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by Heather Gilmour

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Formal home care use in Canada

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Abstract

Background: Formal home care services (those typically delivered by health care providers or volunteer organizations) are different from informal home care services (given by family, friends or neighbours), and thus represent a partial picture of all home care provided. Home care has been associated with decreased mortality, improved quality of life, and reduced hospitalizations and health care costs.

Data and methods: New data from the annual Canadian Community Health Survey (CCHS) 2015/2016 are used to estimate, for the first time, the number and percentage of households in which at least one person of any age received formal home care services in Canada during the previous year. A descriptive analysis of socioeconomic characteristics of households receiving formal home care is presented.

Results: An estimated 6.4% of households (881,800) in Canada received formal home care services in the past year, most frequently nursing (46%) and personal/home support services (46%). Households with parents and adult children (age 25 or older), one-person households, and households with lower socioeconomic status were most likely to have received formal home care. Costs were covered by a range of sources. They were paid solely by government (52%), solely out of pocket (27%), solely by insurance (7%), at least partially by insurance and/or government (8%), and by other sources (6%). Households that received home health care services only—particularly nursing services—were more likely to have their costs entirely covered by government, while those that received support services only were more likely to pay out-of-pocket costs.

Interpretation: This descriptive analysis of household use of formal home care services by socioeconomic characteristics and type of care will help inform health care policies and programs. Future person-level analysis can examine the independent factors associated with home care use.

Keywords: cross-sectional study, health survey, socioeconomic status, home nursing

Home care services allow people of all ages to receive care at home rather than in a hospital or long-term care facility. These services meet a diverse range of needs, such as short-term care for acute conditions or surgery recovery; long-term care so people with chronic conditions and disabilities can continue to live in their homes or in the community; and other needs, such as end-of-life care, rehabilitation, and support for family caregivers.¹⁻³ Home care has been associated with decreased mortality,^{4,5} improved quality of life,⁶ reduced hospitalizations^{7,8} and reduced health care costs.⁹

Services delivered by health care providers or volunteer organizations are considered formal care, while services provided by friends, family or neighbours are considered informal care. Individuals may use a mix of publicly or privately funded formal home care services, in addition to informal assistance.¹⁰ This study focuses on formal home care services, which can be further grouped into home health care (HHC) services and support services.^{11,12} Professionals typically deliver HHC services—including nursing care and other health care services such as physiotherapy, occupational or speech therapy, and nutritional counselling—and help with medical equipment or supplies. Support services are provided by personal support workers or volunteer agencies to help people with daily tasks such as bathing, meal preparation, housekeeping or transportation. Determinants of demand and potential for substitution of formal services with informal care, may differ for HHC and support services.¹²

For the first time, Canadian Community Health Survey (CCHS) respondents were asked to report on formal home care services received not only for themselves, but also for others in their household. Thus, this paper estimates the number and percentage of households in which at least one person of

any age received some form of formal home care services in Canada during the previous year. Estimated costs and sources of payment for services were examined. A descriptive analysis of selected socioeconomic characteristics of households receiving formal home care is included, but is limited to household-level variables since personal characteristics such as age, sex and health status are not available for home care recipients who were not also the selected survey respondent.

Methods

Canadian Community Health Survey (CCHS) 2015/2016

The cross-sectional CCHS collects information related to health status, health care utilization and health determinants for the Canadian population 12 years of age and older. Excluded from the survey's coverage are persons living on reserves and Aboriginal settlements in the provinces; full-time members of the Canadian Forces; youth aged 12 to 17 living in foster homes; the institutionalized population; and persons living in the Quebec health regions of Région du Nunavik and Région des Terres-Cries-de-la-Baie-James. These exclusions represent less than 3% of the target population. CCHS data were collected from January 2015 to December 2016. The overall response rate was 59.5%, for a final sample of 110,095. The analytical sample of households that received home care totalled 7,232.

Definitions

Home care questions refer to services received in the home because of a health condition or a limitation in daily activities and do not include help from family, friends or neighbours.

