

Using linked data from the Multi-Agency Data Integration Project (MADIP), the AIHW has conducted two studies and a further study in collaboration with the Australian National University’s Centre for Social Research and Methods to identify social and economic characteristics associated with greater risk of death by suicide. While these pieces of work are distinct, together they add to the growing understanding of population-level influences on suicide deaths in Australia.

The MADIP is a partnership among Australian Government agencies to link administrative and survey data. These studies used de-identified Australian Census of Population and Housing (2011) data linked with 7 years of Death Registrations (2011 to 2017). For more detailed information on the MADIP data asset, data linkage and analytical methods used, see Technical notes.

Data linkage combines information from multiple sources, while preserving privacy. All linked data sets used for analysis at the AIHW comply with legislative and regulatory standards, are securely stored and accessed, and meet ethical standards and community expectations. Protocols are in place to prevent privacy breaches or the unauthorised identification of individuals, and to ensure data security and restricted access to information.

The initial analysis, Educational attainment, employment and deaths by suicide, found that the cumulative risk of suicide in Australia is higher in those with fewer years of education and is lower among those who are employed. These results have been reported previously on Suicide and self-harm monitoring.

Additional analysis, Regression risk models for selected census variables, developed statistical regression models to examine the association between 10 identified predictive social and economic factors from the 2011 Census and deaths by suicide in Australia. The difference between this approach and the previous cumulative risk analysis, is that regression allows for adjustment for the various risk factors for suicide, which may make estimates more precise.

The multivariate (multiple variables) regression model showed that the strongest associations with deaths by suicide (relative to respective reference groups, and after adjusting for other variables in the model) included:

- being male (HR = 3.12; 95% CI 2.93 to 3.32)
- being widowed, divorced or separated (HR = 1.95; 95% CI 1.79 to 2.12)
- being in a lone person household (HR = 1.72; 95% CI 1.57 to 1.87)
- being unemployed (HR = 1.75; 95% CI 1.55 to 1.99) or not in the labour force (HR = 1.80; 95% CI 1.64 to 1.99)

Results for other variables are reported on Regression risk models for selected census variables.

In further analysis, Social and economic factors associated with suicide in Australia: a focus on individual income reported here for the first time, a longitudinal approach was taken, which enabled the investigation of changes to individuals’ income and employment status across time. It also examined the absolute risk, as well as relative odds of dying by suicide.

The longitudinal multivariate regression model confirmed findings from the Regression risk models for selected census variables study and produced additional insights into associations between deaths by suicide, income and income uncertainty including:

- those with higher income uncertainty had higher odds of suicide death relative to those with lower income uncertainty. Relative to those in the lowest income uncertainty quintile, the odds of dying by suicide increased by 1.91 (95% CI 0.29 to 0.44) for those in the highest income uncertainty quintile.
people who experienced longer periods of unemployment had higher odds of suicide death. Relative to those with no periods of unemployment, the odds of dying by suicide increase by 1.57 (95% CI 1.21-2.05) for those unemployed for 2 years; 1.75 (95%CI 1.36-2.26) for those unemployed for 3 years; 2.03 (95% CI 1.61-2.57) for those unemployed for 4 years; and 1.96 (95% CI 1.61-2.57) for those unemployed for 5 years.

Additional results are reported on Longitudinal analysis of income uncertainty and the full report can be found on Releases.
Deaths by suicide, by socioeconomic areas

There is a strong association between socioeconomic status and deaths by suicide. Age-standardised rates and numbers of deaths by suicide tend to be higher for those living in lower socioeconomic areas (more disadvantaged areas). However, it is important to remember that suicide can affect all Australians and each person’s experience is unique; not everyone who lives in these areas will experience suicidal behaviours.

Socioeconomic status classifies individuals according to the socioeconomic characteristics of the area in which they lived prior to their death by suicide. These areas are defined using the ABS Index of Relative Socio-Economic Disadvantage (IRSD), which reflects the average level of socioeconomic disadvantage of the area, rather than individuals (see Technical notes for more information). Variables used in calculating the IRSD index include household income, unemployment and levels of education.

Suicide deaths by socioeconomic area and mechanism, Australia, 2010 to 2020.

The series of line graphs show age-standardised suicide rates for socioeconomic areas (Quintiles 1 to 5) from 2010 to 2020 for all mechanisms combined. Users can also choose to view age-standardised suicide rates and numbers of deaths by suicide by mechanism, and specified mechanisms as a proportion of all mechanisms, for each socioeconomic area. For all mechanisms combined, suicide rates from 2010 to 2020 generally declined as the level of disadvantage lessened, from Quintile 1 to 5. In the lowest socioeconomic area (with most disadvantage; Quintile 1), rates ranged between 13.0 deaths per 100,000 population (in 2010) and 19.4 in 2017, falling to 18.1 in 2020. In the highest socioeconomic areas (least disadvantaged; Quintile 5) rates fluctuated from 7.5 to 10.1 deaths per 100,000 population over the period 2010 to 2020. In 2020, the age-standardised suicide rate for the lowest socioeconomic area (Quintile 1) was 18.1 deaths per 100,000 population and 8.6 in the highest socioeconomic area (least disadvantaged; Quintile 5).

