

# Seniors' access to transportation

by Martin Turcotte

In today's society, it is more difficult for a person to be active and independent if their access to transportation is limited. To socialize, to acquire the basic necessities of life, to obtain other services or to go somewhere just for the fun of it – it is crucial to be able to get around. For the large majority of Canadians, this does not present a real problem. But for people who do not have a vehicle, or who live in areas badly served by public transit, getting around can severely limit their day-to-day living.

One might think that older people are more vulnerable than other Canadians to limits on their mobility. But to what extent is this really the case? And to what degree are seniors with limited access to transportation affected in their daily lives?

This article answers these questions and others using data from the 2005 General Social Survey (GSS) on time use. First, it presents information about access to transportation by different age groups; then, it discusses the impact of having either more or less access to transportation on seniors' activities and quality of life. Finally, the article examines the characteristics of those seniors who are most likely to have limited access to transportation, and are thus most likely to face restrictions in their everyday activities.

## The great majority of adults and seniors have access to private or public transport

In 2005, 98% of men aged 65 to 74 and 95% of women the same age had access either to a vehicle owned by someone in their household or to public transit. These percentages declined among people in older age groups. Nevertheless, even among seniors aged 85 and over, 86% had access either to a household vehicle or to mass transit.

Larger differences appear when examining the proportion of individuals who have, at a minimum, access to a vehicle belonging to themselves or to a member of their household. Although mass transit is a perfectly satisfactory option for many people (especially for those who live in the downtown neighbourhoods of big cities), access to a private household vehicle makes less routine travel easier, during an emergency for example. In 2005, 80% of seniors had access to a household vehicle, compared with 91% of 55- to 64-year-olds. (See "What you should know about this study" for a definition of the concepts relating to access to a household vehicle.)

## Men are much more likely to have access to a household vehicle as drivers

The split between the different age groups is even larger in terms of access to a household vehicle as a *driver*. Indeed, 71% of people aged

65 and over were able to take the wheel of a vehicle owned by the household, compared with 88% of those aged 55 to 64. The discrepancy between senior men and women was particularly large in older age groups. For example, among 75- to 84-year-olds, 83% of men had vehicle access as a driver, in contrast to only 45% of women. Among those 85 and older, the proportion of men able to drive a household vehicle was twice as high, at 66% versus 33% of women.

These differences between the sexes are not really surprising because senior men are much more likely to own a valid driver's licence than women. There are also proportionally fewer men than women who have never driven a car in their lives. This gap will narrow over time, however, as the baby boomers enter their later years.<sup>1</sup> Indeed, almost as many women as men Boomers are car-drivers or car-owners. According to some researchers, this generation of women will cause a considerable rise in automobile use among seniors as they age over the coming years.<sup>2</sup>

## Is better access to transport linked to a more active life?

Almost all seniors have "theoretical" access to transportation, whether it is their own vehicle, public transport or the help of a friend or family member. Despite this, a person's level of mobility – that is, their ability to get up and go where they want when they want – can vary considerably from

one person to another. Obviously, a senior who owns a car and a driver's licence, or who has the financial means to use a taxi to run his errands, can travel about much more easily than an older person who must rely on her son or daughter to take her shopping.

The 2005 GSS on time use can shine new light on the possible consequences of having more or less access to transportation, particularly with respect to leading an active life. More specifically, it can help to ascertain whether seniors who have better transportation options are more likely to leave their house on a given day, and whether they are more likely to engage in volunteer activities.

### Seniors without access to a car or public transport are less likely to go out

Many authors and specialists in the field of gerontology maintain that access to transport is essential to the quality of life of seniors, contributing substantially (among other things) to their level of independence and their freedom to go out whenever it suits them.<sup>3</sup>

There is a multitude of reasons to leave the house on any given day: to

go shopping, to get to an appointment, to travel to work, to take part in leisure activities or organized sports. Is a senior's level of access to transportation associated with their chances of going out and, implicitly, with the likelihood they will have done one or another of these activities?

To answer this question, a statistical analysis was performed. In addition to access to transport, the analytical model took account of a number of different factors that can also influence the probability of spending all day at home, including age, sex, health status, the presence or absence of limitations affecting a person's activities in relation to transportation or leisure, and so on.