Respondents were asked whether household members had received the following types of care in the past 12 months:

- nursing care (e.g., dressing changes, preparing medications, V.O.N. visits)
- other health care services (e.g., physiotherapy, occupational or speech therapy, nutrition counselling)
- medical equipment or supplies (e.g., wheelchair, pads for incontinence, help with using a ventilator or oxygen equipment)
- personal or home support (such as bathing, housekeeping, meal preparation)
- other services (such as transportation, meals on wheels)
- no one in the household received any home care services.

Household type identifies family relationships within the household. It is based on the concept of economic family which refers to a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common-law or adoption.

The respondent's place of residence was classified by population size: rural area (less than 1,000), small population centre (1,000 to 29,999), medium population centre (30,000 to 99,999) or large urban population centre (100,000 or more).

The highest level of household education was categorized as postsecondary graduation, or secondary graduation or less.

In the analytical sample of home care recipients, household income and main source of income were determined from one of three sources: respondent-provided data (39%), tax records (37%) or imputed data (24%).

To identify people of limited means, respondents were asked about their main source of income: wages and salaries; income from self-employment; dividends and interest (e.g., on bonds, savings); Employment Insurance; Worker's Compensation; Canada Pension Plan or Québec Pension Plan benefits; retirement pensions, superannuation and annuities; RRSP/RRIF; Old Age Security and Guaranteed Income Supplement; Child

Tax Benefit or family allowances; provincial/municipal social assistance or welfare; child support; alimony; other (e.g., rental income, scholarships); or none. Respondents who cited Old Age Security and Guaranteed Income Supplement, or provincial/municipal social assistance or welfare were grouped and compared with those relying on other income sources.

Dwelling ownership was classified as owned by a member of the household (even if it is still being paid for) or rented (even if no cash rent is paid).

To establish the monthly cost of each home care service received, respondents were asked to report, for a typical month over the past 12 months, how much they or other household members paid for the services. In addition, they were asked "Who paid for these services?" Multiple responses could be given and were grouped into government only; out-of-pocket only (home care recipient or family member/friend living inside the household); insurance only; at least partially paid by government and/or insurance; and other (can include someone else living outside the household [e.g., family, friend, volunteer organization], out-of-pocket, and other).

Analytical techniques

Weighted frequencies and cross-tabulations were calculated to examine the proportion of households receiving

home care by selected characteristics. Household-level sampling weights were used to account for the survey design and non-response. Bootstrap weights were applied using SAS-Callable SUDAAN 11.0 to account for underestimation of standard errors due to the complex survey design.¹³ The significance level was set at $p < 0.05$.

Results

Household prevalence of formal home care

In 2015/2016, an estimated 881,800 Canadian households (6.4%) reported that at least one person received formal home care services in the previous 12 months (Table 1). One person received home care services in 5.9% of households, compared with 0.5% of households in which two or more people received home care. In 4.5% of households, only one type of home care service was received. Households that received HHC services only were most prevalent (3.1%), followed by households that received support services only (2.1%) and households receiving both types of home care (1.1%).

Parents living with children aged 25 or older (12.8%) and one-person households (7.6%) were significantly more likely to have received formal home care services than all other household types (Table 2).

Table 1
Number and percentage of households that received formal home care in the past year, household population, Canada, 2015/2016

Home care services	%	95% confidence interval	
		from	to
Total	6.4	6.2	6.6
Number of people in household receiving care			
One	5.9	5.7	6.1
Two or more	0.5	0.4	0.5
Type of home care service			
Home health care (HHC) only	3.1	3.0	3.3
Support only	2.1	1.9	2.2
Both HHC and support	1.2	1.1	1.3
Number of home care services received[†]			
1	4.5	4.3	4.7
2	1.1	1.1	1.3
3 or more	0.7	0.7	0.8

[†] nursing, other health care, medical supplies/equipment, personal/home support, other

Source: Canadian Community Health Survey, 2015/2016.

Households in large population centres were significantly less likely to have received formal home care (5.9%) than those in smaller population centres (7.8%, 7.4%) and rural areas (6.9%).

The following households were significantly more likely to have received formal home care services: households where the highest level of education

was secondary graduation or less compared to postsecondary graduation (9.0% versus 5.4%); households where the main source of income was social assistance, OAS or GIS compared to another source (13.4% versus 5.7%); and households that were rented rather than owned (7.1% versus 6.1%). Those in lower income categories were also significantly more

likely to have received formal home care services than households with an income of \$80,000 or more.

