



5.6 Veterans

The term 'veteran' has traditionally been used to describe former Australian Defence Force (ADF) personnel who were deployed to serve in war or war-like conflict environments. This article takes a broader approach, defining a veteran as a person with any experience in the ADF. The veteran community broadly refers to veterans and their families and carers, and to the ex-service organisations that support them (Hodson & McFarlane 2016; Tehan 2017c). For many veterans, their unique service experience means they may have unique health-related requirements above those of the broader community.

This article focuses on specific aspects of health for known veterans but is somewhat limited by the availability of data on the whole veteran population. Due to the historically small number of women in the ADF, most results are only presented for men.

Diverse veteran community

Veterans include current serving, reserve and ex-serving personnel both with and without operational experience—such as service in World War II, in Korea and Vietnam, in peacekeeping operations and operations in the Middle East. The veteran community also includes partners and dependants, carers, war widows and widowers. Veterans are a diverse group, with different roles and experiences in the ADF. The diversity of the group is reflected in the range of definitions currently used for a veteran. Most broadly, a veteran can be defined as any 'person who is serving or has served in the ADF' (Tehan 2017a). In 2016–17, there were around:

- 58,200 Australians serving in the ADF Permanent Force—0.3% of the Australian population aged 16 and over
- 5,300 ADF Permanent Force separations
- 320,000 veterans who had been deployed—1.6% of the Australian population aged 16 and over. (Note: This estimate does not represent a complete picture of veterans as not all will have been deployed)
- 291,000 Department of Veterans' Affairs (DVA) clients—more than 55% of these were veterans themselves and the rest were their families—this group represented 1.2% of the whole Australian population (ABS 2017; Defence 2017a; Tehan 2017c).

The DVA estimates that around only 1 in 5 (20%) veterans are clients for whom it holds information on their health and welfare status and access to services; this means that the health and welfare status of the remaining veteran population is largely unknown (DVA 2017c).





As the environment in which the ADF operates continues to change, so, too, do the composition and needs of current and future veteran cohorts and their families. An increase in military operations over the last decade or so has resulted in a new cohort of contemporary veterans. While this cohort shares the military experience of previous generations, their needs differ from those of their predecessors, due to factors such as the impact of multiple deployments or deploying as smaller contingents or individuals, rather than larger unit formations; the nature of recent warfare; and an extended working life for many members after their discharge (DVA 2013).

Who is responsible for veterans' health and welfare?

The Department of Defence is responsible for the health care of current serving ADF members up until the date of their transition to civilian life; this includes primary health care, dental and mental health services, hospital care, ancillary health care specialist services, diagnostic and radiology services, rehabilitation and suicide prevention (Defence 2016; DVA 2017a).

After transition, these people can access health care services under Medicare, state and territory government health arrangements, the private sector and (if relevant) those administered by the DVA for eligible veterans, war widows and widowers and dependants. DVA funds a wide range of payments and services—including pensions, compensation and income support, as well as health services such as medical, dental, allied health, specialist services, hospitals, pharmaceuticals, surgery, whole-of-person rehabilitation, counselling, transport and home care (DVA 2017a).

DVA and the Department of Defence are jointly responsible for support for personnel transitioning from the ADF into civilian life (JSCFADT 2015). The Defence transition program provides ADF personnel and their families with support and services that include tailored career coaching, Your Money and You (financial information), medical (including registering for Medicare, sourcing private health insurance, and finding a general practitioner), funding for financial counselling, employment and interview skills, training and education, housing and relocation, and rehabilitation and compensation as needed (Defence 2017b).

Risk and protective factors of ADF service

The service experience of ADF members may have an impact on their health needs as veterans, presenting both protective factors and risk factors for their health. Their type of service, rank, length of service, reason for discharge and transition experience are some factors that may have an effect (AIHW 2018; Kang et al. 2015; Katz et al. 2012; Hoffmire et al. 2015).





