Health Reports

Access to specialized health care services among older Canadians

by Md Kamrul Islam and Heather Gilmour

Release date: March 20, 2024

Statistics Canada   Statistique Canada

Canada

How to obtain more information

For information about this product or the wide range of services and data available from Statistics Canada, visit our website, www.statcan.gc.ca.

You can also contact us by

Email at infostats@statcan.gc.ca

Telephone, from Monday to Friday, 8:30 a.m. to 4:30 p.m., at the following numbers:

- Statistical Information Service   1-800-263-1136
- National telecommunications device for the hearing impaired   1-800-363-7629
- Fax line   1-514-283-9350

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, Statistics Canada has developed standards of service that its employees observe. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca under "Contact us" > "Standards of service to the public."

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued co-operation and goodwill.

Access to specialized health care services among older Canadians

by Md Kamrul Islam and Heather Gilmour

ABSTRACT

Background
Canada is experiencing rapid population aging, which has a wide range of implications, including an increased need for health care services. However, very few studies have examined use of specialized health care services (e.g., visits to medical specialists, non-emergency tests, and surgeries) among older Canadians.

Data and methods
Data from the Canadian Health Survey on Seniors – *2019/2020* were used to examine specialized health care service use among older Canadians. Latent class analysis was calibrated using a nationally representative sample of 39,047 Canadians aged 65 years or older to identify distinct patterns of need factors related to health care service use. Multivariable logistic regression, stratified by gender, was used to examine the association of predisposing characteristics, enabling resources, and need factors with specialized health care service use.

Results
In 2019/2020, an estimated 2.6 million older Canadians (43.4%) visited medical specialists, 1.4 million (23.2%) got non-emergency tests, and 0.6 million (10.4%) had non-emergency surgeries. Among those, 15.6% reported experiencing difficulties accessing services. Women were less likely than men to have visited medical specialists and have received non-emergency tests. Lower education was consistently associated with lower odds of specialized health care service use. Individuals in the multimorbidity, high stress–multimorbidity–disability, and poor physical and mental health classes were more likely than those in the comparatively healthy class to use specialized health care services and to experience difficulties accessing them.

Interpretation
Findings of this study highlight gender differences and the importance of considering multidimensional need factors—ranging from physical health to mental health to psychosocial factors—in examining use of specialized health care services.

Keywords
health care use, medical specialists, non-emergency tests, non-emergency surgeries, older Canadians

AUTHORS
Md Kamrul Islam and Heather Gilmour are with the Health Analysis Division at Statistics Canada.

What is already known on this subject?

- Sociodemographic characteristics and health status are associated with various types of health care service use, such as access to a regular medical doctor, hospitalization, and use of the emergency department.

- Women are less likely than men to use health care services, with some exceptions. However, less is known about gender differences in the influence of predisposing characteristics, enabling resources, and need factors in determining specialized health care service use among older Canadians.

- Canadians experience several difficulties accessing specialized health care services. Nonetheless, little is known about the extent to which older Canadians with distinct patterns of need factors experience difficulties in accessing specialized health care services.

What does this study add?

- An estimated 2.6 million older Canadians (43.4%) visited medical specialists, 1.4 million (23.2%) got non-emergency tests, and 0.6 million (10.4%) had non-emergency surgeries in 2019/2020. Older Canadians in the multimorbidity, high stress–multimorbidity–disability, and poor physical and mental health classes were more likely to use specialized health care services than those in the comparatively healthy class, even after controlling for predisposing and enabling factors.

- Having less than a postsecondary education was consistently associated with each type of specialized health care use for both men and women. The association between service use and factors such as age group, immigrant status, household income, having a regular doctor, rural residence, and being surveyed during the COVID-19 pandemic varied by type of specialized service and gender.

- Among older Canadians who accessed specialized health care services in 2019/2020, an estimated half million (15.6%) reported having difficulty in getting the services. Women in all need groups had higher odds of experiencing such difficulties than did women in the comparatively healthy group. For men, this was the case for those in the high stress–multimorbidity–disability and the poor physical and mental health classes.

- Common difficulties in accessing health care services included difficulty getting a referral, difficulty getting an appointment, the wait time being too long between the appointment and getting the services, and services not being available at the time required.

Canada is experiencing rapid population aging. The aging of Canada's population is mostly driven by aging baby boomers, increasing life expectancy, and decreasing fertility. In 2021, 18.5% of the population was aged 65 years or older, an increase from 13.0% in 2001.[1] By 2030, this is projected to reach between 21.4% and 23.4% of the population.[2] Older people are more likely to have multiple and complex health conditions and, in 2020, accounted for 44% of health expenditures in Canada.[3] Thus, health care use, including specialist care use, would be expected to increase in the future.

A substantial body of literature has looked at the use of health care services among Canadians.[4-10] Studies have examined access to a regular medical doctor,[9,11] hospitalization,[10,12] use of the emergency department,[13] and medication use.[14] However, only a few studies have investigated the use of health care services by older Canadians (65 years or older),[4,9-10] with a focus on medical specialists, non-emergency tests, and non-emergency surgeries (hereafter, specialized health care services), and difficulty in accessing these services.[15] Ensuring adequate access to specialized health care services, including non-emergency tests and surgeries, has many health benefits—particularly for high-risk populations such as older adults—including better detection and treatment of health problems and avoidance of further deterioration of existing health conditions.[16-17]

Drawing on Andersen's behavioural model of health service use,[18] many predisposing and enabling factors, such as gender, age, marital status, immigrant status, rurality, education, employment, income, and having a regular doctor, have been identified as factors associated with various types of health care use.[4-6,8-10] Individual need factors such as health status and loneliness have also been associated with health service use.[5-7] However, identifying patterns of need factors that frequently appear together recognizes the heterogeneity of health profiles and that individual need factors do not necessarily occur in isolation.[19] To achieve this, latent class analysis (LCA) was used to classify respondents into unique multidimensional needs groups.

Using data from the 2019/2020 Canadian Health Survey on Seniors (CHSS), this study examines the prevalence of specialized health care service use (medical specialist, non-emergency medical tests, non-emergency surgery) and evaluates the association of predisposing factors, enabling resources, and need-related factors with specialized health care service use in the past 12 months among Canadians aged 65 or older living in the community. Additionally, prevalence of and factors associated with experiencing difficulties accessing specialized health care services and the types of difficulties experienced were assessed. Men and women were analyzed separately.

The data for the 2019/2020 CHSS were collected both before COVID-19 pandemic restrictions (January to December 2019, and January to March 2020) and during the pandemic (September to December 2020). There are many factors that may have influenced health care use during the pandemic (e.g., cancellation of non-emergency procedures and reduced in-person visits).[20,23] Thus, the timing of the survey data collection was included in the analysis.

Methods

Data source

The CHSS 2019/2020, a cross-sectional supplement to the Canadian Community Health Survey (CCHS), collected information from 41,635 respondents aged 65 years or older living in the 10 provinces. The survey excludes people living on reserves and other Indigenous settlements in the provinces, full-time members of the Canadian Forces, the institutionalized population, and people living in certain health regions. Data were collected from January 2019 to December 2020, with a pause from April 2020 to August 2020 because of the pandemic. The response rate for the 2019/2020 CHSS was 40.1%; 90.8% of respondents agreed to link their answers to the CCHS. Detailed documentation for the 2019/2020 CHSS is available at https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurv ey&SDDS=5267.

Study sample

Proxy respondents (n=2,311) were not asked questions for the access to health care services module and were excluded. In addition to the question on sex at birth, respondents were asked, "What is your gender?" Responses were categorized as male, female, or gender diverse. Those classified as gender diverse (<10) and those who did not report their gender (<10), as well as those who did not report whether they required a visit a medical specialist (n=70), non-emergency surgery (n=48), or non-emergency tests (n=194) in the last 12 months of the survey, were also excluded. Thus, the final sample for the study included 39,047 individuals (16,600 men and 22,447 women), representing 5.9 million Canadians aged 65 or older living in the community. The demographic and socioeconomic distribution of the study sample is shown in Appendix A.

Outcome variables

Respondents were asked about their use of three types of specialized health care services, and whether they had any difficulties in getting these services. Four separate outcome variables were created based on whether an individual

1. required a visit to a medical specialist for a diagnosis or a consultation in the past 12 months (yes or no) (such as a cardiologist, endocrinologist, allergist, urologist or gynecologist, or psychiatrist [excluding an optometrist])

2. required non-emergency surgery in the past 12 months (yes or no); this includes surgery not provided in an emergency, such as cardiac surgery, joint surgery (knee or hip), and cataract surgery, excluding laser eye surgery

3. required non-emergency tests (MRI, CT scan, angiography) in the past 12 months (yes or no)

4. experienced difficulties in getting any of the specialized health care services in the past 12 months (yes or no).