Content warning:
The data in this visualisation might be distressing to some readers as it contains data on the modality of suicide deaths and attempts. Please consider your need to read the following information. If this material raises concerns for you or if you need immediate assistance, please contact a crisis support service, available free of charge, 24 hours a day, 7 days a week.

Please consider the Mindframe guidelines if reporting on these statistics.

Proceed to visualisation
From 2010 to 2020, age-standardised suicide rates were highest for those who lived in the lowest socioeconomic areas (most disadvantaged areas), and generally decreased as the level of disadvantage lessened.

In 2020, the overall suicide rate for people living in the lowest socioeconomic (most disadvantaged) areas (18.1 deaths per 100,000 population; Quintile 1) was twice that of those living in the highest socioeconomic (least disadvantaged) areas (8.6 deaths per 100,000 population; Quintile 5).

As for rates, the number of deaths by suicide for the 5 socioeconomic areas generally declined as socioeconomic disadvantage decreased.

**Suicide rates increased over time in lowest socioeconomic areas**

Age-standardised suicide rates increased for those living in the lowest socioeconomic areas (Quintile 1) from 13.0 deaths per 100,000 population in 2010 to a peak of 19.4 in 2017, before falling gradually to 18.1 deaths per 100,000 in 2020. In contrast, little change was observed for those living in the 2 highest socioeconomic areas (Quintiles 4 and 5).

Henley and Harrison (2019) found that over the period 2009-10 to 2015-16, suicide rates increased significantly for those living in the lowest socioeconomic areas (most disadvantaged) by an average 3.5% per year while little change was observed for those in the highest (least disadvantaged) socioeconomic areas (0.2% change per year).

**Methods of suicide vary by socioeconomic area**

Understanding the methods used for suicide can play an important role in suicide prevention. These data are provided to inform discussion around restriction of access to means as a policy intervention for the prevention of suicide.

Please consider your need to read the following information. If this material raises concerns for you or if you need immediate assistance, please contact a crisis support service, available free of charge, 24 hours a day, 7 days a week.

Please consider the Mindframe guidelines if reporting on these statistics.

The classification system used to code causes of deaths data, ICD-10, uses the term ‘mechanism’ to refer to the external cause of death. Throughout Suicide & self-harm monitoring ‘mechanism’ has been used in data visualisations, while the term ‘method’ has been used in the accompanying text.

Throughout 2010 to 2020, age-standardised suicide rates generally decreased with decreasing socioeconomic disadvantage for hanging (ICD-10 X70) and firearms (ICD-10 X72-X75). However, there was little difference in suicide rates between socioeconomic areas for poisoning excluding gas (ICD-10 X60-X66, X68-X69), poisoning by gas (ICD-10 X67) or other methods (ICD-10 X71, X76-X84, Y87.0).

In 2020, the rate of suicide by hanging for those living in the lowest socioeconomic areas (Quintile 1) was 2.7 times higher than that of those living in the highest socioeconomic areas (Quintile 5) (12.1 vs 4.5 deaths per 100,000 population). For firearms, poisoning by gas, exposure to poisonous substances excluding gas and other methods of suicide there was little variation between the highest and lowest socioeconomic areas in 2020.

The proportion of deaths by suicide by either exposure to poisonous substances excluding gas or other methods tended to increase with decreasing socioeconomic disadvantage while the proportion of deaths by hanging tended to decrease.

**Reference**

Intentional self-harm hospitalisations by socioeconomic areas

Hospitalisations data for patients with intentional self-harm injuries includes those with and without suicidal intent. For further information refer to the Technical notes.

Socioeconomic status classifies individuals according to the socioeconomic characteristics of the area in which they live. These areas are defined using the ABS Index of Relative Socio-Economic Disadvantage (IRSD), which reflects the average level of socioeconomic disadvantage of the area (see Technical notes for more information).

Intentional self-harm hospitalisations, by age, sex and socioeconomic areas, Australia, 2012-13 to 2020-21.

The line graph shows age-specific rates of intentional self-harm hospitalisations from 2012-13 to 2020-21 by socioeconomic areas from Quintile 1, the most disadvantaged, to Quintile 5, the least disadvantaged. Users can also choose to view age-specific rates, numbers and proportion of hospitalisations for intentional self-harm by socioeconomic areas by sex and specific age groups. For the period 2012-13 to 2020-21, rates of intentional self-harm hospitalisations were highest in the most disadvantaged areas (Quintile 1) with the lowest rates in the least disadvantaged areas (Quintile 5). Rates varied across the period for all Quintiles.

Does socioeconomic status affect risk of intentional self-harm?

Rates of hospitalisations for intentional self-harm tend to be higher for those living in lower socioeconomic (more disadvantaged) areas.

In 2020-21:
the rate for the most disadvantaged areas (Quintile 1) was 135 hospitalisations per 100,000 population, which is 1.5 times higher than the rate for the least disadvantaged areas (Quintile 5; 90 per 100,000 population).

A similar pattern was seen in suicide rates in 2020, see Suicide by socioeconomic areas.

How have rates of intentional self-harm hospitalisations changed for socioeconomic areas?

