



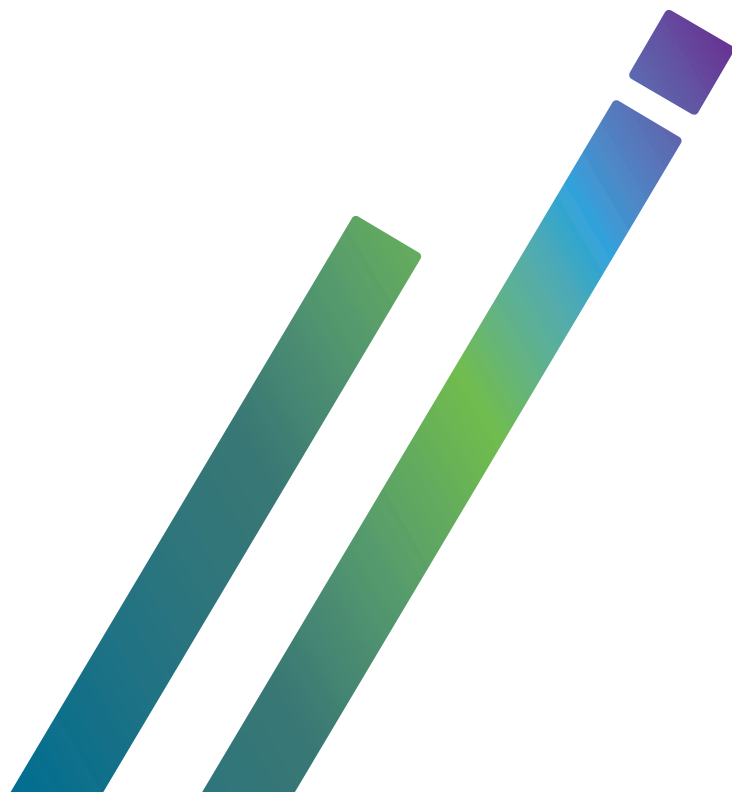
Australian Government

Australian Institute of
Health and Welfare



National suicide monitoring of serving and ex-serving Australian Defence Force personnel

2020 update



AIHW

National suicide monitoring of serving and ex-serving Australian Defence Force personnel: 2020 update

PHE 222

Released 09/10/2020

Download of report available at

<https://www.aihw.gov.au/reports/veterans/national-veteran-suicide-monitoring>

In the latest 3-year period analysed (2016-2018) the age-adjusted rate of suicide in serving males was 37% lower than in Australian males. Among reserve males it was 47% lower than in Australian males. Between 2007 and 2018 the rate of suicide in ex-serving males who discharged on medical grounds was higher than in Australian males, while among those who discharged voluntarily it was similar.

Latest findings

- In 2016 to 2018 the age-adjusted rate of suicide in serving males was 37% lower than in Australian males
- In 2016 to 2018 the age-adjusted rate of suicide in reserve males was 47% lower than in Australian males
- Ex-serving males who discharged from service voluntarily had similar rates of suicide to Australian males
- Ex-serving males who discharged from service on medical grounds had higher rates of suicide than Australian males

About this report

There is ongoing concern in the Australian community about suicide in serving and ex-serving ADF personnel. In particular, ex-serving ADF personnel have historically faced an [increased risk of suicide](#). Reducing the rate of serving and ex-serving suicide is a priority for the Australian Government.

Recent government inquiries have highlighted the need to improve the integration of service responses to meet the health and wellbeing needs of serving and ex-serving ADF personnel (JSCFADT 2015). The need to invest in prevention and early intervention strategies to improve health and wellbeing outcomes for these groups has also been highlighted. The Government has introduced further suicide prevention and mental health support services for serving and ex-serving ADF personnel and their families (AG 2017).

On 5 February 2020, the Prime Minister announced the establishment of a National Commissioner for Defence and Veteran Suicide Prevention (National Commissioner) to inquire into suicides among serving and ex-serving ADF members. As a first priority, the National Commissioner will undertake an Independent Review of Past ADF and Veteran Suicides (the Review). The National Commissioner will be supported by expert technical assistance from the Australian Commission on Safety and Quality in Health Care (ACSQHC) and the Australian Institute of Health and Welfare (AIHW). The Review will predominantly focus on deaths by suicide among ADF members and veterans who have had one day or more of service since 1 January 2001, where the death occurred between 1 January 2001 and 31 December 2018 and will identify and investigate the risk and protective factors relevant to past deaths by suicide among ADF members and veterans. This will build on the analysis provided in the current report, incorporating data from a wider array of sources.

We acknowledge and pay our respects to those who have passed away, or been affected, by suicide. We are committed to ensuring our work continues to inform improvements in mental health, suicide awareness and prevention.

What is in this report?

This online report *National suicide monitoring of serving and ex-serving Australian Defence Force personnel* provides annual updates to information on the level of suicide among serving and ex-serving ADF personnel with at least 1 day of ADF service since 2001 across three service status groups (Box 1).

Box 1: ADF service status groups

Serving full time: ADF personnel serving in a regular capacity in the Royal Australian Navy (Navy), Australian Army (Army) or the Royal Australian Air Force (Air Force) on or after 1 January 2001, on continuous full-time service, or participating in a gap year program.

Reserve: ADF personnel in the active or inactive reserve forces for the Navy, Army or the Air Force on or after 1 January 2001. Most personnel leaving full-time service transition to the inactive reserve forces, unless prevented by medical or other grounds.

Ex-serving: ADF personnel in the serving or reserve population on or after 1 January 2001, who were subsequently discharged.

The information in this report is based on fact of death information from the National Death Index (NDI), cause of death information from the National Mortality Database (NMD) and Defence Suicide Database (DSD), as well as information on personnel in the three ADF service status groups from Department of Defence personnel systems. For more detail, see Data sources.

The study includes ADF personnel with service on or after 1 January 2001, based on when the Department of Defence personnel system was introduced.

- Numbers of suicides are reported from 2001 onwards, based on the latest available cause of death data.
- Rates of suicide are reported from 2002 onwards, based on available population data for the three ADF service status groups.
- While some numbers of suicides can be reported on a yearly basis, 3-year rolling aggregations are used to report the more detailed information.
- Rates of suicide are reported in 3-year aggregations for 2007 onwards as changes to the Australian Bureau of Statistics (ABS) coding guidelines were applied for deaths registered from 1 January 2007 and comparable rates for prior years cannot be calculated.

This report is the third annual update to the ongoing monitoring of suicides in serving and ex-serving ADF personnel. Research relating to veterans undertaken by the AIHW can be accessed on the AIHW website. A detailed report, [Incidence of suicide in serving and ex-serving Australian Defence Force personnel: detailed analysis 2001-2015](#), was released in January 2018. This report examined the incidence of suicide among serving and ex-serving personnel and further identified characteristics that may be associated with suicide risk. The current report contains information on suicide rates in ex-serving males analysed by service (Army, Navy or Air Force) and by discharge reason (voluntary, medical or other involuntary) for the first time.

Each annual release updates previously published numbers of suicides to incorporate any updates to the source data. These updates add more recently identified suicides, leading to small increases in some suicide rates. The main reasons for changes to previously published results are:

- a lag in cause of death information for the most recent year of data, where a death is registered in the following year
- revisions to cause of death data by the ABS
- improvements in information available to the study.

More detail on these reasons for changes to previously published information is provided in the Technical Notes.

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Notes on measuring suicide rates 2002 to 2018

There are differences between the demographic profiles of the three Australian Defence Force (ADF) service status groups and the Australian population (Box 2). Because of these differences, comparisons of numbers of suicides between the ADF service status groups and the Australian population are not straightforward.

Box 2: Differences between the ADF and Australian populations

Compared with the ADF service status groups, the Australian population is older on average and around 50% male, while the ADF service status groups are younger and around 85% male. These age and sex differences need to be accounted for when examining differences in suicide levels between these populations.

Further, the annual population size for each of the service status groups differs. While the serving and reserve populations are relatively stable over time, the ex-serving population in this study started at zero (0) on 1 January 2001 and increased each year as personnel discharge. Unlike the serving and reserve populations, the ex-serving population is also ageing over time.

To assist in making comparisons, this report presents rates of suicide and Standardised Mortality Ratios (SMRs). Suicide rates contextualise information on the number of deaths by suicide by taking into account the size of the underlying population. SMRs provide an even more meaningful comparison by controlling for the difference in age structures between the three ADF service status groups and its equivalent comparison (Australian) population. SMRs are presented as comparisons of age-adjusted rates.

Data for 2001 are not included in the calculation of rates in this report, as data for the serving and reserve populations were not available before 2002 due to a change in Defence personnel management systems at that time. Analysis of ex-serving personnel was restricted to data from 2002 onwards, in line with reporting for serving and reserve groups. For information on interpreting these results, including changes to previously published data, see Box 2 and the Technical Notes.

Confidence Intervals

Confidence intervals are presented in this report to reflect some of the uncertainty in the suicide rates calculated for the three ADF service status groups and the Australian population. Confidence intervals provide one way to assess the uncertainty in estimated rates due to fluctuations that may occur in the number suicides over time. There are other sources of uncertainty, such as linkage error, that are not captured by these intervals.

As time passes and more data become available, greater confidence can be attached to any consistent observed differences in outcomes between the ADF population and the comparable Australian population.

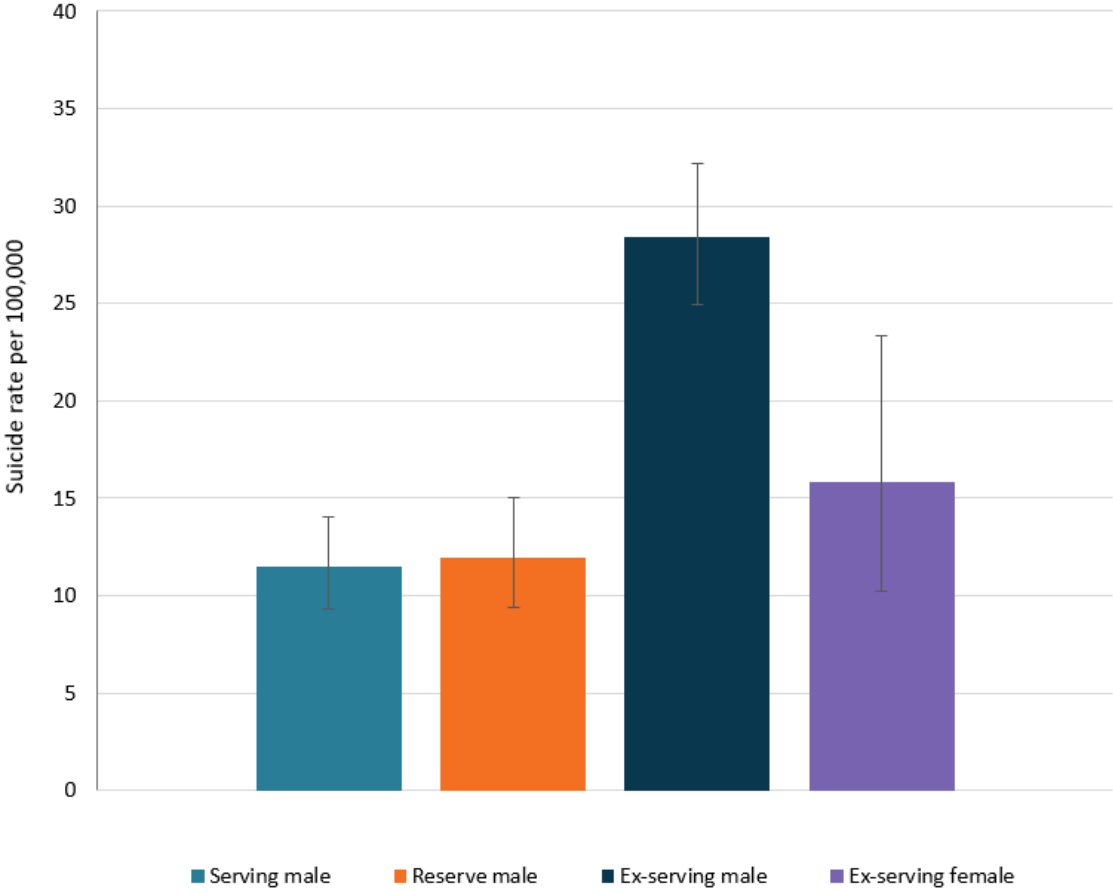
See the Technical Notes for more information on confidence intervals.

Suicides by service status group

Suicide rates have been calculated for the period 2002 to 2018 for each service group. These rates can be validly compared with each other and can be compared with rates for the Australian population. Due to the small number of deaths by suicide among females across the ADF service status groups it was only possible to present the suicide rate for ex-serving females. The suicide rates for 2002-2018 are shown in Figure 1. The suicide rate for ex-serving males between 2002 and 2018 was 28 per 100,000, which was higher than the rates for serving (11 per 100,000) and reserve males (12 per 100,000). The rate for ex-serving males was also higher than the rate for ex-serving females, which was 16 per 100,000 over the same period.

The suicide rates for serving and reserve males were both lower than Australian males in the same age ranges over the period 2002 to 2018. The rates for ex-serving males and ex-serving females were both higher than in the Australian population over the same period.

Figure 1: Suicide rates for 2002-2018, ADF service groups, males and females



Source: AIHW analysis of linked PMKeyS—NDI data 2002-2018.

Age-adjusted rates by service status group

SMRs were calculated for the period 2002-2018 to control for differences in age distributions between the ADF and Australian populations.

The age-adjusted rate of suicide, when compared to the Australian population was:

- 50% lower for serving males, SMR = 0.50 (95% CI = 0.40-0.61)
- 49% lower for males in the reserves, SMR = 0.51 (95% CI = 0.40-0.64)
- 21% higher for ex-serving males, SMR = 1.21 (95% CI = 1.06-1.38)
- 127% (or 2.27 times) higher for ex-serving females, SMR = 2.27 (95% CI = 1.47-3.35).

These differences were all found to be statistically significant.

Unlike suicide rates, these SMRs cannot be used to compare suicide rates between service groups or across time. This is due to the fact that each SMR a measure that provides a comparison that is specific to the two populations involved.

Suicides by service group over time

Between 2001 and to 2018 there were 465 certified deaths by suicide among males and females with at least 1 day of Australian Defence Force (ADF) service since 1 January 2001. Of these, 267 (57%) occurred among ex-serving personnel (Table 1).

The number of suicides in each service group is presented in Table 1, by single year. It should be noted that the ex-serving population increased each year throughout the study period (2001-2018) as more personnel were discharged from the ADF (see Supplementary table S6.1). Changes in numbers of suicides over time need to be interpreted in the context of these changes.

Table 1. Number of deaths by suicide, ADF service status groups, males and females, 2001 to 2018

Year	Serving and Reserve^(a)	Ex-serving^(a)	Total in all ADF service groups^(a)
2001	n.p.	n.p.	19
2002	n.p.	n.p.	15
2003	8	10	18
2004	n.p.	n.p.	15
2005	n.p.	n.p.	10
2006 ^(b)	7	6	13
2007 ^(c)	11	9	20
2008	9	11	20
2009	13	13	26
2010	13	14	27
2011	11	13	24
2012	8	18	26
2013	12	22	34
2014	14	20	34
2015	9	32	41
2016	15	27	42
2017	15	33	48
2018	5	28	33
Total	198	267	465

n.p. Not published because of small numbers or confidentiality.

(a) Consists of deaths by suicide in males and females for serving, reserve and ex-serving ADF personnel.

(b) From 2006 onwards, the ABS implemented a revisions process for coroner-certified deaths (such as suicides). This improved data quality by enabling additional deaths by suicide to be identified beyond initial processing (ABS 2018). For detailed information see Technical Notes.

(c) New ABS coding guidelines were applied for deaths registered from 1 January 2007. The new guidelines improve data quality by enabling deaths to be coded as suicide by ABS mortality coders if evidence indicates the death was from intentional self-harm (ABS 2018). For detailed information see Technical Notes.

Source: AIHW analysis of linked PMKeyS-NDI data 2001–2018.

Suicide rates by service group over time

Rates over time are presented using data summed over 3-year periods, to avoid misinterpretation of trends due to variations in small numbers. For the rolling 3-year periods from 2007 to 2018, the rate of suicide among:

- serving males was between 8 and 18 per 100,000 population
- males in the reserves was between 10 and 15 per 100,000 population
- ex-serving males was between 25 and 33 per 100,000 population.

Significance testing using confidence intervals (CIs) has been used to examine the differences between groups. See Technical Notes and Data tables for more detail.

The suicide rate in serving males in the most recent 3-year period (2016-2018) was 15 per 100,000, which was significantly lower than in Australian males. The suicide rate among serving males was consistently lower than the rate in Australian males, and this difference was found to be significant in every 3-year period analysed except for 2015–2017.

The suicide rate in reserve males in the most recent 3-year period (2016-2018) was 13 per 100,000, which was significantly lower than in Australian males. The suicide rate in reserve males was consistently lower than the rate in Australian males, and this difference was found to be significant for the most recent 3-year periods from 2013–2015 to 2016–2018.

The suicide rate in ex-serving males in the most recent 3-year period (2016-2018) was 29 per 100,000, which was higher, though not significantly different to the rate in Australian males. The suicide rate in this group was consistently higher than the rate in Australian males, and this difference was significant in the 3-year periods between 2013–2015 and 2015–2017.

The interactive graph below presents the suicide rates for males in each of the three ADF service status groups and the rates for the comparative population of Australian males, for all 3-year periods from 2007-2009 to 2016-2018.

Please note: The graph below is an image of an interactive graph available in the online version of this report. See Appendix for other data selections available for rates of suicide.