Covariates

Drawing on Andersen's behavioural model of health service use[18,24-25] three types of covariates were selected: predisposing characteristics, enabling resources, and need factors. Predisposing characteristics are related to the tendency to use health care services. Enabling resources refers to the availability of services and personnel and the knowledge and ability to access them. Need-related factors, such as health status, influence the need for services.

Predisposing characteristics

Respondents' gender, age, and marital status were included in the analysis as predisposing characteristics.[26] Based on the question "What is your gender?", two categories of gender (male and female) were used in the study. Age groups used were 65 to 74, 75 to 84, and 85 years or older. Marital status was classified as married or common-law; divorced, separated, or widowed; and single (never married). Immigrant status was categorized as European immigrant, non-European immigrant, and Canadian-born individual.

Enabling resources

The highest level of education was classified as less than postsecondary or postsecondary and above. The average household income of seniors' households from 2019 to 2020 was used as the cut-off point,[27] and total household income was categorized as less than $70,000 or $70,000 and above. Having a regular medical doctor was included as dichotomous (yes or no). Place of residence was coded as urban or rural.

Need factors

Previous studies have documented a wide range of factors influencing health care service use, such as physical health,[5] mental health,[28] and psychosocial factors.[29] Drawing on

previous studies, eight dichotomous items, including both physical and psychosocial health domains, were used as need factors in the analysis: perceived general health (poor or fair versus good, very good, or excellent); perceived life stress (extremely stressful, quite a bit stressful, a bit stressful, or not very stressful versus not at all stressful); self-reported diagnosis of mood disorder (yes or no) and anxiety disorder (yes or no); obesity (obese classes I, II, or III) versus not obese (overweight, normal weight, or underweight), derived based on self-reported height and weight; multimorbidity, i.e., two or more chronic conditions diagnosed by a health professional (asthma, chronic obstructive pulmonary disease, sleep apnea, fibromyalgia, arthritis, osteoporosis, high blood pressure, high blood cholesterol or lipids, heart disease, stroke, diabetes, cancer, Alzheimer's disease, chronic fatigue syndrome, back problems, chronic kidney disease, bowel disorder, urinary incontinence, Parkinson's disease, cataracts, glaucoma, diabetic retinopathy, or age-related macular degeneration); disability (none or mild versus moderate or severe) based on the Health Utilities Index Mark 3;[30] and loneliness based on the Three-Item Loneliness Scale, with scores of at least 5 labelled as lonely.[31-32] In accordance with findings of previous studies, it was expected to find greater use of specialized health care service use among older Canadians with a higher concentration of need factors. The weighted percentage distribution of the need factors is shown in Appendix B.

Timing of the survey was classified as before COVID-19 pandemic restrictions (January to December 2019, and January to March 2020) and during the COVID-19 pandemic (September to December 2020). This variable was included in bivariate analysis and as a covariate in multivariable analysis to assess whether the timing of survey data collection was related to the outcome variables.

Respondents were asked whether they had experienced any difficulties getting each type of specialized health care service in the past 12 months and what types of difficulties they experienced. Because of sample size limitations, factors associated with difficulties were analyzed for all specialized services together, rather than separately.

Analytical approach

LCA was used to identify distinct groups based on eight need factors. The objective was for the individuals within groups to be similar to each other while distinct from those in other groups. LCA can identify the most common patterns of health need factors that frequently appear together and recognizes the heterogeneity of health needs among older Canadians. It also recognizes that individual factors do not necessarily occur in isolation and may have a synergistic effect on each other.

The optimal number of groups, in this case five, was determined by the Akaike information criterion, Bayesian information criterion (BIC), and sample-adjusted BIC, whereby lower values indicate better model fit.[33] The entropy value of 0.90 in the five-class model indicates very good separation of classes (Table 1). The percentage of respondents in the smallest class was 5.7%, indicating an adequate number of respondents for calibrating regression analysis. The LCA was implemented in Stata 17.0, and individual sampling weights were used.

Each respondent was assigned to a class based on the highest probability of class membership. The five mutually exclusive classes were labelled as comparatively healthy, high stress, multimorbidity, high stress–multimorbidity–disability, and poor physical and mental health. The comparatively healthy class comprised 32.6% of the total sample, the high stress class 15.3%, the multimorbidity class 23.2%, the high stress–multimorbidity–disability class 23.2%, and the poor physical and mental health class 5.7%. Those in the comparatively healthy class had the lowest probabilities of need factors, while those in the poor physical and mental health class had the highest probabilities (Table 2).

Weighted percentages and cross-tabulations of specialized health care service use and difficulty in getting the services were estimated. Multivariable logistic regression was used to evaluate the association of predisposing factors, enabling resources, and need-related factors (represented by five LCA classes) with specialized health care service use and difficulty accessing services. Missing cases were very low, ranging from 0.1% (marital status) to 1.2% (education). Listwise deletion of missing cases was applied in calibrating the regression models.

Table 1

Summary of fit statistics for latent class models on need factors of specialized health care service use, household population aged 65 years or older, Canada, excluding territories, 2019/2020

Models	AIC	BIC	SABIC	Entropy	Smallest profile (%)
1-Class	295406	295475	295449	...	...
2-Class	281848	281994	281940	0.90	37.6
3-Class	280226	280449	280366	0.89	6.9
4-Class	279755	280055	279943	0.93	4.8
5-Class	279321	279698	279558	0.90	5.7

... not applicable

Notes: AIC = Akaike information criterion, BIC = Bayesian information criterion, SABIC = sample-adjusted BIC. All latent class models are based on perceived general health, perceived life stress, mood disorder, anxiety disorder, obesity, multimorbidity, disability, and loneliness; sampling weights were used in the latent class analysis. The 6-Class model was not well identified.
Source: The 2019/2020 Canadian Health Survey on Seniors.

Table 2
Probability of latent class membership and item response probabilities of need factors, household population aged 65 years or older, Canada, excluding territories, 2019/2020

Need factors	Class 1: Comparatively healthy	Class 2: High stress	Class 3: Multimorbidity	Class 4: High stress –multimorbidity–disability	Class 5: Poor physical and mental health
Probability of latent class membership within classes (%)	32.6	15.3	23.2	23.2	5.7
Item response probabilities of need factors[1]					
Fair or poor perceived health	0.02	0.00	0.12	0.46	0.48
High life stress	0.60	0.88	0.64	0.87	0.95
Anxiety disorder	0.01	0.06	0.02	0.05	0.45
Mood disorder	<0.01	0.06	0.03	0.01	0.67
Obese	0.16	0.19	0.41	0.35	0.46
Multimorbidity[2]	0.37	0.60	0.95	0.95	0.96
Moderate or severe disability	0.10	0.41	0.37	0.84	0.89
Lonely	0.05	0.40	0.04	0.31	0.58

[1] Item-response probabilities within each class

[2] Multimorbidity was defined as having two or more chronic conditions (excluding mood and anxiety disorders)

Source: The 2019/2020 Canadian Health Survey on Seniors.

Sampling weights were used to account for the survey design and non-response. Bootstrap weights were applied using SAS-callable SUDAAN 11.0.3 to account for the underestimation of standard errors caused by the complex survey design.[34] The significance level was set at $p < 0.05$.

Results

Characteristics of the study population

The study population represents 3.2 million women and 2.7 million men aged 65 years or older (54.0% were women and 46.0% were men) living in private households in the 10 provinces. The majority were aged 65 to 74 years, married or living in common-law, and born in Canada. More than half of the study population had a postsecondary education or higher. Among men, 53.6% had a household income of $70,000 and above; 42.7% for women. Most had a regular medical doctor and were living in urban areas. The majority were in the comparatively healthy class (44.1% for men and 38.3% for women), and 3.2% of men and 6.6% of women were in the poor physical and mental health class (Appendix A).