To conduct the analysis, seniors were divided into four groups according to their level of access to transportation: 1) owned a vehicle and a valid driver's licence (71% of seniors); 2) did not have a valid driver's licence but did have access to a household vehicle as a passenger (9%); 3) did not have access to a vehicle but did have access to public transit (14%); 4) had access to neither a household vehicle nor public transit (6% of seniors).

The results of the statistical model clearly show that when a person has access to neither public transport nor a household vehicle, they have a higher probability of not leaving the house during the reference day. Keeping all other factors in the model constant, the predicted probability that people with limited access to transportation would stay at home was 49%.

In contrast, seniors with a valid driver's licence and a car were the most likely to have gone out at least once: the predicted probability that they would have spent the day at home was only 19%.

Seniors who were able to use a car as *passengers*, as well as those with public transit available, lay between these extremes. They shared a 32% predicted probability of having been at home all day, always holding all other factors in the model constant.<sup>4</sup>

These results do not mean that people without a driver's licence or access to public transit are more likely to stay at home only because they are limited by inadequate access to transportation and have no other choice. Other factors not included in the analysis can also have an impact. It is possible, for example, that some



## Most seniors have access to some means of transportation

Age	Access to a household vehicle or public transportation			Access to a household vehicle (with or without a driver's licence)			Access to a household vehicle, with a valid licence		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	%								
25 to 34	98	99	97	85	87	83	82	85	79
35 to 44	98	98	98	89	92	87	86	90	82
45 to 54	98	98	98	90	92	87	87	91	84
55 to 64	98	98	97	91	94	89	88	94	83
65 to 74	96	98	95	87	93	83	80	90	70
75 to 84	93	97	90	72	88	62	61	83	45
85 and over	86	91	82	53	68	44	46	66	33
65 and over	94	97	92	80	89	72	71	86	58

Source: Statistics Canada, General Social Survey on time use, 2005.

## Definition of concepts and variables

### Access to a household vehicle and access to a household vehicle as a driver

These categories were created by combining respondents' responses to three different questions in the General Social Survey 2005 on time use.

- Do you have a valid driver's licence?
- Do you or does any member of your household lease or own a vehicle (includes a car, van, jeep or truck)?
- Do you have this car or truck at your disposal all the time, most of the time, rarely or never?

For purposes of this study, only people who had the household vehicle(s) at their disposal all the time or most of the time were considered to have access to a vehicle.

People who had a driver's licence and used the vehicle either mostly as a driver or as both a driver and a passenger (with a driver's licence) were considered to have access to a household vehicle as a *driver*.

### Access to public transportation

Respondents in households whose members did not have a vehicle and respondents who did not have access to a household vehicle (as a driver or passenger) were asked the following question to determine whether they had access to public transportation:

- Is public transportation, for example, bus, rapid transit or subway, available to you?

### People who did not leave their residence the previous day

In the 2005 General Social Survey, respondents were asked what activities they engaged in the day before the telephone interview (as well as where these activities had taken place).

This made it possible to distinguish between people who did not go out and people who went out at least once (for any reason). It should be noted that doing yard work outside one's house, for example, is not considered leaving one's residence.

### Mobility

In this article, mobility refers to people's ability to go where they want when they want. It refers exclusively to travel outside the home. This concept has nothing to do with the kind of mobility that involves moving to a new house or changing place of residence.

### Methodology and statistical models

The predicted probabilities shown in the table were calculated using two logistical regressions. They represent the estimated probability that a senior with a particular characteristic (for example, having a vehicle and a driver's licence) remained at home the whole day (or did volunteer work) after all the other factors in the regression model were controlled for, i.e., held constant at the average value for the sample in question.

Additional statistical analyses, which included other variables, were also performed. They showed that there was no statistically significant relationship between the season and the probability of not having gone out the previous day; in other words, the probability of going out at least once during the day was just as high in winter as in summer. Urban or rural residence was also included in these supplementary analyses, but once again, no statistically significant relationship was found. This does not mean, though, that seniors in rural areas are less vulnerable (the charts in the article show the opposite) but rather that the critical factor is access to a vehicle or to public transportation, and not area of residence as such.

people do not have a driver's licence because they do not need one or because they are homebodies by nature.