From 2012-13 to 2020-21:

- the highest proportion of intentional self-harm hospitalisations was for people living in the lowest socioeconomic (most disadvantaged) areas; this proportion has remained relatively stable over the period at around 25%
- rates for males in the lowest socioeconomic areas, Quintile 1 and 2, increased from 115 and 98 hospitalisations per 100,000 to 129 and 110 in 2016-17, respectively, and then decreased to 98 and 79 in 2020-21
- rates for females in the lowest (most disadvantaged) socioeconomic areas also increased from 179 in 2012-13 to 206 in 2016-17 and then decreased to 171 in 2020-21.

For both males and females, the highest age-specific rates of hospitalisations between 2012-13 and 2020-21 were recorded for those aged 25-44 in the lowest socioeconomic areas (Quintile 1), with the highest age-specific rates recorded for females in this age group.

- there was an increase in hospitalisations for all socioeconomic areas in females aged 0-24 from 2019-20 to 2020-21
- rates for females aged 25-44 in Quintile 1 increased from 243 per 100,000 population in 2012-13 to 272 in 2016-17 before falling to 206 in 2020-21
- rates for males aged 25-44 in Quintile 1 ranged from 197 in 2012-13 to 213 in 2016-17 then fell to 162 in 2020-21.

An increase in the rate of hospitalisations due to intentional self-harm for all socioeconomic areas was reported in 2016-17, which may be due to increases in hospitalisations in 3 states. Variation in hospital admission policy and practices between states and territories may have contributed to differences in the reporting of hospitalisation data. For further information, see the data quality statement.

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Deaths of despair

Since the late 1990s, there has been a marked increase in the overall mortality of middle-aged white non-Hispanic males and females in the United States (Case and Deaton 2015, 2017, 2020). This increase in mortality was largely attributed to increases in deaths by suicide, drug and alcohol poisonings (both accidental and undetermined intent) and deaths due to chronic liver diseases and cirrhosis—termed ‘deaths of despair’ by Case and Deaton (Case and Deaton, 2015, 2017, 2020). They linked this trend to a decline in economic security, a lack of universal health care and the widespread availability of opioids (Case and Deaton 2015, 2017, 2020). In 2017, Case and Deaton suggested that a similar increase in mortality from deaths of despair may be emerging in other countries (Case and Deaton 2017).

An analysis of Australian mortality data using methods similar to those used by Case and Deaton shows that Australians are not increasingly dying due to these ‘deaths of despair’ over time. The rates of combined deaths by suicide, alcoholic liver disease and cirrhosis, and accidental poisoning (deaths of despair) over the period 1997 to 2020 show no clear trend. Over the past 5 years the rate has remained
around 23 to 25 deaths per 100,000 population (from 2016 to 2020), similar to rates at the start of the period 1997 to 1999; between these dates rates remained lower (around 20 deaths per 100,000 population).

Males are more likely than females to die by these selected causes of death (suicide, alcoholic liver disease and cirrhosis, and accidental poisoning). At the start of the period, rates of combined deaths by suicide, alcoholic liver disease and cirrhosis, and accidental poisoning in males were at a high of around 36-38 deaths per 100,000 population from 1997 to 1999 and female rates were around 11 deaths—about 3.2 to 3.4 times lower than males. In the past 5 years from 2016, death rates for both males and females have shown little variation with male rates ranging between 34 and 37 deaths per 100,000 population and female rates around 13 to 14 deaths—that is, these causes of death are about 2.7 times more common in males than females.

For males, deaths by suicide accounted for the majority (53-67%) of these ‘deaths of despair’ over the period 1997 to 2020. In contrast, deaths by suicide tended to account for less than half (43-48%) of these deaths in females.

References


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Technical notes
This section contains more detailed information about the data sources, codes and classifications, and analysis methods used in compiling data for Suicide & self-harm monitoring.

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Data sources

National Mortality Database (NMD)

National Hospital Morbidity Database (NHMD)

National Ambulance Surveillance System (NASS)

Multi-Agency Data Integration Project (MADIP)

Australian Defence Force (ADF) Suicide Data Sources

Australian Burden of Disease Study (ABDS)

Data from suicide registers

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Codes and classifications

International Statistical Classification of Diseases (ICD) and Related Health Problems

The ICD, which was developed by the World Health Organization (WHO), is the international standard for coding morbidity and mortality statistics. It was designed to promote international comparability in collecting, processing, classifying and presenting these statistics. The ICD is periodically reviewed to reflect changes in clinical and research settings.

For Suicide & self-harm monitoring, deaths since 1964 (included in the NMD) classified as 'intentional self-harm' according to the relevant revisions of the ICD classification were included:

<table>
<thead>
<tr>
<th>ICD version</th>
<th>Years applicable</th>
<th>Intentional self-harm codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th revision</td>
<td>1958–1967</td>
<td>E970–E979 and E963</td>
</tr>
<tr>
<td>8th revision</td>
<td>1968–1978</td>
<td>E950–E959</td>
</tr>
<tr>
<td>9th revision</td>
<td>1979–1996</td>
<td>E950–E959</td>
</tr>
<tr>
<td>10th revision</td>
<td>1997 to date</td>
<td>X60–X84 and Y87.0</td>
</tr>
</tbody>
</table>

For deaths prior to 1964, please see General Record of Incidence of Mortality (GRIM) books GRIM 2017 Intentional self-harm (suicide) X60-X84, Y87.0 for ICD versions and codes used.

