

# Home care in Canada

*Kathryn Wilkins and Evelyn Park*

## **Abstract**

### **Objectives**

This article describes the social, socioeconomic and other health-related characteristics of people receiving formal, publicly funded home care services.

### **Data source**

The data are from the household component of the 1994/95 National Population Health Survey. The analysis covers 16,291 respondents aged 18 or older.

### **Analytical techniques**

Recipients of publicly funded home care services were profiled using weighted univariate frequencies and multivariate logistic regression.

### **Main results**

Recipients of publicly funded home care services in 1994/95 numbered over half a million. People who were elderly, female, had two or more chronic conditions or were living with others accounted for large proportions of these recipients. Characteristics significantly associated with receiving home care included old age, poor or fair general health, abstinence from alcohol (compared with regular use), low income, living alone, needing help with some activity of daily living, and having cancer or the effects of a stroke.

## **Key words**

home care services, aged, disabled, home nursing, activities of daily living

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In recent years, health care restructuring has resulted in bed and hospital closures.<sup>1</sup> Cost containment measures have also given rise to shorter hospital stays. Falling hospital admission rates and shorter stays suggest that some patients are now discharged at an earlier stage of recovery from surgery or illness than in the past.<sup>2,3</sup> In addition, with the growth of the elderly population, the number of people living in the community with chronic, debilitating conditions such as arthritis and dementia is increasing.<sup>4</sup>

The provision of health care and support services in the home is currently receiving much attention from all levels of government as a cheaper alternative to, or means of transition from, both acute and long-term institutional care. A report released in 1997 by the National Forum on Health named home care as one of three “areas for action to move toward a more integrated system.”<sup>5</sup> Home care was identified as a priority for funding in the 1997 federal budget, and in 1998, home care was the subject of a national conference.<sup>6</sup>

In addition to the recommendation of merging home care into publicly funded health care services, the National Forum on Health noted the desirability of standardizing home care across Canada.

Currently, home care services are centrally organized in some provinces, but regionally or locally controlled in others. A physician's referral may be required in one place, while in another, a referral

## Methods

### Data source

Most of the analysis in this article is based on the household component of Statistics Canada's 1994/95 National Population Health Survey (NPHS) for the 10 provinces. Some data from the institutional component, which covered residents of long-term health care facilities, are also presented.

The household component of the NPHS sample consisted of 27,263 households, of which 88.7% agreed to participate in the survey. After the application of a screening rule (to keep the sample representative),<sup>7</sup> 20,725 households remained in scope.

One knowledgeable person in every participating household provided general socio-demographic and health information about each household member. In total, data pertaining to 58,439 individuals were collected. (The data base containing these data is called the General file). In addition, one randomly selected person in each of the 20,725 participating households was chosen to provide in-depth information about their own health. In 18,342 of these households, the selected person was aged 12 or older. Their response rate to these in-depth health questions was 96.1% or 17,626 respondents. (The data base containing in-depth health information as well as data from the General file pertaining to these respondents is called the Health file.) Only the 16,291 records corresponding to adults (aged 18 or older) were analyzed for this article.

### Analytical techniques

Tabulations of selected variables were used to describe recipients of publicly funded home care (referred to as formal home care services) and to compare them with the general household population. Estimates were weighted to the age and sex distribution of the 1994/95 Canadian population aged 18 and older.

Multiple logistic regression was used to study the associations of independent variables with home care use. The regression analysis was performed on data for the 568 respondents aged 18 or older who reported receiving home care in the 12 months before the survey, as well as the 15,663 respondents who did not receive it and for whom complete data were available. To avoid losing data from the 4% of respondents who did not provide income information, the category "household income: data not available" was created. To reduce bias, regressions were weighted using survey weights

re-scaled to sum to the sample size. To account for design effects, odds ratios were considered statistically significant only if the values of the lower and upper bounds of their 95% confidence interval were not in the range 0.945 to 1.055.

### Limitations

Formal home care constitutes only a part of all care rendered to people in their home. Although those who receive home nursing services probably have greater physical needs, or at least need more specialized care than can be provided by household members, it is reasonable to expect that in many respects, formal home care recipients do not differ much from people who receive informal care. However, since data on informal care were not available, respondents receiving informal care only were included with those not receiving formal home care.