Specialized health care service use

Based on the 2019/2020 CHSS, an estimated 2.6 million older Canadians (43.4%, 95% confidence interval [CI]: 42.5% to 44.4%) reported visiting medical specialists, 1.4 million (23.2%, 95% CI: 22.3% to 24.0%) reported getting non-emergency tests, and 0.6 million (10.4%, 95% CI: 9.9% to 11.1%) reported getting non-emergency surgeries in the past 12 months, with women being significantly less likely than men to have visited medical specialists or received non-emergency tests. Among men, those aged 75 to 84 years were more likely to visit medical specialists and get non-emergency tests than those aged 65 to 74 years. Among women, those aged 85 years or older were less likely to visit medical specialists and get non-emergency tests than those aged 65 to 74 years (Table 3).

Those with less than a postsecondary education were less likely to visit medical specialists and get non-emergency tests and

surgeries. Similarly, having a household income of less than $70,000 was associated with a lower likelihood of visiting medical specialists and getting non-emergency surgeries (for men, but not for women). Those with a regular medical doctor were more likely to visit medical specialists and get non-emergency tests and surgeries (for women, but not for men).

Older Canadians in the multimorbidity and high stress–multimorbidity–disability classes were significantly more likely to use each type of specialized health care service than those in the comparatively healthy class—for both men and women. This was also true for those in the poor physical and mental health class, with one exception in the case of non-emergency surgery for men.

Multivariable findings

Overall, women had significantly lower odds than men of visiting medical specialists or getting non-emergency tests, even after accounting for predisposing characteristics, enabling resources, and need factors (not shown). There were no gender differences in getting non-emergency surgeries (not shown).

Some age differences remained significant in multivariable analysis for visiting medical specialists and getting non-emergency tests. Men aged 75 to 84 years had higher odds of using these services than those aged 65 to 74 years, while women aged 85 years or older had lower odds of doing so (Table 4).

In several instances, immigrants were less likely to have used specialized health care services than their Canadian counterparts (Table 4). For example, women who immigrated from non-European countries had lower odds of visiting medical specialists (0.7), men from European countries had lower odds of getting non-emergency tests (0.7), and men from both European and non-European countries had lower odds of getting non-emergency surgeries (0.6 and 0.5, respectively).

Consistently for both genders, those with less than a postsecondary education were less likely to have used each of the specialist health care services (odd ratios 0.6 to 0.8) than those with higher levels of education (Table 4). However, a

Table 3

Percentage who used specialized health care services in the previous 12 months, household population aged 65 years or older, Canada, excluding territories, 2019/2020

	Medical specialists						Non-emergency tests						Non-emergency surgery					
	Men			Women			Men			Women			Men			Women		
		95% confidence interval			95% confidence interval			95% confidence interval			95% confidence interval			95% confidence interval			95% confidence interval	
Characteristics	%	from	to	%	from	to	%	from	to	%	from	to	%	from	to	%	from	to
Overall	45.5	44.1	47.0	41.6 ‡	40.3	43.0	24.1	22.9	25.4	22.3 ‡	21.2	23.5	10.9	10.0	11.9	10.1	9.3	10.9
Predisposing characteristics																		
Age group																		
65 to 74 †	44.0	42.1	45.9	41.6	40.0	43.3	22.6	21.0	24.2	22.7	21.1	24.4	10.7	9.6	11.9	9.7	8.8	10.6
75 to 84	49.2 *	46.4	52.0	43.4 ‡	41.0	45.7	27.7 *	25.3	30.3	23.0 ‡	21.0	25.0	11.4	9.8	13.2	11.2	9.8	12.8
85 or older	44.4	39.4	49.6	37.0 *‡	33.1	41.1	23.6	19.2	28.8	18.2 *	15.5	21.2	10.3 E	7.0	14.7	9.0 E	6.5	12.3
Marital status																		
Married or common-law	46.6 *	44.9	48.4	43.1 ‡	41.2	44.9	24.6	23.1	26.1	22.6	20.9	24.4	10.8	9.7	12.0	10.0	9.0	11.1
Divorced, separated, or widowed	42.5	39.7	45.4	40.4	38.6	42.3	23.6	21.3	26.1	22.6	21.1	24.1	11.4	9.5	13.6	9.8	8.8	10.9
Single, never married †	40.8	35.8	45.9	38.1	33.2	43.2	20.7	16.7	25.4	18.9	14.8	23.7	10.2	7.5	13.6	12.1 E	8.8	16.3
Immigrant status																		
European immigrants	44.6	40.1	49.3	41.3	37.2	45.6	26.8	22.8	31.1	23.4	20.0	27.2	8.0 *	6.2	10.2	9.8	7.5	12.6
Non-European immigrants	47.8	42.6	53.1	35.7 *‡	30.5	41.3	20.0	16.0	24.7	19.2	14.7	24.6	7.2 *E	5.1	10.1	10.3 E	7.3	14.3
Canadian-born population †	45.2	43.6	46.7	42.6 ‡	41.3	44.0	24.4	23.1	25.7	22.7	21.6	23.8	12.2	11.0	13.4	10.1 ‡	9.4	10.9
Enabling resources																		
Education																		
Postsecondary †	49.2	47.3	51.1	46.0 ‡	44.1	47.9	25.5	23.8	27.2	24.2	22.5	25.9	11.8	10.6	13.2	11.1	10.1	12.3
Less than postsecondary	39.2 *	37.0	41.4	36.6 *	34.8	38.6	21.0 *	19.3	22.8	20.1 *	18.7	21.6	9.5 *	8.3	10.8	9.0 *	8.0	10.2
Total household income																		
$70,000 and above †	47.9	45.8	50.1	44.2 ‡	41.9	46.5	23.5	21.8	25.4	22.6	20.6	24.7	12.3	10.9	13.9	10.5	9.3	11.9
Less than $70,000	42.8 *	40.8	44.8	39.7 *‡	38.2	41.3	24.9	23.1	26.7	22.1 ‡	20.9	23.4	9.2 *	8.2	10.3	9.7	8.9	10.7
Has a regular medical doctor																		
Yes	46.7 *	45.2	48.2	42.5 *‡	41.2	43.9	24.9 *	23.6	26.2	23.0 *‡	21.8	24.2	11.0	10.1	12.1	10.2 *	9.5	11.1
No †	29.7	25.0	34.7	26.8	22.8	31.1	14.3	11.2	18.1	10.8	8.5	13.5	8.9 E	6.4	12.2	7.5	5.6	9.9
Place of residence																		
Urban †	46.7	45.0	48.5	42.8 ‡	41.3	44.3	24.2	22.6	25.8	22.7	21.4	24.1	11.1	10.0	12.3	10.0	9.2	11.0
Rural	41.3 *	39.2	43.5	36.9 *‡	34.9	39.0	24.1	22.2	26.1	20.5 *‡	18.9	22.3	10.2	9.0	11.7	10.2	9.0	11.6
Need factors																		
Comparatively healthy †	37.7	35.7	39.8	29.9 ‡	28.0	32.0	17.3	15.6	19.2	15.0	13.3	16.9	9.1	7.9	10.5	7.6	6.6	8.7
High stress	39.2	34.4	44.3	38.2 *	34.0	42.5	18.5	14.6	23.2	16.7	13.7	20.1	11.4 E	8.4	15.4	8.2 E	6.1	11.0
Multimorbidity	46.1 *	42.6	49.6	42.9 *	39.7	46.1	23.9 *	21.1	26.9	21.2 *	18.9	23.8	11.8 *	9.8	14.1	10.1 *	8.6	11.9
High stress–multimorbidity–disability	57.3 *	54.4	60.1	52.3 *‡	49.9	54.6	35.3 *	32.5	38.2	29.9 *‡	27.7	32.1	12.7 *	10.8	14.8	12.6 *	11.1	14.4
Poor physical and mental health	61.5 *	54.4	68.1	59.9 *	55.7	64.0	34.6 *	28.7	41.1	37.9 *	33.4	42.7	13.0 E	9.5	17.5	14.5 *	11.7	17.7
Timing of the survey																		
Before COVID-19 restrictions †	46.8	45.1	48.5	42.3 ‡	40.7	43.8	23.6	22.2	25.1	23.4	22.1	24.7	10.2	9.3	11.3	10.1	9.2	11.0
During COVID-19 pandemic	43.5 *	40.8	46.2	40.7	38.4	42.9	24.9	22.6	27.4	20.6 *‡	18.6	22.8	11.9	10.3	13.8	10.1	8.7	11.6

† reference category

* significantly different from reference category ($p < 0.05$)

‡ significantly different from men ($p < 0.05$)

E use with caution

Note: Based on available case analysis (unequal sample size across the predictors).