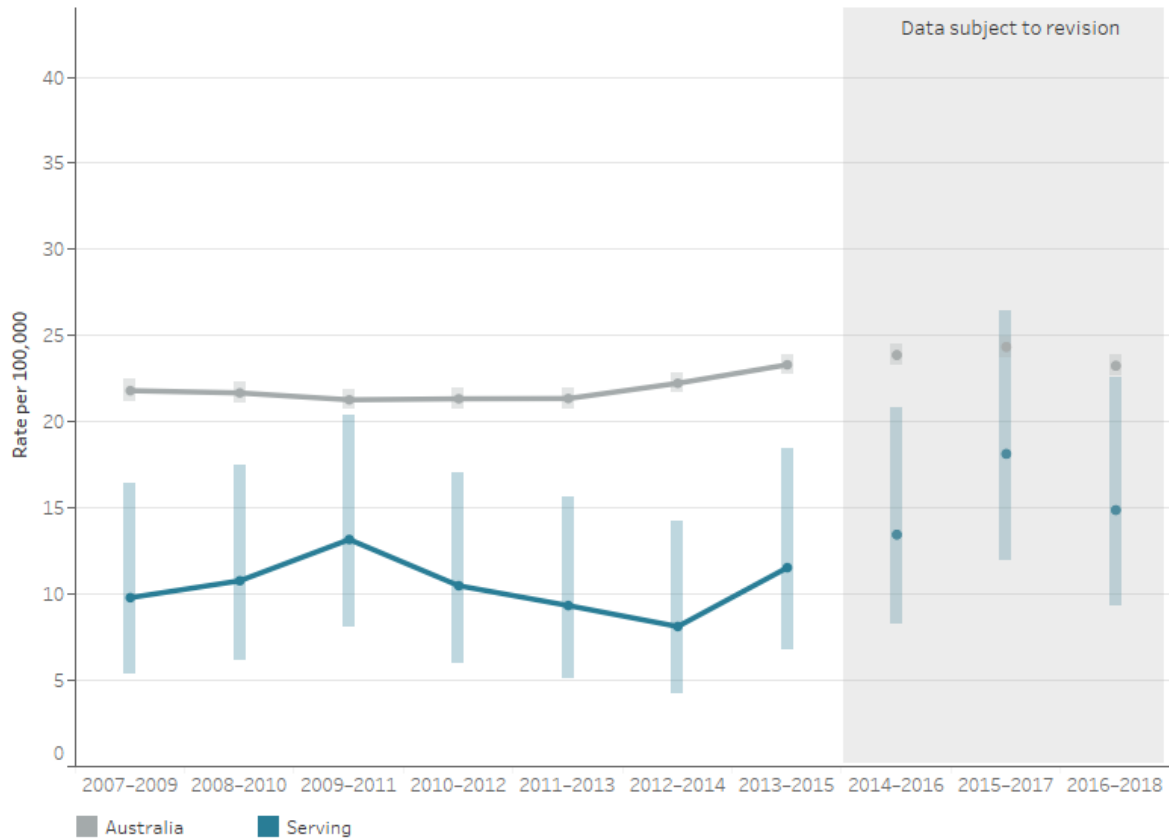
Serving and Australia suicide rate by 3 year aggregate (males)

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

Service Category
 Serving
 Ex-serving
 Reserve

Compare to
 Australia
 Serving
 Ex-serving
 Reserve

Show Confidence Interval?
 Yes
 No



Source: AIHW analysis of linked PMKeyS-NDI data 2001–2018; NMD 2007–2018.

Data underlying this graph are available in Supplementary tables S1.2 to S1.4. See Data for a link to the tables.

Please note, data are subject to change: see Technical Notes for further detail.

Age-adjusted rates by service status over time - males

In the most recent 3-year period (2016-2018) the age-adjusted rate of suicide in serving males was 37% lower than in Australian males, and this difference was statistically significant. For the 3-year periods between 2007 and 2018 the age-adjusted suicide rate was between 63% (SMR = 0.37 in 2012–2014) and 27% (SMR = 0.73 in 2015–2017) lower than the Australian population. This difference was statistically significant in every 3-year period except 2015–2017.

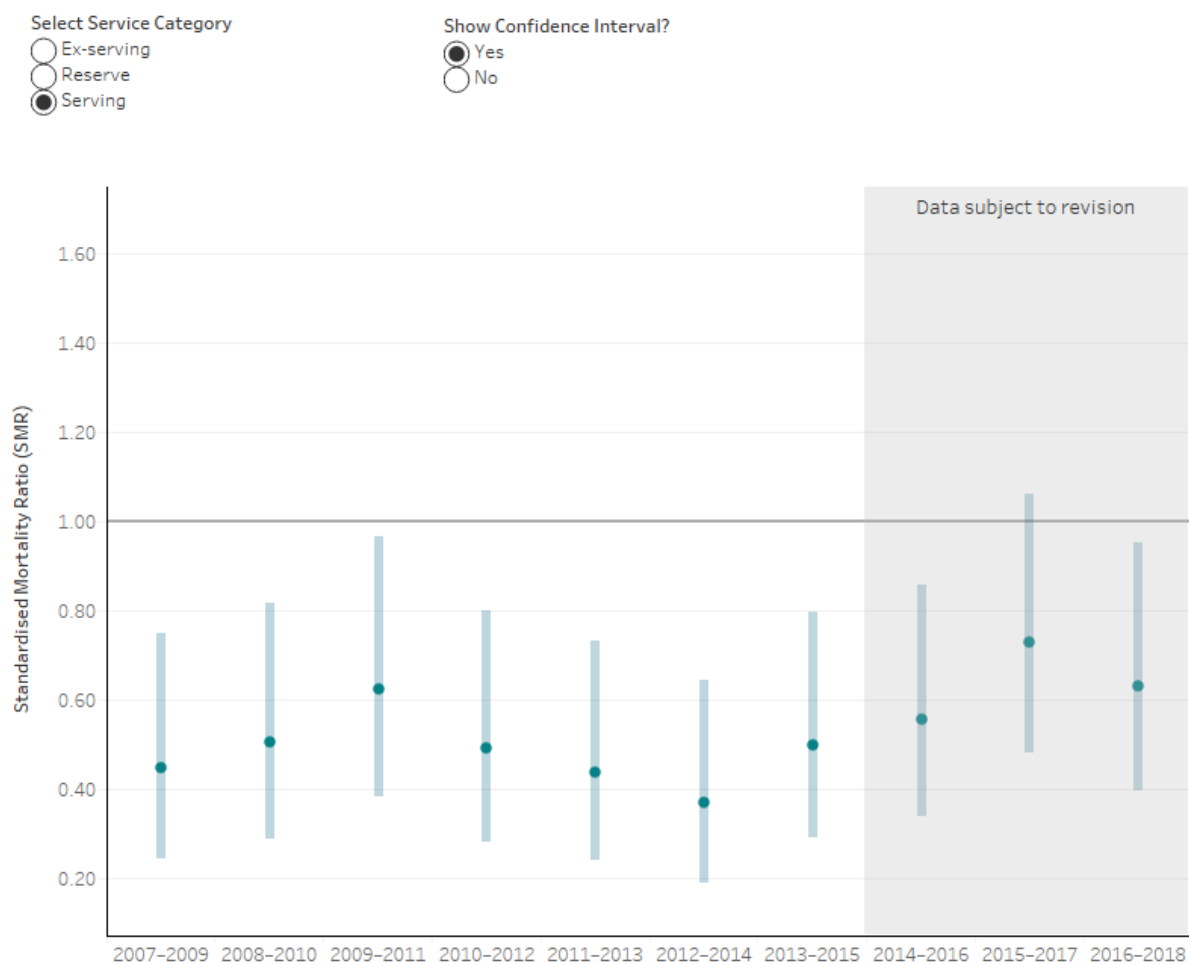
In the most recent 3-year period (2016-2018) the age-adjusted rate of suicide in reserve males was 47% lower than in Australian males, and this difference was statistically significant. The age-adjusted suicide rate was between 57% (SMR = 0.43 in 2015–2017) and 32% (SMR = 0.68 in 2007–2009) lower than in the Australian population for the 3-year periods between 2007 and 2018, and has been statistically significant in every 3-year period since 2009–2011.

In the most recent 3-year period (2016-2018) the age-adjusted rate of suicide in ex-serving males was 19% higher than in Australian males, though this difference was not statistically significant. For the 3-year periods between 2007 and 2018 the difference varied between 14% (SMR = 1.14) in 2009–2011 and 36% (SMR = 1.36) in 2013–2015. The difference was found to be statistically significant in 2013–2015 and 2015–2017. (see Data tables for more detail).

The SMRs for males in each ADF service status group between 2007–2009 and 2016–2018 are presented in the interactive graph below. For notes on interpreting SMRs, see Technical Notes. Select an ADF service group from the menu to display its SMR.

Please note: The graph below is an image of an interactive graph available in the online version of this report. See Appendix for other data selections available for rates of suicide.

Standardised mortality ratio (SMR) by 3 year aggregate, Serving (males)



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018 NMD 2007-2018.

Data underlying this graph are available in Supplementary tables S2.2 to S2.4. See Data for a link to the tables.

Please note, data are subject to change: see Technical Notes for further detail.

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Suicides in female ADF personnel

The majority of suicides in serving and ex-serving ADF personnel were among males, reflecting the fact that the study population is predominantly male, as well as a higher suicide rate among ex-serving males (28 per 100,000) compared to ex-serving females (16 per 100,000) between 2002 and 2018.

While the number of females in the ADF is increasing, it has historically been low. The total female serving and reserve population was 17,049 (17%) in 2018. The size of the contemporary female ex-serving cohort is increasing each year, with the number reaching 17,187 in 2018. Each year of data adds to the confidence in the results for female ex-serving ADF personnel.

In the period 2001-2018, there were 36 deaths by suicide among females, with 25 of these among ex-serving females.

The age-adjusted rate of suicide for ex-serving females between 2002 and 2018, when compared to the Australian population was 127% (or 2.27 times) higher for ex-serving females, SMR = 2.27 (95% CI = 1.47-3.35).

This difference was statistically significant. Confidence intervals (CI) provide one way to assess the randomness that may occur in the number of suicides over time. The wider confidence interval for the female ex-serving SMR reflects the higher degree of potential variability compared to the male results. More information on confidence intervals is provided in the Technical Notes section.

For privacy and statistical reasons relating to the small number of females in the study, suicide rates and SMRs for serving and reserve females and SMRs for ex-serving females by 3-year periods are not reported.

Suicides in females over time

The number of suicides for the 3-year periods between 2001 and 2018 and split by sex is shown in Table 2. Small numbers of female suicides prevent reporting of the number of suicides before 2009-2011. The increase in numbers each period is due at least in part to the increasing size of the study population.

Table 2. Number of deaths by suicide, all service status groups, males and females by 3-year aggregations, 2001–2003 to 2016–2018

Years	All ADF service groups: Males	All ADF service groups: Females	Total^(a)
2001-03	n.p.	n.p.	52
2002-04	n.p.	n.p.	48
2003-05	n.p.	n.p.	43
2004-06 ^(a)	n.p.	n.p.	38
2005-07 ^{(a)(b)}	n.p.	n.p.	43
2006-08 ^{(a)(b)}	n.p.	n.p.	53
2007-09 ^(b)	n.p.	n.p.	66
2008-10	n.p.	n.p.	73
2009-11	72	5	77
2010-12	72	5	77
2011-13	74	10	84
2012-14	85	9	94
2013-15	99	10	109
2014-16	106	11	117
2015-17	118	13	131
2016-18	111	12	123
Total	429	36	465

n.p. Not published because of small numbers or confidentiality.

(a) From 2006 onwards, the ABS implemented a revisions process for coroner-certified deaths (such as suicides). This improved data quality by enabling additional deaths by suicide to be identified beyond initial processing (ABS 2018). For detailed information see Technical Notes.

(b) New ABS coding guidelines were applied for deaths registered from 1 January 2007. The new guidelines improve data quality by enabling deaths to be coded to suicide by ABS mortality coders if evidence indicates the death was from intentional self-harm (ABS 2018). For detailed information see Technical Notes.

Source: AIHW analysis of linked PMKeyS-NDI data 2001–2018.

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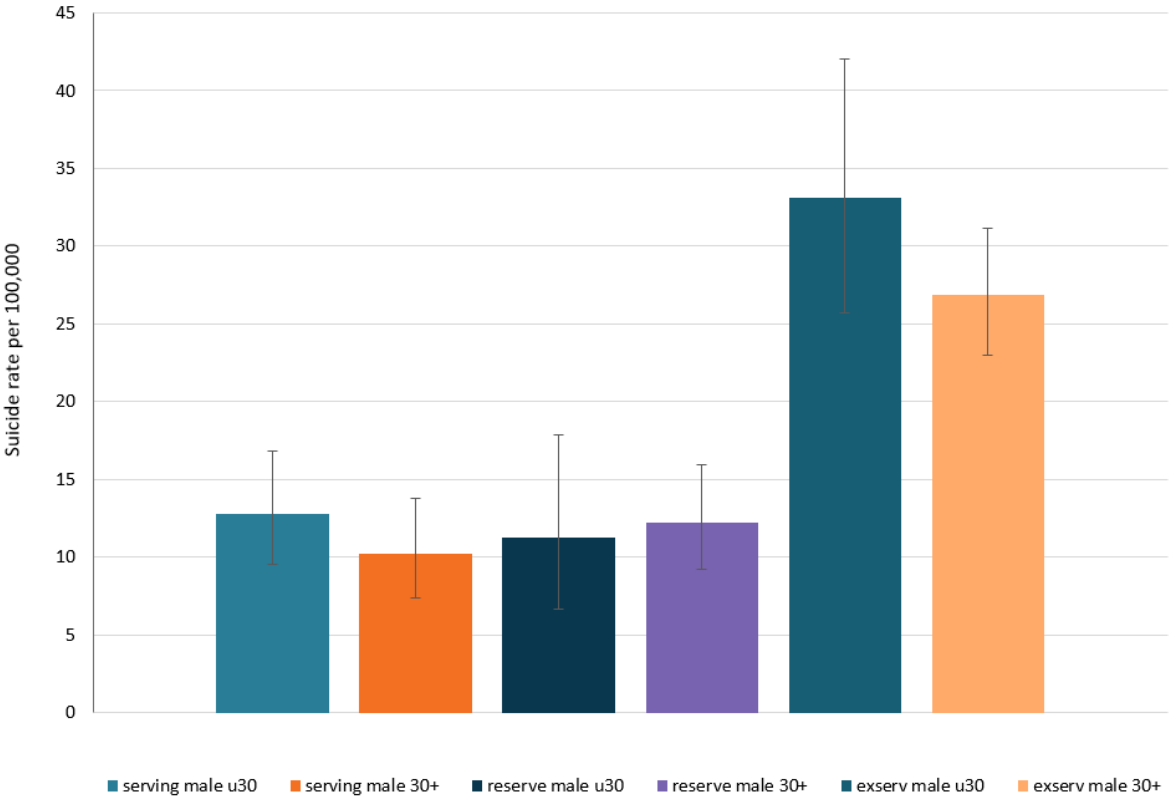
Suicides by age group

For the period 2002 to 2018 the rates of suicide in serving and reserve males under the age of 30 were 13 per 100,000 and 11 per 100,000 respectively. These rates were similar to the rates in serving and reserve males aged 30 and over, which were 10 per 100,000 and 12 per 100,000.

The suicide rate in ex-serving males aged under 30 was 33 per 100,000, while the rate in ex-serving males aged 30 and over was 27 per 100,000. These rates were not significantly different from each other, but were higher than the rates for serving and reserve males for both age groups.

For the period 2002 to 2018 the suicide rates in serving and reserve males were lower than in Australian males, regardless of which of the two age groups they were in. Over the same period the suicide rate in ex-serving males under 30 was higher than in Australian males in the same age range. The rate of suicide in ex-serving males aged 30 and over was not significantly different to the rate in Australian males in that age range. Rates of suicide are not presented for females by age group due to small numbers.

Figure 2: Suicide rates for 2002-2018, ADF service groups, aged under 30 and 30+, males



Source: AIHW analysis of linked PMKeyS—NDI data 2001–2018.

Suicides in ex-serving ADF personnel over time

Between 2001 and 2018 there was a total of 77 suicides in ex-serving male and female personnel aged under 30, with the remaining 190 in ex-serving personnel aged 30 and over. The number of suicides among those aged 30 and older is increasing at least in part due to the fact that each year the number of ex-serving personnel aged 30 and over is increasing.

Table 3. Number of deaths by suicide, ex-serving males and females aged under 30 and over 30, 2001–2003 to 2016–2018

Years	Ex-serving under 30	Ex-serving 30+	Total ^(a)
2001-03	n.p.	n.p.	12
2002-04	n.p.	n.p.	14
2003-05	13	6	19
2004-06 ^(b)	8	7	15
2005-07 ^{(b)(c)}	12	9	21
2006-08 ^{(b)(c)}	10	16	26
2007-09 ^(c)	11	22	33
2008-10	13	25	38
2009-11	14	26	40
2010-12	14	31	45
2011-13	17	36	53
2012-14	20	40	60
2013-15	24	50	74
2014-16	20	59	79
2015-17	17	75	92
2016-18	12	76	88
Total	77	190	267

n.p. Not published because of small numbers or confidentiality.

(a) Consists of deaths by suicide in males and females for ex-serving ADF personnel.

(b) From 2006 onwards, the ABS implemented a revisions process for coroner-certified deaths (such as suicides). This improved data quality by enabling additional deaths by suicide to be identified beyond initial processing (ABS 2018). For detailed information see Technical Notes.

(c) New ABS coding guidelines were applied for deaths registered from 1 January 2007. The new guidelines improve data quality by enabling deaths to be coded as suicide by ABS mortality coders if evidence indicates the death was from intentional self-harm (ABS 2018). For detailed information see Technical Notes.

Source: AIHW analysis of linked PMKeyS-NDI data 2001–2018.

Suicide rates in ex-serving males by age group over time

In 2016-2018, the suicide rate for ex-serving males aged under 30 was 24 per 100,000, compared to the rate of 21 per 100,000 for the same demographic in the Australian population. The suicide rate amongst ex-serving males under 30 varied between 23 and 47 deaths per 100,000 from 2007-2009 to 2016-2018. The suicide rate amongst ex-serving males under 30 was consistently higher than in Australian males under 30, and this difference was statistically significant in the 3-year periods from 2012-2014 to 2014-2016.

In 2016-2018, the suicide rate for ex-serving males aged 30 and over was 30 per 100,000, which was higher than the rate for the same demographic in the Australian population (23 per 100,000), though this difference was not statistically significant. The suicide rate in this group ranged between 23 and 32 per 100,000 over the 3-year periods between 2007 and 2018. During this time, there was no evidence of a significant difference in suicide rates between ex-serving males aged 30 and over and males in the same age range in the Australian population.

The suicide rate for ex-serving males, by age group, is compared with the rate for Australian males in the same age range in the interactive graph below. Select an age group from the menu to display the comparison.

Please note: The graph below is an image of an interactive graph available in the online version of this report. See Appendix for other data selections available for rates of suicide.