ICD-10-AM

Diagnosis, intervention and external cause data are reported to the NHMD by all states and territories using the International Statistical Classification of Diseases and Related Health Problems, 10th revision, Australian Modification (ICD-10-AM) and the Australian Classification of Health Interventions (ACHI). The Australian Coding Standards (ACS) are designed to be used in conjunction with the ICD-10-AM and ACHI to support sound coding convention.

The hospital separations reported were coded according to the applicable ICD-10-AM edition for the following years:

- 2010-11 to 2012-13: ICD-10-AM 7th edition

Records that satisfied the following criteria were included:

- a principal diagnosis in the ICD-10-AM range S00-T75, T79 (Injury, poisoning and certain other consequences of external causes)
- the first reported external cause code in the record in the ICD-10-AM range X60-X84, Y87.0 (external causes of morbidity).

Excluded from the criteria are:

- separations for which the care type was reported as Newborn (without qualified days), and records for Hospital boarders or Posthumous organ procurement
- separations with a mode of admission of 'transfer from another hospital'
- separations with reported ICD-10-AM code Z50 (Care involving the use of rehabilitation procedures) in additional diagnosis.

Changes to the Australian Coding Standard for Rehabilitation in 1 July 2015 ICD-10-AM (9th Edition), means that the ‘reason’ for rehabilitation (codes S00-T98 Injury, poisoning and certain other consequences of external causes) will be assigned the principal diagnosis and the rehabilitation code (Z50) will be sequenced as the additional diagnosis. This change results in an increase in the number of
separations in principal diagnoses with codes from S00-T98 from 1 July 2015 onwards. In order to reflect the number of injury separations where the primary clinical intent is acute care and not rehabilitation, records with Z50 (Care involving the use of rehabilitation procedures) in principal diagnosis or additional diagnosis for all years are excluded in the data set before and after the coding change.

Intentional self-harm hospitalisations reported in Suicide & self-harm monitoring may differ from other publications. The differences are small and may reflect differences in the inclusion criteria (e.g. Y87.0 included here) and/or exclusion criteria. Data may also be subject to periodic updates occurring after the original publication date.

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Methods

Crude rates

A crude rate provides information on the number of events relative to the population 'at risk' (for example, the entire population) in a specified period based on the Australian estimated resident population for the relevant analysis year. No age adjustments are made when calculating such a rate. Crude rates are used throughout this publication and expressed per 100,000 population.

Age-specific rates

Age-specific rates are calculated by dividing the number of events (for example, deaths) in each specified age group, by the total population at risk of the event in the same age group. Where age-specific rates are reported they are expressed per 100,000 population.

Age-standardised rates

Age-standardised rates are incidence rates that enable comparisons between populations that have different age structures and over time as the age structure of the population of interest may change. This effectively removes the influence of the age structure on the summary rate—it is the overall death rate that would have prevailed in the standard population if it had experienced at each age the death rates of the population under study.

Direct standardisation was used in this report. To calculate age-standardised rates, age-specific rates (grouped in 5-year intervals) were multiplied against a standard population. Directly age-standardised rates were adjusted using the current Australian standard population (that is, the non-recast Australian estimated resident population (ERP) as at 30 June 2001).

Rates are expressed as per 100,000 per population years.

Standardised mortality ratio

Standard mortality ratio (SMR) is a widely recognised measure used to account for differences in age structures when comparing death rates between populations. This method of standardisation can be used when analysing relatively rare events (i.e. where number of deaths is less than 25 for the analysed time period) (Curtin and Klein, 1995). The SMR has been used in the analysis of Australian Defence Force (ADF) deaths by suicide. It is used to control for the fact that the 3 ADF service status groups have a younger age profile than the Australian population, and rates of suicide vary by age in both the study populations and the Australian population. The SMRs control for these differences, enabling comparisons of suicide counts between the 3 service status groups and Australia without the confounding effect of differences in age. The SMR is calculated as the observed number of events (deaths by suicide) in the study population divided by the number of events that would be expected if the study population had the same age and sex specific rates as the as the comparison population.

Geography

Geographic location data are based on the area of usual residence of the deceased in the NMD or admitted patient in the NHMD. These data are specified using Statistical Area Level 2 (SA2) of the Australian Bureau of Statistics (ABS) Australian Statistical Geography Standard (ASGS) Edition 2016 for all states and territories. From 2016–17, the area of usual residence in the NHMD was voluntarily provided by some jurisdictions in the form of a Statistical Area level 1 (SA1).

Remoteness areas

Data for remoteness areas are based on a person’s usual residence, rather than where they died (NMD) or received treatment (NHMD). Data by remoteness are aligned to the 2016 Australian Statistical Geography Standard (ASGS) Remoteness Area Structure. Correspondence files are sourced from Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas (ABS cat. no. 1270.0.55.001). The 2016 ASGS Remoteness Structure categorises geographic areas in Australia into 5 classes of remoteness areas based on their relative access to services using the Accessibility/Remoteness Index of Australia which is, in turn, derived by measuring the road distance of a location from the nearest urban centre. The 5 classes are: Major cities, Inner regional, Outer regional, Remote, and...