Source: The 2019/2020 Canadian Health Survey on Seniors.

household income of less than $70,000 was independently associated with lower odds of visiting medical specialists (0.8) and getting non-emergency surgeries (0.7) for men only.

Both men and women with a regular medical doctor had higher odds than those without a regular medical doctor of visiting medical specialists (1.9 for men and 1.8 for women) and of getting non-emergency tests (1.8 for men and 2.2 for women).

Men and women living in rural areas had lower odds than those in urban areas of visiting medical specialists, and women in rural areas had lower odds of getting non-emergency tests.

Strong associations were apparent with each of the specialized health care services for both men and women in the multimorbidity, high stress–multimorbidity–disability, and poor physical and mental health groups, compared with the comparatively healthy group. For example, for women, the increased odds of having visited a medical specialist were 1.9 in the multimorbidity group, 2.8 in the high stress–multimorbidity–disability group, and 3.8 in the poor physical and mental health group. In addition, women in the high stress class had 1.5 times higher odds of visiting medical specialists than women in the comparatively healthy class.

Regarding non-emergency tests, compared with the comparatively health class, odds ratios were 1.5 for men in the multimorbidity class, 2.6 for men in the high stress–multimorbidity–disability class, and 2.9 for men in the poor physical and mental health class. For women, the odds of getting non-emergency tests in the three classes were 1.6, 2.5, and 3.5, respectively.

Table 4

Adjusted odds ratios relating use of specialized health care services in the previous 12 months to selected characteristics, household population aged 65 years or older, Canada, excluding territories, 2019/2020

	Medical specialists						Non-emergency tests						Non-emergency surgery					
	Men			Women			Men			Women			Men			Women		
Characteristics	Adjusted odds ratios	95% confidence interval from	to	Adjusted odds ratios	95% confidence interval from	to	Adjusted odds ratios	95% confidence interval from	to	Adjusted odds ratios	95% confidence interval from	to	Adjusted odds ratios	95% confidence interval from	to	Adjusted odds ratios	95% confidence interval from	to
Predisposing characteristics																		
Age group																		
65 to 74†	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...
75 to 84	1.3 *	1.1	1.5	1.1	1.0	1.2	1.3 *	1.1	1.6	0.9	0.8	1.1	1.1	0.9	1.4	1.2	1.0	1.4
85 or older	1.0	0.8	1.3	0.8 *	0.6	1.0	1.0	0.8	1.4	0.7 *	0.5	0.8	1.0	0.7	1.5	0.9	0.6	1.3
Marital status																		
Married or common-law	1.2	0.9	1.5	1.3	1.0	1.6	1.2	0.9	1.6	1.3	0.9	1.9	1.0	0.7	1.4	0.8	0.5	1.2
Divorced, separated, or widowed	1.0	0.8	1.3	1.0	0.8	1.3	1.1	0.8	1.5	1.2	0.9	1.7	1.1	0.8	1.6	0.8	0.5	1.1
Single, never married†	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...
Immigrant status																		
European immigrants	0.9	0.7	1.1	0.9	0.7	1.1	1.1	0.9	1.4	1.0	0.8	1.3	0.6 *	0.4	0.8	1.0	0.7	1.3
Non-European immigrants	1.0	0.8	1.2	0.7 *	0.5	0.9	0.7 *	0.5	0.9	0.8	0.5	1.1	0.5 *	0.4	0.8	1.0	0.7	1.4
Canadian-born population†	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...
Enabling resources																		
Education																		
Less than postsecondary	0.6 *	0.6	0.7	0.7 *	0.6	0.7	0.7 *	0.6	0.8	0.8 *	0.7	0.9	0.8 *	0.6	0.9	0.8 *	0.7	0.9
Postsecondary†	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...
Total household income																		
Less than $70,000	0.8 *	0.7	1.0	0.9	0.8	1.0	1.2	1.0	1.4	1.0	0.9	1.2	0.7 *	0.6	0.9	0.9	0.7	1.1
$70,000 and above†	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...
Has a regular medical doctor																		
Yes	1.9 *	1.5	2.5	1.8 *	1.4	2.2	1.8 *	1.4	2.4	2.2 *	1.7	3.0	1.3	0.9	1.8	1.3	0.9	1.7
No†	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...
Place of residence																		
Urban†	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...
Rural	0.8 *	0.7	0.9	0.8 *	0.7	0.8	1.0	0.9	1.2	0.9 *	0.8	1.0	0.9	0.7	1.1	1.1	0.9	1.3
Need factors																		
Comparatively healthy†	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...
High stress	1.2	0.9	1.5	1.5 *	1.2	1.8	1.1	0.8	1.6	1.1	0.8	1.5	1.3	0.9	1.9	1.1	0.8	1.6
Multimorbidity	1.5 *	1.2	1.8	1.9 *	1.6	2.2	1.5 *	1.2	1.8	1.6 *	1.3	1.9	1.3 *	1.0	1.7	1.4 *	1.1	1.8
High stress–multimorbidity–disability	2.3 *	1.9	2.6	2.8 *	2.5	3.2	2.6 *	2.1	3.1	2.5 *	2.1	2.9	1.5 *	1.2	1.9	1.8 *	1.5	2.2
Poor physical and mental health	3.0 *	2.2	4.0	3.8 *	3.1	4.6	2.9 *	2.1	3.9	3.5 *	2.7	4.4	1.6 *	1.1	2.4	2.1 *	1.6	2.8
Timing of the survey																		
Before COVID-19 restrictions†	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...	1.0	...	...
During COVID-19 pandemic	0.8 *	0.7	1.0	0.9	0.8	1.0	1.0	0.9	1.2	0.8 *	0.7	1.0	1.2	1.0	1.4	1.0	0.8	1.2

... not applicable

† reference category

* significantly different from reference category ($p < 0.05$)

Source: The 2019/2020 Canadian Health Survey on Seniors.

In the case of non-emergency surgeries, odds ratios for men were 1.3 in the multimorbidity class, 1.5 in the high stress–multimorbidity–disability class, and 1.6 in the poor physical and mental health class, compared with the comparatively healthy class. For women, the odds of getting non-emergency tests in the three classes were 1.4, 1.8, and 2.1, respectively.

The associations between COVID-19 and using specialized medical services were significant in a couple of cases—men had lower odds (0.8) of visiting medical specialists during the pandemic than before pandemic-related restrictions, and women had lower odds of getting non-emergency tests during the pandemic. It is worth mentioning that these findings are representative of older Canadians at the aggregate level (combined for all provinces). Given that there were considerable differences in pandemic-related restrictions across provinces, use of specialized medical services among older Canadians may vary significantly across provinces.

Difficulty in accessing specialized health care services

Among older Canadians who accessed specialized health care services in 2019/2020, an estimated half million (15.6%, 95% CI: 14.6% to 16.6%) reported having difficulty getting these services. Women were more likely than men to experience difficulty visiting medical specialists and getting non-emergency tests (Chart 1). Although women were less likely than men to have visited medical specialists and gotten non-emergency tests, the factors independently associated with use of each type of specialist service were broadly similar for both men and women, with a few exceptions.

Approximately one-half or more of older Canadians cited waiting too long as a difficulty in obtaining specialized health care services (e.g., too long between booking appointment and visit, too long to get appointment or surgery). Difficulty getting an appointment or referral was also commonly mentioned (Table 5).

Chart 1
Percentage who experienced difficulty getting specialized health care services among those who used specialized health care services in the previous 12 months, by type of service and gender, household population aged 65 years or older, Canada, excluding territories, 2019/2020

percent
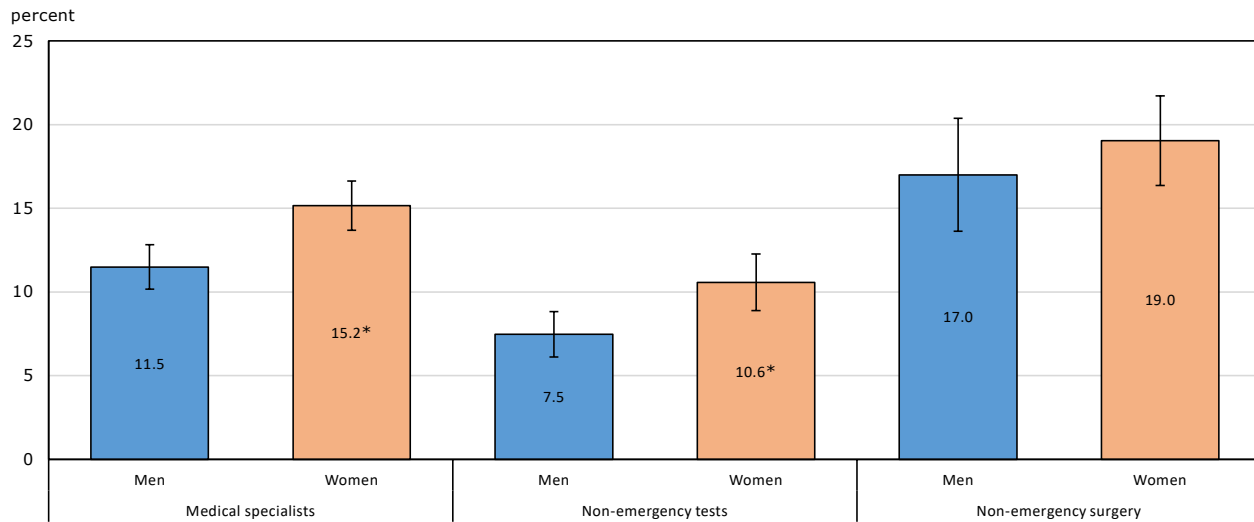
* significantly different from men (p < 0.05)
Source: The 2019/2020 Canadian Health Survey on Seniors.