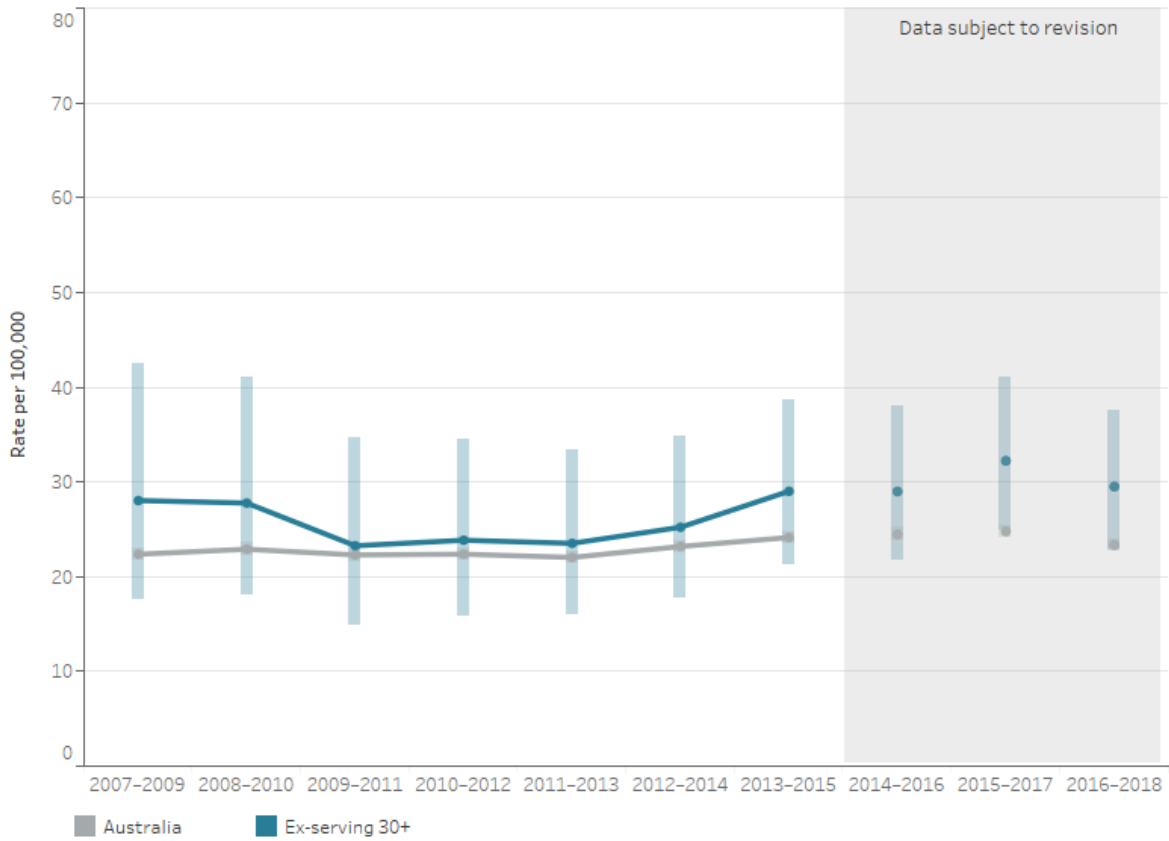
Ex-serving and Australian males 30+, suicide rate by 3 year aggregate

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

Service Category
 Ex-serving 30+
 Ex-serving <30

Compare to
 Ex-serving 30+
 Ex-serving <30
 Australia

Show Confidence Interval?
 Yes
 No



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Data underlying this graph are available in Supplementary tables S3.2 and S3.3. See Data for a link to the tables.

Please note, data are subject to change: see Technical Notes for further detail.

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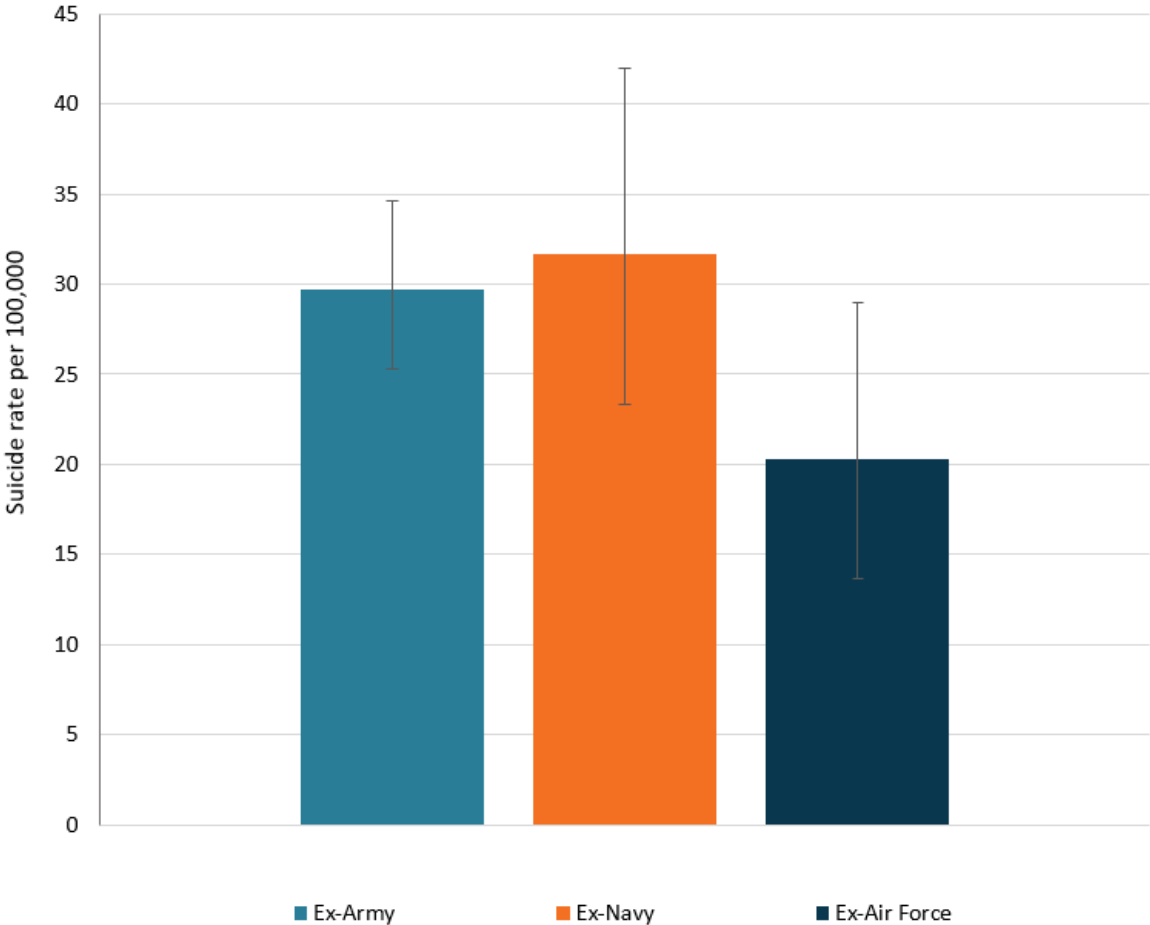
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Suicides in ex-serving personnel by service

For the period 2002 to 2018 the rate of suicide in ex-serving males who served in the Army was 30 per 100,000. This rate was similar to the rate for males who served in the Navy (32 per 100,000), while the rate of suicide among males who served in the Air Force was (20 per 100,000).

Rates of suicide are not presented for females by service due to small numbers.

Figure 3: Suicide rates for 2002-2018, by service, ex-serving males



Source: AIHW analysis of linked PMKeyS—NDI data 2001–2018.

Suicides in ex-serving males and females by service over time

Between 2001 and 2018 there were 177 suicides among ex-serving personnel who served in the Army, 55 suicides among those who served in the Navy and 35 in those who served in the Air Force. These numbers reflect at least in part the fact that those who served in the Army made up around 65% of the ex-serving population over the study period.

Table 4. Number of deaths by suicide, ex-serving males and females by service 2001–2003 to 2016–2018

Years	Ex-Army^(a)	Ex-Navy^(a)	Ex-Air Force^(a)
2001-03	8	n.p.	n.p.
2002-04	9	n.p.	n.p.
2003-05	12	n.p.	n.p.
2004-06 ^(b)	10	n.p.	n.p.
2005-07 ^{(b)(c)}	15	n.p.	n.p.
2006-08 ^{(b)(c)}	20	n.p.	n.p.
2007-09 ^(c)	25	n.p.	n.p.
2008-10	27	6	5
2009-11	29	5	6
2010-12	29	6	10
2011-13	34	9	10
2012-14	39	13	8
2013-15	47	20	7
2014-16	54	17	8
2015-17	59	22	11
2016-18	58	20	10
Total	177	55	35

n.p. Not published because of small numbers or confidentiality.

(a) Consists of deaths by suicide in males and females.

(b) From 2006 onwards, the ABS implemented a revisions process for coroner-certified deaths (such as suicides). This improved data quality by enabling additional deaths by suicide to be identified beyond initial processing (ABS 2018). For detailed information see Technical Notes.

(c) New ABS coding guidelines were applied for deaths registered from 1 January 2007. The new guidelines improve data quality by enabling deaths to be coded to suicide by ABS mortality coders if evidence indicates the death was from intentional self-harm (ABS 2018). For detailed information see Technical Notes.

Source: AIHW analysis of linked PMKeyS-NDI data 2001–2018.

Suicide rates in ex-serving males by service over time

Between 2007 and 2018 the rates of suicide in ex-serving males did not differ significantly between the three services. It should be noted that the larger population size of those who served in the Army means that the rates for this group are more stable over time than those for the other service groups.

In 2016-2018 the suicide rate in ex-serving males who served in the Army was 29 per 100,000. This rate varied between 25 and 34 per 100,000 over the 3-year periods between 2007 and 2018 and was consistently higher than the rate in Australian males. This difference was statistically significant in 2013-2015 and 2014-2016.

In 2016-2018 the rate of suicide in ex-serving males who served in the Navy was 35 per 100,000. This rate varied between 15 and 48 per 100,000 for the 3-year periods between 2007 and 2018. The rate was lower or similar to the rate in Australian males between 2007-2009 and 2011-2013, and was higher than in Australian males from 2012-2014 onwards. The rate was significantly higher than Australian males in the same age range in 2013-2015.

In 2016-2018 the rate of suicide in ex-serving males who served in the Air Force was 19 per 100,000. This rate varied between 14 and 38 per 100,000 and has been similar or lower than the rate in Australian men from 2012-2014 onwards. The rate was not significantly different from Australian males in the same age range for any 3-year periods between 2007 and 2018.

Please note: The graph below is an image of an interactive graph available in the online version of this report. See Appendix for other data selections available for rates of suicide.

Ex-Army and Australia suicide rate by 3 year aggregate (males)

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

Service Category

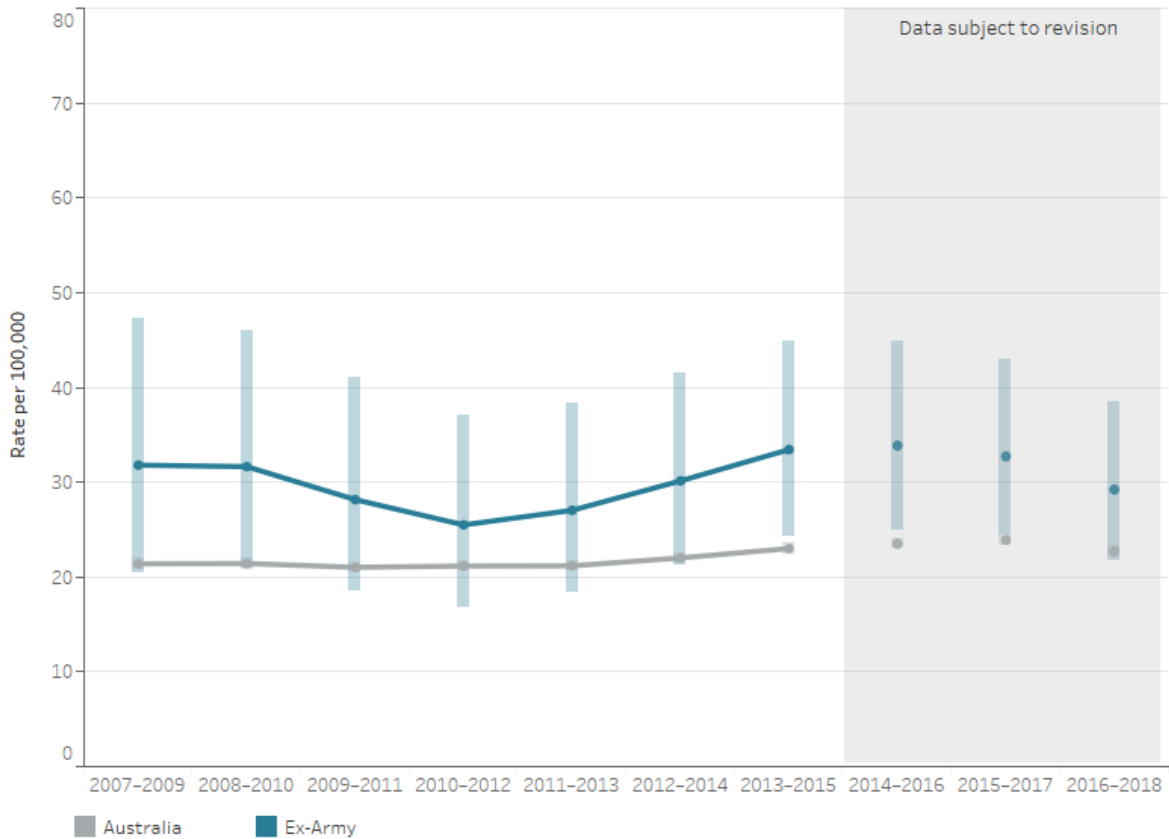
- Ex-Army
- Ex-Navy
- Ex-RAAF

Compare to

- Australia
- Ex-Army
- Ex-Navy
- Ex-RAAF

Show Confidence Interval?

- Yes
- No



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Data underlying this graph are available in Supplementary tables S4.2to S4.4. See Data for a link to the tables.

Please note, data are subject to change: see Technical Notes for further detail.

If you need help or support, please contact:

Open Arms - Veterans and Families Counselling **1800 011 046**, or <www.openarms.gov.au>

Open Arms Suicide Intervention page <<https://www.openarms.gov.au/get-support/suicide-intervention>>

ADF All-hours Support Line **1800 628 036**Lifeline **13 11 14**, or <www.lifeline.org.au>

Suicide Call Back Service **1300 659 467**, or <<https://www.suicidecallbackservice.org.au>>

Beyondblue Support Service **1300 22 4636**, or <www.beyondblue.org.au>

For information on support provided by DVA see:

<<https://www.dva.gov.au/health-and-treatment/injury-or-health-treatments/mental-health-care/mental-health-support-services>>

<<https://www.dva.gov.au/health-and-treatment/injury-or-health-treatments/mental-health-care/free-mental-health-care-veterans>>

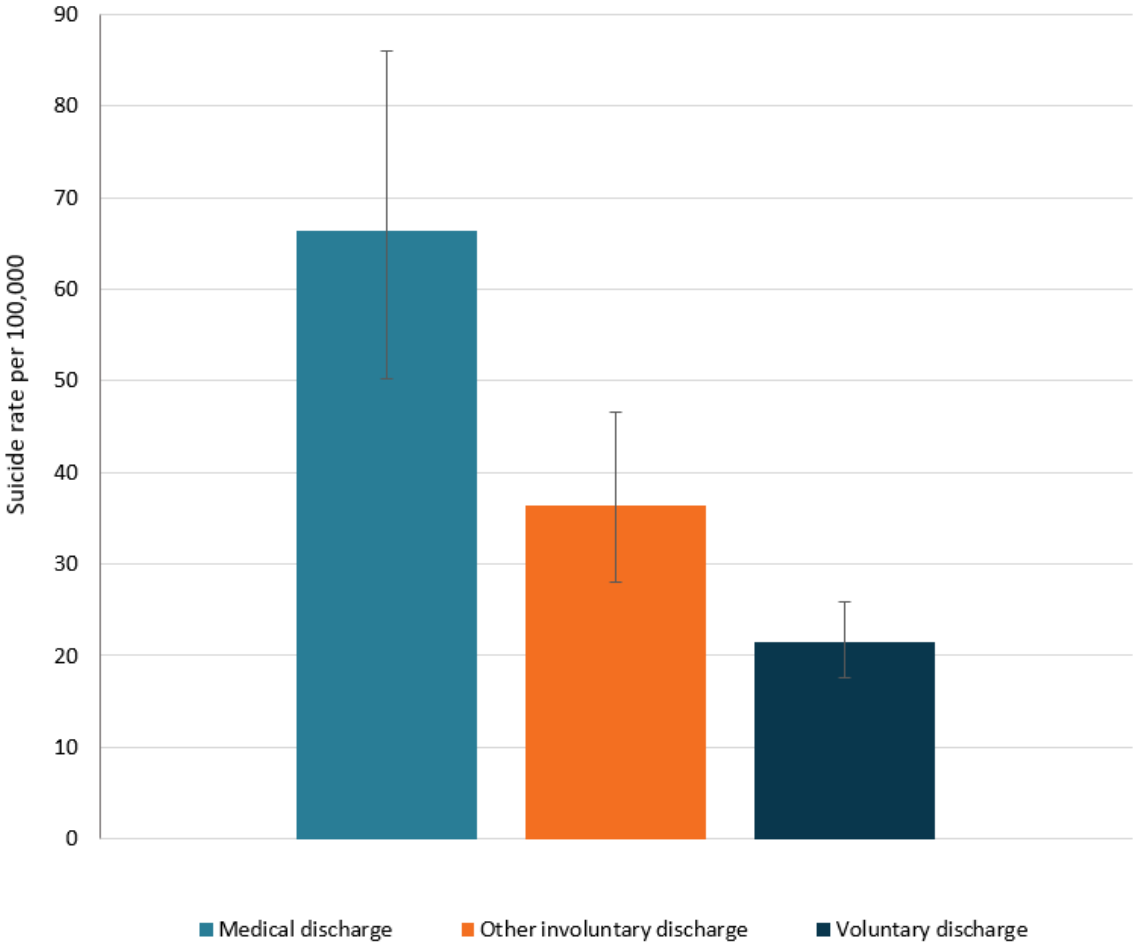
Suicides in ex-serving personnel by discharge reason

The reason for discharge from the ADF has previously been identified as a significant predictor of suicide among ex-serving ADF personnel, with medical discharge found to be associated with an increased risk of suicide (AIHW, 2018).

For the period 2002 to 2018 the rate of suicide in those who discharged on medical grounds was 66 per 100,000, which was higher than the rate for those who discharged for other involuntary reasons (36 per 100,000). The rate for those who discharged voluntarily was lower than both the former at 21 per 100,000.

Rates of suicide are not presented for females by discharge reason due to small numbers.

Figure 4: Suicide rates for 2002-2018, by discharge reason, ex-serving males



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018.

Suicides in ex-serving males and females by discharge reason over time

The number of suicides in ex-serving males by discharge reason are shown in Table 5. The rate of suicide was higher in those who discharged involuntarily compared with those who discharged voluntarily. However, due to the larger number of ex-serving personnel who discharged voluntarily, the number of suicides was higher among those who discharged voluntarily.

Those who were discharged involuntarily have been split into two groups for the purpose of analysis, those who were medically discharged and all other involuntary discharge reasons (e.g. disciplinary reasons).