Socioeconomic status

The Socio-Economic Indexes for Areas (SEIFA) is a suite of 4 summary measures, developed by the ABS based on Census data that ranks geographic areas across Australia in terms of their relative socioeconomic advantage and disadvantage. The SEIFA index used is the 2016 SEIFA Index of Relative Socioeconomic Disadvantage (IRSD) for use at Statistical Area Level 2 except for NHMD 2012-13 to 2016-17 data which uses the 2011 SEIFA IRSD.

The IRSD includes only measures of relative disadvantage. A low score indicates greater disadvantage in general (for example, an area has many households with low income, many people with no qualifications and many people working in low skill occupations). A high score indicates a relative lack of disadvantage in general (for example, an area has few households with low incomes, few people with no qualifications and few people working in low skilled occupations). It is important to understand that a high score reflects a relative lack of disadvantage rather than advantage and that the IRSD relates to the average disadvantage of all people living in a geographic area and does not reflect the socioeconomic status of all individuals living within the area.

Population-based Australian cut-offs for SEIFA quintiles have been used in this report. Population-based quintiles are calculated by dividing SEIFA areas into 5 equal groups in such a way that the population in each group is approximately equal. As SEIFA measures the characteristics of an area rather than individuals, the population in the most disadvantaged population-based quintile (‘1—Lowest’) is the 20% of the national population residing in the most disadvantaged areas, rather than the most disadvantaged 20% of the population.

See the Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA) Australia, 2016 [2] for further information on SEIFA.

Primary Health Network

Primary Health Networks (PHNs) were established in 2015 by the Department of Health to commission medical services and improve the coordination of care for patients across specific geographic areas (PHN areas). There are 31 PHN areas that cover the whole of Australia.

Statistics for PHN areas are derived by aligning deaths or hospitalisations area of usual residence data at Statistical Area Level 2 (SA2) to the 2017 PHN structure using ABS correspondence files, sourced from Australian Statistical Geography Standard (ASGS): Volume 3 - Non ABS Structures, July 2018 (ABS cat. no. 1270.0.55.003) [3].

Statistical Areas

Statistical Areas are a geographic classification defined by the Australian Bureau of Statistics. They encompass 4 levels, with increasing size and population: Statistical Areas Level 1 (SA1s); Statistical Areas Level 2 (SA2s); Statistical Areas Level 3 (SA3s); and Statistical Areas Level 4 (SA4).

Deaths by suicide and hospitalisations for intentional self-harm data at Statistical Area Level 2 (SA2) were aligned to Statistical Area Level 3 (SA3) and 4 (SA4) geographies based on the 2016 Australian Statistical Geography Standard (ASGS) structure. Correspondence files are sourced from Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas (ABS cat. no. 1270.0.55.001) [4].

Using confidence intervals to test for statistical significance

Statistical significance is a measure that indicates how likely it is that an observed difference, or a larger one, would occur under the conditions of the null hypothesis.

In the analysis of deaths by suicide in Australian Defence Force personnel, 95% confidence intervals (CIs) are provided for each standardised mortality ratio to indicate the level of uncertainty around these estimates due to random fluctuations in the number of deaths by suicide over time. Estimates produced using low numbers can be sensitive to small changes in numbers of deaths over time and will therefore have wide CIs. 95% CIs are provided within this report as they may account for the variation in absolute numbers of deaths by suicide over time (related to the small sample size). It is important to note that there are other sources of uncertainty, such as linkage error, that are not captured by the provided CIs.

Use of CIs is the simplest way to test for significant differences between service groups and Australian comparison groups. For the purpose of this monitoring site, differences are deemed to be statistically significant if CIs do not overlap with 1.0 in the case of an SMR. The CIs in this report cannot be used to determine the significance of differences over time between overlapping 3-year time periods.

References

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Data downloads

Data tables: 2020–21 National Hospital Morbidity Database—Intentional self-harm hospitalisations
Data | 26 Jul 2022

Data tables: 2021 National Ambulance Surveillance System—self-harm behaviours
Data | 26 Jul 2022

Data tables: Social and economic factors and deaths by suicide
Data | 26 Jul 2022
Download Data tables: Social and economic factors and deaths by suicide. Format: XLSX 148Kb

Data tables: Australian suicide and self-harm monitoring: a scoping review of analytic methods
Data | 09 Dec 2021

Data tables: 2020 National Mortality Database—Suicide (ICD-10 X60–X84, Y87.0)
Data | 30 Sep 2021
Download Data tables: 2020 National Mortality Database—Suicide (ICD-10 X60–X84, Y87.0). Format: XLSX 450Kb

Data tables: 2019 Global Burden of Disease—Deaths due to deliberate self-harm
Data | 20 Jul 2021

Data tables: National Mortality Database—Birth cohort analysis
Data | 29 Sep 2020
From report: Suicide in Australia: Trends and analysis 1964 to 2018

Data tables: National Mortality Database—Suicide (ICD-10 X60–X84, Y87.0) monthly variation
Data | 29 Sep 2020
From report: Suicide mortality in Australia: Estimating and projecting monthly variation and trends from 2007 to 2018 and beyond
Download Data tables: National Mortality Database—Suicide (ICD-10 X60–X84, Y87.0) monthly variation. Format: XLSX 138Kb
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### Notes

#### Latest data updates

For information on future planned updates to the publication see [Data update schedule](#).