The healthy worker effect is demonstrated by the generally better health and lower mortality rates of employed populations compared with the general population—usually due to lower participation in employment among people with serious illness, injury or disability. Several studies have recognised the ‘healthy soldier effect’ as protection afforded above that of the general employed population, due mainly to their ongoing need to stay fit and to having ready access to health care during service (Harrex et al. 2003; Kang et al. 2015). While ex-serving personnel may no longer have the protective benefits of ready access to health care, some of the benefits of good physical health may remain and be reflected in the lower all-cause mortality rate in ex-serving ADF personnel compared with an age-matched population of Australian men (AIHW 2018).

Transition from military to civilian life is an important event in a veteran’s life. While many have transitioned without seeking help, others find the process difficult and uncertain. They move from the structured, purpose-driven and supported military environment—where housing, medical services, training and education are provided or subsidised as a condition of service—to the largely unstructured and unsupported nature of civilian life (Defence 2017b). The transition process is thus recognised as a time of stress, anxiety, vulnerability and uncertainty for some individuals (DVA 2013; JSCFADT 2015; Kapur et al. 2009). People leaving the military with service-related problems such as chronic ill health, injury, chronic pain or psychological concerns may experience greater difficulties (DVA 2017b).

What do we know about the health of Australia’s veterans?

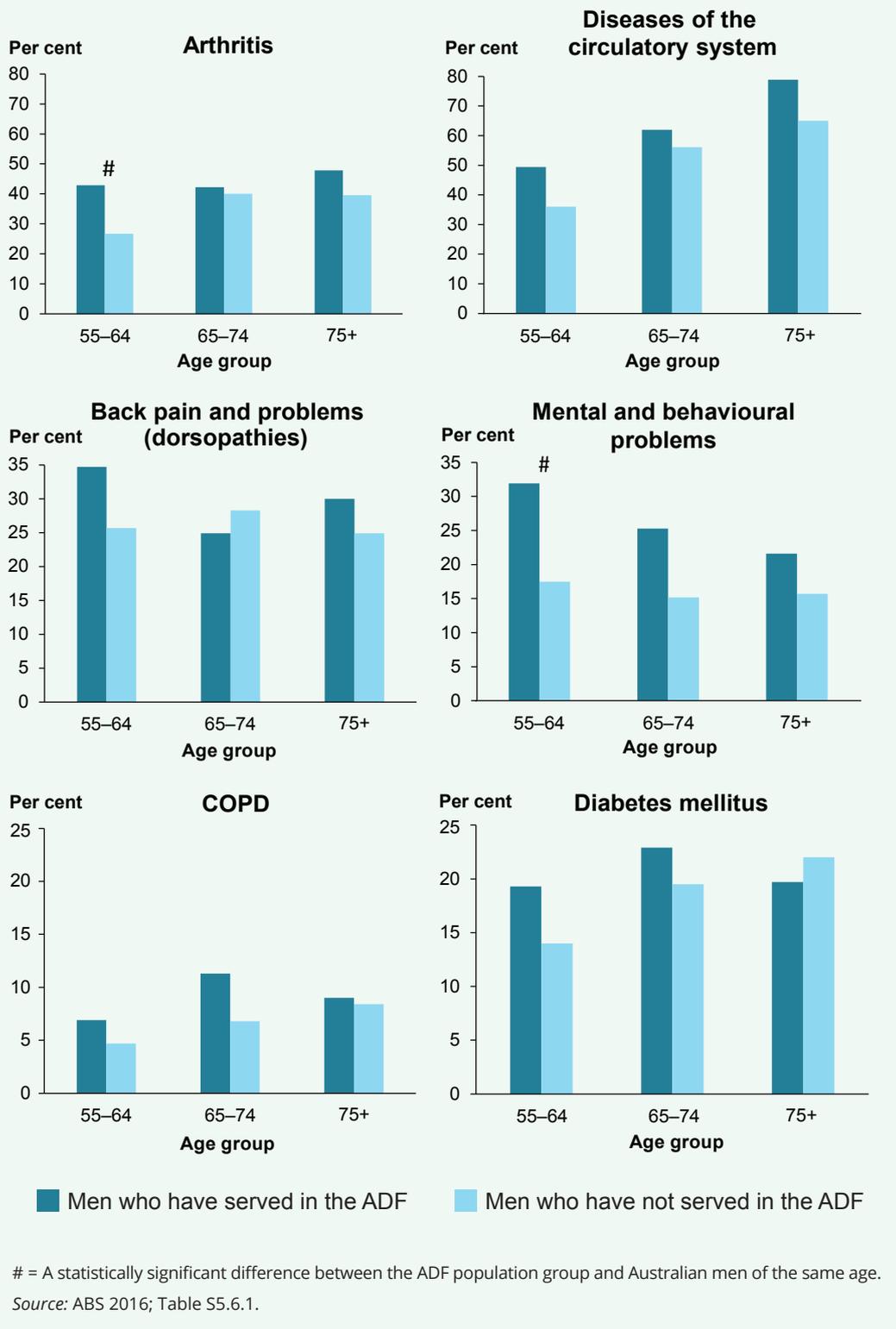
Due to limitations in the data currently available on veterans, a comprehensive picture of the health of the veteran population cannot be provided. Work is currently underway in a number of areas to deal with this gap, including the Transition and Wellbeing Research Program, via research commissioned under DVA’s Applied Research Programme and the strategic partnership between DVA and AIHW (see sections ‘What is the AIHW doing?’ and ‘What is missing from the picture?’ for further details).