Table 5: Number of deaths by suicide, ex-serving males and females by discharge reason^(a) 2001–2003 to 2016–2018

Years	Medical discharge	Other involuntary discharge	Voluntary discharge
2001-03	n.p.	n.p.	9
2002-04	n.p.	n.p.	10
2003-05	n.p.	n.p.	15
2004-06 ^(b)	n.p.	n.p.	11
2005-07 ^{(b)(c)}	n.p.	n.p.	13
2006-08 ^{(b)(c)}	6	5	13
2007-09 ^(c)	7	8	17
2008-10	8	9	20
2009-11	8	10	22
2010-12	10	14	21
2011-13	14	16	21
2012-14	17	20	20
2013-15	23	17	28
2014-16	21	17	36
2015-17	24	23	39
2016-18	18	28	36
Total	62	68	122

n.p. Not published because of small numbers or confidentiality.

(a) Not all discharge reasons are included in this table, contractual/administrative discharges are omitted due to small numbers – hence the total number of suicides in this table does not equal 267

- (b) From 2006 onwards, the ABS implemented a revisions process for coroner-certified deaths (such as suicides). This improved data quality by enabling additional deaths by suicide to be identified beyond initial processing (ABS 2018). For detailed information see Technical Notes.
- (c) New ABS coding guidelines were applied for deaths registered from 1 January 2007. The new guidelines improve data quality by enabling deaths to be coded to suicide by ABS mortality coders if evidence indicates the death was from intentional self-harm (ABS 2018). For detailed information see Technical Notes.

Source: AIHW analysis of linked PMKeyS-NDI data 2001–2018.

Suicide rates in ex-serving males by discharge reason over time

The rate of suicide in ex-serving males discharged on medical grounds was consistently higher than the rate in those who discharged voluntarily for the 3-years periods between 2007 and 2018. This difference was statistically significant for the 3-year periods from 2011-2013 to 2015-2017.

The rate of suicide for ex-serving males who were discharged for voluntary reasons was similar to Australian males the same age for all 3-year periods between 2007 and 2018. The rate of suicide among this group was between 16 and 24 per 100,000 over this time period.

The rate of suicide for ex-serving males who were discharged from the ADF on medical grounds was between 52 and 94 per 100,000 for 3-year periods between 2007 and 2018. This was consistently higher than the rate in Australian males in the same age range. This difference was statistically significant for all 3-year periods between 2010 and 2018.

The rate of suicide for ex-serving males who were discharged for involuntary reasons other than medical reasons was also consistently higher than for Australian males in the same age range, though this difference was only statistically significant in 2012-2014 and in 2016-2018. Suicide rates in this group were between 35 and 48 per 100,000 in the 3-year periods between 2007 and 2018.

Please note: The graph below is an image of an interactive graph available in the online version of this report. See Appendix for other data selections available for rates of suicide.

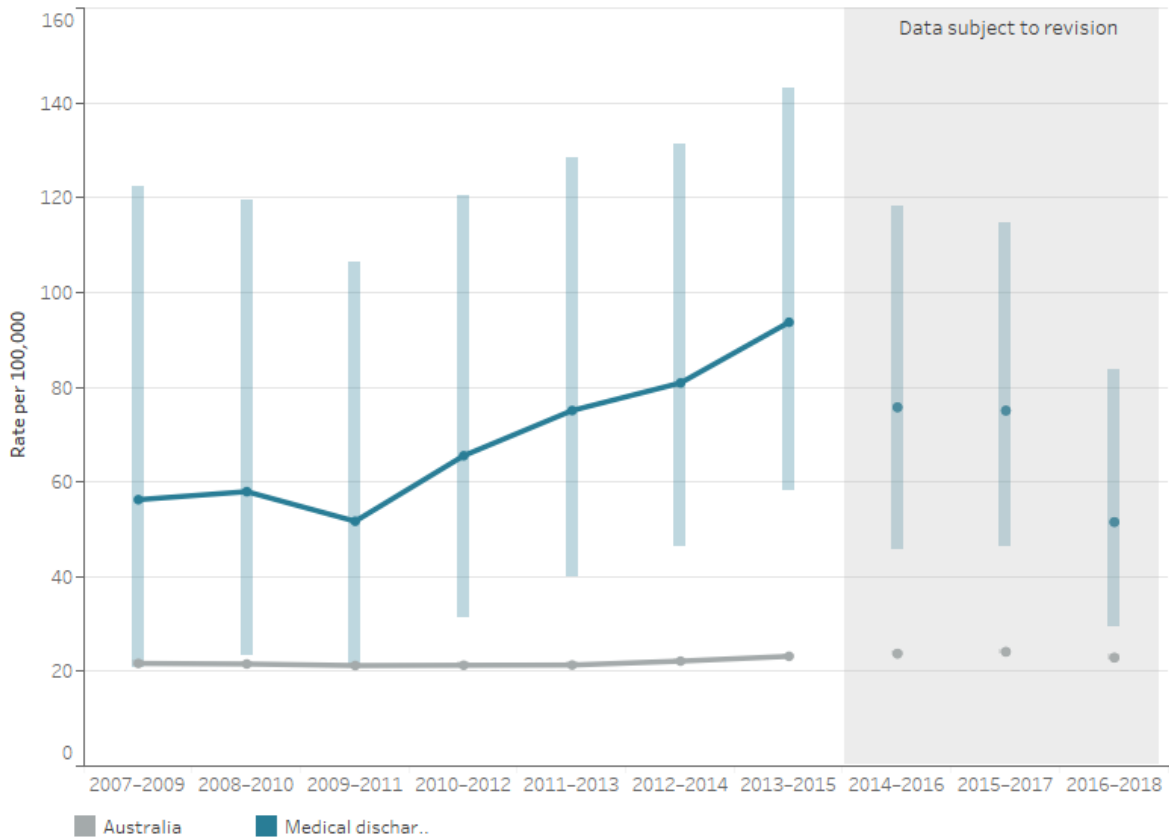
Medical discharge and Australia suicide rate by 3 year aggregate (males)

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

- Service Category
- Medical discharge
 - Other involuntary
 - Voluntary discharge

- Compare to
- Australia
 - Medical discharge
 - Other involuntary
 - Voluntary discharge

- Show Confidence Interval?
- Yes
 - No



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Data underlying this graph are available in Supplementary tables S5.2 to S5.4. See Data for a link to the tables.

Please note, data are subject to change: see Technical Notes for further detail.

If you need help or support, please contact:

Open Arms - Veterans and Families Counselling **1800 011 046**, or <www.openarms.gov.au>

Open Arms Suicide Intervention page <<https://www.openarms.gov.au/get-support/suicide-intervention>>

ADF All-hours Support Line **1800 628 036**Lifeline **13 11 14**, or <www.lifeline.org.au>

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For information on support provided by DVA see:

<<https://www.dva.gov.au/health-and-treatment/injury-or-health-treatments/mental-health-care/mental-health-support-services>>

<<https://www.dva.gov.au/health-and-treatment/injury-or-health-treatments/mental-health-care/free-mental-health-care-veterans>>

References

AIHW 2018. [Incidence of suicide in serving and ex-serving Australian Defence Force personnel: detailed analysis 2001-2015](#). Cat. No. PHE 218. Canberra; AIHW.

Technical Notes

Changes to previously published suicide information

In the 2020 update report an additional 46 suicide deaths were identified since the 2019 update, the breakdown of these deaths is as follows:

- 33 suicide deaths were identified that occurred in 2018
- 6 additional suicide deaths were identified in 2005 (1), 2012(1), 2016 (2) and 2017 (2) due to newly identified linkages
- 4 additional suicides were identified in 2017 due to lag in reporting cause of death
- 3 additional suicide deaths were identified in 2012 (1) and 2014 (2) due to updates in the Defence Suicide Database

As well as the addition of a new year of cause of death data, there are three main reasons for changes to previously published suicide results, as described below.

Lag in cause of death information for the most recent year of data, where a death is registered in the following year

Analysis in this study is based on year of occurrence of death. The National Death Index (NDI) is the source of information on fact of death in this study. Fact of death information from the NDI is supplemented with cause of death information from the National Mortality Database (NMD). Results published in the report *National suicide monitoring of serving and ex-serving Australian Defence Force personnel: 2019 update* for deaths that occurred in 2017 were based on preliminary cause of death information from the NMD. This was the most recent version of cause of death information at the time of reporting.

Analysis of the NMD for all Australian deaths shows that between 4% and 7% of deaths are not registered until the next year (ABS 2018). These deaths are not captured in cause of death information, until data for the next year become available. This means that while fact of death information was complete for 2017 at the time of publishing the *National suicide monitoring of serving and ex-serving Australian Defence Force personnel: 2019 update*, cause of death information was missing for around 7.5% of the deaths included in the analysis at that time. Additional suicides that occurred in 2017 but that were not registered until 2018 have now been identified with the inclusion of preliminary 2018 cause of death information in the current results.

Cause of death data revisions (ABS)

Cause of death information for the *National suicide monitoring of serving and ex-serving ADF personnel: 2020 update* release is based on final cause of death information for the years 2001 to 2015. Revised data are used for 2016 and preliminary data for 2017 and 2018. Cause of death for a small number of records linked to the 2016 (revised), 2017 (preliminary) and 2018 (preliminary) cause of death data may change where a death is being investigated by a Coroner and more up to date information becomes available as a result of the ABS revisions process. This may have a small effect on the number of deaths attributed to suicide in these years, as some deaths currently coded as 'undetermined intent' could later be identified as 'intentional self-harm'.

Although this method likely captures the vast majority of suicides, there is potential for some to be missed if coronial findings are finalised or updated more than 4 years after a death.

Improvements in information available to the study

Changes to previously published results may also occur as additional information becomes available to the study.

For example, changes affecting recording of deaths in jurisdictional systems (including administrative and system changes, certification practices, classification updates or coding rule changes) can affect the data sets underlying this study. Data users should note the potential impact of these changes when making comparisons between reference periods. While such changes will not explain all differences between years, they are a factor that may influence the magnitude of any changes in suicide numbers as revisions are applied (ABS 2018)

Improvements in available information and linkage processes over time have also resulted in additional suicides being identified for periods previously reported on.

Australian Bureau of Statistics (ABS) changes to mortality coding over the study period

The following information on mortality coding is sourced from the ABS. For further information, see the ABS Causes of death, Australia report.

Substantial changes to ABS cause of death coding were undertaken in 2006, improving data quality by enabling the revision of cause of death for open coroner's cases over time. Deaths that are referred to a coroner (including deaths due to suicide) can take time to be fully investigated. To account for this, all coroner-certified deaths registered after 1 January 2006 are subject to a revisions process. This allows cause of death for open coroner's cases to be included at a later stage where the case is closed during the revision period. Cause of death data are deemed preliminary when first published, with revised and final versions of the data being historically published 12 and 24 months after initial processing. Prior to 2006, revisions did not take place and as such it is recognised by the ABS that deaths by suicide may have been understated during this period (ABS 2018).

As well as the above changes, new coding guidelines were applied to deaths registered from 1 January 2007. The new guidelines improve data quality by enabling deaths to be coded as suicide by ABS mortality coders if evidence from police reports, toxicology reports, autopsy reports and coroners' findings indicates the death was due to suicide. Previously, coding rules required a coroner to determine a death as due to suicide for it to be coded as suicide.

The combined result of both changes has been the more complete capture of deaths by suicide, and a reduced number of deaths coded as 'undetermined intent', within Australian mortality data.

Detailed information on coding guidelines for intentional self-harm, and administrative and system changes that can have an impact on the mortality data set, can be found in Explanatory Notes 91-100 of Causes of death, Australia report (ABS 2018).

Rates based on small numbers

Rates based on small numbers of events can fluctuate from year to year for reasons other than a true change in the underlying frequency of the event.

In this report, rates are not reported when there are fewer than 5 events, as rates produced using small numbers can be sensitive to small changes in counts of deaths over time.

Suicide rates

When reporting how often suicide occurs, suicide rates account for the size of the underlying population. Whilst this measure does not account for differences in the age structures of the populations being compared, rates can be validly compared over time, across groups and to the corresponding Australian population.

Here, rates report how often suicides occur in the three ADF service status groups, and Australia, expressed as a number per 100,000 people.

Standardised mortality ratios

The standardised 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 is used to control for the fact that the three 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 three 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 comparison population.

SMRs greater than 1.0 indicate a greater number of suicides in the ADF population than expected; and SMRs less than 1.0 indicate a lower number of suicides than expected in the ADF population.

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 this study, 95% confidence intervals (CIs) are provided for each standardised mortality ratio (SMR) and suicide rates to indicate the level of uncertainty around these estimates due to random fluctuations in the number of 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 the 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 report, differences are deemed to be statistically significant if CIs do not overlap with each other (when comparing suicide rates) or 1.0 (in the case of an SMR). The CIs in this report can not be used to determine the significance of differences over time between overlapping 3-year time periods.

Where the CIs are wide, for example in the case of the SMR for ex-serving females, sensitivity analysis was conducted. This analysis found that slight changes to the numbers of suicides did not significantly alter the result.

Acronyms

ADF	Australian Defence Force
AIHW	Australian Institute of Health and Welfare
CI	confidence interval
DSD	Defence Suicide Database
DVA	Department of Veterans' Affairs
NDI	National Death Index
NMD	National Mortality Database
PMKeyS	Personnel Management Key Solution
SMR	Standardised mortality ratio

Notes

Data quality statement

The data quality statement underpinning the NDI can be found at: [National Death Index \(NDI\), Data Quality Statement](#)

The data quality statements underpinning the AIHW National Mortality Database can be found in the following Australian Bureau of Statistics (ABS) publications:

- ABS quality declaration summary for [Deaths, Australia \(ABS cat. no. 3302.0\)](#)
- ABS quality declaration summary for [Causes of death, Australia \(ABS cat. no. 3303.0\)](#)
- For more information on the AIHW National Mortality Database see [Deaths data at AIHW](#) and the [National Mortality Database](#).

Data

The sources used here are as follows:

- **National Mortality Database (NMD).** Cause of Death Unit Record File data are provided to the AIHW by the Registries of Births, Deaths and Marriages and the National Coronial Information System (managed by the Victorian Department of Justice) and include cause of death coded by the Australian Bureau of Statistics (ABS). The data are maintained by the AIHW in the NMD.

Analysis in this report is based on year of occurrence of death. Year of death is an underestimate for the last year of data (2017), as some deaths are not registered until later years. Historical analysis of the NMD shows between 4% and 7% of deaths are not registered until the following year or later (ABS 2018). At the time of analysis, the causes of death data were final for 2014, revised for 2015 and preliminary for 2016 and 2017. Cause of death for a small number of deaths occurring in 2015, 2016 and 2017 are subject to further revision by the Australian Bureau of Statistics (ABS).

In this study, the NMD is used in the calculation of Australian crude rates and SMRs, and is the same source of information on cause of death as used in the NDI.

- **National Death Index (NDI).** The NDI is managed by the AIHW and contains person-level records of all deaths in Australia since 1980 obtained from the Registrars of Births, Deaths and Marriage in each state and territory. Its use is confined to data linkage studies approved by the AIHW Ethics Committee for health and medical research. NDI records are supplemented with cause of death information from the NMD (AIHW 2018).

In this study, the NDI is used in linkage with the Personnel Management Key Solution (PMKeyS) and Defence Suicide Database (DSD) to create the linked PMKeyS–NDI data set used in analysis of suicide in the ADF population.

- **Personnel Management Key Solution (PMKeyS).** PMKeyS is a Defence staff and payroll management system that contains information on all people with Australian Defence Force (ADF) service on or after 1 January 2001 (when the system was introduced). This database contains demographic and service information at a given point in time and is linked to the NDI to identify deaths, including suicides, in the three ADF service status groups.
- **Defence Suicide Database (DSD).** The DSD is maintained by Defence and contains information on suspected and confirmed deaths due to suicide of personnel serving full time since 1 January 2000. Suspected and confirmed suicides are included in the database only on the advice of the ADF Investigative Service. Cases are confirmed by receipt of a coronial finding of suicide. This database is linked to the PMKeyS and NDI and records with a status of 'confirmed' are used to supplement cause of death information from the NDI for numbers of suicides only.

References

- ABS (Australian Bureau of Statistics) 2018. Causes of death, Australia, 2017. Explanatory notes. ABS cat. no. 3303.0. Canberra: ABS. Viewed 11 June 2019, <<https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3303.0Explanatory%20Notes12017?OpenDocument>>.
- AIHW (Australian Institute of Health and Welfare) 2018. Canberra: AIHW. Viewed 18 June 2019. [About National Death Index](#).
- Curtin, L. R., & Klein, R. J. (1995). *Direct standardization (age-adjusted death rates)* (No. 6). Hyattsville, MD: US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Health Statistics.

Appendix: Images of supplementary suicide rate interactive graphs

Rate of suicide by service status (men)

Serving and Australia suicide rate by 3 year aggregate (males)

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

Service Category

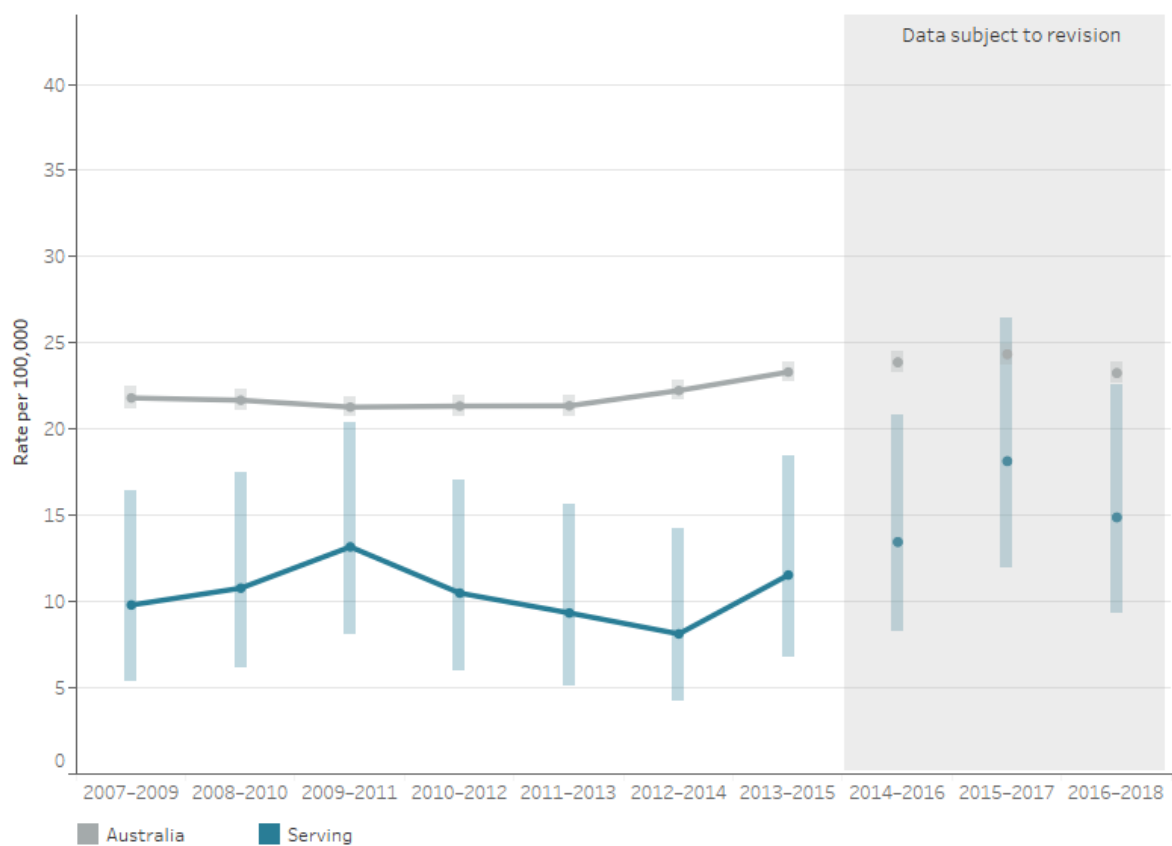
- Serving
- Ex-serving
- Reserve

Compare to

- Australia
- Serving
- Ex-serving
- Reserve

Show Confidence Interval?