- **5 October 2022**
  - Suspected deaths by suicide - Data from suicide registers

- **8 September 2022**
  - Suspected deaths by suicide - Data from suicide registers

- **5 August 2022**
  - Suspected deaths by suicide - Data from suicide registers
  - Australian prevalence estimates of suicidal behaviours

- **26 July 2022**
  - Research & information | Releases | Featured reports - Evaluation of the National Suicide and Self-harm Monitoring Project and System| Final Report
  - Behaviours & risk factors - Longitudinal analysis of income uncertainty & suicide (MADIP data asset)
  - Intentional self-harm hospitalisations 2020-21
  - Ambulance attendances - suicidal and self-harm behaviours
  - Research & information | Releases | Consultations - Data Requirements for the Portal

- **8 July 2022**
  - Suspected deaths by suicide - Data from suicide registers
  - COVID-19 - The use of mental health services, psychological distress, loneliness, suicide, ambulance attendances and COVID-19
  - Australia's health 2022: Suicide & intentional self-harm

- **8 June 2022**
  - Suspected deaths by suicide - Data from suicide registers

- **27 Apr 2022**
  - Suspected deaths by suicide - Data from suicide registers
  - COVID-19 - The use of mental health services, psychological distress, loneliness, suicide, ambulance attendances and COVID-19

- **3 Feb 2022**
  - Suspected deaths by suicide - Data from suicide registers

- **9 Dec 2021**
  - Suspected deaths by suicide - Data from suicide registers
  - COVID-19 - The use of mental health services, psychological distress, loneliness, suicide, ambulance attendances and COVID-19
  - Research & information | Releases | Featured Reports - A scoping review of analytic methods used within the peer reviewed literature
  - Research & information | Releases | Featured Reports - Addendum | Suicide mortality in Australia: Estimating and projecting monthly variation and trends from 2007 to 2018 and beyond

- **8 Dec 2021**
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Glossary

Aboriginal or Torres Strait Islander: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander. See also Indigenous.

Additional diagnosis: The diagnosis of a condition or recording of a complaint—either coexisting with the principal diagnosis or arising during an episode of admitted patient care (hospitalisation)—that requires the provision of care. Multiple diagnoses may be recorded.

ADF personnel: Serving, reserve and ex-serving members of the Australian Defence Force; civilian personnel employed by the Department of Defence are excluded.

Admission: An admission to hospital. The term hospitalisation is used to describe an episode of hospital care that starts with the formal admission process and ends with the formal separation process.

Administrative data collection: A data set that results from the information collected for the purposes of delivering a service or paying the provider of the service. This type of collection is usually complete (all in-scope events are collected), but it may have limitations for population-level analysis because the data are collected primarily for an administrative purpose.

Age structure: The relative number of people in each age group in a population.

Age-specific rate: The number of events for a specified age group over a specified period (e.g. calendar or financial year), divided by the total population in that age group. Reported as number per 100,000. The numerator and denominator relate to the same age group.

Age-standardised rates: are incidence rates that enable comparisons to be made between populations that have different age structures. The age structures of the different populations are converted to the same ‘standard’ structure, and then the rates that would have occurred with that structure are calculated and compared. Rates are expressed as per 100,000 per population years.

Associated cause(s) of death: All causes of death listed on the death certificate, other than the underlying cause of death. They include the immediate cause, any intervening causes, and conditions which contributed to the death but were not related to the disease or condition causing the death.

Attributable burden: The disease burden attributed to a particular risk factor. It is the amount of burden that could be avoided if the risk factor were removed or reduced to the lowest possible exposure.


Burden of disease: The quantified impact of a disease, injury or risk factor on a population, using the disability-adjusted life year (DALY) measure. One DALY is one year of ‘healthy life’ lost due to illness and/or death. The more DALY associated with a disease or injury, the greater the burden. The DALY is produced by combining the non-fatal and fatal burden together. People generally experience more burden as they age.

Cause(s) of death: All diseases, morbid conditions or injuries that either resulted in or contributed to death—and the circumstances that produced any such injuries—that are entered on the death certificate. The coding of causes of death produces an underlying cause of death and, for many deaths, one or more associated cause(s) of death. See also multiple causes of death.

Child: A person aged 0–14 years.

Comorbidity: The occurrence of 2 or more health conditions in a person at one time. While the coexistence of these multiple conditions may be unrelated, in many instances there is some association between them.

Confidence interval: A statistical term describing a range (interval) of values within which we can be ‘confident’ that the true value lies, usually because it has a 95% or higher chance of doing so.

Contemporary ex-serving (Australian Defence Force): Australian Defence Force members who have had at least 1 day of full-time or reserve service on or after 1 January 2001, and have since been discharged from the Australian Defence Force.
current serving (Australian Defence Force): Australian Defence Force members who have had at least 1 day of full-time service on or after 1 January 2001, and are still serving in the Australian Defence Force.

crude rate: The crude rate is the number of events recorded during a specified time period (e.g. calendar year) per 100,000 estimated resident population.