According to the 2014–15 National Health Survey, men aged 55 and over who served in the ADF generally report similar rates of selected chronic conditions—arthritis, back pain and problems, chronic obstructive pulmonary disease (COPD), diabetes mellitus, diseases of the circulatory system and mental and behavioural problems—as men in the same age group who have not served. However, men aged 55–64 who served in the ADF report higher rates of mental and behavioural problems and arthritis than men of the same age who have not served—1.8 times and 1.6 times higher, respectively (Figure 5.6.1).





Figure 5.6.1: Prevalence of selected chronic conditions for men aged 55 and over, by age group and ADF service status, 2014–15





According to self-reported data in the 2014–15 National Health Survey (NHS), after adjusting for differences in age structure, men aged 18 and over who had ever served in the ADF were as likely to rate their health as ‘very good’ or ‘excellent’ as men who had not served (56% and 55%, respectively).

The 2010 ADF Mental Health Prevalence and Wellbeing Study found that 1 in 5 (22%) people in the ADF population experienced a mental disorder in the previous 12 months. More than half (54%) of the ADF population had experienced an anxiety, affective or alcohol use disorder at some stage in their lifetime, which was higher than that among the Australian community (49%). Men in the ADF had a greater prevalence of affective disorders (9.4%) than men who had not served (5.7%) and a lower prevalence of alcohol disorders (5.6%) than men who had not served (8.8%) (Van Hooff et al. 2014).

Incidence of suicide among serving and ex-serving ADF personnel

There has been ongoing concern within the ADF, veteran and wider Australian communities about the incidence of suicide in serving and ex-serving ADF personnel. However, until recently, there was a lack of rigorous statistical evidence to inform targeted strategies and plans to support people at risk. A recent study has provided accurate numbers and rates of suicide death among contemporary ADF personnel who have at least 1 day of service from 1 January 2001 (AIHW 2016b, 2018). Suicide rates were examined for three ADF populations—those serving full time, in the reserves and ex-serving personnel (hereafter referred to as the 3 ADF populations; Box 5.6.2). Comparisons were made with the Australian population (AIHW 2016b, 2018), and service-related characteristics associated with suicide death in ex-serving personnel were presented (AIHW 2018).

Box 5.6.2: Defining the 3 ADF populations

The term ‘ADF personnel’ refers to serving, reserve and ex-serving ADF members. It does not include civilian personnel employed by the Department of Defence.

Serving full time: ADF members 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 the gap year program.

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

Ex-serving: ADF members in the serving or reserve population on or after 1 January 2001 and who were discharged after 1 January 2001. The ex-serving population increased by around 5,000 per year in the period of study (2001–2015).