Overall, women had significantly higher odds than men of experiencing difficulty in getting specialized health care services, even after adjusting for the predisposing characteristics, enabling resources, and need factors (not shown).

Factors independently associated with lower odds of experiencing difficulty in getting specialized health care services included being 75 to 84 years of age for men (0.8) or 85 or older for women (0.5), being a non-European immigrant for women (0.6), having less than a postsecondary education for both men and women (0.7), and having a regular medical doctor for men (0.6) (Table 6).

Women who immigrated from European countries were 40.0% more likely to have had difficulty getting specialized medical services than Canadian-born women. Both men and women in the high stress–multimorbidity–disability, and poor physical and mental health classes were more likely to have had difficulties than those in the comparatively healthy class. For women, this was also the case for those in the high stress and multimorbidity classes.

Discussion

According to the 2019/2020 CHSS, an estimated 2.6 million older Canadians (45.4%) visited medical specialists, 1.4 million (23.2%) got non-emergency tests, and 0.6 million (10.4%) had non-emergency surgeries. Among those who accessed specialized health care services, 0.5 million (15.6%) reported difficulty in accessing them.

This study was particularly interested in examining gender differences in factors associated with use of specialized health

care services. Although women were less likely than men to have visited medical specialists and gotten non-emergency tests, the factors independently associated with use of each type of specialist service were broadly similar for both men and women, with a few exceptions. With respect to gender, previous studies reported mixed findings on health service use. For example, women were more likely to use primary care services,[35-36] but less likely to use emergency and hospital services.[35,37] Similarly, women had a lower likelihood of using mental health services from specialists.[38-39] Previous studies have pointed to various factors for gender disparities in health services use, including differences in health perceptions and attitudes,[35] morbidity patterns,[35,40] mental health status,[40] social structural factors (e.g., socioeconomic conditions, social support, family arrangement),[41-42] and immigrant status and race or ethnicity.[43-44] In addition, the lower use of specialized health care service use among women may be attributable to their greater difficulties accessing these services, as shown in this study. Among other factors, the lower use of specialized health care services among women during the pandemic may be partly because of their greater fear of exposure to COVID-19 in a health care setting.[20]

Consistent with expectations, higher odds of visiting medical specialists and getting non-emergency tests were noted with increasing age among men (for those aged 75 to 84 years compared with those aged 65 to 74 years). However, women aged 85 years or older had lower odds of visiting medical specialists and getting non-emergency tests, despite having lower odds of experiencing difficulties in accessing specialized health care services than did women aged 65 to 74 years. It may be that the CHSS target population (those living in the community) results in a healthy respondent bias. By excluding those who are living in institutions, and most likely to be in poor

Table 5

Types of difficulties experienced in getting specialized health care services among those who used specialized health care services in the previous 12 months, household population aged 65 years or older, Canada, excluding territories, 2019/2020

Types of difficulties	Men %	95% confidence interval from	to	Women %	95% confidence interval from	to
Visiting medical specialists						
Difficulty getting a referral	11.5 [E]	7.6	17.1	8.5	6.4	11.1
Difficulty getting an appointment	39.2	33.3	45.5	40.9	36.1	46.0
Waited too long between booking appointment and visit	50.1	44.1	56.0	47.9	42.4	53.4
Waited too long to see the specialist	22.0	17.4	27.6	22.3	18.3	26.8
Service not available at time required	7.1 [E]	4.7	10.5	6.9 [E]	4.8	9.8
Service not available in the area	7.9 [E]	5.5	11.2	5.4 [E]	3.9	7.5
Transportation problems	2.2 [E]	1.3	3.9	2.9	1.7	4.8
Cost	2.1 [E]	1.1	3.9	1.4 [E]	0.9	2.4
General deterioration of health	2.4 [E]	1.3	4.2	3.5 [E]	2.2	5.5
Appointment cancelled or deferred by specialist	6.9 [E]	4.4	10.7	7.0 [E]	4.7	10.4
Other difficulties[¥]	12.3	8.9	16.8	15.0	11.3	19.6
Getting non-emergency tests						
Difficulty getting a referral	10.7 [E]	5.6	19.5	4.0 [E]	2.2	6.9
Difficulty getting an appointment	24.9	18.2	33.0	22.6	16.5	30.1
Waited too long to get an appointment	54.6	44.9	63.9	56.4	48.5	64.0
Waited too long to get test	19.4 [E]	13.3	27.4	18.5 [E]	13.1	25.4
Service not available at time required	4.8 [E]	2.8	8.1	5.6 [E]	3.2	9.5
Other difficulties[¥¥]	27.8 [E]	19.6	37.7	25.3 [E]	17.9	34.4
Getting non-emergency surgery						
Difficulty getting an appointment	21.3	15.3	28.9	33.9 [‡]	26.5	42.2
Difficulty getting a diagnosis including obtaining a diagnostic test	8.1 [E]	4.7	13.7	11.9 [E]	8.0	17.5
Waited too long for surgery	59.6	48.2	70.1	67.0	60.1	73.3
Service not available in the area	6.1 [E]	3.6	10.3	8.5 [E]	4.6	15.4
Appointment cancelled or deferred by surgeon or hospital	11.7 [E]	7.2	18.6	11.0 [E]	6.5	18.1
Other difficulties[¥¥¥]	34.3 [E]	23.7	46.7	34.0	27.5	41.1

[‡] significantly different from men ($p < 0.05$)

[E] use with caution

[¥] Other difficulties in visiting medical specialists include language problem and unable to leave the house because of a health problem.

[¥¥] Other difficulties in getting non-emergency tests include service not available in the area, transportation problems, cost, general deterioration of health, did not know where to go, and unable to leave the house because of a health problem.

[¥¥¥] Other difficulties in getting non-emergency surgery include waited too long for a hospital bed to become available, transportation problems, language problem, cost, general deterioration of health, and unable to leave the house because of a health problem.

Source: The 2019/2020 Canadian Health Survey on Seniors.

health, this study may underestimate the need for specialized health care services, particularly among women aged 85 years or older. In this age group, 31.5% of women and 19.5% of men were living in health care and related facilities in 2021.[45-46]

Some findings from this study indicate that immigrants were less likely to access specialized health care services, although there were differences by gender and type of service. Immigrants from non-European countries had lower odds than their Canadian-born counterparts of visiting a medical specialist (women), having non-emergency tests (men), and having non-emergency surgeries (men), while European immigrants had lower odds of having non-emergency surgeries (men). Although it is not possible to directly compare because of differences in the study population and factors considered in the analysis, previous studies have documented lower use of health care services among immigrants than the host country population[44,47] and attributed this to structural obstacles (e.g., difficulty in transportation or in obtaining permission to seek treatment during work hours) and cultural barriers (e.g., lack of linguistically and culturally appropriate health services). In this

study, associations between immigrant status and difficulties getting services were mixed—no association for men, and among women, European immigrants had higher odds of having difficulties, while non-European immigrants had lower odds of having difficulties than Canadian-born women. Further research is needed using a relatively large sample to uncover potential reasons for the lower odds of having difficulties accessing specialized health care services among non-European immigrant women.