Nova Scotia and Quebec had a significantly higher percentage of households that received formal home care compared to the rest of Canada, while Saskatchewan, British Columbia and Yukon had a lower percentage.

Table 2
Number and percentage of households that received formal home care in the past year, by socioeconomic characteristics, household population, Canada, 2015/2016

Characteristic	Formal home care services		
	%	95% confidence interval	
		from	to
Total	6.4	6.2	6.6
Household type			
Person living alone [†]	7.6	7.2	8.1
Couple alone	5.9*	5.6	6.3
Parent(s) with child(ren) under 25	4.9*	4.6	5.3
Parent(s) with child(ren) 25 or older	12.8*	11.6	14.2
Other	4.4*	3.5	5.5
Place of residence			
Rural area (less than 1,000)	6.9*	6.5	7.4
Small population centre (1,000 to 29,999)	7.8*	7.2	8.4
Medium population centre (30,000 to 99,999)	7.4*	6.7	8.1
Large urban population centre (100,000 or more) [†]	5.9	5.6	6.2
Household education			
Postsecondary [†]	5.4	5.2	6.5
Secondary graduation or less	9.0*	8.5	5.7
Main source of household income			
Social assistance / OAS / GIS [†]	13.4	12.3	14.6
Other	5.7*	5.5	5.9
Household income			
\$0 to \$39,999	9.7*	9.1	10.2
\$40,000 to \$59,999	6.6*	6.0	7.2
\$60,000 to \$79,999	5.8*	5.3	6.4
\$80,000 or more [†]	4.4	4.1	4.7
Dwelling ownership			
Own [†]	6.1	5.9	6.4
Rent	7.1*	6.7	7.6
Province/territory			
Nova Scotia	7.8*	6.9	8.8
Northwest Territories	7.2 [‡]	5.1	10.1
Quebec	7.1*	6.6	7.6
New Brunswick	7.0	5.9	8.1
Ontario	6.7	6.3	7.2
Prince Edward Island	6.4	5.2	7.7
Newfoundland and Labrador	6.2	5.1	7.4
Alberta	6.0	5.4	6.6
Nunavut	5.9 [‡]	3.7	9.4
Manitoba	5.7	4.8	6.7
Saskatchewan	5.4*	4.6	6.4
British Columbia	4.9*	4.4	5.4
Yukon	3.8*	2.9	5.0

[‡] use with caution

* significantly different from reference group (p < 0.05)

[†] reference category; for province/territory, reference category is all other provinces and territories combined

Source: Canadian Community Health Survey, 2015/2016.

Types of formal home care

In an analysis restricted to households that had received home care in the past year, results showed that about one-half (49%) obtained help with HHC services only (Table 3). One-third of households (32%) received help with support services only. Some (19%) received help with both HHC and support services. The most frequent services received were nursing care (46.0%, 95%; CI 44.3, 46.6) and personal or home support (45.7%, 95%; CI 44.0, 47.4), followed by medical equipment/supplies (22.5%, 95%; CI 21.1, 24.0), other health care (19.4%, 95%; CI 18.0, 20.9) and other services (11.9%, 95%; CI 10.9, 12.9).

Some differences between households that received HHC only, support only, or both types of home care service were apparent (Table 3). For example, one-person households were significantly less likely to have received HHC only compared with all other household types, but were significantly more likely to have received support only. Those with postsecondary education, sources of income other than social assistance, and higher household income were significantly more likely to have received HHC only, and significantly less likely to have received support services only.

