

Health Reports

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by Mary Beth MacLean, Jill Sweet, Alyson Mahar, Sarah Gould,
and Amy L. Hall

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ABSTRACT

Background

Veterans are more likely than other Canadians to have chronic health conditions, making access to health care an important issue. However, little research has addressed health care access and use among veterans. This paper examines access and use among veterans compared with other Canadians.

Methods

Health care access and use indicators were examined for Regular Force veterans using the 2016 Life After Service Survey. Information for male and female veterans was compared with information on the Canadian general population from the 2015 and 2016 Canadian Community Health Survey, using age-adjusted rates and 95% confidence intervals.

Results

More than 80% of male and female veterans reported having a regular medical doctor in the 12 months before the survey. The majority of veterans (71% of males and 81% of females) had consulted a family doctor, while a minority had been hospitalized (8% of males and females). These rates were similar to those in the Canadian general population. However, veteran consultation rates for mental health care and with audiologists, speech therapists or occupational therapists among both sexes were double to triple those of the Canadian general population. Among veterans, males reported lower rates of unmet needs compared with females.

Conclusion

Veterans had similar rates of access to a regular medical doctor and higher rates of use compared with other Canadians. However, these may be comparatively low, given previous findings on higher rates of disability and some chronic conditions among veterans. Noted differences between males and females highlight the importance of research and services that account for sex and gender. The extent to which health care needs explain health care use and barriers to care requires further research.

Keywords

Veterans, health care, health care accessibility, comparative study, sex factors

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What is already known on this subject?

- Veterans have a greater prevalence of various chronic health conditions, including mental and physical conditions, compared with the Canadian general population.
- Little is known about veteran health care use and access compared with the Canadian general population.

What does this study add?

- Use rates for both general health and mental health care differed between veterans and the general population.
- Differences were also observed between male and female veterans. This is important, since sex-disaggregated analyses of this population have been uncommon to date.
- Barriers to health care service access and use in this population require further investigation.

Access to health care is an important aspect of supporting health, as well as of preventing work-related disability.¹ Veterans of the Canadian Armed Forces have been found to have a higher prevalence of many health conditions and self-reported disability, compared with the Canadian general population.^{2,3} For example, previous comparisons of veterans and the Canadian general population using the Life After Service Survey and the Canadian Community Health Survey have indicated that Regular Force veterans have higher rates of chronic physical health problems than the Canadian general population, including back pain, hearing loss and arthritis.^{2,3} Mental health conditions, such as depression, anxiety and post-traumatic stress disorder, have also been found to be more prevalent in veterans when comparing these two data sources.^{2,3} Disability rates among veterans are almost three times those of the Canadian general population;⁴ similarly, work-related disability is also more common among veterans than the general population.⁵

Despite the greater health care needs that may be inferred among Canadian veterans compared with the general population, relatively few published studies have described veteran health care use,⁶⁻⁸ and none have described health care access among veterans as compared with the Canadian general population. Outside Canada, only one study comparing the health care use of veterans with that of the general population could be found, in Australia.⁹ Furthermore, most studies of serving members and veterans focus on mental health care use and not on broader health care use. This is important, as mental and physical health are interrelated, particularly among veterans.¹⁰ Moreover, despite noted differences in health care needs and use between male and female veterans,^{3,11} no published studies have included sex-disaggregated comparisons of veterans' access and use with the access and use of their Canadian general population counterparts.

As veterans have greater rates of disability and chronic conditions,^{2,3} it is expected that they would be more likely to

use health care. Despite greater extended health care coverage, veterans must find a family doctor after release from the military and therefore may be less likely to have access to health care.

The purpose of this paper is to compare rates of health care access and use among male and female veterans against those of their Canadian general population counterparts. Rates of health care access and use are also examined across males and females.

Methods

Veteran population

Various demographic characteristics of Canadian Regular Force veterans and self-reported indicators of need, health care access and health care use for this population are available in the 2016 Life After Service Survey (LASS).^{2,4} This national cross-sectional survey was developed by Veterans Affairs Canada in partnership with the Department of National Defence and Statistics Canada. Veterans who released from the Regular Force between 1998 and 2015 were identified from a computer-generated listing of military releases. Excluded were entry ranks (including recruit, officer cadet and second lieutenant); out-of-scope records for people residing in one of the three territories or outside Canada; and individuals living in an institution, who had re-enrolled in the Canadian Armed Forces or who had died.