- Yes
- No



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Reserve and Australia suicide rate by 3 year aggregate (males)

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

Service Category

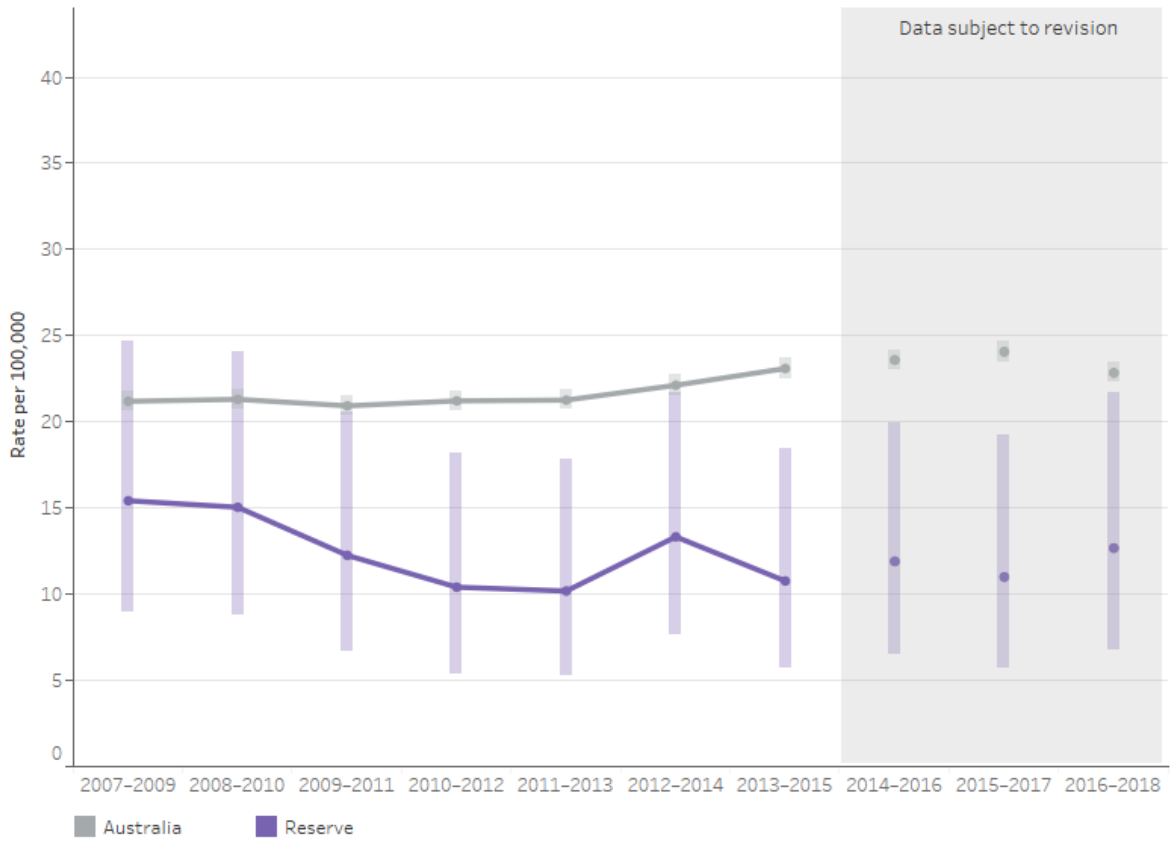
- Serving
- Ex-serving
- Reserve

Compare to

- Australia
- Serving
- Ex-serving
- Reserve

Show Confidence Interval?

- Yes
- No



Source: AIHW analysis of linked PMKeyS-NDI data 2001–2018; NMD 2007–2018.

Ex-serving and Australia suicide rate by 3 year aggregate (males)

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

Service Category

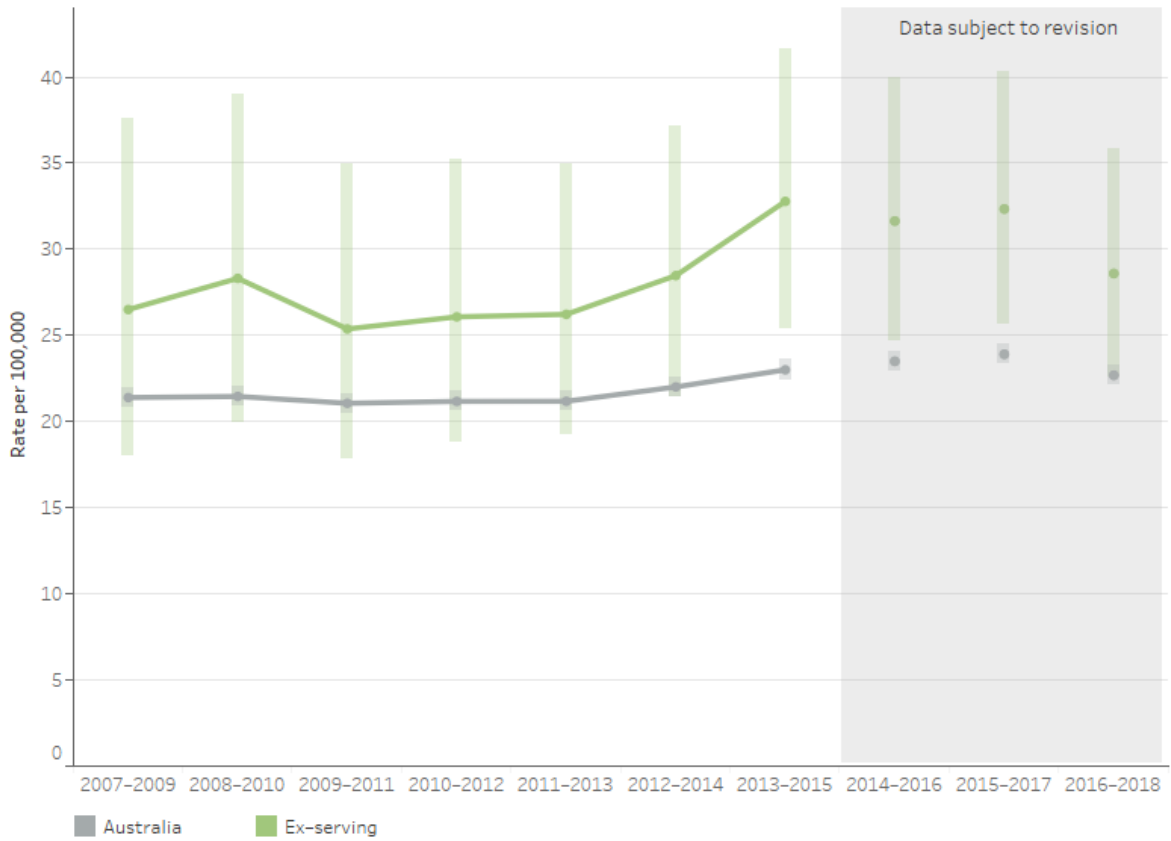
- Serving
- Ex-serving
- Reserve

Compare to

- Australia
- Serving
- Ex-serving
- Reserve

Show Confidence Interval?

- Yes
- No



Source: AIHW analysis of linked PMKeyS-NDI data 2001–2018; NMD 2007–2018.

Serving and Reserve suicide rate by 3 year aggregate (males)

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

Service Category

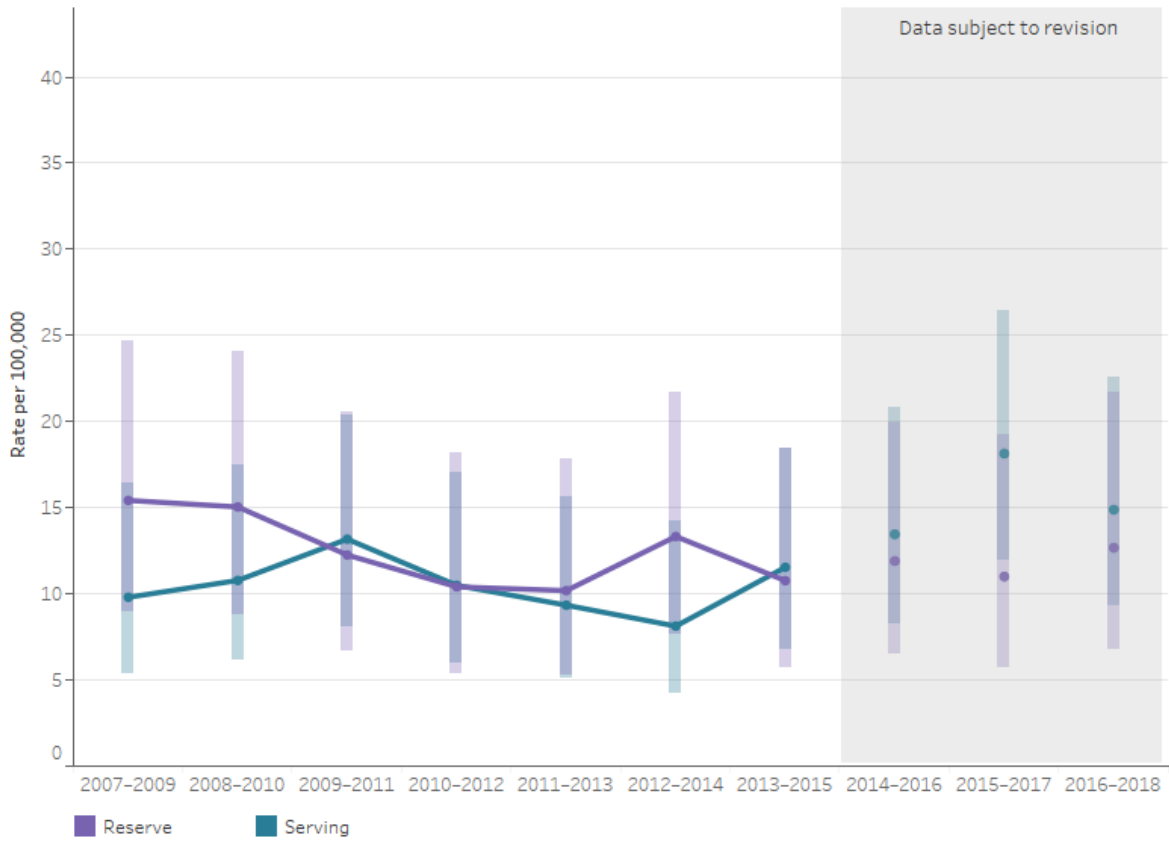
- Serving
- Ex-serving
- Reserve

Compare to

- Australia
- Serving
- Ex-serving
- Reserve

Show Confidence Interval?

- Yes
- No



Source: AIHW analysis of linked PMKeyS-NDI data 2001–2018; NMD 2007–2018.

Serving and Ex-serving suicide rate by 3 year aggregate (males)

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

Service Category

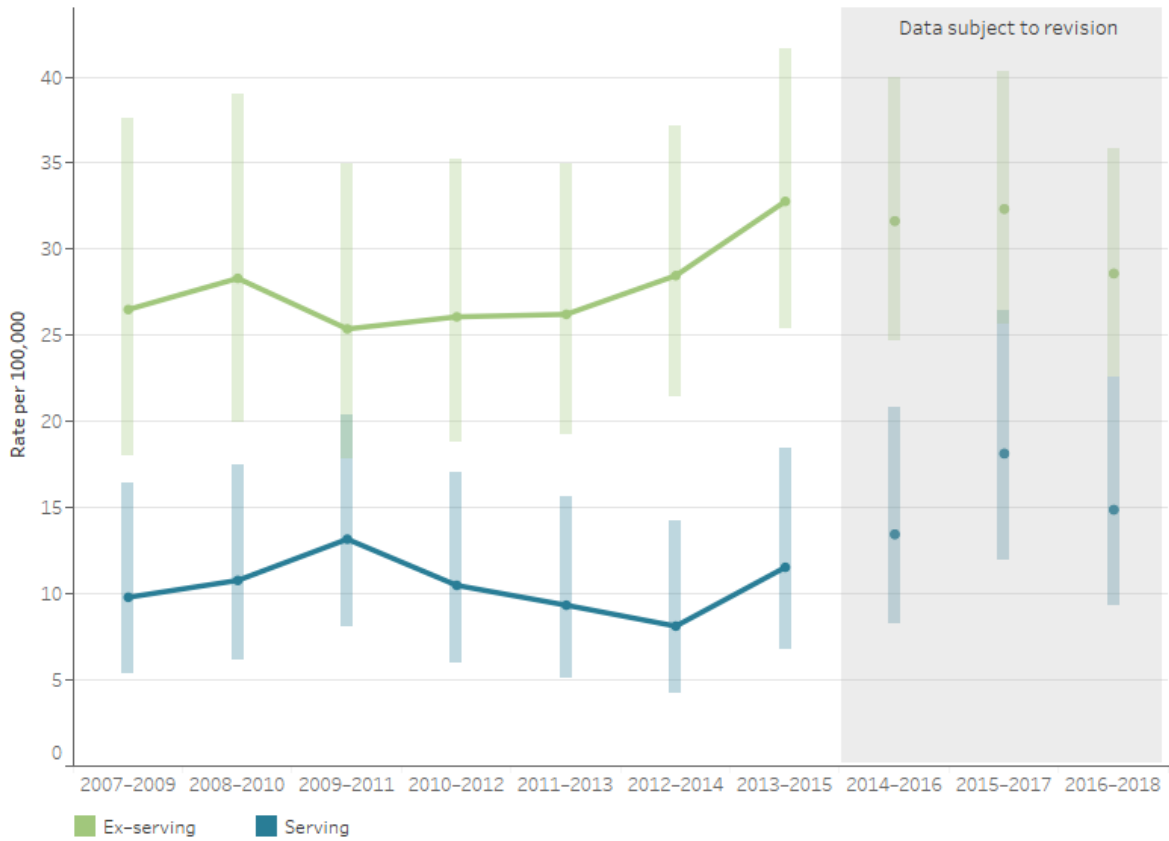
- Serving
- Ex-serving
- Reserve

Compare to

- Australia
- Serving
- Ex-serving
- Reserve

Show Confidence Interval?

- Yes
- No



Source: AIHW analysis of linked PMKeyS-NDI data 2001–2018; NMD 2007–2018.

Reserve and Ex-serving suicide rate by 3 year aggregate (males)

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

Service Category

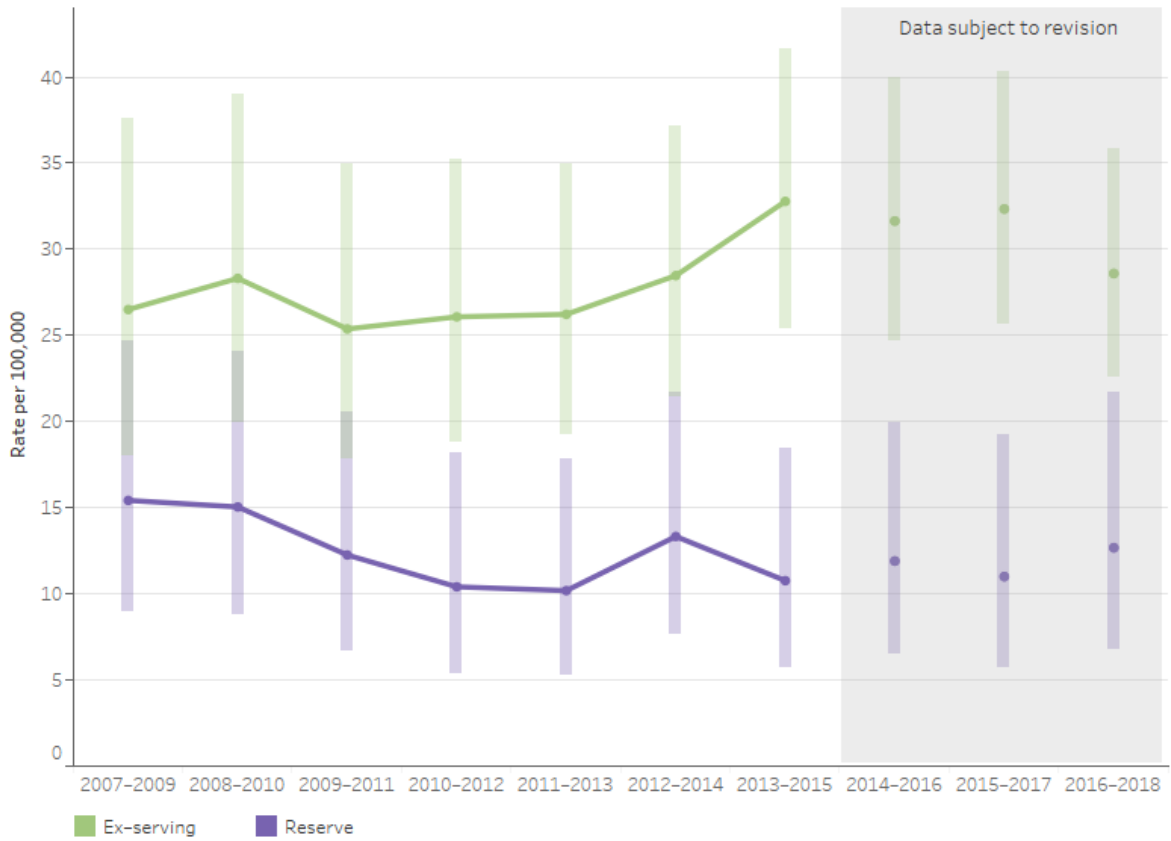
- Serving
- Ex-serving
- Reserve

Compare to

- Australia
- Serving
- Ex-serving
- Reserve

Show Confidence Interval?