Costs and payment for formal home care

Just over one-half of households (52%) had home care service costs that were paid solely by government (Table 4). Among households receiving HHC services only, this proportion rose to 65%. More than one-quarter of households (27%) paid solely out of pocket for home care services. This increased to 44% for households that received support ser-

Table 3

Type of home care service by socioeconomic characteristics, households that received formal home care services in the past year, household population, Canada, 2015/2016

Characteristic	Households that received formal home care services								
	Home health care (HHC) only			Support only			Both HHC and support		
	%	95% confidence interval		%	95% confidence interval		%	95% confidence interval	
		from	to		from	to		from	to
Total	48.8	47.1	50.5	32.1	30.5	33.7	19.1	17.8	20.6
Household type									
Person living alone [†]	28.8	26.3	31.4	45.9	43.1	48.6	25.4	23.1	27.8
Couple alone	56.2*	53.1	59.2	25.9*	23.3	28.6	18.0*	15.9	20.3
Parent(s) with child(ren) under 25	70.0*	66.4	73.4	21.2*	18.1	24.7	8.7*	6.8	11.1
Parent(s) with child(ren) 25 or older	44.0*	38.5	49.6	30.5*	25.2	36.3	25.5	20.6	31.2
Other	44.7*	33.4	56.6	29.2**	20.4	40.0	26.0 [‡]	17.5	36.9
Place of residence									
Rural area (less than 1,000)	53.9*	50.5	57.3	27.7*	24.9	30.8	18.3	16.1	20.8
Small population centre (1,000 to 29,999)	44.4	41.0	47.9	32.8	29.9	35.9	22.7*	19.7	26.1
Medium population centre (30,000 to 99,999)	50.5	46.1	55.0	31.8	28.1	35.7	17.7	14.6	21.3
Large urban population centre (100,000 or more) [†]	47.9	45.4	50.4	33.4	31.0	35.8	18.7	16.7	20.9
Household education									
Postsecondary [†]	54.2	52.0	56.4	28.4	26.4	30.5	17.4	15.7	19.1
Secondary graduation or less	38.4*	35.7	41.2	39.3*	36.6	42.1	22.3*	19.9	24.9
Main source of household income									
Social assistance / OAS / GIS [†]	34.3	30.4	38.4	42.2	38.2	46.3	23.6	20.0	27.5
Other	52.6*	50.7	54.6	29.7*	27.9	31.5	17.7*	16.3	19.2
Household income									
\$0 to \$39,999	37.1*	34.6	39.7	39.5*	37.1	42.0	23.4*	21.3	25.7
\$40,000 to \$59,999	53.3*	49.1	57.4	27.6	24.2	31.2	19.2*	16.1	22.7
\$60,000 to \$79,999	49.1*	44.2	54.1	28.7	24.1	33.7	22.2*	18.1	26.9
\$80,000 or more [†]	62.9	59.5	66.1	25.5	22.5	28.7	11.7	9.8	13.9
Dwelling ownership									
Owned [†]	52.2	50.1	54.3	30.5	28.6	32.6	17.3	15.6	19.0
Rented	42.1	39.1	45.1	35.0	32.3	37.7	23.0	20.5	25.7

[‡] use with caution

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

[†] reference category

Source: Canadian Community Health Survey, 2015/2016.

vices only versus 13% of households that receive HHC services only. Insurance alone covered home care costs for 7% of households. An additional 8% of households received services that were paid at least in part by government and/or insurance. Services were paid by other sources in 6% of households.

Costs paid by household members varied by service—91% of households that received services reported no out-of-pocket costs for nursing care, while 46% reported no out-of-pocket costs for other support services (Figure 1). Higher proportions of households reported paying for support services than for HHC services, and were more frequently in the highest monthly cost category—12% paid \$400 or more per month for per-

sonal or home support services, and 9% paid \$400 or more per month for other support services.