Between 2001 and 2015, there were 325 suicide deaths among people with at least 1 day of ADF service since 2001. Of these, 51% (166) were ex-serving at the time of their death, 28% (90) were serving full time and 21% (69) were in the reserves.

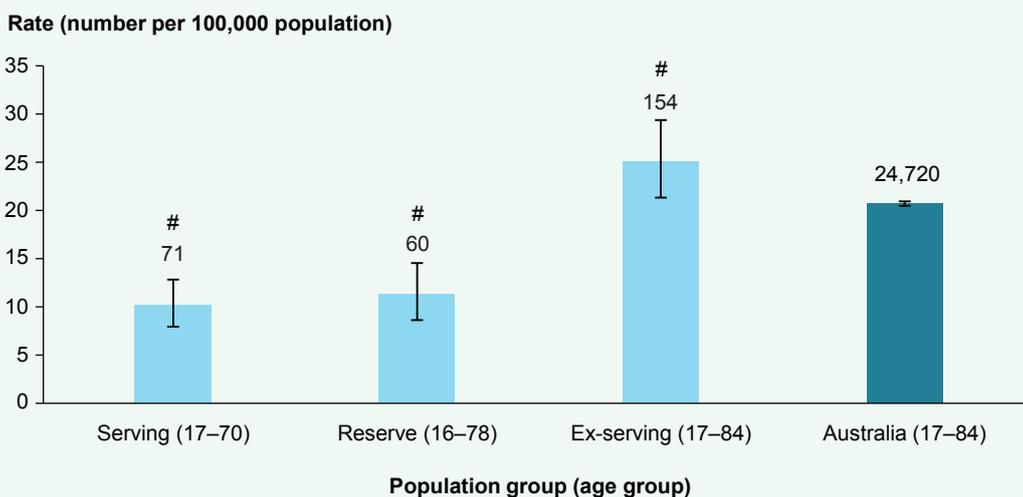
Men made up 84% of the ADF populations examined in the study. The clear majority of suicide deaths identified occurred among men—93% (303 deaths), with 6.8% (22 deaths) among women.

The rate of suicide death among women in the 3 ADF populations was highest for women aged 18–29 (AIHW 2018). This was similar to the rate in Australian women of the same age. Due to the smaller number of women in the study, further detailed analysis on women was not possible.

Suicide rates among men serving full time or in the reserves were lower than rates for all Australian men (AIHW 2018; Figure 5.6.2). In contrast, the suicide rate for ex-serving men was:

- 1.2 times as high as the rate for men in the Australian population—however, after adjusting for age, the rates are similar; this result is still of interest, though, when considered in the context of the lower all-cause mortality in ex-serving men compared with all Australian men
- 1.7 times as high for men aged 18–29 compared with all Australian men of the same age (Figure 5.6.3)
- more than twice as high as for men serving full time or in the reserves (Figure 5.6.2); for ex-serving men aged 18–29, the suicide rate was around 3 times as high as for men of the same age serving full time or in the reserves (Figure 5.6.3)
- more than twice as high as for ex-serving women.

Figure 5.6.2: Crude rate of suicide death, ADF populations compared with Australian men, 2002–2015



= A statistically significant difference between the ADF population group and Australian men of the same age.