Statistics Canada collected survey data via telephone interviews in February and March 2016. With a 73% response rate and 91% share rate (consent to allow Statistics Canada to share data with Veterans Affairs Canada), a sample of 2,755 Regular Force veterans, representative of the population of 56,419 Regular Force veterans who released from service between 1998 and 2015, was available for analysis.

Table 1
Study sample (unweighted), by sex and age group

Age group (years)	Veterans (2016 LASS)				All Canadians (2015 and 2016 CCHS)			
	Male		Female		Male		Female	
	count	percent	count	percent	count	percent	count	percent
Younger than 30	162	6.7	20	5.9	11,290	22.2	11,563	19.7
30 to 39	284	11.8	59	17.3	6,701	13.2	8,461	14.4
40 to 49	460	19.1	74	21.7	6,771	13.3	7,542	12.8
50 to 59	946	39.2	151	44.3	8,531	16.8	9,629	16.4
60 and older	562	23.3	37	10.9	17,532	34.5	21,639	36.8
Total	2,414	100.0	341	100.0	50,825	100.0	58,834	100.0

Notes: CCHS = Canadian Community Health Survey, LASS = Life After Service Survey.

Sources: Statistics Canada, 2016 Life After Service Survey, and 2015 and 2016 Canadian Community Health Survey.

Comparisons with the Canadian general population

The Canadian Community Health Survey¹² (CCHS) is a cross-sectional survey of the non-institutionalized population aged 12 and older across Canada, including the territories, and is offered in both official languages. This survey is conducted annually by Statistics Canada, with a sample size of 130,000 over two years. CCHS data are typically used for health surveillance and population health research. Data are collected using computer-assisted personal and telephone interview software.

Veterans' health care access and use were compared with those of the Canadian general population using indicators available from both the LASS and the 2015 and 2016 CCHS.¹² One exception was the indicator for unmet health care needs in the past 12 months. This indicator was available for only 16% of the 2015 and 2016 CCHS population, since it was optional content for the provinces and territories. This indicator was therefore compared only for male and female veterans, and not with the Canadian general population.

Access and perceived barriers to health care

Answers to two questions pertaining to health care access in the past 12 months, asked in both surveys, were examined: "Do you have a regular medical doctor?" and "Was there ever a time when you felt that you needed health care, other than homecare services, but you did not receive it?" Response categories for both questions were "yes" and "no."

Health care use

Respondents to both the LASS and the CCHS were asked "In the past 12 months, have you seen or talked to any of the following health professionals about your physical, emotional or mental health ... a family doctor or general practitioner?" Response categories were "yes" and "no." This was followed by "How many times?" For mental health care use, respondents were asked "In the past 12 months, have you seen or talked to a health professional about your emotional or mental health?" This line of questioning was repeated to identify consultations

with various types of health professionals. To assess hospitalizations, respondents were asked "In the past 12 months, have you been a patient overnight in a hospital?"

Analyses

Canadian general population rates were age-standardized to the veteran population for both populations aged 19 and older. Analysis was conducted using Stata version 15.1, and a Taylor series linearization was used for error estimation. Weighted data using Stata SVY commands were used and excluded missing responses from the denominator. In addition, 95% confidence intervals were examined as an indicator of differences between veterans and the Canadian general population. Differences between male and female veterans were also examined.

Results

Sex and age characteristics of the veteran sample (2,755 Regular Force veterans who released between 1998 and 2015) and their Canadian general population counterparts are described in Table 1. Veterans were mostly male (88%) and younger than their general population counterparts.

Most male and female veterans reported having a regular medical doctor (82% and 87%, respectively), and a minority reported having been hospitalized (both 8%) in the previous year; these rates are similar to those observed for males and females in the Canadian general population (Table 2). Male veterans were less likely than female veterans to report unmet health care needs, at 10% and 16%, respectively.