The absence of a uniform definition of formal home care limits the interpretation of the findings. Services differ in structure, access and content among provincial and regional jurisdictions. To account for some of the differences, province was included in the initial regression models. However, the effect on the probability of receiving home care was negligible, so the variable was dropped from the analysis.

Selection bias may further limit interpretation of the data. Household members who were not available to be selected as survey respondents for the in-depth health interview may not have enjoyed the same level of health as those who were available and selected. For example, some people who had received home care during the 12 months before the survey may not have been interviewed because they were ill or in hospital. To partially assess the extent of such bias, weighted estimates of the number of people who received home care were produced using the data from the randomly selected respondents (Health file), as well as from all household members (General file). Although the estimate using data for all household members was slightly higher (2.6% versus 2.4%), the difference was reassuringly small.

All data were self-reported, and the degree of their validity is unknown. To minimize reporting error related to chronic diseases, respondents were instructed to report only those conditions that were (or were expected to be) of at least six months' duration and had been diagnosed by a health professional.

from a social service agency suffices.<sup>8,9</sup> And in most but not all jurisdictions, home care recipients are charged nominal fees, depending on their ability to pay.<sup>10</sup> In some areas, home care includes a comprehensive range of services including physiotherapy, speech therapy, occupational therapy, and palliative and acute care; in others, only standard functions such as nursing and homemaking services are available.

This lack of uniformity poses a challenge to research and may help explain why published reports on home care have focused almost exclusively on provincially or regionally administered programs.<sup>11-13</sup> If home care services are to be standardized as recommended by the National Forum on Health, understanding home care recipients at the national level is essential.

The National Population Health Survey (NPHS), a comprehensive, population-based survey of the health of Canadians, has collected information about publicly funded home care services across the country. Based on 1994/95 NPHS data, this article provides a profile of users of formally organized home care, in terms of health conditions and behavioural, personal and social characteristics (see *Methods* and *Definitions*). The article also shows which factors, adjusting for other relevant variables, are associated with receiving home care. Finally, it looks at what proportion of people needing help actually receive formal home care.

### Women and home care—an indirect link

In 1994/95, an estimated 522,900 Canadian adults, or 2.4% of people aged 18 and older, reported receiving formal home care in the 12 months before the survey. Over one-third (36%) of them were younger than 65—a clear indication that home care is not limited to geriatric services.

Although the proportion under 65 is substantial, this age group comprises a much smaller share of home care users than of the non-recipient household population (Table 1). Only 1% of the household population under age 65 received home care, compared with 8% of 65- to 79-year-olds and 22% of those aged 80 and older. Not surprisingly, seniors' odds of receiving home care, even after controlling for the presence of specific chronic

Table 1  
Selected characteristics of recipients and non-recipients of formal home care in past year, household population aged 18 and older, Canada excluding territories, 1994/95

	Home care recipients	Non-recipients
	%	
<b>Age</b>		
18-64	35.9	86.0
65-79	39.8	11.9
80+	24.3	2.1
<b>Sex</b>		
Male	32.7	49.5
Female	67.4	50.6
<b>Living arrangements</b>		
Alone	39.0	12.0
With others	61.0	88.0
<b>Household income</b>		
Lowest	13.9	5.4
Lower middle	25.1	11.1
Middle	33.0	28.0
Upper middle	18.4	35.2
Highest	5.2	15.5
Data not available	4.4	4.7
<b>Chronic conditions<sup>†‡</sup></b>		
Arthritis/Rheumatism	45.7	13.4
Back problems (non-arthritic)	27.6	14.8
Chronic bronchitis/Emphysema	11.3	3.1
Cancer	9.6	1.6
Cataracts	17.2	2.3
Diabetes	15.5	3.1
Heart disease	25.3	3.7
High blood pressure	28.8	9.2
Effects of stroke	10.0	0.7
Urinary incontinence	8.0	1.0
2+ chronic conditions	56.3	14.0
<b>General health status</b>		
Poor	20.6	2.0
Fair	29.0	8.2
Good	29.2	27.0
Very good	16.5	37.3
Excellent	4.8	25.5
<b>Needs help with ADL<sup>†</sup></b>		
Moving about inside house	25.4	0.9
Personal care	13.0	0.5
	22.5	0.7
<b>Needs help with IADL<sup>†</sup></b>		
Preparing meals	72.3	7.6
Shopping for groceries	31.4	1.4
Housework	40.8	2.5
Heavy household chores	50.9	2.8
	63.0	7.0
<b>Activity-limiting injury in past 12 months</b>	21.5	15.8
<b>Hospital stay in past 12 months</b>		
None	50.5	90.8
1-7 nights	21.7	6.9
8+ nights	27.8	2.1
<b>Alcohol use</b>		
None	47.5	20.1
Occasional (< 1 drink per week)	34.9	41.5
Regular (at least 1 drink per week)	17.6	38.4
<b>Smoking</b>		
Never	37.2	38.0
Occasional/Former	42.4	35.8
Daily	20.5	26.2