Lower socioeconomic status, particularly having less than a postsecondary education, was found to be associated with lower odds of visiting medical specialists and having non-emergency tests and surgeries. Men with lower income had lower odds of visiting a medical specialist and having non-emergency surgeries. Previous studies have also detected lower use of specialized health care services among those with lower socioeconomic status,[9] even though they might have a higher need for these services because of poorer physical and mental health compared with their peers with higher socioeconomic status.[48] Pulok and Hajizadeh[9] detected that education was the

Table 6
Adjusted odds ratios relating difficulty in getting specialized health care services to selected characteristics among those who used specialized health care services in the previous 12 months, household population aged 65 years or older, Canada excluding territories, 2019/2020

Characteristics	Men			Women		
	Adjusted odds ratios	95% confidence interval		Adjusted odds ratios	95% confidence interval	
		from	to		from	to
Predisposing characteristics						
Age group						
65 to 74[†]	1.0	...	...	1.0	...	...
75 to 84	0.8 *	0.6	1.0	1.0	0.8	1.2
85 or older	0.7	0.5	1.2	0.5 *	0.3	0.7
Marital status						
Married or common-law	0.9	0.5	1.4	1.0	0.7	1.5
Divorced, separated, or widowed	0.8	0.5	1.2	0.9	0.6	1.3
Single, never married[†]	1.0	...	...	1.0	...	...
Immigrant status						
European immigrants	1.1	0.7	1.6	1.4 *	1.0	1.9
Non-European immigrants	0.8	0.6	1.3	0.6 *	0.4	1.0
Canadian-born population[†]	1.0	...	...	1.0	...	...
Enabling resources						
Education						
Less than postsecondary	0.7 *	0.6	1.0	0.7 *	0.6	0.9
Postsecondary[†]	1.0	...	...	1.0	...	...
Total household income						
Less than $70,000	0.9	0.7	1.2	0.8	0.7	1.0
$70,000 and above[†]	1.0	...	...	1.0	...	...
Has a regular medical doctor						
Yes	0.6 *	0.4	0.9	0.9	0.6	1.4
No[†]	1.0	...	...	1.0	...	...
Place of residence						
Urban[†]	1.0	...	...	1.0	...	...
Rural	0.9	0.8	1.2	0.9	0.8	1.1
Need factors						
Comparatively healthy[†]	1.0	...	...	1.0	...	...
High stress	1.2	0.8	1.8	1.7 *	1.2	2.4
Multimorbidity	1.1	0.8	1.5	1.4 *	1.0	1.9
High stress–multimorbidity–disability	1.6 *	1.2	2.2	2.1 *	1.6	2.7
Poor physical and mental health	2.4 *	1.5	3.7	2.9 *	2.1	4.0
Timing of the survey						
Before COVID-19 restrictions[†]	1.0	...	...	1.0	...	...
During COVID-19 pandemic	1.0	0.8	1.3	1.1	0.9	1.4

... not applicable

[†] reference category

* significantly different from reference category ($p < 0.05$)

Source: The 2019/2020 Canadian Health Survey on Seniors.

most important contributor to inequity in specialist visits after income among older Canadians. While Canada's universal health care system (Medicare) provides free access to hospital and physician services, barriers related to accessibility (e.g., ability to obtain referrals, travel cost) and affordability of health care services (e.g., lack of universal coverage for prescription drugs) may play a role in the lower use of specialized health care services among those with lower income.[9]

In 2021, 4.7 million Canadians aged 12 years or older (excluding the territories) (14.5%) did not have a regular health care provider. Of them, 0.4 million were aged 65 years or older.[49] Having a regular doctor was associated with approximately twice the odds of visiting a medical specialist or getting non-emergency tests. This finding is in keeping with the structure of the health care system in Canada, where seeing a specialist requires a referral from a family doctor. Residents in rural areas were less likely to visit medical specialists or get non-emergency tests (women only), perhaps because of reduced access to primary care for referrals and the concentration of specialist services in urban areas.[50]

Limited access to non-urgent health care and concerns about being exposed to COVID-19 in a health care setting[20] might have been expected to result in lower odds of specialized health care service use during the pandemic. However, such lower odds were evident only for men in visiting medical specialists and for women in getting non-emergency tests. Increased use of virtual care options during the pandemic could have replaced some types of in-person specialized health care services, but these varied by province, and were less likely to be used by adults aged 65 or older.[51]

This study identified five distinct health need classes based on eight physical, mental, and psychosocial factors. Odds of specialized health care service use increased with higher concentrations of health conditions. For example, those in the poor physical and mental health class had higher odds of visiting medical specialists and getting non-emergency tests and non-emergency surgeries than those in the comparatively healthy class. It is worth repeating that the poor physical and mental health class is characterized by higher probabilities of having all of the eight need factors: fair or poor perceived

general health, perceived life stress, mood disorder, anxiety disorder, obesity, multimorbidity, disability, and loneliness. In a broader sense, these results corroborate the findings from previous research,[5-7,10] which were based on individual need factors—not combinations of factors—such as multimorbidity, and poor physical and mental health.

Findings of this study identify the proportion of older adults with multidimensional need factors and add insight into the effects of combined need factors on specialized health care service use among older Canadians. Those living with mental health conditions in addition to poor physical health and psychosocial issues (e.g., loneliness) were more likely to use specialized health care services. Recognizing the complexity of the health needs of this group of older adults may help inform optimal specialized health care service delivery to Canadians.

Women and those with higher need factors (e.g., high stress–multimorbidity–disability and poor physical and mental health classes) were more likely to have experienced difficulty accessing specialized health care services. This is consistent with previous research.[15,20,52] The most common difficulties experienced by older Canadians in 2019/2020 included difficulty getting a referral, difficulty getting an appointment, wait time being too long (for both getting an appointment and getting the service after appointment), and services not being available either at the time required or in the area. A recent study revealed that the waiting time from referral by a general practitioner to consultation with a specialist increased to 11.1 weeks in 2021 from 10.5 weeks in 2020. The study also found that Canadians experienced significant waiting times for various diagnostic technologies: for example, 5.2 weeks a CT scan, 10.2 weeks for an MRI, and 3.6 weeks for an ultrasound.[53]

Difficulties accessing specialist care could have consequences such as decreased compliance with treatment and delays seeking and obtaining treatment, resulting in exacerbation of existing conditions, suboptimal diagnosis, poor quality of life, or even mortality at the individual level and increased financial burden at the health care system level.[15,54] This is particularly important in the context of the aging population with a high prevalence of health conditions and increased demand for specialist services.

Strengths and limitations

To the best of the authors' knowledge, this is the first analysis that identified patterns of need factors—applying LCA—and their association with specialized health care service use among older Canadians. The large sample size in the 2019/2020 CHSS facilitated separate analysis for men and women. This paper also evaluated the extent to which older Canadians experienced difficulties in accessing specialized services and types of difficulties experienced.

However, this study has some limitations. The CHSS excludes information on on-reserve populations, as well as those in institutional settings such as long-term care and nursing homes, who may be more likely to need specialized health care services. Thus, findings are not necessarily representative of this population group. Finally, data collection for the 2020 CHSS was interrupted by the COVID-19 pandemic, and the inability to conduct in-person interviews during the pandemic resulted in lower response rates. Survey weights were used in the analyses to minimize any potential bias that could arise because of low response rates.

Conclusion

This national, population-based study of specialized health care use among older Canadians identified predisposing, enabling, and multidimensional need groups associated with specialized health care use among older Canadians. Women, immigrants, those with lower socioeconomic status, and those living in rural areas were less likely to use these services in some cases, while those with a regular medical doctor and worse health profiles were more likely to do so. A better understanding of the characteristics of older Canadians who use specialized health care services, by type of service and gender, can inform service delivery policies and programs and help to identify inequities. Findings of this study also highlight the importance of considering the heterogeneity of health need factors—ranging from physical health to mental health to psychosocial factors—in examining specialized health care service use and difficulty in getting those services.