In terms of health care consultations in the 12 months prior to the interview, male and female veterans were similar to the Canadian general population in having consulted a family doctor in the previous year. However, male and female veterans were both more likely than their Canadian general population counterparts to have consulted any other medical doctor or specialist (besides a family doctor), an eye specialist, a nurse, a dental professional, or an audiologist or speech or occupational therapist. For example, for males, 33% of veterans consulted a

Table 2
Regular Force veteran and Canadian general population self-reported health service access and use rates, by sex

	Males						Females					
	Veterans			Canadian comparator ^{††}			Veterans			Canadian comparator ^{††}		
	%	95% confidence interval		%	95% confidence interval		%	95% confidence interval		%	95% confidence interval	
		from	to		from	to		from	to		from	to
In past 12 months												
Has a regular medical doctor	82.3	80.0	84.3	81.5	80.8	82.2	86.9	80.9	91.2	88.9	88.3	89.5
Unmet health care need	9.9	8.4	11.6	9.9	9.1	10.7	16.2	11.7	22.0	13.4	12.6	14.2
Hospitalized	7.8	6.5	9.3	6.2	5.8	6.6	7.7	4.8	12.2	8.2	7.8	8.6
Consultation for any health care reason												
Family doctor	70.9	68.3	73.4	71.7	70.9	72.5	81.0	74.6	86.1	82.1	81.4	82.8
Any other medical doctor or specialist	33.4	31.0	35.8	27.8	27.1	28.5	46.8	39.7	54.1	37.9	37.2	38.6
Eye specialist [‡]	39.6	37.1	42.4	35.3	34.5	36.1	51.5	44.3	58.7	41.8	41.0	42.6
Nurse	13.8	12.1	15.7	10.4	9.9	10.9	14.9	10.7	20.6	13.6	13.1	14.1
Dental professional	70.2	67.6	72.6	64.9	64.1	65.7	81.6	75.4	86.5	71.8	71.1	72.5
Audiologist, or speech or occupational therapist	11.1	9.6	12.7	3.9	2.5	5.3	15.9	11.0	22.4	4.3	2.9	5.7
Consultation for mental health												
Any health professional	23.1	21.0	25.5	9.3	8.7	9.9	31.4	25.1	38.4	17.5	16.8	18.2
Family doctor	8.7	7.4	10.3	4.9	4.5	5.3	17.2	12.1	23.9	9.9	9.4	10.4
Psychiatrist	6.4	5.3	7.7	2.0	1.7	2.3	9.3	5.8	14.6	3.3	3.0	3.6
Psychologist	12.6	10.9	14.5	2.1	1.8	2.4	12.4	8.5	17.7	3.9	3.5	4.3
Nurse	1.0	0.6	1.6	0.4	0.2	0.6	2.3	1.1	7.8	0.8	0.6	1.0
Social worker or counsellor	3.0	2.3	3.9	1.9	1.6	2.2	4.1	2.5	6.6	3.6	3.3	3.9

[‡] Refers to ophthalmologist and optometrist

^{††} Canadian comparator rates are age-standardized to the veteran population.

Source: Statistics Canada, 2016 Life After Service Survey for veterans, 2016 Canadian Community Health Survey for the Canadian population with the exception of unmet need which was from the 2013 Canadian Community Health Survey.

medical doctor or physician specialist, compared with 28% of the Canadian general population. For females, these rates were 47% for veterans and 38% for the Canadian general population.

Almost one-quarter (23%) of male veterans and almost one-third (31%) of female veterans had consulted a mental health care professional in the previous year, approximately double the rates observed for the Canadian general population. In terms of specific providers, both male and female veterans were more likely to have consulted their family doctor, a psychiatrist or a psychologist about their mental health. Male (but not female) veterans were more likely than their Canadian general population counterparts to have consulted a nurse for any health care reason and a social worker or counsellor about their mental health. Female (but not male) veterans were more likely than their Canadian general population counterparts to have consulted a nurse about their mental health.

Males (both veterans and those in the Canadian general population) were generally less likely than females to have consulted a family doctor, any other medical doctor or specialist, an eye specialist, or a dental professional, for any health reason. Males were also less likely than females to have consulted their family doctor about their mental health.

There were some similarities between male and female veterans that were not consistent with differences found between males and females in the Canadian general population. For example, in the Canadian general population, males were less likely than females to report having a regular medical doctor, having been

hospitalized in the past 12 months, having consulted a nurse for any reason, or having consulted a health provider for mental health reasons. Male and female veterans did not differ from one another for these indicators.

Discussion

Veterans, both male and female, had higher rates of use of health care providers (such as physician specialists, eye specialists, and audiologists or speech or occupational therapists), for any reason, compared with the Canadian general population. They also had higher rates of use of health care providers (such as family doctors, psychiatrists and psychologists) for mental health reasons compared with the Canadian general population. Compared with males and females in the general population, male and female veterans were equally likely to have consulted a family doctor, to have been hospitalized and to have a regular medical doctor.