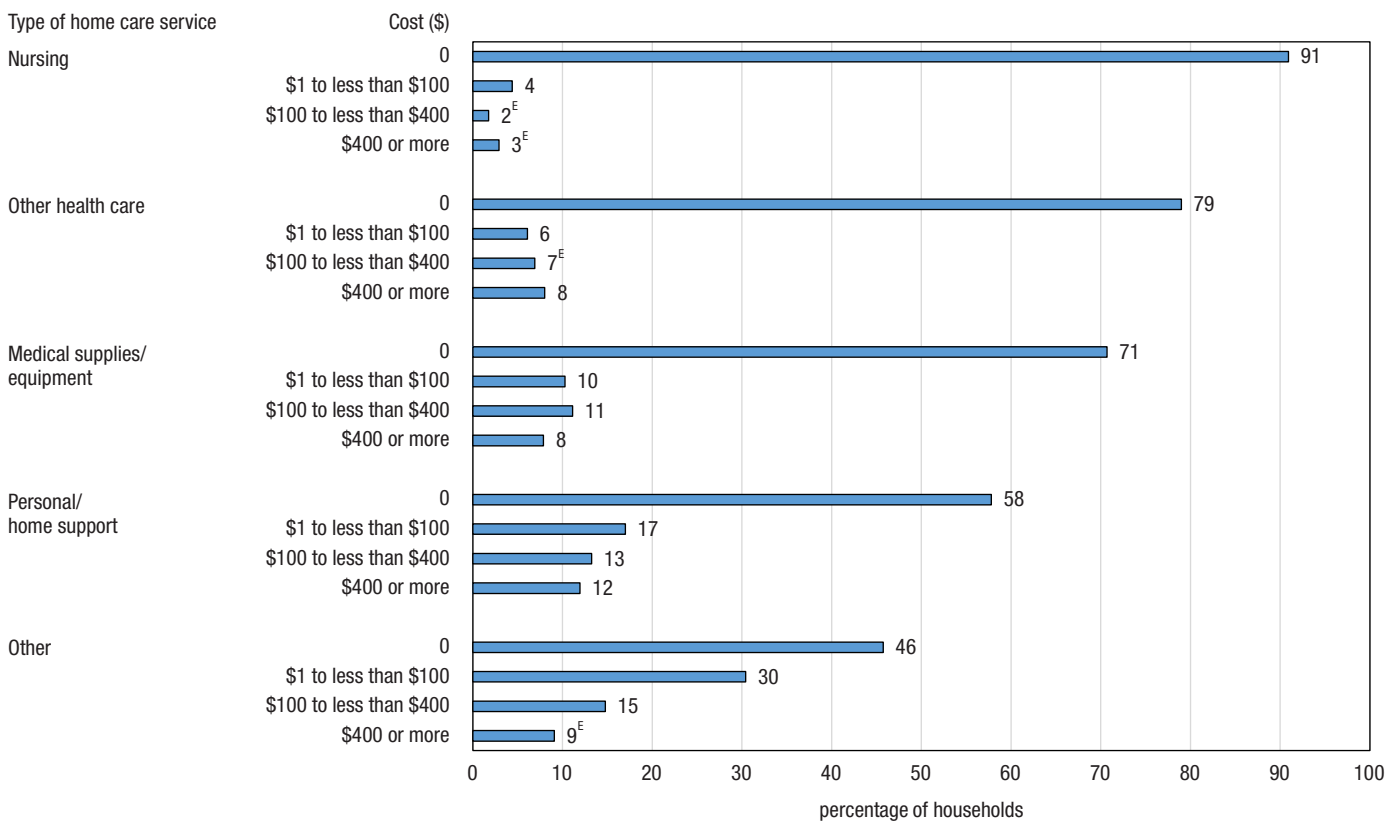
Discussion

In 2015/2016, an estimated 6.4% of households (881,800) had received formal home care services in the past year. Comparison with previous national prevalence studies of home care in Canada is difficult because those studies considered services received by the study participant rather than by anyone in the household; specified home care paid for at least in part by government; included informal care provided by family, friends or neighbours; or focused on seniors only.^{10,14-17} According to the

2012 General Social Survey (GSS)—the most comparable data source—an estimated 1.2 million Canadians aged 15 or older had received professional home care services in the previous 12 months.¹⁴ The GSS estimate may be higher than the CCHS estimate of 881,800 households because it represents individuals rather than households, and references a broader range of reasons for receiving home care in the survey question (“for a long-term health condition, a physical or mental disability, or problems related to aging” in the GSS versus “for a health condition or a limitation in daily activities” in the CCHS).

Households that contained parents and adult children (aged 25 or older) had the highest prevalence of home care

Figure 1
Monthly cost of home care services received during the past 12 months, by type of service, household population that received home care, Canada, 2015/2016



^E use with caution

Source: Canadian Community Health Survey 2015/2016.