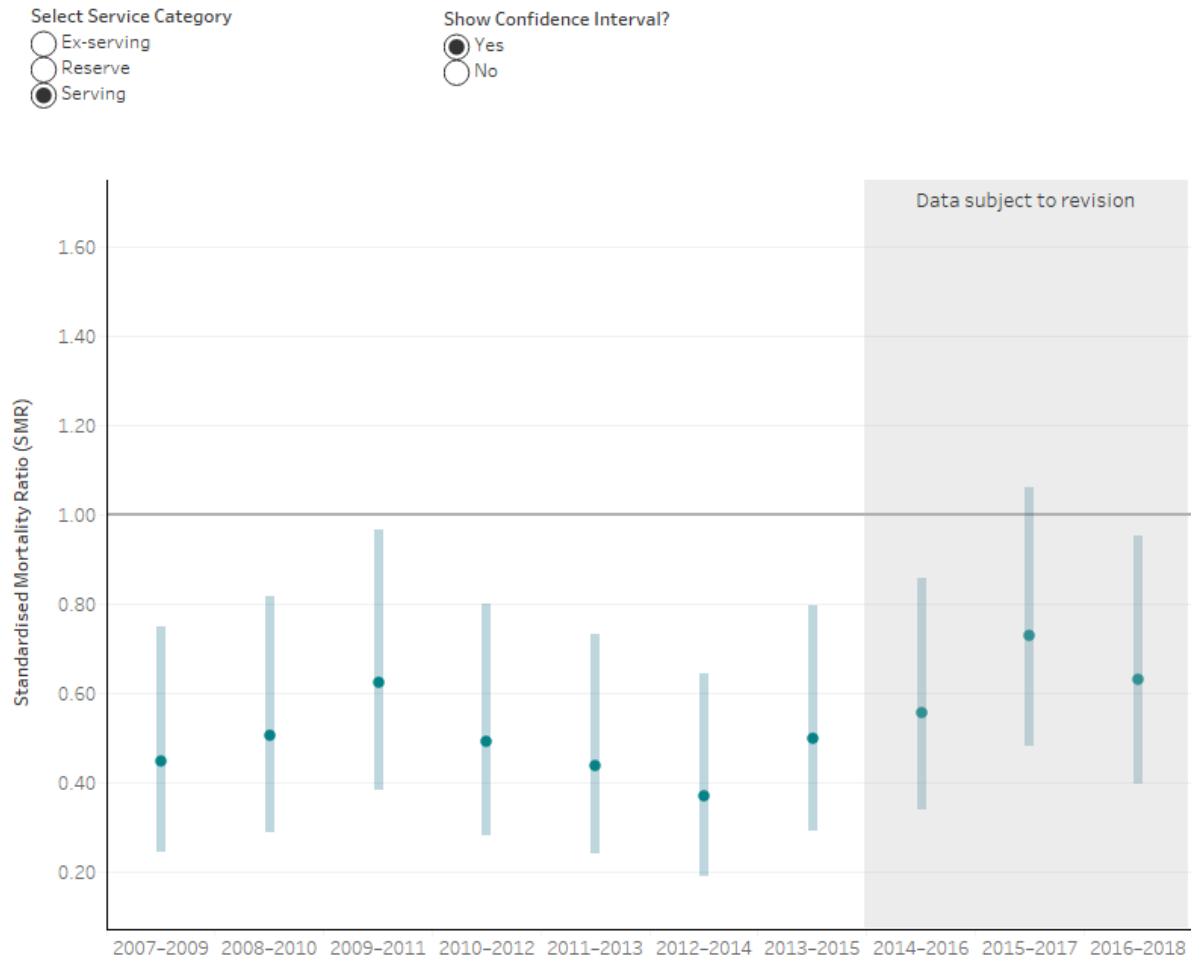
- Yes
- No



Source: AIHW analysis of linked PMKeyS-NDI data 2001–2018; NMD 2007–2018.

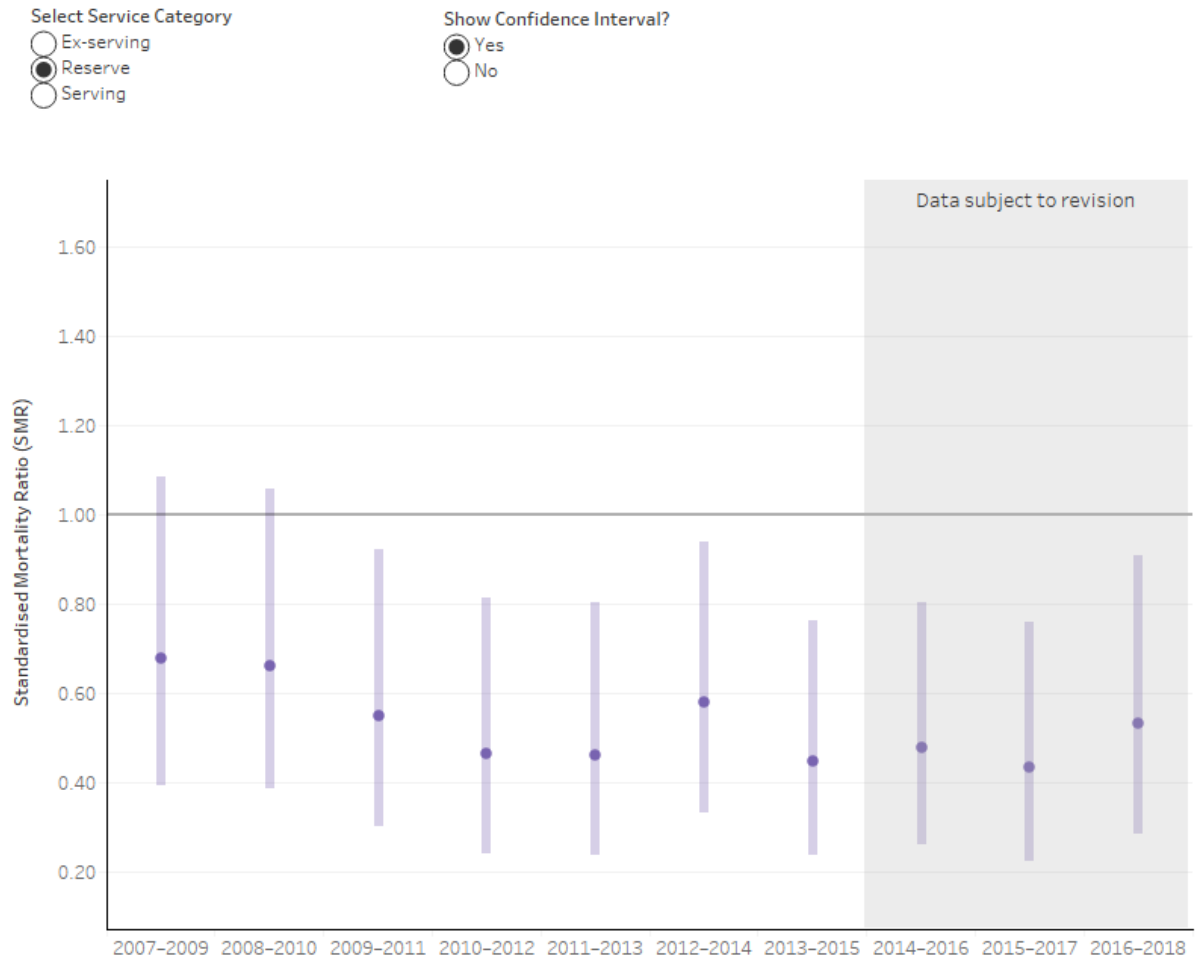
Age-adjusted suicide rates (standardised mortality ratios) by service status (men)

Standardised mortality ratio (SMR) by 3 year aggregate, Serving (males)



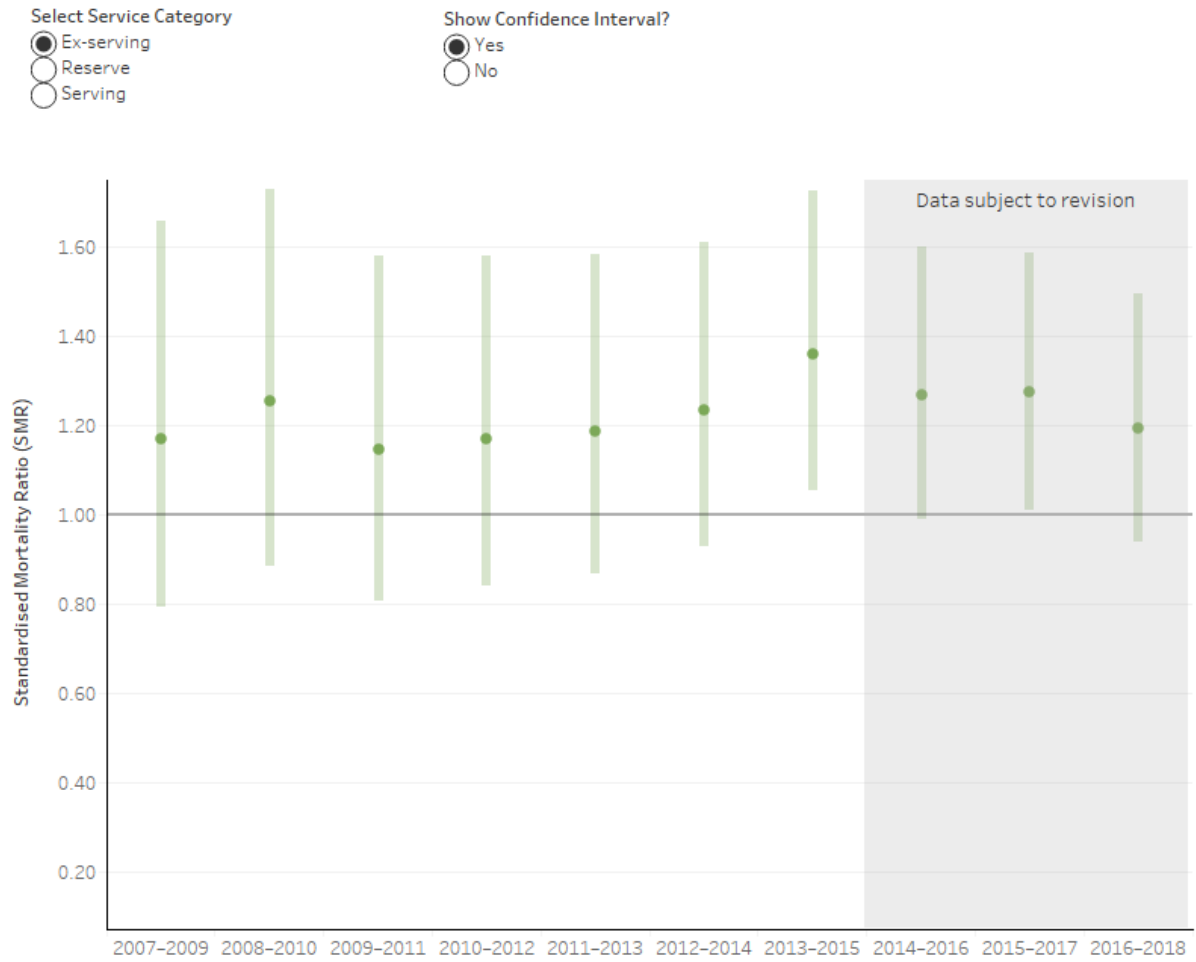
Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018 NMD 2007-2018.

Standardised mortality ratio (SMR) by 3 year aggregate, Reserve (males)



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018 NMD 2007-2018.

Standardised mortality ratio (SMR) by 3 year aggregate, Ex-serving (males)



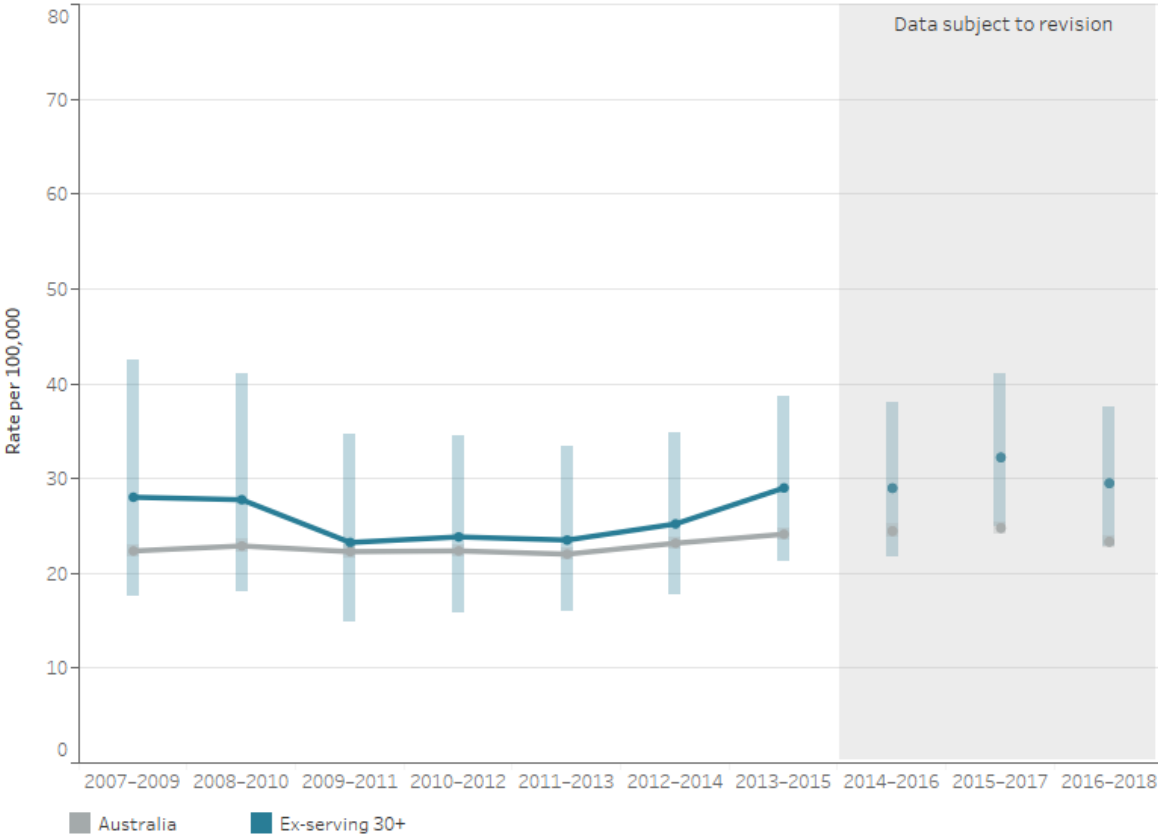
Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018 NMD 2007-2018.

Suicide rates by age (ex-serving men, aged under 30 and aged 30 years and over)

Ex-serving and Australian males 30+, suicide rate by 3 year aggregate

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

- Service Category**
 Ex-serving 30+
 Ex-serving <30
- Compare to**
 Ex-serving 30+
 Ex-serving <30
 Australia
- Show Confidence Interval?**
 Yes
 No



Source: AIHW analysis of linked PMKeyS-NDI data 2001–2018; NMD 2007–2018.

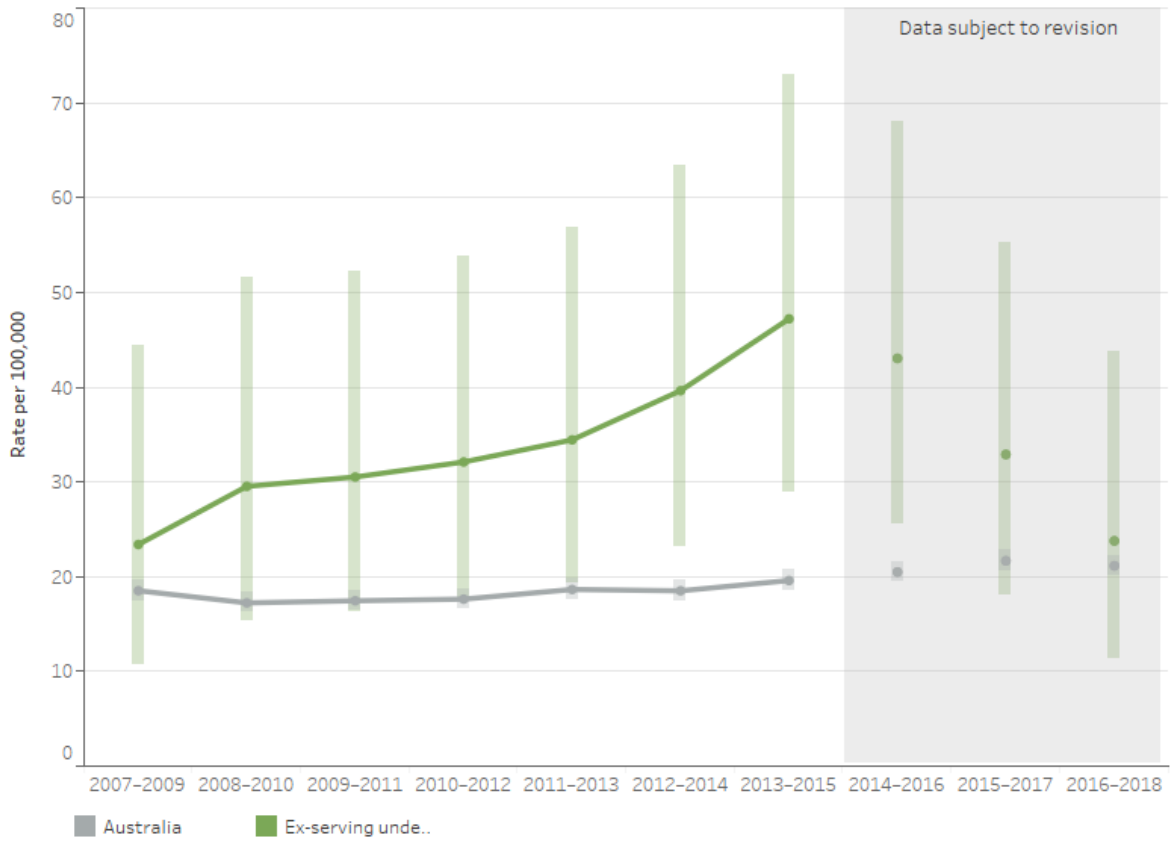
Ex-serving and Australian males under 30, suicide rate by 3 year aggregate