**Data source:** 1994/95 National Population Health Survey, Health file

<sup>†</sup> Sum of percentages may exceed 100% because multiple responses are allowed.

<sup>‡</sup> As diagnosed by a health professional

conditions and other health-related factors, were nearly three times those of people aged 18 to 64 (Table 2).

Two-thirds of home care recipients were women, but the adjusted odds of receiving home care were no higher for women than for men. This reflects the association between being female and factors that are more strongly associated with receiving

home care, such as reaching old age, having chronic conditions, and needing help with activities of daily living (ADL).

Direct information on disease severity was not available from the NPHS. However, three variables were used as indicators of health: self-reported general health, number of chronic conditions, and time spent in hospital in the past year. Half of home

## Definitions

The following definition was read to NPHS respondents: “Home care services are health care or homemaker services received at home, with the cost being entirely or partially covered by government (e.g., nursing care; help with bathing; help around the home; physiotherapy; counseling; and meal delivery).” Respondents were asked: “Have you received any home care services in the past 12 months? (Yes No) What type of services have you received? (Specify).”

To measure the prevalence of *chronic conditions*, respondents were asked: “Do you have any of the following long-term conditions (refers to conditions that have lasted or are expected to last six months or more) that have been diagnosed by a health professional: asthma, arthritis or rheumatism, back problems excluding arthritis, high blood pressure, chronic bronchitis or emphysema, diabetes, heart disease, cancer, effects of stroke, urinary incontinence, cataracts and glaucoma?”

To measure the occurrence of *injuries*, respondents were asked: “In the past 12 months, did you have any injuries that were serious enough to limit your/his/her normal activities?”

Dependency in *instrumental activities of daily living (IADL)* was measured by asking: “Because of any condition or health problem, do you need the help of another person in: Preparing meals? Shopping for groceries or other necessities? Doing normal everyday housework? Doing heavy household chores such as washing walls, yard work, etc.?”

Dependency in *activities of daily living (ADL)* was measured by extending the question to “Personal care such as washing, dressing or eating? Moving about inside the house?”

To obtain *general health status*, respondents were asked: “In general, would you say your health is: Excellent? Very good? Good? Fair? Poor?”

*Alcohol use* was categorized as:

1. Regular (at least one drink per week),
2. Occasional (maximum of 2-3 drinks per month),
3. Never drank or currently does not drink (no alcoholic beverage in past 12 months)

*Smoking* was categorized as:

1. Regular smoking (smokes daily now)
2. Former or occasional current smoking (“occasional” is less frequently than daily)
3. Has never smoked

*Living arrangement* categories were defined as:

1. Lives with at least one other person
2. Lives alone

The average *frequency of contacts* with relatives (living outside one’s home), friends and neighbours was measured in two categories:

1. Low-medium (average of 0-4 contacts in past 12 months)
2. Frequent (average of 5-6 contacts in past 12 months)

*Household income group* is a derived measure of income based on household size:

Household size	Household income group				
	Lowest	Lower middle	Middle	Upper middle	Highest
1 or 2 people	<\$10,000	\$10,000-\$14,999	\$15,000-\$29,999	\$30,000-\$59,999	≥\$60,000
3 or 4 people	<\$10,000	\$10,000-\$19,999	\$20,000-\$39,999	\$40,000-\$79,999	≥\$80,000
5 or more people	<\$15,000	\$15,000-\$29,999	\$30,000-\$59,999	\$60,000-\$79,999	≥\$80,000

care recipients reported their health as “poor” or “fair,” 56% had two or more chronic conditions, and 28% had spent eight or more nights in hospital during the previous year. These proportions were notably lower among non-recipients of home care. The odds of receiving home care among people reporting poor or fair health and among those who had spent at least eight nights in hospital remained significantly elevated after controlling for the effects of specific chronic conditions, age, ADL dependency, sex, and other factors included in the analysis.