Table 4
Sources of payment for formal home care services among households that received services in the past 12 months, by type of home care, household population, Canada, 2015/2016

Sources of payment	Home care services			HHC only			Support only			Both HHC and support		
	%	95% confidence interval		%	95% confidence interval		%	95% confidence interval		%	95% confidence interval	
		from	to		from	to		from	to		from	to
Government only	52.2	50.5	53.9	64.6	62.2	67.0	39.7	36.5	43.0	41.4	37.5	45.4
Out-of-pocket only [†]	27.0	25.5	28.7	12.5	11.0	14.2	44.2	41.0	47.5	35.4	31.5	39.5
Insurance only	7.3	6.4	8.3	10.7	9.2	12.3	3.7	2.7	4.9	4.6 ^E	3.0	6.8
At least in part by government and/or insurance	8.0	7.2	8.9	6.9	5.8	8.2	6.8	5.5	8.3	12.7	10.4	15.5
Other sources [‡]	5.5	4.7	6.5	5.4	4.3	6.7	5.6	4.3	7.4	5.8 ^E	3.9	8.7

^E use with caution

[†] can include the home care recipient themselves or a family member or friend living inside the household

[‡] can include someone else living outside the household (e.g., family, friends, volunteer organization), out-of-pocket, or other

Source: Canadian Community Health Survey, 2015/2016.

service receipt, possibly reflecting living arrangements that allow a parent to provide care for an ill or disabled child, or for adult children to care for aging parents. Persons living alone were more likely to have received formal home care,

and a higher proportion of them received support services only. This may be due to the absence of someone else in the household who can provide informal care as a substitute for formal support services.

Consistent with previous research,^{11,17-19} the prevalence of receiving home care was higher among households with lower socioeconomic status, as assessed by education, source of income,

home ownership and income range. These associations cannot be verified adequately with multivariate analysis using the household-level data in this study because variables such as age, sex and health status are only available for the survey respondent, and not for other members of the household. However, a multivariate logistic regression was performed using survey respondent data only. Models contained household type, place of residence, age, sex, long-term care insurance, having a regular health care provider, self-perceived health, and number of nights spent in hospital in the past 12 months, in addition to each of the socioeconomic status variables entered individually in separate models. Results showed that having a lower household income, receiving social assistance income, and renting rather than owning a home were independently associated with increased odds of home care receipt, whereas lower household education was not (data not shown). Other research based on individuals that was able to control for health status also found that the inverse association between home care and socioeconomic status persisted.^{11,17,19}

The proportion of formal home care recipients receiving HHC only was greater among households with higher socioeconomic status, while the proportion receiving support only, or both types of services, was greater in households with lower socioeconomic status. This highlights the importance of examining determinants by type of home care service.

Home care services, unlike physician and hospital services, are not insured under the *Canada Health Act*. However, many are publicly funded by provincial/

territorial governments, or delivered through several federal jurisdictions focused on providing care to populations under federal jurisdictions (e.g., Veterans Affairs Canada, Department of National Defence, Indigenous Services Canada, Royal Canadian Mounted Police).³ Households that received HHC services only, particularly nursing services, were more likely to have costs that were paid by government, while households that received support services only were more likely to pay out-of-pocket costs. This may be due to differences in the availability of publicly funded HHC and support services by jurisdiction. A more detailed analysis of payment amounts and sources that takes into account variations in the availability and extent of publicly funded home care services across jurisdictions would be required to understand the relationship between the distribution of public and private financing and the receipt of specific home care services, but is beyond the scope of this analysis.

Strengths and limitations

Household-level analysis provides a more complete estimate of home care receipt because respondents answer not only for themselves, but also for others (of any age) in their household. However, a major limitation of household-level analysis is that information about the home care recipient's personal demographic and health characteristics is lacking if the recipient is not also the survey respondent. Therefore, this analysis cannot determine whether children, seniors or other adults were the care recipients. It is also not possible to control for important factors related to the receipt of home care, such as age and

health status, in multivariate analysis at the household level. Future analysis at the person level is required to examine in more depth the personal and health characteristics associated with home care use.

Information that would allow for an assessment of the intensity of home care service, such as the number of hours of home care received and the number of services received under each category (e.g., nursing), is not available.