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

Service Category
 Ex-serving 30+
 Ex-serving <30

Compare to
 Ex-serving 30+
 Ex-serving <30
 Australia

Show Confidence Interval?
 Yes
 No

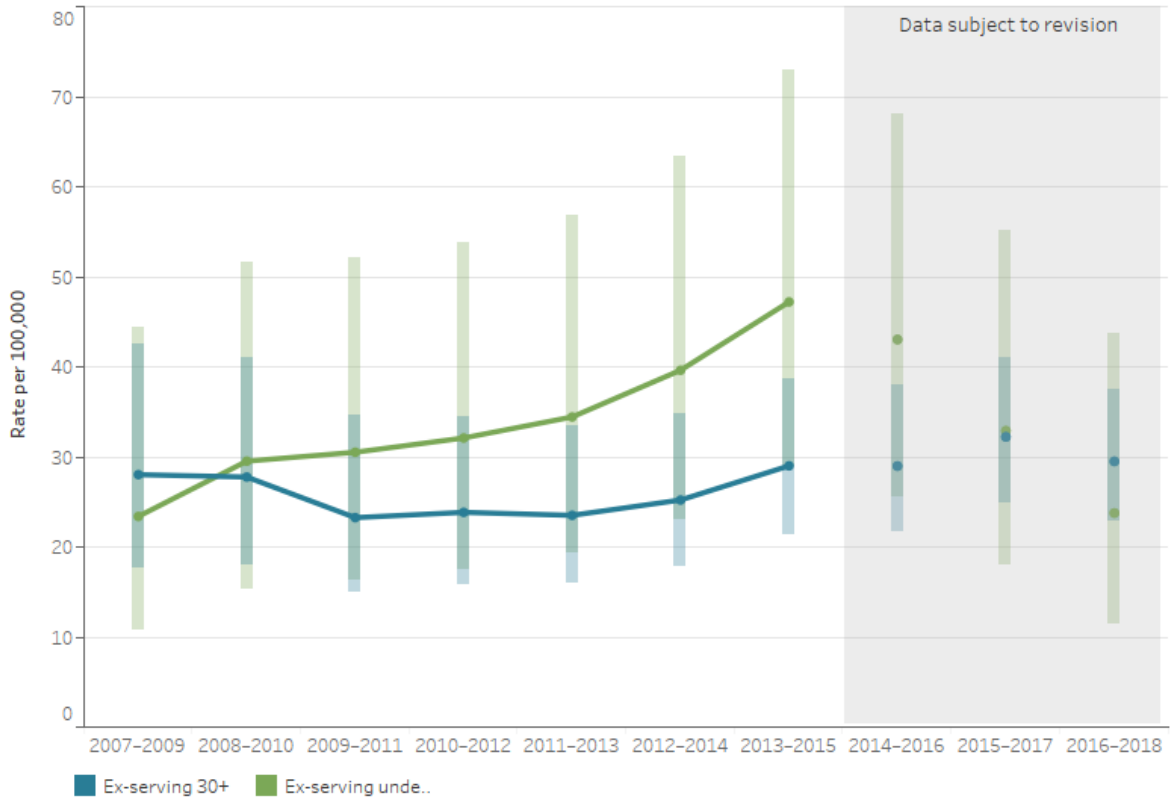


Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Ex-serving under 30 and Ex-serving 30+, suicide rate by 3 year aggregate (males)

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

- Service Category
 Ex-serving 30+
 Ex-serving <30
- Compare to
 Ex-serving 30+
 Ex-serving <30
 Australia
- Show Confidence Interval?
 Yes
 No



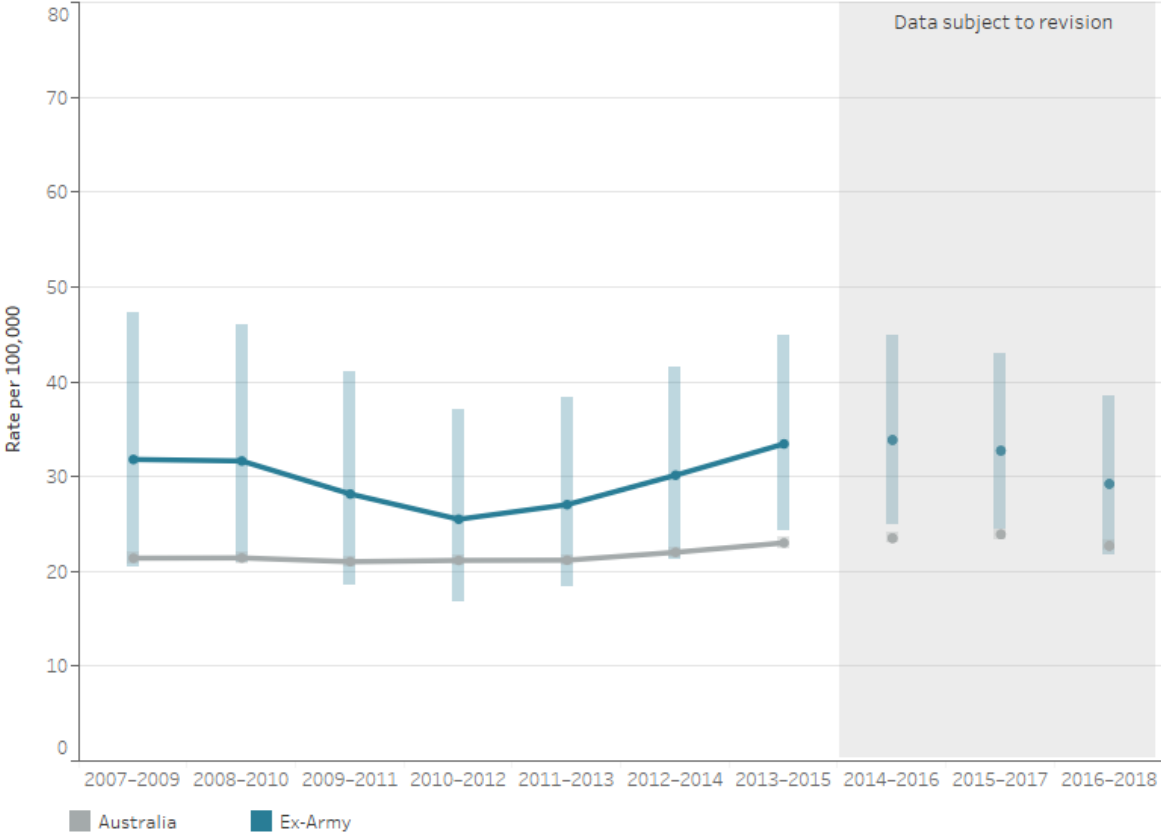
Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Suicide rates by service (ex-serving men)

Ex-Army and Australia suicide rate by 3 year aggregate (males)

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

- Service Category
 - Ex-Army
 - Ex-Navy
 - Ex-RAAF
- Compare to
 - Australia
 - Ex-Army
 - Ex-Navy
 - Ex-RAAF
- Show Confidence Interval?
 - Yes
 - No



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Ex-Navy and Australia suicide rate by 3 year aggregate (males)

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

Service Category

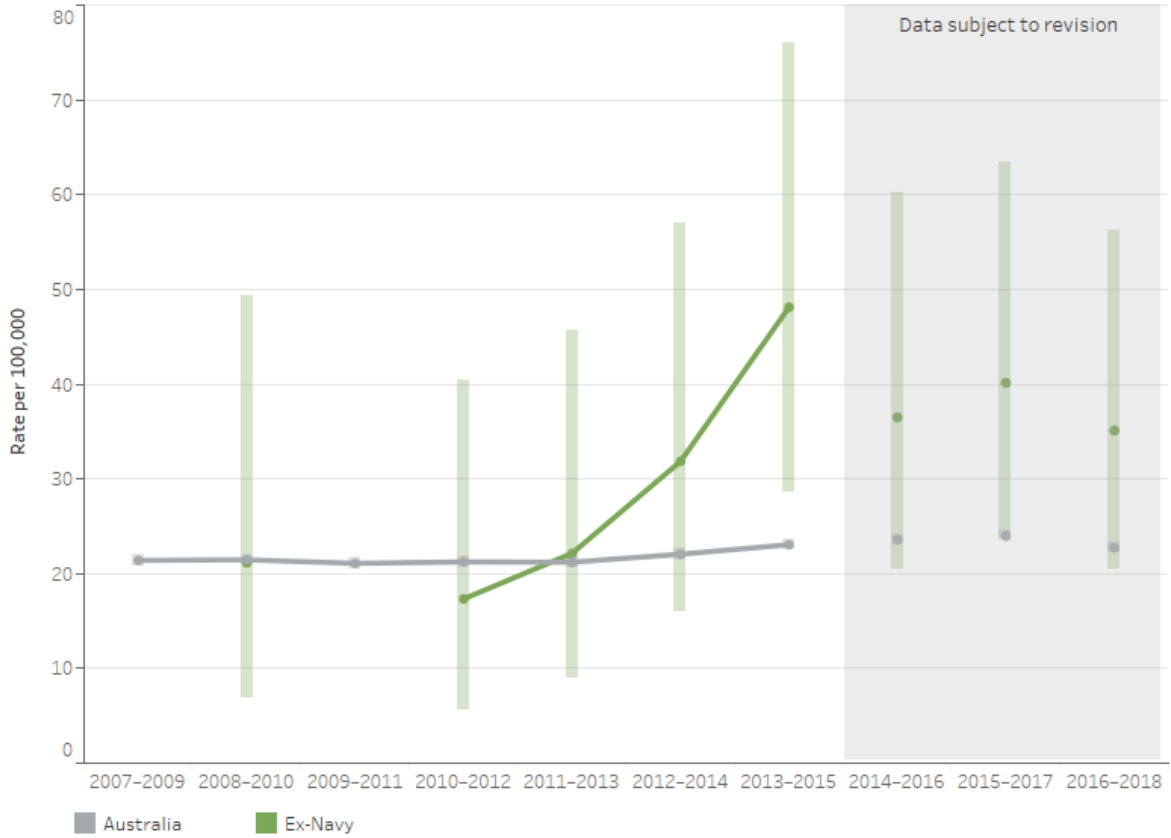
- Ex-Army
- Ex-Navy
- Ex-RAAF

Compare to

- Australia
- Ex-Army
- Ex-Navy
- Ex-RAAF

Show Confidence Interval?

- Yes
- No



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Ex-RAAF and Australia suicide rate by 3 year aggregate (males)

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

Service Category

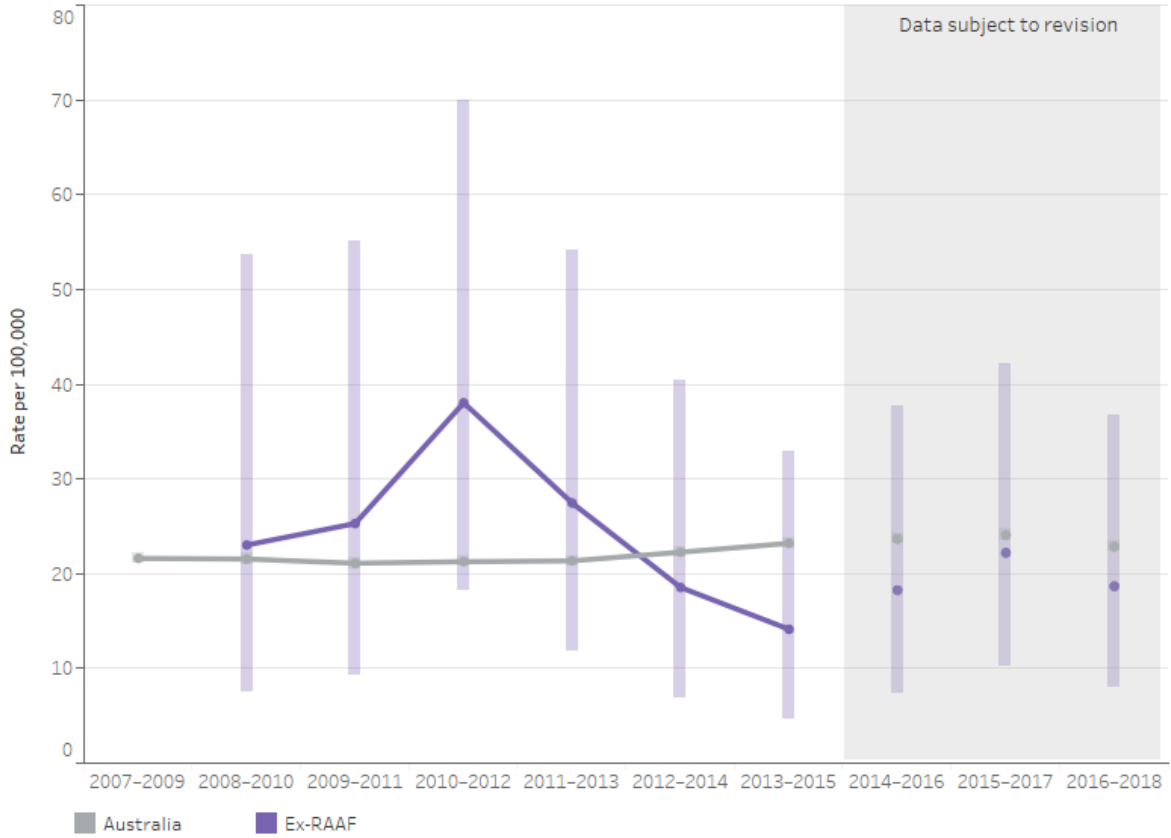
- Ex-Army
- Ex-Navy
- Ex-RAAF

Compare to

- Australia
- Ex-Army
- Ex-Navy
- Ex-RAAF

Show Confidence Interval?

- Yes
- No



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Ex-Army and Ex-Navy suicide rate by 3 year aggregate (males)

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

Service Category

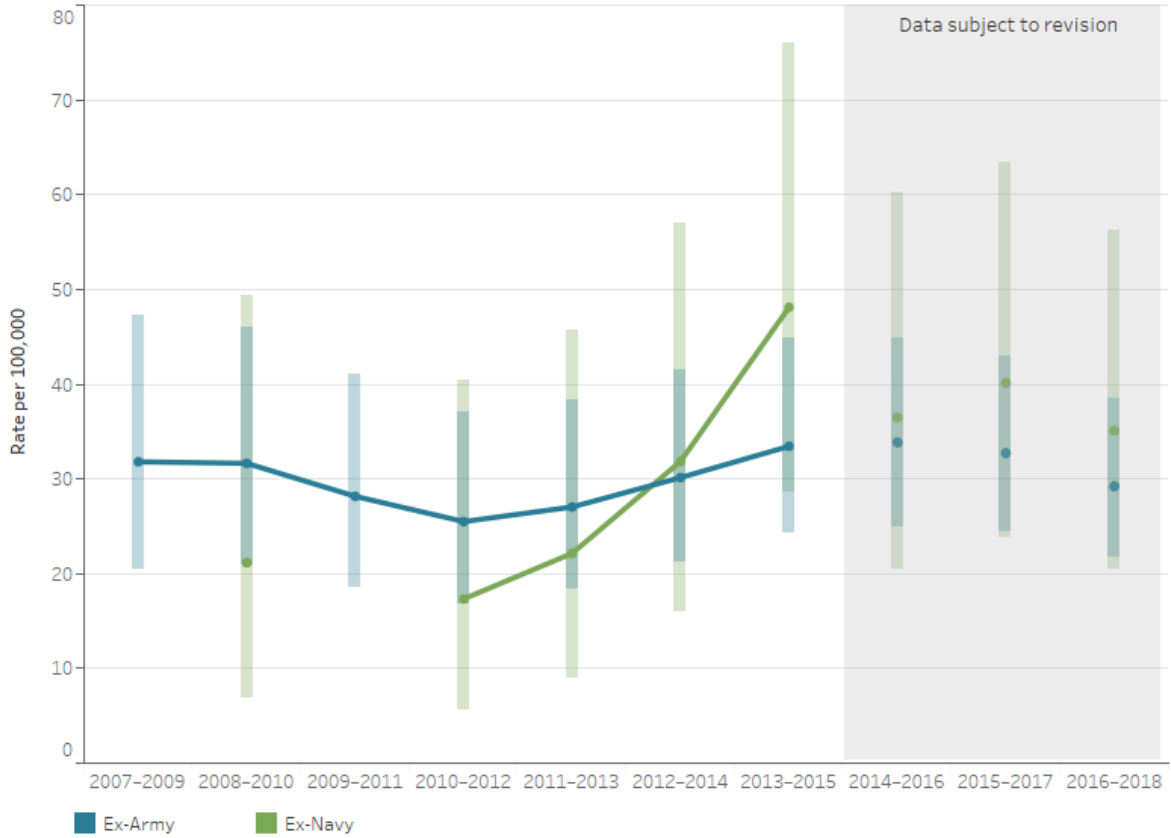
- Ex-Army
- Ex-Navy
- Ex-RAAF

Compare to

- Australia
- Ex-Army
- Ex-Navy
- Ex-RAAF

Show Confidence Interval?

- Yes
- No



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Ex-Army and Ex-RAAF suicide rate by 3 year aggregate (males)

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

Service Category

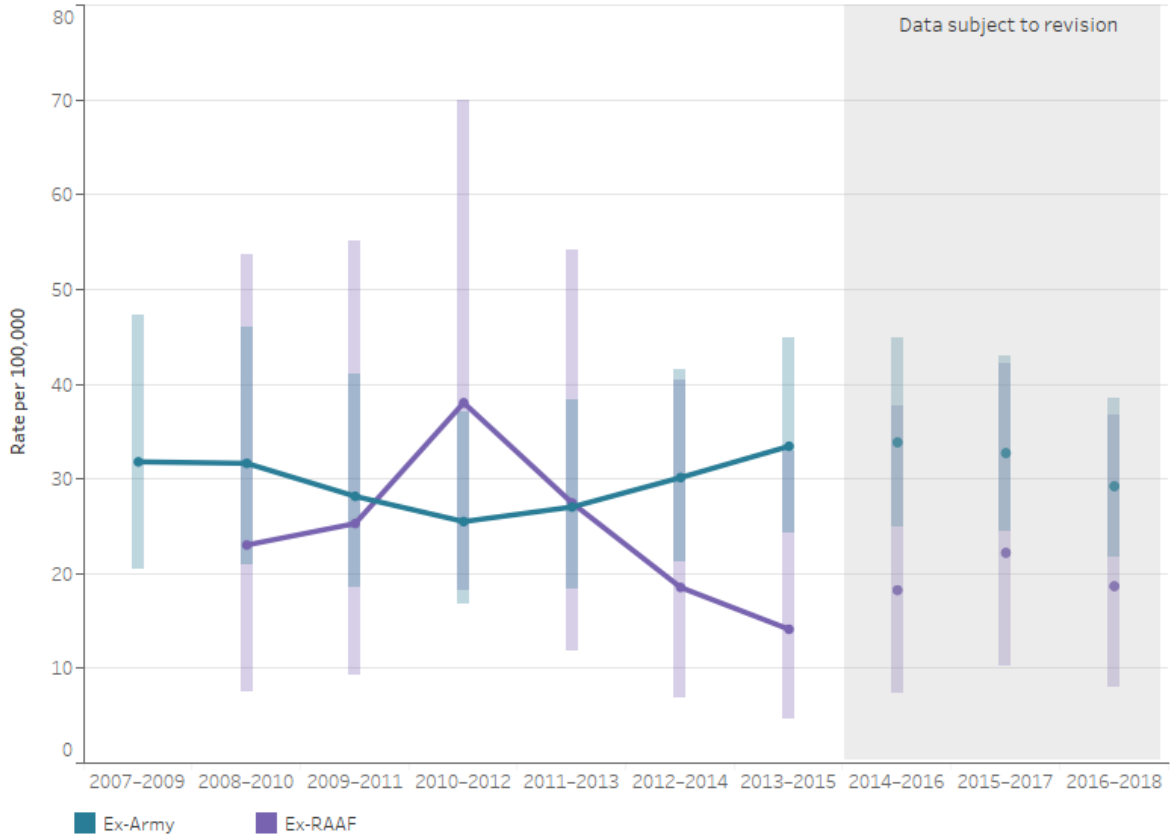
- Ex-Army
- Ex-Navy
- Ex-RAAF

Compare to

- Australia
- Ex-Army
- Ex-Navy
- Ex-RAAF

Show Confidence Interval?