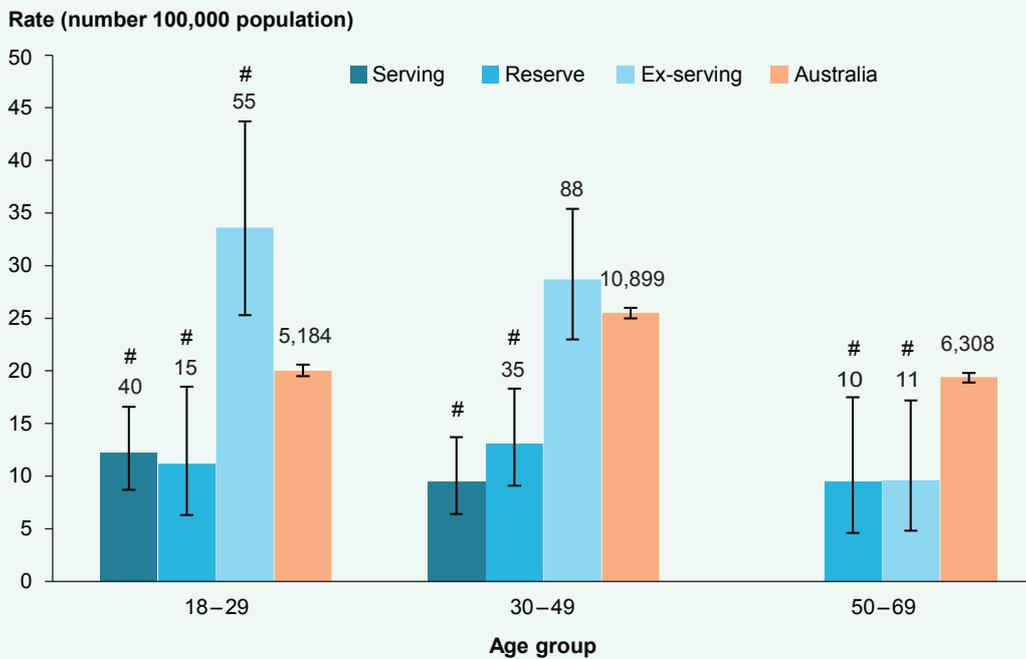
Note: The number of deaths in each group is displayed above the bars. The thin vertical lines superimposed over the top end of each bar are 95% confidence intervals (CIs). The rate shown for Australian men is based on the age range of the ex-serving population (ages 17–84, crude rate = 21.7). The crude rate in Australian men aged 17–70 is 21.8 and for men aged 16–78, is 21.4.

Sources: National Mortality Database 2002–2015; Linked PMKeyS–National Death Index data 2002–2015; Table S5.6.2.





Figure 5.6.3: Suicide death, rate for ADF populations and all Australian men, by age, 2002–2015



= A statistically significant difference between the ADF population group and Australian men of the same age.

Note: The number of deaths in each group is displayed above the bars. Where a number is not shown, it has been suppressed to ensure confidentiality. The thin vertical lines superimposed over the top end of each bar are 95% CIs.

Sources: National Mortality Database 2002–2015; Linked PMKeyS–National Death Index data 2002–2015; Table S5.6.3.

The following service-related characteristics were associated with higher risk of suicide death among ex-serving men:

- medical discharge—suicide in men discharged involuntarily for medical reasons is 1.9 times more likely than in men discharged voluntarily
- all ranks other than commissioned officers—ex-serving personnel separated in all ranks other than commissioned officer are 2.2 times more likely to die by suicide than commissioned officers.

Length of service was not a significant predictor of suicide death once all available information—age, service (Navy, Army, Air Force), rank, reason for discharge and the time between discharge from the ADF and death—was controlled for (AIHW 2018). However, results suggest an increased likelihood of suicide in ex-serving men with less than 1 year of service when compared with men who had served 10 years or more.

The key findings for this study are calculated from certified deaths information only. Differences between the results for this study and other publicly reported estimates may be due to the study scope and/or the source of cause of death information. Other factors to consider when interpreting these results are described in the full report (AIHW 2018).



While these results cannot indicate if a particular characteristic is the cause of the suicide death, they do help to identify groups of people who may be at higher risk of suicide death—including personnel discharged for medical reasons and personnel discharged in all ranks other than commissioned officers. This information has helped to inform policy and to increase supports to reduce suicide rates among serving and ex-serving ADF personnel.

Since 1 July 2017, in response to the findings of this study, the Australian Government has made free mental health treatment available to all current and former members of the permanent ADF, and implemented case management services for personnel discharged from a mental health hospital (Australian Government 2017; Tehan 2017b).

The Australian Government has also committed to the annual monitoring of key findings from the study (Australian Government 2017). The AIHW will continue to independently track these data to further our understanding of this complex issue and to inform future policy and interventions to reduce suicide rates among serving and ex-serving ADF personnel.