That being said, it is likely that the difficulty faced by seniors without access to a car or public transit is an important reason why they had a greater tendency to remain at home. For them, having transport available could be limited to asking relatives for help getting from one place to another. As suggested by

certain studies based on focus group discussions, seniors who must rely on relatives to drive them often limit their travel as much as possible for fear of being a nuisance to their family.<sup>5</sup>

### Seniors with university degrees are least likely to stay at home

Other factors are also associated with the probability of not leaving the house on the reference day. Firstly, older seniors were more likely than

their younger counterparts to have spent the whole day at home; this is not very surprising since levels of activity generally fall with age.

Secondly, seniors were less likely to have left the house the day before if their ability to travel or take part in leisure activities was *often* limited due to a physical condition, a mental state or a health problem: the predicted probability that they had stayed at home the previous day was 36%, compared with 21% for those whose

	Predicted probability...			Predicted probability...	
	of not having left the house the previous day	of having done volunteer work last year		of not having left the house the previous day	of having done volunteer work last year
	%			%	
<b>Access to transportation</b>			<b>Total number of people considered close</b>		
<i>Has a driver's licence and a vehicle</i>	19	32	<i>0 to 4</i>	27	16
Has a vehicle but no licence	32	15	5 to 9	n. s.	n. s.
Access to public transportation	32	21	10 to 20	n. s.	34
No access to transportation	49	17	More than 20	21	40
<b>Sex</b>			<b>Highest level of education</b>		
Male	n. s.	23	<i>Did not graduate from high school</i>	28	20
Female	24	31	High school graduation	n. s.	n. s.
<b>Age</b>			College or trade school diploma	n. s.	30
65-74	19	27	University degree	14	47
75-84	28	n. s.	<b>Household income</b>		
85+	35	n. s.	<i>Less than \$20,000</i>	26	27
<b>Perceived health</b>			\$20,000 - \$39,999	n. s.	n. s.
Excellent or very good	n. s.	n. s.	\$40,000 or more	n. s.	n. s.
<i>Good, fair or poor</i>	22	27	<b>Owns residence</b>		
<b>Activity limitations for transportation or leisure</b>			Yes	26	n. s.
Yes, often	36	18	No	15	26
Yes, sometimes	n. s.	n. s.	<b>Born in Canada</b>		
No	27	29	Yes	n. s.	n. s.
<b>Living arrangements</b>			No	23	22
<i>Lives alone</i>	27	28	<b>Region of residence</b>		
Lives with spouse only	n. s.	n. s.	Atlantic	n. s.	n. s.
Lives with spouse and other people	36	n. s.	Quebec	n. s.	n. s.
Other arrangement	n. s.	n. s.	Ontario	22	30
			Prairies	n. s.	n. s.
			British Columbia	n. s.	n. s.

n. s. : Difference is not statistically significant relative to the reference category in italics.  
 Source: Statistics Canada, General Social Survey on time use, 2005.

activities were not curtailed (always keeping constant the other factors in the analysis including, among others, the respondent's age). Other studies have also shown this association between the existence of physical limitations and the reduction in the amount of travel undertaken.<sup>6</sup>

Thirdly, seniors with the largest social networks (they considered themselves close to 20 or more people) did not remain at home as much as those whose networks were small (less than five people). This connection is understandable

since one of the main reasons older people go out is to visit close friends or family and to take part in social activities (compared to younger Canadians, who most often leave the house to travel to work and back).<sup>7</sup>

Finally, the probability of being at home the whole day differs between seniors with a university degree and those without a high school diploma. Seniors who held degrees were only half as likely to have spent the reference day around the house than seniors who had not completed a high school education

(predicted probabilities of 14% and 28%, respectively). On the whole, seniors having a higher level of education are more inclined to be active in the labour market, to do volunteer work, to be members of an organization or to participate in other ways in civic activities.<sup>8</sup> All of these activities generally require that a person be somewhere other than home, which probably explains in part the difference observed between seniors depending on their educational attainment.