**Table 2**  
**Adjusted odds ratios relating selected characteristics to receipt of formal home care in past year, household population aged 18 and older, Canada excluding territories, 1994/95**

	Adjusted odds ratio	95% confidence interval
<b>Demographic factors</b>		
Age 65 or older	2.9*	2.14, 3.79
Female	1.2	0.89, 1.50
<b>Physical needs</b>		
IADL or ADL dependency	10.8*	8.07, 14.40
Hospital stay of 8+ nights in past 12 months†	3.9*	2.86, 5.29
General health status poor or fair‡	1.4*	1.07, 1.83
Activity-limiting injury in past 12 months	1.4	1.03, 1.88§
<b>Chronic conditions††</b>		
Cancer	2.2*	1.40, 3.50
Effects of stroke	1.8*	1.15, 2.96
Diabetes	1.4	0.96, 2.00
Cataracts	1.3	0.91, 1.88
Heart disease	1.3	0.93, 1.75
Urinary incontinence	1.2	0.72, 1.94
2+ chronic conditions	1.2	0.81, 1.74
Chronic bronchitis	1.1	0.72, 1.60
Arthritis/Rheumatism	1.0	0.73, 1.25
Back problems (non-arthritis)	0.9	0.66, 1.18
High blood pressure	0.9	0.67, 1.20
<b>Social, behavioural, economic factors</b>		
Alcohol use: none‡‡	1.8*	1.30, 2.53
Alcohol use: occasional‡‡	1.4	1.03, 1.97§
Living arrangements: alone	1.6*	1.23, 2.14
Household income: lowest, lower middle§§	1.6*	1.19, 2.04
Household income: data not available§§	1.2	0.69, 2.09
Smoking: daily	1.1	0.81, 1.57
Smoking: occasional, former	1.2	0.91, 1.59

**Data source:** 1994/95 National Population Health Survey, Health file

**Note:** The sample size is 16,231.

† Reference category is 0 to <8 nights in hospital.

‡ Reference category is excellent, very good or good health.

§ To account for design effect, confidence intervals in the .945 to 1.055 range were not considered statistically significant.

†† As diagnosed by a health professional. Reference category is absence of condition.

‡‡ Reference category is regular (at least 1 drink per week).

§§ Reference category is middle, upper middle or highest.

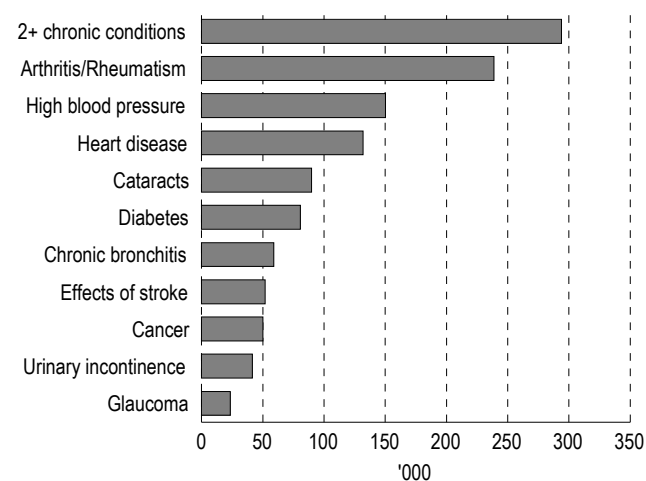
\*  $p < 0.05$

## High prevalence of arthritis

The high prevalence of certain chronic illnesses among home care recipients does not necessarily imply that the likelihood of receiving home care increased with the presence of these conditions. For example, nearly 240,000 home care recipients had arthritis/rheumatism, and they made up nearly half (46%) of all home care users (Chart 1). However, only 8% of people with arthritis/rheumatism received home care (Chart 2). And after accounting for other factors, their odds of receiving home care were actually the same as for people without arthritis/rheumatism (Table 2).