Formal home care services represent a partial picture of all care provided. A previous Canadian survey found that about 56% of home care recipients had professional help.¹⁴

The reason for which home care services were received is unknown. For example, services could be received for an acute health problem such as recovery from surgery or illness, for a longer-term condition or disability, or for difficulties related to aging.

Conclusion

Results from this descriptive analysis of CCHS data will be useful in home care service and program planning. In 2015/2016, an estimated 6.4% of Canadian households received formal home care, most commonly nursing services and personal/home support services. Receipt of services varied by household type, socioeconomic status and service type. Just over one-half of households (52%) had home care costs that were covered solely by government sources, while 27% paid solely out of pocket. Assessment of changes in the prevalence of household home care use will be possible as data from future cycles of the CCHS become available. ■

References

1. Health Canada. *Home and community health care*. Available at: <https://www.canada.ca/en/health-canada/services/home-continuing-care/home-community-care.html>. Accessed November 1, 2017.
2. Canadian Institute for Health Information. *Home care*. Available at: <http://www.cihi.ca/en/home-care>. Accessed November 1, 2017.
3. Canadian Home Care Association. *Portraits of Home Care in Canada 2013*. Mississauga, ON: 2013.
4. Rahme E, Kahn S, Dasgupta K. et al. Short-term mortality associated with failure to receive home care after hemiarthroplasty. *Canadian Medical Association Journal* 2010; 182(13): 1421–1426.
5. Albert SM, Simone B, Brassard A, Stern Y, Mayeux R: Medicaid home care services and survival in New York City. *Gerontologist* 2005; 45(5): 609-616.
6. Kadowaki L, Wister AV, Chappell NL. Influence of Home Care on Life Satisfaction, Loneliness, and Perceived Life Stress. *Canadian Journal on Aging* 2015; 34(1): 75-89.
7. Canadian Foundation for Healthcare Improvement. *Home is Where the Health Is: Dramatic results show shifting chronic disease care closer to home reduces hospital use*. Available at: <http://www.cfhi-fcass.ca/NewsAndEvents/NewsReleases/NewsItem/2018/01/23/home-is-where-the-health-is>. Accessed January 30, 2018.
8. Boland L, Légaré F, Perez MMB et al. Impact of home care versus alternative locations of care on elder health outcomes: an overview of systematic reviews. *BMC Geriatrics* 2017; 17:20.
9. Chappell NL, Havens B, Hollander MJ, et al. Comparative costs of home care and residential care. *Gerontologist* 2004; 44(3): 389-400.
10. Hoover M, Rotermann M. Seniors' use of and unmet needs for home care, 2009. *Health Reports* 2012; 23(4):1-8.
11. Goodridge D, Hawranik P, Duncan V, Turner H. Socioeconomic disparities in home health care service access and utilization: A scoping review. *International Journal of Nursing Studies* 2012; 49: 1310-19.
12. Mery G, Wodchis WP, Laporte A. The determinants of the propensity to receive publicly funded home care services for the elderly in Canada: a panel two-stage residual inclusion approach. *Health Economics Review* 2016; 6:8.
13. Rust KF, Rao JNK. Variance estimation for complex surveys using replication techniques. *Statistical Methods in Medical Research* 1996; 5(3): 283-310.
14. Sinha M, Bleakney A. Receiving care at home. *Spotlight on Canadians: Results from the General Social Survey 2014*. (Catalogue No. 89-652-X-002). Ottawa: Statistics Canada
15. Carrière G. Seniors' use of home care. *Health Reports* 2006;17(4): 43-47
16. Rotermann M. Seniors' health care use. *Health Reports* 2006; 16 supplement: 33-45.
17. Wilkins K, Park E. Home care in Canada. *Health Reports* 1998; 10(1): 29-37.
18. Almeida APSC, Nunes BP Duro SMS, Facchini LA. Socioeconomic determinants of access to health services among older adults: a systematic review. *Revista de Saude Publica* 2017; 51: 50
19. Allan De, Funk LM, Reid RC, Cloutier-Fisher D. Exploring the influence of income and geography on access to services for older adults in British Columbia: A multivariate analysis using the Canadian Community Health Survey (Cycle 3.1). *Canadian Journal of Aging* 2011; 30(1): 69-82.