Appendix A

Weighted percentage distribution by gender and selected characteristics, household population aged 65 years or older, Canada, excluding territories, 2019/2020

	Men				Women			
	Number		95% confidence interval		Number		95% confidence interval	
Characteristics	('000)	%	from	to	('000)	%	from	to
Predisposing characteristics								
Age group								
65 to 74	1,736	63.9	63.4	64.4	1,895	59.4 ‡	58.8	59.9
75 to 84	778	28.6	28.1	29.1	946	29.7 ‡	29.2	30.1
85 or older	204	7.5	7.0	8.0	350	11.0 ‡	10.5	11.4
Marital status								
Married or common-law	2,065	76.0	74.8	77.1	1,689	53.0 ‡	51.6	54.3
Divorced, separated, or widowed	472	17.4	16.3	18.4	1,265	39.7 ‡	38.4	41.0
Single, never married	181	6.7	6.1	7.3	234	7.3	6.6	8.1
Immigrant status								
European immigrants	356	13.1	12.0	14.3	403	12.7	11.7	13.7
Non-European immigrants	385	14.2	12.8	15.7	380	11.9 ‡	10.7	13.3
Canadian-born population	1,973	72.7	71.2	74.2	2,399	75.4 ‡	74.0	76.8
Enabling resources								
Education								
Postsecondary	1,658	62.3	60.8	63.7	1,645	52.7 ‡	51.4	53.9
Less than postsecondary	1,005	37.7	36.3	39.2	1,478	47.3 ‡	46.1	48.6
Total household income								
$70,000 and above	1,458	53.6	52.1	55.2	1,362	42.7 ‡	41.3	44.1
Less than $70,000	1,260	46.4	44.8	47.9	1,829	57.3 ‡	55.9	58.7
Has a regular medical doctor								
Yes	2,528	93.2	92.4	93.9	3,008	94.3 ‡	93.7	94.9
No	185	6.8	6.1	7.6	181	5.7 ‡	5.1	6.3
Place of residence								
Urban	2,111	77.7	76.5	78.8	2,565	80.4 ‡	79.4	81.3
Rural	607	22.3	21.2	23.5	626	19.6 ‡	18.7	20.6
Need factors								
Healthy	1,199	44.1	42.6	45.6	1,221	38.3 ‡	36.9	39.7
Stressful	203	7.5	6.8	8.3	303	9.5 ‡	8.8	10.3
Multimorbidity	460	16.9	15.8	18.1	424	13.3 ‡	12.5	14.1
Stressful–multimorbidity–disability	768	28.3	26.9	29.6	1,033	32.4 ‡	31.1	33.6
Poor physical and mental health	88	3.2	2.8	3.8	210	6.6 ‡	6.0	7.2
Timing of the survey								
Before COVID-19 restrictions	1,670	61.4	60.6	62.3	1,971	61.8	61.0	62.5
During COVID-19 pandemic	1,048	38.6	37.7	39.4	1,220	38.2	37.5	39.0

‡ significantly different from men ($p < 0.05$)

Notes: Based on available case analysis (unequal sample size across the predictors). The study population represents 5.9 million older Canadians (46.0% men and 54.0% women).

Source: The 2019/2020 Canadian Health Survey on Seniors.

Appendix B
Weighted percentage distribution of need factors by gender, household
population aged 65 years or older, Canada, excluding territories, 2019/2020

	Men			Women		
		95% confidence interval			95% confidence interval	
Characteristics	%	from	to	%	from	to
Self-perceived general health						
Poor or fair	16.9	15.7	18.0	17.1	16.2	18.1
Good, very good, or excellent	83.1	82.0	84.3	82.9	81.9	83.8
Perceived life stress						
Stressful	69.3	67.9	70.7	76.8 ‡	75.7	77.9
Not stressful	30.7	29.3	32.1	23.2 ‡	22.1	24.3
Mood disorder						
Yes	4.0	3.6	4.6	7.0 ‡	6.5	7.6
No	96.0	95.4	96.4	93.0 ‡	92.4	93.5
Anxiety disorder						
Yes	3.5	3.0	4.0	6.8 ‡	6.2	7.5
No	96.5	96.0	97.0	93.2 ‡	92.5	93.8
Obesity						
Yes	28.7	27.3	30.1	28.0	26.8	29.3
No	71.3	69.9	72.7	72.0	70.7	73.2
Living with multimorbidity						
Yes	67.4	65.9	68.9	73.1 ‡	71.9	74.2
No	32.6	31.1	34.1	26.9 ‡	25.8	28.1
Living with disability						
Moderate or severe disability	39.4	38.0	40.8	45.7 ‡	44.3	47.1
None or mild disability	60.6	59.2	62.0	54.3 ‡	52.9	55.7
Loneliness						
Yes	14.5	13.5	15.6	23.0 ‡	21.9	24.2
No	85.5	84.4	86.5	77.0 ‡	75.8	78.1

‡ significantly different from men ($p < 0.05$)

Note: Based on available case analysis (unequal sample size across the need factors).

Source: The 2019/2020 Canadian Health Survey on Seniors.

References

1. Statistics Canada. Older adults and population aging statistics. 2022a; https://www.statcan.gc.ca/en/subjects-start/older_adults_and_population_aging.

2. Statistics Canada. Population projections for Canada (2018 to 2068), provinces and territories (2018 to 2043). *Catalogue no. 91-520-X,* 2019. https://www150.statcan.gc.ca/n1/pub/91-520-x/91-520-x2019001-eng.htm.

3. Canadian Institute for Health Information. Has health spending on seniors changed? [infographic]. 2022a. https://www.cihi.ca/en/has-health-spending-on-seniors-changed.

4. Conde H, McDonald JT. The health services use among older Canadians in rural and urban areas. *SEDAP Research Paper* 2007; 178: 1-41. http://socserv.mcmaster.ca/sedap/p/sedap178.pdf.

5. Fisher KA, Griffith LE, Gruneir A, et al. Effect of socio-demographic and health factors on the association between multimorbidity and acute care service use: Population-based survey linked to health administrative data. *BMC Health Services Research* 2021; 21(62): 1-17. https://doi.org/10.1186/s12913-020-06032-5.

6. Gruneir A, Markle-Reid M, Fisher K, et al. Comorbidity burden and health services use in community-living older adults with diabetes mellitus: A retrospective cohort study. *Canadian Journal of Diabetes* 2016; 40(1):35-42. https://doi.org/10.1016/j.jcjd.2015.09.002.

7. Koné AP, Scharf D. Prevalence of multimorbidity in adults with cancer, and associated health service utilization in Ontario, Canada: A population-based retrospective cohort study. *BMC Cancer* 2021; 21(406): 1-13. https://doi.org/10.1186/s12885-021-08102-1.

8. Ng E, Sanmartin CA, Manuel DG. Acute care hospitalization, by immigrant category: Linking hospital data and the Immigrant Landing File in Canada. Statistics Canada. *Health Reports* 2016; 27(8):12-18. https://www150.statcan.gc.ca/n1/pub/82-003-x/2016008/article/14648-eng.htm.

9. Pulok MH, Hajizadeh M. Equity in the use of physician services in Canada's universal health system: A longitudinal analysis of older adults. *Social Science & Medicine* 2022; 307:115186. https://www.doi.org/10.1016/j.socscimed.2022.115186.

10. Rotermann M. High use of acute care hospital services at age 50 or older. *Health Reports* 2017; 28(9): 3-17. https://www150.statcan.gc.ca/n1/en/pub/82-003-x/2017009/article/54855-eng.pdf?st=9OW66dq.

11. Islam MK, Kellett P. Provincial variations in not having a regular medical doctor and having unmet healthcare needs among Canadians. *International Journal of Health Planning and Management* 2022; 37(4): 2090-2105. https://doi.org/10.1002/hpm.3451.

12. Ramage-Morin PL, Gilmour H, Rotermann M. Nutritional risk, hospitalization and mortality among community-dwelling Canadians aged 65 or older. *Health Reports* 2017; 28(9): 17-27. https://www150.statcan.gc.ca/n1/pub/82-003-x/2017009/article/54856-eng.pdf.

13. Ionescu-Ittu R, McCusker J, Ciampi A, et al. Continuity of primary care and emergency department utilization among elderly people. *Canadian Medical Association Journal* 2007; 177(11): 1362-1368. https://doi.org/10.1503/cmaj.061615.

14. Ramage-Morin PL. Medication use among senior Canadians. *Health Reports* 2009; 20(1): 37-44. https://www150.statcan.gc.ca/n1/en/pub/82-003-x/82-003-x2009001-eng.pdf?st=clznsoEp.

15. Clarke, J. (2016). Difficulty in accessing health care services in Canada. *Statistics Canada Catalogue no. 82-624-X* 2016; 1-11. https://www150.statcan.gc.ca/n1/en/pub/82-624-x/2016001/article/14683-eng.pdf?st=VRYkel7n.

16. Jorgensen T, Jacobsen RK, Toft U, et al. Effect of screening and lifestyle counselling on incidence of ischaemic heart disease in general population: Inter99 randomised trial. *BMJ* 2014; 348:g3617. https://doi.org/10.1136/bmj.g3617.