Among those with other conditions, the proportions of home care users were considerably higher. For example, over one in four people afflicted with the effects of stroke received home care, but they numbered only about 52,000 or 10% of all home care users. This reflects the relatively low prevalence of the effects of stroke in the non-institutionalized population. Therefore, although the odds of receiving home care for people suffering from the effects of stroke are higher than those for people with arthritis/rheumatism, a home care worker's case load would likely include more people

**Chart 1**  
**Number who received formal home care in past year, by presence of chronic conditions,† household population aged 18 and older, Canada excluding territories, 1994/95**



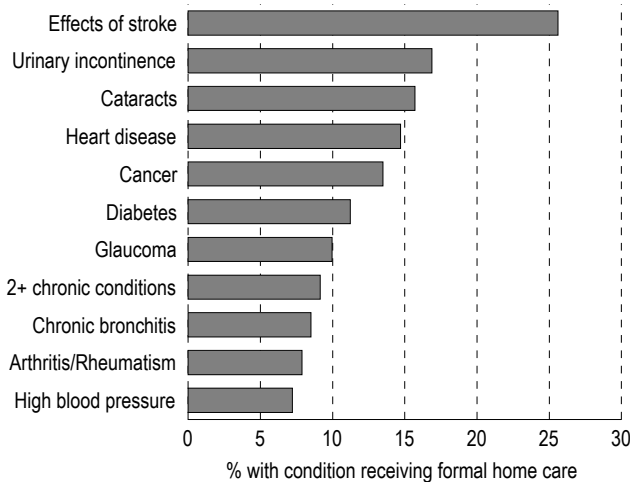
**Data source:** 1994/95 National Population Health Survey, Health file

† As diagnosed by a health professional

with arthritis than with the consequences of a stroke.

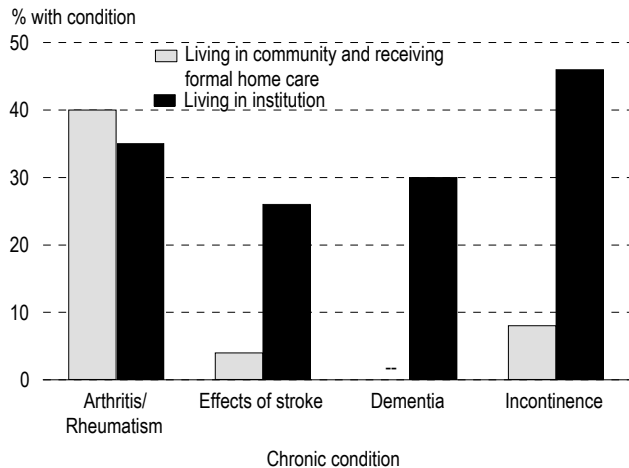
Even after controlling for factors that might help explain the need for home care, people with cancer or the effects of stroke had about twice the odds of receiving home care as did those without these conditions. It may be that these conditions confer specific needs, perhaps for rehabilitative therapy or palliative care, not accounted for by the other health-

**Chart 2**  
**Percentage who received formal home care in past year, by presence of chronic conditions,† household population aged 18 and older, Canada excluding territories, 1994/95**



**Data source:** 1994/95 National Population Health Survey, Health file  
 † As diagnosed by a health professional

**Chart 3**  
**Prevalence of selected chronic conditions, by residence, population aged 65 and older, Canada excluding territories, 1994/95**



**Data source:** 1994/95 National Population Health Survey, Health and Institutional files  
 -- Amount too small to be expressed

related characteristics that were considered.