Mortality and cancer incidence in aircraft maintenance personnel

Between 1974 and 2000, the Air Force undertook a series of formal Deseal/Reseal (DSRS) programs, alongside informal repair activities, to correct fuel leaks inside the fuel tanks of F-111 aircraft. Several concerns were raised about health outcomes among Air Force personnel who worked on these programs and associated activities at the Air Force Base at Amberley in Queensland. The repair work was suspended in 2000, and a series of inquiries and health studies followed—one of these was the Mortality and Cancer Incidence Study (MCIS) (AIHW 2016a).

The purpose of the MCIS was to determine whether the personnel exposed to (involved in) the DSRS programs at Amberley (the DSRS Study Population) experience higher than expected rates of mortality or cancer incidence compared with two groups of non-exposed Air Force personnel based at Amberley and Richmond (Comparison populations; see Box 5.6.4). The number of exposed women in the study population was too small for meaningful comparisons, so the DSRS Study and Comparison populations include men only.

Box 5.6.4: Comparison populations

The two Comparison populations were matched to the DSRS Study Population by age, sex, rank, and posting/exposure category—but differed by occupation and environment/location. These populations were:

- the Air Force Base Amberley Comparison Population—sourced from individuals with similar environmental exposures (located at the same base, in Queensland), but different occupational exposures (non-technical role)
- the Air Force Base Richmond Comparison Population—sourced from individuals with similar occupational exposures (technical, aircraft maintenance), but different environmental exposures (located at a different base, in New South Wales).

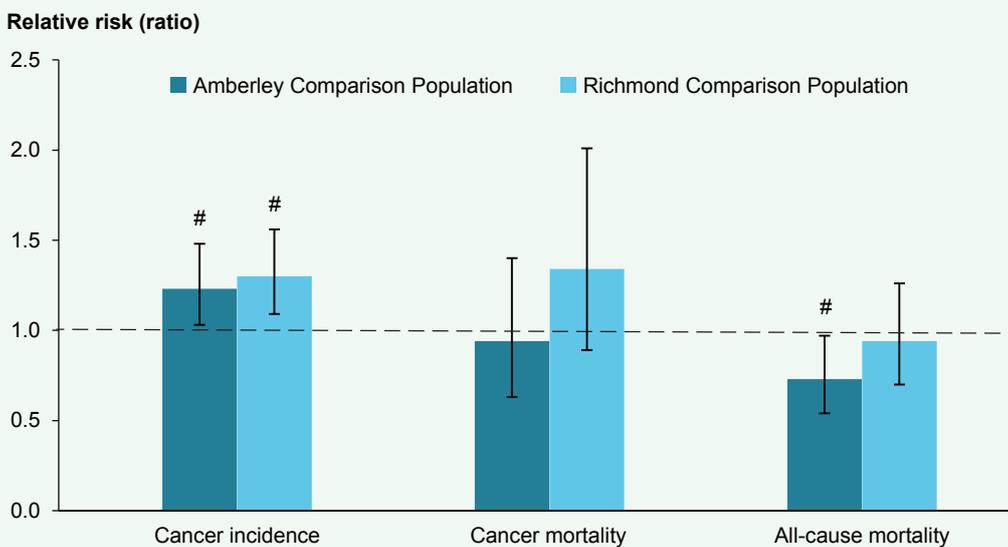




Four iterations of the MCIS have been undertaken to date. Findings from the fourth study in relation to cancer incidence in 1982–2010 show that, of the 149 cancers diagnosed, the most common were prostate cancer (21% of all cancers), melanoma of the skin (17%) and colorectal cancer (13%). The MCIS confirms that the personnel exposed to the DSRS programs at Amberley experience higher than expected rates of cancer incidence compared with the two groups of non-exposed Air Force personnel based at Amberley and Richmond. Results also show that involvement in the DSRS programs was associated with:

- a 23%–30% increase in the rate of cancer diagnosis (compared with both the Amberley and Richmond Comparison populations) (Figure 5.6.4)
- a 39% increase in the rate of cancer diagnosis (compared with the Australian population)
- higher incidence of non-Hodgkin lymphoma (more than 2 times as high compared with the Amberley Comparison Population)
- higher incidence of lung cancer (nearly 2 times as high compared with the Richmond Comparison Population) (AIHW 2016a).