DALY: See disability-adjusted life year.

data linkage: The process of combining (linking) information from two or more different data sources that are believed to relate to the same entity (for example, the same individual or the same institution). This linkage can yield more information about the entity and, in certain cases, provide a time sequence—helping to ‘tell a story’, show ‘pathways’ and perhaps unravel cause and effect. The term is used synonymously with ‘record matching and ‘data integration’.

death: Any death which occurs in, or en route to Australia and is registered with a State or Territory Registry of Births, Deaths and Marriages.

determinant: Any factor that influences how likely a population or individual will stay healthy or become ill or injured. Factors that increase the chances of ill health are known as risk factors, while those that promote good health are protective factors. Services or other programs that aim to improve health are usually not included in this definition.

disability-adjusted life year (DALY): A measure of healthy life lost, either through premature death or living with disability due to illness or injury. It is the basic unit used in burden of disease and injury estimates.

episode of care: The period of admitted patient care between a formal or statistical admission and a formal or statistical separation, characterised by only one care type (see care type and separation).

estimated resident population (ERP): The official ABS estimate of the Australian population. The ERP is derived from the 5-yearly Census counts and is updated quarterly between each Census. It is based on the usual residence of the person. Rates are calculated per 1,000 or 100,000 mid-year (30 June) ERP.

external cause: The environmental event, circumstance, or condition that is regarded as the cause of injury, poisoning and other adverse effect.

fatal burden: The quantified impact on a population of dying prematurely due to disease or injury, measured by years of life lost (YLL).

hospitalisation: An episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending in a change of type of care (e.g. from acute care to rehabilitation).

incidence: Incidence is a measure of the number of new cases of a characteristic that develop in a population in a specified time period; whereas prevalence is the proportion of a population who have a specific characteristic in a given time period, regardless of when they first developed the characteristic.

incidence rates: incidence rates for death by suicide refers to the number of suicides during a specified period over the population within the same period. Rates are expressed as per 100,000 per population years.

Index of Relative Socioeconomic Disadvantage (IRSD): One of the set of Socio-Economic Indexes for Areas (SEIFA) for ranking the average socioeconomic conditions of a population in a geographic area. The IRSD was developed by the ABS for use at Statistical Area Level 2 and summarises attributes of the population that indicate disadvantage, such as low income, low educational attainment, high unemployment and jobs in relatively unskilled occupations.

Indigenous: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander. See also Aboriginal or Torres Strait Islander.

intentional self-harm: Includes attempts to suicide, as well as cases where people have intentionally hurt themselves, but not necessarily with the intention of suicide (e.g. acts of self-mutilation).

International Statistical Classification of Diseases and Related Health Problems (ICD): The World Health Organization’s internationally accepted classification of death and disease. The 10th Revision (ICD-10) is currently in use. The ICD-10-AM is the Australian Modification of the ICD-10; it is used for diagnoses and procedures recorded for patients admitted to hospitals.

monitoring (of public health): A process of keeping a regular and close watch over important aspects of the public’s health and health services through various measurements, and then regularly reporting on the situation, so that the health system and society more generally can plan and respond accordingly. The term is often used interchangeably with surveillance, although surveillance may imply more urgent watching and reporting, such as the surveillance of infectious diseases and their epidemics.

morbidity: The ill health of an individual and levels of ill health in a population or group.

mortality: Number or rate of deaths in a population during a given time period.

multiple causes of death: All causes listed on the death certificate. This includes the underlying cause of death and all associated causes of death. This information is useful for describing the role of all diseases involved in deaths, where there is more than one cause contributing to the death. For deaths where the underlying cause was identified as an external cause multiple causes include circumstances of injury, the nature of injury as well as any other conditions reported on the death certificate.
non-fatal burden: The quantified impact on a population of ill health due to disease or injury, measured as years lived with disability (YLD).

non-Indigenous: People who have declared that they are not of Aboriginal or Torres Strait Islander descent.

prevalence: The number or proportion (of cases, instances, and so forth) in a population at a given time.

prevention (of suicide): Action to reduce or eliminate the onset, causes, complications or recurrence of suicide.

Primary Health Networks (PHNs): Primary Health Networks were established on 1 July 2015 by the Australian Government Department of Health. They are independent primary health care organisations that commission services and are operated by not-for-profit companies, informed by clinical councils and community advisory committees.

Primary Health Network (PHN) areas: PHNs connect health services across a specific geographic area (a PHN area), with the boundaries defined by the Australian Government Department of Health. There are 31 PHN areas that cover the whole of Australia.

principal diagnosis: The diagnosis established after study to be chiefly responsible for occasioning an episode of admitted patient care (hospitalisation). Diagnoses are recorded using the relevant edition of the International statistical classification of diseases and related health problems, 10th revision, Australian modification (ICD-10-AM).

protective factors: Factors that enhance the likelihood of positive outcomes and reduce the chance of negative consequences from exposure to risk.

psychological distress: Psychological distress is commonly measured using the Kessler Psychological Distress Scale—10 items (K10). The K10 questionnaire was developed to yield a global measure of psychosocial distress, based on questions about people's level of nervousness, agitation, psychological fatigue and depression in the past four weeks. The Kessler 6 Scale is an abbreviated version of K10.

psychosocial factors: Social processes and social structures which can have an interaction with individual thought, behaviour and/or health outcomes.

public health: Activities aimed at benefiting a population, with an emphasis on prevention, protection and health promotion as distinct from treatment tailored to individuals.