### Older home care recipients outnumber nursing home residents

The number of people aged 65 and older who received home care (335,200) substantially exceeded the number of seniors residing in institutions (185,600).<sup>14</sup> Measuring the extent to which home care services delay or prevent institutionalization is beyond the scope of this article. Furthermore, the degree of family support or of responsibility assumed by informal care givers cannot be examined here. However, a comparison of some of the health-related characteristics of home care recipients with those of residents of long-term care facilities indicates the conditions with which it is possible to remain at home. For example, the prevalence of arthritis/rheumatism was higher among home care recipients than among residents of institutions. By contrast, the percentages of people in institutions with the effects of stroke, dementia and incontinence were strikingly higher than the corresponding percentages among home care recipients (Chart 3).<sup>14</sup>

### Social factors

The proportion of home care recipients who were living alone was just over three times as high as the proportion of non-recipients who were living alone (39% versus 12%) (Table 1). The pattern was similar regardless of age, although home care recipients aged 18 to 64 who lived alone were over-represented to a greater degree than those aged 65 and older.

The higher probability of receiving home care among people who lived alone may be partly attributable to a higher prevalence of health-related needs in this group. For example, a larger share of them, particularly those under age 65, had one or more chronic conditions. However, even after adjusting for chronic illnesses and other health-related factors, the odds of receiving formal home care among people living alone were 1.6 times those of people living with at least one other person. This supports the natural assumption that people who live with others tend to receive informal assistance from them.

There was a clear inverse relationship between household income group and the proportion of people receiving home care (Chart 4). This may reflect the poorer health of people of lower socioeconomic status, necessitating a greater need for home care. However, even after controlling for health status, smoking and the presence of numerous chronic conditions, the odds of receiving home care were 1.6 times as high among people in the two lower income groups as among those in the three higher groups. The income variable may capture some aspect of health (or illness) not measured by the other variables included in the model. It also may be that people with more income are better able to afford private home care services, the use of which could not be addressed in this analysis.

Abstinence from alcohol was also associated with the receipt of home care. When other health-related variables were taken into account, the odds that people who reported not drinking alcohol in the previous 12 months would have received home care were nearly twice those of regular drinkers. The odds that occasional drinkers would have received home care were also higher than for regular drinkers, but did not achieve statistical significance. These findings are consistent with research suggesting that

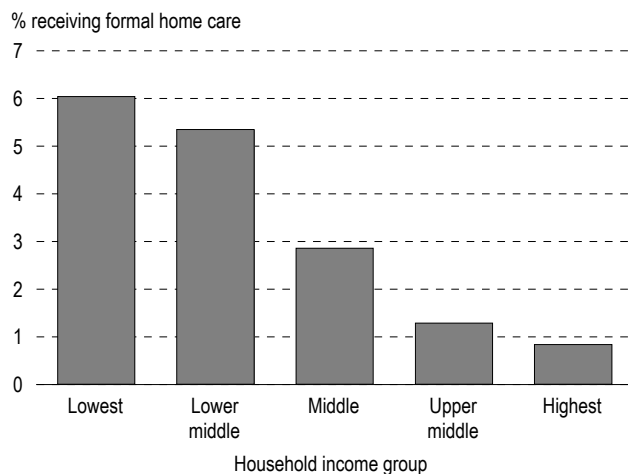
regular, moderate alcohol consumption confers certain beneficial health effects.<sup>15,16</sup> However, the association does not necessarily show that regular drinking *causes* better health, particularly since the results stem from cross-sectional data. Also, no distinction is made here between moderate and heavy regular drinking or between former drinkers and those who have always abstained. The association between abstinence and receiving home care may reflect a tendency of people who develop health problems to reduce or abstain from alcohol consumption.

### Many in need not receiving home care

As expected, people who reported needing help to carry out activities of daily living (ADL) or instrumental activities of daily living (IADL) had an extremely high odds ratio (10.8) of receiving home care. Even so, fairly large proportions of people with these needs did not receive formal home care.