17. Liss DT, Uchida T, Wilkes CL, et al. General health checks in adult primary care: a review. *JAMA* 2021; 325(22):2294-306. https://doi.org/10.1001/jama.2021.6524.

18. Andersen, R. Revisiting the Behavioral Model and Access to Medical Care: Does it Matter? *Journal of Health and Social Behavior* 1995; 36(1): 1-10. https://doi.org/10.2307/2137284.

19. Lafortune L, Béland F, Bergman H, et al. Health state profiles and service utilization in community-living elderly. *Medical Care* 2009; 47(3): 286-294. https://doi.org/10.1097/MLR.0b013e3181894293.

20. Frank, K. Difficulties accessing health care in Canada during the COVID-19 pandemic: Comparing individuals with and without chronic conditions. *Health Reports* 2022; 33(11): 16-26. https://www.doi.org/10.25318/82-003-x202201100002-eng.

21. Glazier RH, Green ME, Wu FC, et al. Shifts in office and virtual primary care during the early COVID-19 pandemic in Ontario, Canada. *Canadian Medical Association Journal (CMAJ)* 2021; 193(6): E200-E210. https://doi.org/10.1503/cmaj.202303.

22. Canadian Institute for Health Information (CIHI). Impact of COVID-19 on Canada's health care systems. 2021. https://www.cihi.ca/en/covid-19-resources/impact-of-covid-19-on-canadas-health-care-systems.

23. Hartnett KP, Kite-Powell A, DeVies J, et al. Impact of the COVID-19 pandemic on emergency department visits—United States. Morbidity and Mortality Weekly Report 2020; 69(23):699. http://dx.doi.org/10.15585/mmwr.mm6923e1.

24. Andersen, RM. National health surveys and the behavioral model of health services use. *Medical Care* 2008; 46(7): 647-653. https://doi.org/10.1097/MLR.0b013e31817a835d.

25. Babitsch B, Gohl D, Lengerke T. Re-revisiting Andersen's behavioral model of health services use: A systematic review of studies from 1998–2011. *GMS Psycho-Social-Medicine* 2012; 9(1): 23-36. https://doi.org/10.3205/psm000089.

26. Lederle M, Tempes J, Bitzer EM. Application of Andersen's behavioural model of health services use: a scoping review with a focus on qualitative health services research. *BMJ Open* 2021;11(5):e045018. http://dx.doi.org/10.1136/bmjopen-2020-045018.

27. Statista. Average net household income in Canada from 2019 to 2020. 2023; https://www.statista.com/statistics/1317652/average-income-of-canadian-households-family/.

28. Bastani P, Mohammadpour M, Samadbeik M, et al. Factors influencing access and utilization of health services among older people during the COVID-19 pandemic: a scoping review. *Archives of Public Health* 2021; 79:1-1. https://doi.org/10.1186/s13690-021-00719-9.

29. Sirois FM, Owens J. A meta-analysis of loneliness and use of primary health care. *Health Psychology Review* 2023; 17(2):193-210. https://doi.org/10.1080/17437199.2021.1986417.

30. Feng Y, Bernier J, McIntosh C, et al. Validation of disability categories derived from Health Utilities Index Mark 3 scores. *Health Reports* 2009; 20(2): 43-50. https://www150.statcan.gc.ca/n1/pub/82-003-x/2009002/article/10863-eng.pdf.

31. Hughes ME, Waite LJ, Hawkley LC, et al. A short scale for measuring loneliness in large surveys: Results from two population-based studies. *Research on Aging* 2004; 26(6): 655-72. https://doi.org/10.1177/0164027504268574.

32. Gilmour, H. Social participation and the health and well-being of Canadian seniors. *Health Reports* 2012; 23(4): 1-12. https://www150.statcan.gc.ca/n1/en/pub/82-003-x/2012004/article/11720-eng.pdf?st=5m0pbakD.

33. Weller BE, Bowen NK, Faubert SJ. Latent class analysis: A guide to best practice. *Journal of Black Psychology* 2020; 46(4): 287-311. https://doi.org/10.1177/0095798420930932.

34. Rust KF, Rao JNK. Variance estimation for complex surveys using replication techniques. *Statistical Methods in Medical Research* 1996; 5(3): 283-310. https://doi.org/10.1177/096228029600500305.

35. Bertakis KD, Azari R, Helms LJ, et al. Gender differences in the utilization of health care services. *Journal of Family Practice* 2000; 49(2): 147-152.

36. Lavergne MR, Bodner A, Allin S, et al. Disparities in access to primary care are growing wider in Canada. *Healthcare Management Forum* 2023;36(5):272-279. https://doi.org/10.1177/08404704231183599.

37. Giles WH, Anda RF, Casper ML, et al. Race and sex differences in rates of invasive cardiac procedures in US hospitals: data from the National Hospital Discharge Survey. *Archives of Internal Medicine* 1995; 155(3): 318-24. https://doi.org/10.1001/archinte.1995.00430030116013.

38. Fleury MJ, Grenier G, Bamvita JM, et al. Determinants associated with the utilization of primary and specialized mental health services. *Psychiatric Quarterly* 2012; 83:41-51. https://doi.org/10.1007/s11126-011-9181-3.

39. Vasiliadis HM, Lesage A, Adair C, et al. Do Canada and the United States differ in prevalence of depression and utilization of services? *Psychiatric Services* 2007; 58(1):63-71. https://doi.org/10.1176/appi.ps.58.1.63.

40. Merzel C. Gender differences in health care access indicators in an urban, low-income community. *American Journal of Public Health* 2000; 90(6):909-16. https://doi.org/10.2105/AJPH.90.6.909.

41. Adler NE, Newman K. Socioeconomic disparities in health: pathways and policies. *Health Affairs* 2002; 21(2): 60-76. https://doi.org/10.1377/hlthaff.21.2.60.

42. Denton M, Prus S, Walters V. Gender differences in health: a Canadian study of the psychosocial, structural and behavioural determinants of health. *Social Science & Medicine* 2004; 58(12):2585-600. https://doi.org/10.1016/j.socscimed.2003.09.008.

43. Manuel JI. Racial/ethnic and gender disparities in health care use and access. *Health Services Research* 2018; 53(3):1407-1429. https://doi.org/10.1111/1475-6773.12705.

44. Tsai PL, Ghahari S. Immigrants' experience of health care access in Canada: A recent scoping review. *Journal of Immigrant and Minority Health* 2023; 25, 712–727 (2023). https://doi.org/10.1007/s10903-023-01461-w.

45. Statistics Canada. Table 98-10-0045-01. Type of collective dwelling, age and gender for the population in collective dwellings: Canada, provinces and territories. 2022b. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=9810004501

46. Statistics Canada. Table 98-10-0027-01 Age (in single years), average age and median age and gender: Canada and forward sortation areas. 2022c. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=9810002701

47. Derr AS. Mental health service use among immigrants in the United States: A systematic review. *Psychiatric Services* 2016; 67(3): 265-274. https://doi.org/10.1176/appi.ps.201500004.

48. Marmot M. Social determinants of health inequalities. *The Lancet* 2005; 365(9464):1099–1104. https://doi.org/10.1016/S0140-6736(05)71146-6.

49. Statistics Canada. Table 13-10-0096-01: Health characteristics, annual estimates. 2022d. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310009601.

50. Sibley LM, Weiner JP. An evaluation of access to health care services along the rural-urban continuum in Canada. *BMC Health Services Research* 2011; 11(20): 1-11. https://doi.org/10.1186/1472-6963-11-20.

51. Canadian Institute for Health Information. Virtual care: A major shift for Canadians receiving physician services. 2022b. https://www.cihi.ca/en/virtual-care-a-major-shift-for-physicians-in-canada

52. Harrington DW, Wilson K, Rosenberg M, et al. Access granted! barriers endure: Determinants of difficulties accessing specialist care when required in Ontario, Canada. *BMC Health Services Research* 2013; 13 (146): 1-10. https://doi.org/10.1186/1472-6963-13-146.

53. Moir M, Barua B. Waiting your turn: Wait times for health care in Canada, 2021 Report. Fraser Institute, 2021.https://www.fraserinstitute.org/sites/default/files/waiting-your-turn-2021.pdf.

54. Health Canada. Healthy Canadians 2012 – A Federal Report on Comparable Health Indicators. Ottawa, Ontario. 2013; https://publications.gc.ca/site/eng/9.506140/publication.html.