While health care use rates were higher among veterans than among the Canadian general population, they were lower than may have been expected, given the much greater rates of disability and chronic health conditions among veterans previously found using LASS and CCHS data,^{2,3} suggesting possible barriers to care. For example, while mental health care use rates among veterans were about double those of the Canadian general population, common mental health conditions such as anxiety and depression have been observed among

veterans at rates up to three times those of the Canadian general population.²⁻⁴ In addition, male veterans were less likely than female veterans to report unmet health care needs and were generally less likely to access health care. While differences in use are generally consistent with findings for the Canadian general population, the findings of this study indicate that further research and service planning focused on veterans should consider sex and gender differences in health care use and access.

It was hypothesized that veterans may be less likely to have a regular medical doctor given the need to find a new doctor after release from the military. While it is perhaps reassuring to observe that veterans did not report less access to a regular medical doctor than their Canadian general population counterparts, their higher rates of disability and chronic conditions^{2,3} suggest greater needs. Furthermore, previous studies have found a greater likelihood of unrecognized needs and reluctance to seek help among military and veteran populations.^{13,14} This may be attributable to the high value often placed on emotional strength in the military, further supported by a masculine-dominant military environment, with the vast majority of members being male.¹⁵ The present study's finding that male veterans were less likely than female veterans to report unmet needs suggests unrecognized needs among men. The fact that veterans must find a family doctor and adjust to a less structured health care environment following their discharge from military service also points to a need for further research regarding facilitators and barriers to health care use among veterans. This is particularly true for use of mental health care among veterans—there is a lack of knowledge regarding barriers to this type of care.¹⁵

The findings of this study are mixed in terms of consistency with two previous studies of veteran health care use. The findings that a majority of male and female veterans had a family doctor and that a minority had been hospitalized in the past 12 months were consistent with a previous study of health care use among veterans living in Ontario.^{2,16} In both the present study and the Ontario study, over 80% of veterans had a family doctor, and approximately 10% had been hospitalized. The two studies differed in types of visit (for any reason versus for a non-mental health reason), period covered (12 months before the survey versus five years after release), age of the population and data source (survey versus administrative data).⁸ While veterans in Australia have been found not to differ in their use of mental health care from other Australians, despite being more likely to be diagnosed with a mental disorder,⁹ veterans in the present study were found to be more likely to use mental health care than their Canadian general population counterparts. This difference may relate to greater need among Canadian veterans, or to other factors that merit further investigation.

This study has several strengths. It is the first to examine veteran health care use rates (both mental and other health services) against those of the Canadian general population, adding to the currently small international literature on this topic. Veteran status was objectively identified through record linkage to

administrative data from the Department of National Defence, and the survey response rate of 73% was relatively strong. As data were weighted by Statistics Canada to account for the stratified survey design and non-response, reported findings are generally representative of the Canadian veteran population released from military service between 1998 and 2015. Therefore, the findings of this study cannot be generalized to all veterans. Further adding to the strength of this study is its comparisons of access and use of health care by sex. This is an important way to detect differences and provide insights for males and females separately.¹⁷ For example, health-care-seeking behaviours have been noted to differ by gender, with women more likely than men to recognize health care needs and visit their primary care provider for both physical and mental health concerns.¹⁸

Some important limitations should also be noted. First, it is important to mention that the 2016 LASS included only Regular Force veterans who released from 1998 to 2015 and who were above entry ranks at release. Second, as the LASS surveyed more recently released veterans, the sample was relatively young, with only 6% aged 65 or older, so it did not fully represent older veterans, who are more likely to use health care.⁴ Third, reporting and recall biases are possible since health care use indicators were collected through self-report surveys. While the extent of these biases is unknown, they are assumed to occur equally in both the veteran (2016 LASS) and the general population (2015 and 2016 CCHS) surveys used in this study. Lastly, the LASS did not include respondents from the territories. However, since the territories accounted for only 0.3% of the weighted CCHS population in 2015 and 2016, this exclusion would not have any noticeable effect.

Male veterans and males in the Canadian general population were generally less likely than females to have consulted health care providers for any health reason, as well as for their mental health. There were, however, some similarities between male and female veterans that were not consistent with differences found between males and females in the Canadian general population. Furthermore, male veterans were less likely than female veterans to report unmet health care needs. These differences highlight the importance of research and service planning that accounts for sex and gender differences in health care use. Further research is needed to understand the extent to which health care use rates are consistent with indicators of need, such as disability and chronic condition rates. Specific barriers to health care access faced by male and female veterans should also be investigated, to assess potential areas for improvement.

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