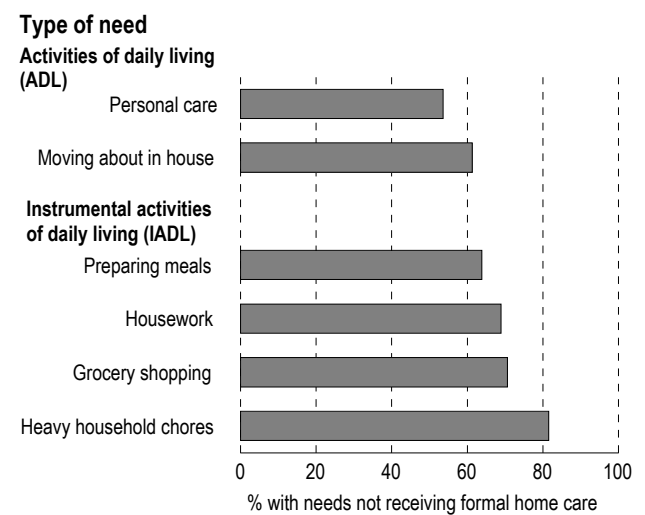
More than half of those (over 136,000) who reported needing assistance with personal care (washing themselves, dressing or eating) received no formal home care (Charts 5 and 6). For people with IADL needs such as preparing meals, shopping and

Chart 4  
Percentage who received formal home care in past year, by household income group, household population aged 18 and older, Canada excluding territories, 1994/95



Data source: 1994/95 National Population Health Survey, Health file

Chart 5  
Percentage with ADL or IADL needs who did not receive formal home care in past year, household population aged 18 and older, Canada excluding territories, 1994/95



Data source: 1994/95 National Population Health Survey, Health file

doing housework, the percentages not receiving home care were even greater. At least some of these needs were probably being met by private home care services or by family members, but clearly, formal home care was not being used by many who needed help with fairly basic functions.

These findings are consistent with a recent study in Saskatchewan of hospital patients discharged to their homes. Sixty percent of those who were assessed in hospital as requiring home care did not go on to receive formal services.<sup>17</sup>

Information from other sources indicates that formal home care constitutes only part of the support services that people receive. The 1991 Health and Activity Limitation Survey reveals that informal assistance, mostly from family members, accounted for a large segment of all assistance given to disabled seniors.<sup>18</sup> (Editor's note: see *Seniors' needs for health-related personal assistance* in this issue.) The 1990 General Social Survey indicates that 56% of Canadians aged 15 and older received supportive services (a large part of which was housework and household maintenance) from family members and friends.<sup>19</sup> Finally, according to the 1996 General Social Survey, 2.8 million adults provided some sort of informal care to people with long-term health

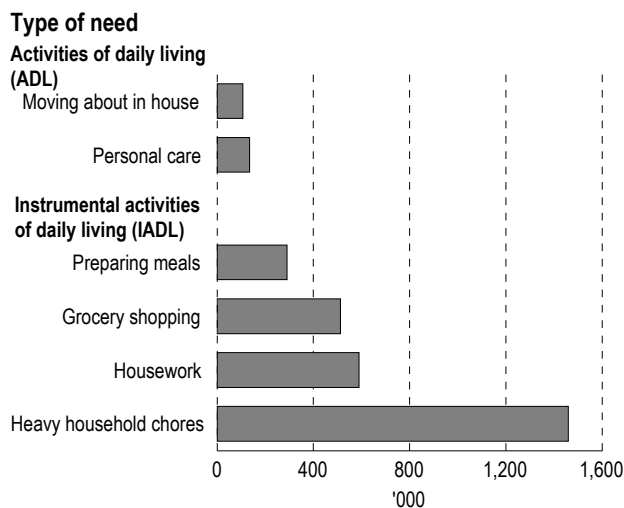
problems.<sup>20</sup> In light of these results, a somewhat unexpected finding from the NPHS is that among people who were IADL- or ADL- dependent, the average frequency of contact with friends, family and neighbours did not vary according to whether they were receiving formal home care. Possibly, if information had been collected about how often these "contacts" involved provision of assistance, differences might have emerged.

### Concluding remarks

Over half a million Canadians received formal home care in 1994/95. Considerably more seniors received home care than resided in long-term care facilities, and home care is no doubt an important factor in people's ability to remain in the community. Receipt of formal home care is linked not only to age, debility and specific health problems, but also to socioeconomic factors and family structure.

A substantial proportion of people who need help are not receiving formal home care. It is reasonable to assume that in many cases help is being provided by other household members and that some people are receiving private care. As well, it is quite probable that some needs are simply not being met.

Chart 6  
**Number with ADL or IADL needs who did not receive formal home care in past year, household population aged 18 and older, Canada excluding territories, 1994/95**



Data source: 1994/95 National Population Health Survey, Health file

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