Figure 5.6.4: Relative risk ratios for cancer incidence (1982–2010), cancer mortality and all cause mortality (1999–2012): DSRS Study Population compared with Comparison populations



= Indicates statistically significant finding at the 95% CI.

Note: The dashed horizontal line marks where relative risk is 1.0. If the relative risk is greater than 1.0, the number of cancers or deaths in the Study population is higher than that for the Comparison populations. If the relative risk is less than 1.0, the number of cancers or deaths in the Study population is lower than that for the Comparison population. The thin vertical lines represent the 95% CI around the (weighted) incidence/mortality relative risk. That is, there is 95% certainty that the true difference in incidence/mortality rates between the Study population and the Comparison populations sits within that interval.

Sources: AIHW linkage analysis of the Australian Cancer Database 2010 and the National Death Index; Table S5.6.4.





There were 52 deaths from all causes in the fourth MCIS Study Population in 1999–2012, making the all-cause mortality rate in the DSRS Study Population lower when compared with the Amberley Comparison Population (27%) (AIHW 2016a). Of these deaths, 29 (56%) were from cancer, making it the leading cause of death for that population.

When interpreting these findings, it is important to keep in mind the nature of the ongoing scrutiny of the Study Population and their health status, which can introduce biases into the study. Further information on the methods and factors to consider when interpreting these results can be found in the full report (AIHW 2016a).

What is the AIHW doing?

DVA and the AIHW have established a 3-year strategic partnership from 2017–2020, to build a comprehensive profile of the health and welfare of Australia's veterans, including current and ex-serving persons, their families and carers. A broad population-level approach will be taken—beyond current serving and DVA clients—to analyse health and welfare outcomes for veterans. Existing disparate data sources will be explored to identify opportunities to consolidate information from:

- survey data where people self-identify as having ADF service
- administrative data that include questions, variables or flags relating to ADF service or receipt of DVA entitlements
- future data integration.

What is missing from the picture?

DVA estimates that only around 1 in 5 (20%) veterans are known to them as clients, for whom they hold a range of information about health and welfare status and access to services (DVA 2017c). This means that the health and welfare status of the remaining 80% of the veteran population is largely unknown.

Veterans are not readily identifiable in many general population health and welfare data sources. While some data sources include questions, variables or flags relating to ADF service or the receipt of DVA health and welfare entitlements, the different definitions used of 'a veteran' limits comparisons across these sources. Developing a standardised veteran indicator—and extending the use of this in existing surveys or administrative collections—would enable data on veterans to be consistently identified and analysed across a broader range of existing data sources.

Research focusing on a subset of the veteran population and/or particular conflicts—for example, Vietnam veterans—is limited in its capacity to support population-level analyses. As well, while survey and administrative by-product data sources cover aspects of multiple domains (including health, social support and housing), they are limited in both their capacity to provide holistic coverage of all domains and to support longitudinal analysis.

There are also substantial gaps for the education, employment, justice and safety, and income and finance domains.

As well, there are substantial gaps in our understanding of women's experiences in the ADF. This is due to the historically small number of women represented in the ADF, which has limited this research.





Where do I go for more information?

More information on veterans is available at <www.aihw.gov.au/reports-statistics/population-groups/veterans/overview>.

The report *Incidence of suicide among serving and ex-serving Australian Defence Force personnel* and other releases are available for free download.

The report *Fourth Study of mortality and cancer incidence in aircraft maintenance personnel: a continuing study of F-111 Deseal/Reseal personnel 2016* and previous releases are available for free download.

More information on the Department of Veterans' Affairs is available at <www.dva.gov.au>.

More information on the Department of Defence is available at <www.defence.gov.au>.

More information on the Australian Senate inquiry into suicide by veterans is available at <www.aph.gov.au>.

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