quintile: A group derived by ranking the population or area according to specified criteria and dividing it into five equal parts. Commonly used to describe socioeconomic areas.

rate: A rate is one number (the numerator) divided by another number (the denominator). The numerator is commonly the number of events in a specified time. The denominator is the population ‘at risk’ of the event. Rates (crude, age-specific and age-standardised) are generally multiplied by a number such as 100,000 to create whole numbers.

remoteness area: A classification of the remoteness of a location using the Australian Statistical Geography Standard Remoteness Area Structure (2016) which divides Australia into 5 classes of remoteness based on their relative access to services using the Accessibility and Remoteness Index of Australia which is, in turn, derived by measuring the road distance of a location from the nearest urban centre. The 5 Remoteness Areas are Major cities, Inner regional, Outer regional, Remote and Very remote.

reserve (Australian Defence Force): Australian Defence Force members who have had at least 1 day of reserve service on or after 1 January 2001.

risk factor: Any attributes, characteristics or exposures that increase the likelihood of a person developing a health condition or experiencing an event.

separation (from hospital): An episode of care for an admitted patient, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending in a change of type of care (for example, from acute care to rehabilitation). Separation also means the process by which an admitted patient completes an episode of care either by being discharged, dying, transferring to another hospital or changing type of care.

social determinants of health: The circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies and politics.

socioeconomic status: The social and economic position of an individual or group within the larger society. In this monitoring site, socioeconomic status is reported using the Socio-Economic Indexes for Areas, typically for 5 groups, from the most disadvantaged (lowest socioeconomic status areas) to the least disadvantaged (highest socioeconomic status areas).

Socio-Economic Indexes for Areas (SEIFA): A set of indexes, created from Census data, that represent the socioeconomic status of geographical areas in Australia according to their relative socioeconomic advantage and disadvantage. The SEIFA index used in this report is the Index of Relative Socioeconomic Disadvantage (IRSD). It is important to understand that the index value reflects the overall or average level of disadvantage of the population of an area; it does not reflect the socioeconomic status of individuals living within the area.

Socio-Economic Indexes for Areas (SEIFA) quintiles: Population-based quintiles are calculated by dividing SEIFA areas into 5 equal groups in such a way that the population in each group is approximately equal. As SEIFA measures the characteristics of an area rather than individuals, the population in the most disadvantaged population-based quintile (‘1—Lowest’) is the 20% of the national population residing in the most disadvantaged areas, rather than the most disadvantaged 20% of the population.
statistical areas: A geographical classification defined by the ABS. They encompass four levels, with increasing size and population: Statistical Areas Level 1 (SA1s); Statistical Areas Level 2 (SA2s); Statistical Areas Level 3 (SA3s); and Statistical Areas Level 4 (SA4s).

statistical significance: A statistical measure indicating how likely the observed difference or association is due to chance alone. Rate differences are deemed to be statistically significant when their confidence intervals do not overlap, since their difference is greater than what could be explained by chance.

suicidal ideation: Serious thoughts about ending one’s own life.

suicidal behaviours: The collective term for suicidal ideation, suicide plans and suicide attempts.

suicide: An action intended to deliberately end one’s own life.

total burden: The sum of fatal burden (YLL) and non-fatal burden (YLD).

underlying cause of death: The disease or injury that initiated the train of events leading directly to a person’s death, or the circumstances of the accident or violence that produced the fatal injury. See also cause(s) of death and associated cause(s) of death.

usual residence: The area of the address at which the deceased lived or intended to live, for 6 months or more prior to death.

years lived with disability (YLD): The number of years of what could have been a healthy life that were instead spent in states of less than full health. YLD represent non-fatal burden.

years of life lost (YLL): The number of years of life lost due to premature death, defined as dying before the ideal life span. YLL represent fatal burden.
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Archived content
For the latest data, please see Data downloads.

The below data tables contain previously published data that have now been superseded.

Notes for archived data downloads

- **National Hospital Morbidity Database—Intentional self-harm hospitalisations**
  The estimated resident populations used in rates calculations throughout this data table have been revised in more recent updates.

- **National Mortality Database—Suicide (ICD-10 X60–X84, Y87.0)**
  The estimated resident populations used in rates calculations throughout this data table have been revised in more recent updates.

Data tables: 2019 National Ambulance Surveillance System
Data
Source: National Ambulance Surveillance System for attendances related to self-harm behaviours and mental health

Data tables: 2019 National Hospital Morbidity Database—Intentional self-harm hospitalisations
Data
Source: National Hospital Morbidity Database
Download Data tables: 2019 National Hospital Morbidity Database—Intentional self-harm hospitalisations. Format: XLSX 394Kb XLSX 394Kb

Data tables: 2019 National Mortality Database—Suicide (ICD-10 X60-X84, Y87.0)
Data
Download Data tables: 2019 National Mortality Database—Suicide (ICD-10 X60-X84, Y87.0). Format: XLSX 440Kb XLSX 440Kb

Data tables: 2020 National Hospital Morbidity Database - Intentional self-harm hospitalisations
Data
Source: National Hospital Morbidity Database

Data tables: June 2021 National Ambulance Surveillance System—self-harm behaviours
Data

Data

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