- Yes
- No



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Ex-Navy and Ex-RAAF suicide rate by 3 year aggregate (males)

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

Service Category

- Ex-Army
- Ex-Navy
- Ex-RAAF

Compare to

- Australia
- Ex-Army
- Ex-Navy
- Ex-RAAF

Show Confidence Interval?

- Yes
- No



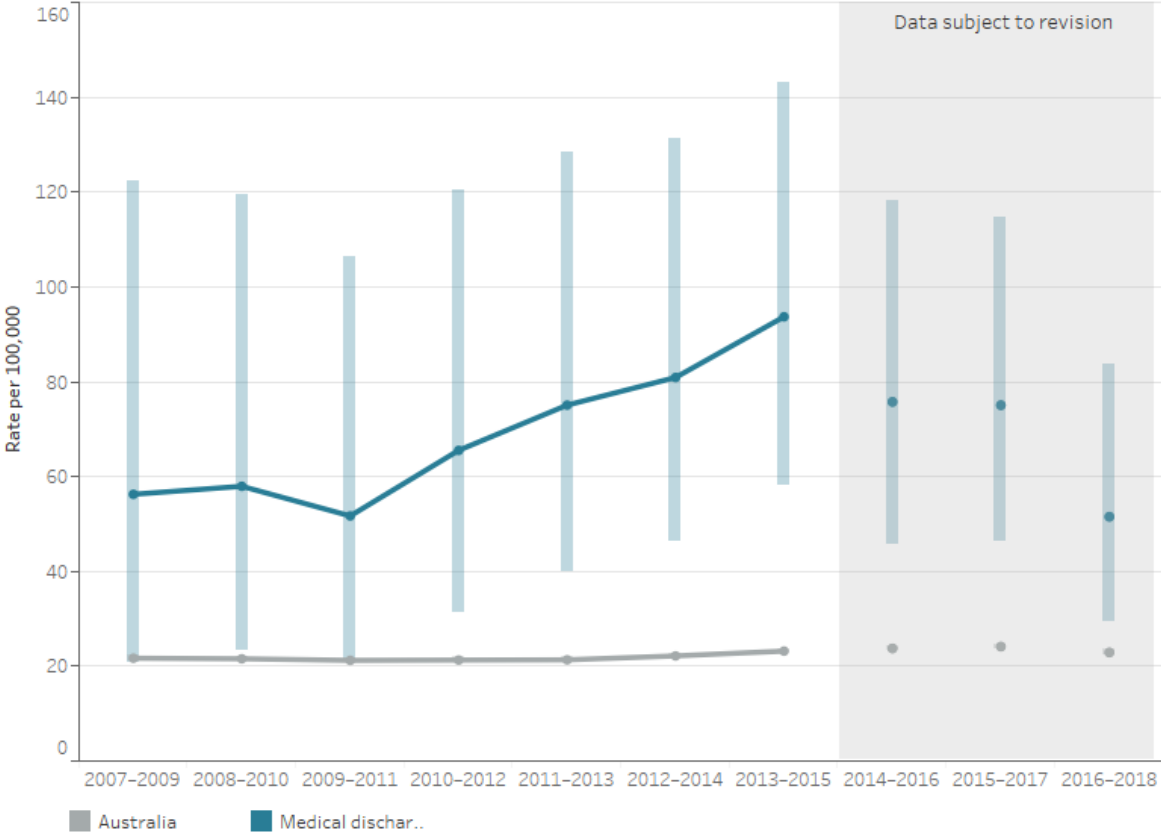
Source: AIHW analysis of linked PMKeyS-NDI data 2001–2018; NMD 2007–2018.

Suicide rates by discharge reason (ex-serving men)

Medical discharge and Australia suicide rate by 3 year aggregate (males)

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

- Service Category**
- Medical discharge
- Other involuntary
- Voluntary discharge
- Compare to**
- Australia
- Medical discharge
- Other involuntary
- Voluntary discharge
- Show Confidence Interval?**
- Yes
- No



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

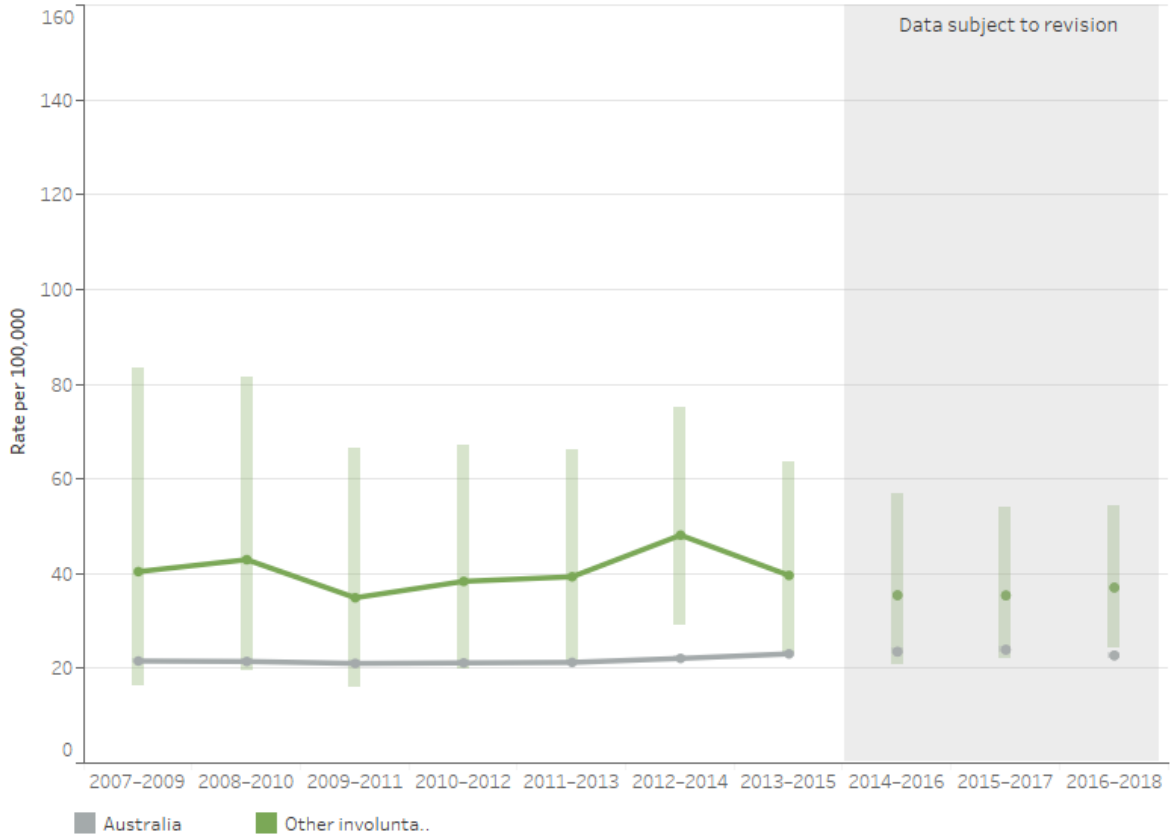
Other involuntary and Australia suicide rate by 3 year aggregate (males)

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

- Service Category
- Medical discharge
 - Other involuntary
 - Voluntary discharge

- Compare to
- Australia
 - Medical discharge
 - Other involuntary
 - Voluntary discharge

- Show Confidence Interval?
- Yes
 - No



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

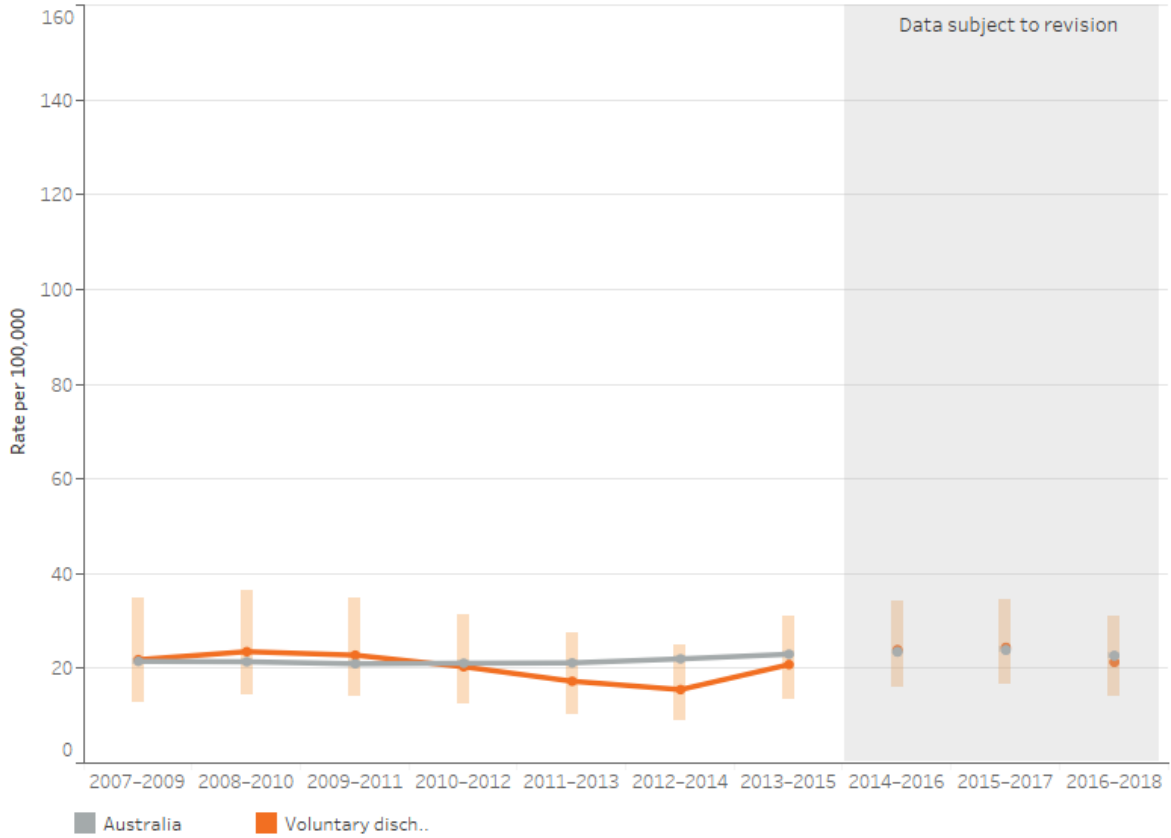
Voluntary discharge and Australia suicide rate by 3 year aggregate (males)

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

- Service Category
- Medical discharge
 - Other involuntary
 - Voluntary discharge

- Compare to
- Australia
 - Medical discharge
 - Other involuntary
 - Voluntary discharge

- Show Confidence Interval?
- Yes
 - No



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Medical discharge and Other involuntary suicide rate by 3 year aggregate (males)

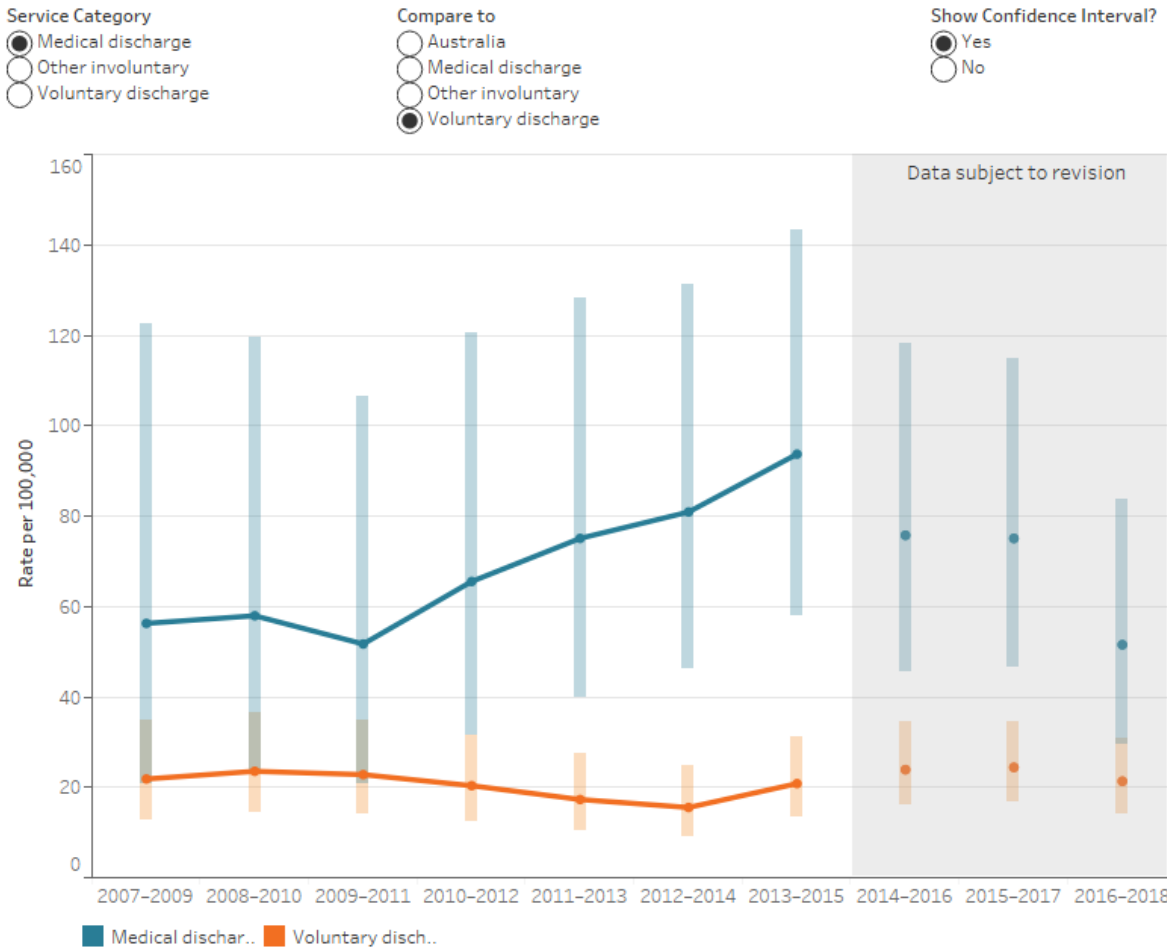
Select which data you wish to view below and hover over a data point for detailed information.



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Medical discharge and Voluntary discharge suicide rate by 3 year aggregate (males)

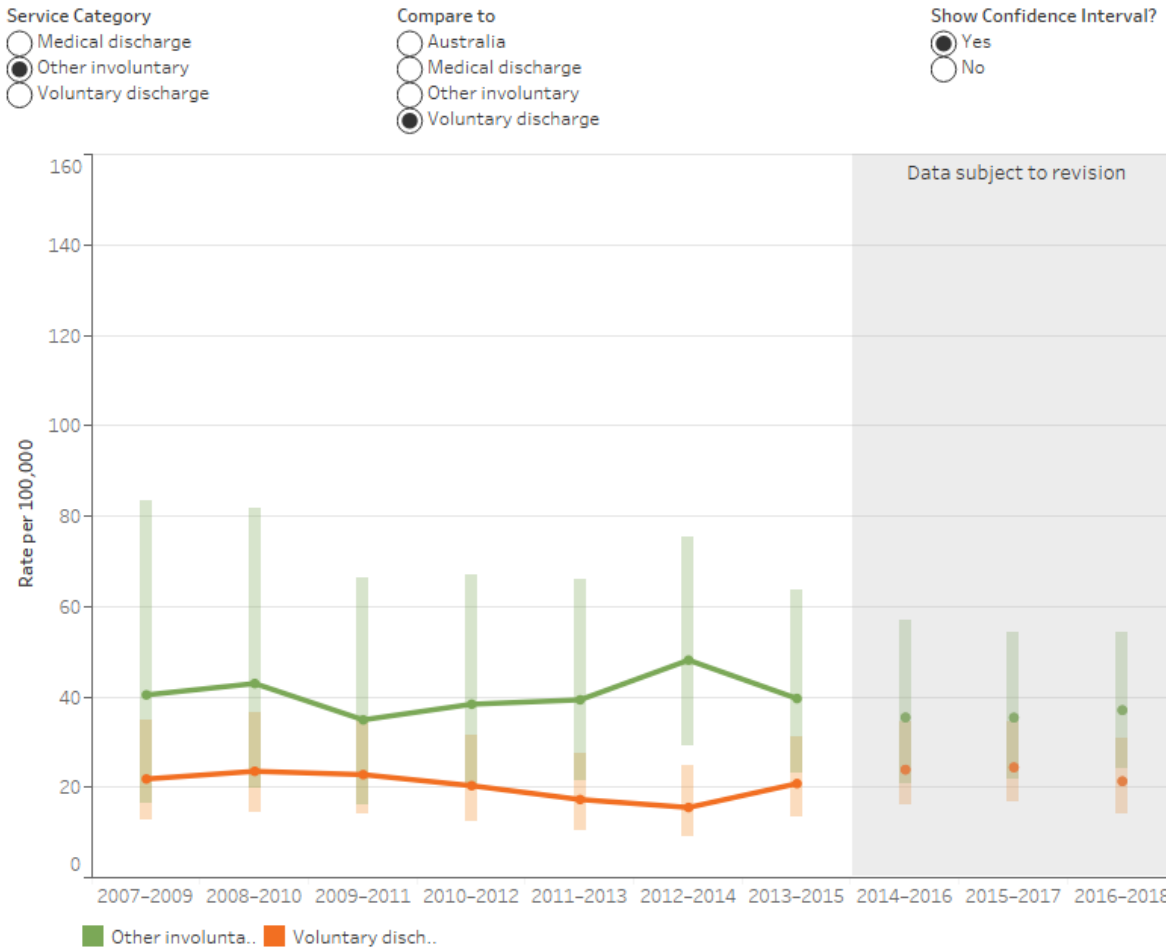
Select which data you wish to view below and hover over a data point for detailed information.



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.

Other involuntary and Voluntary discharge suicide rate by 3 year aggregate (males)

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



Source: AIHW analysis of linked PMKeyS-NDI data 2001-2018; NMD 2007-2018.



In the latest 3-year period analysed (2016-2018) the age-adjusted rate of suicide in serving males was 37% lower than in Australian males. Among reserve males it was 47% lower than in Australian males. Between 2007 and 2018 the rate of suicide in ex-serving males who discharged on medical grounds was higher than in Australian males, while among those who discharged voluntarily it was similar.

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better decisions,
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