Some authors have hypothesized that the more active lifestyle enjoyed by the baby boomers (travel, leisure, golf, and so on), in conjunction with their greater reliance on the automobile, will contribute significantly to seniors' mobility in the future.<sup>9</sup> Given this fact, it is likely that the coming years will see an increase in the share of vehicle pollution attributable to older people being out and about.<sup>10</sup>

### Seniors with a car and a driver's licence are most likely to have done volunteer work

To maintain an active life, as well as to "get involved" and help members of their community, many older people do volunteer work. While the proportion of seniors who volunteer is basically the same as that in other age groups, the average number of hours they devote is greater.<sup>11</sup> One of the conditions necessary for participating in voluntary activities is the ability to get easily to the location where those activities are taking

place. Does having better access to transportation encourage seniors to volunteer?

According to the results of a statistical analysis that examined volunteer work as a function of the level of access to transportation, it seems that the answer is yes. Indeed, when holding constant the effect of other factors in the model, the predicted probability that an older person with a household vehicle and a driver's licence had done volunteer work in the preceding year was 32%. In contrast, the probability was 17% for those with neither a car nor public transit, and 15% for those with access to a vehicle but only as a passenger.

To our knowledge, no previous study has empirically demonstrated this association between seniors' access to a vehicle and a driver's licence, on one hand, and the probability of volunteering on the other.<sup>12</sup> What does it mean? One possible explanation is that certain volunteer activities, for example

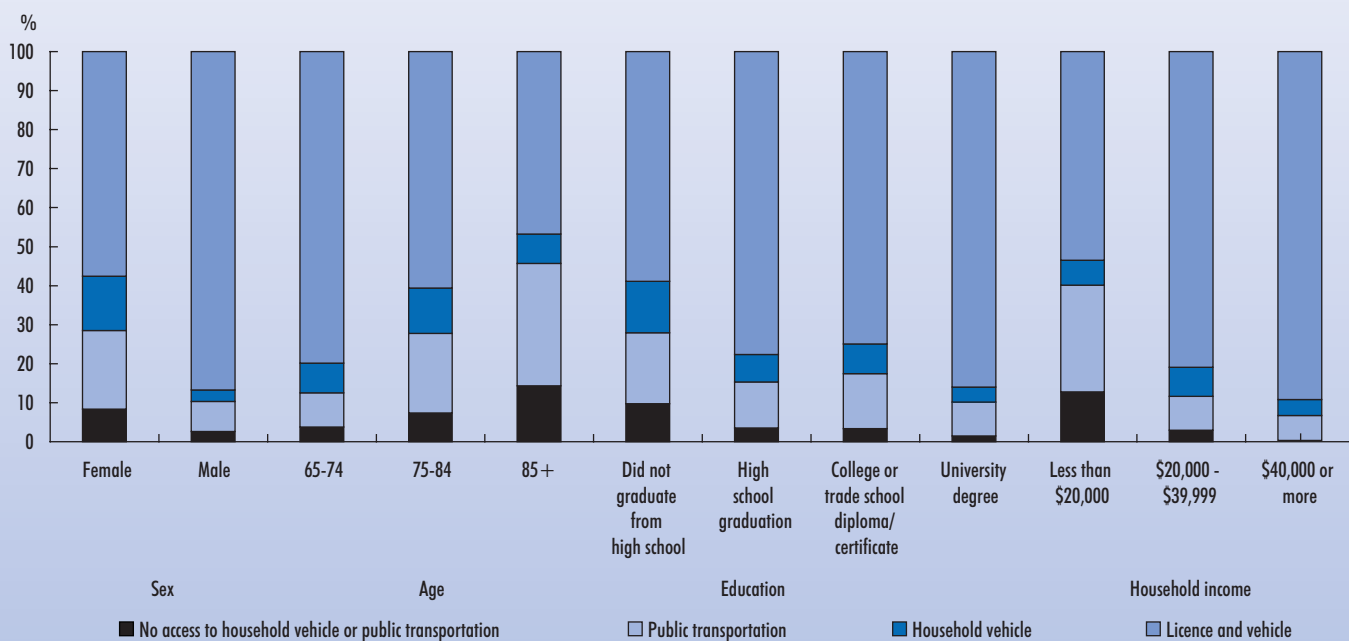
helping other seniors complete certain household tasks or deliver groceries, effectively demand a driver's licence. More generally, it is simply easier to get to volunteer activities if a person has a car than if they have to depend on public transit or on a household member to drive them there.

### Seniors living in rural areas are most likely to have limited access to transportation

As shown by this study, people whose mobility is limited, and particularly those who have access to neither a household vehicle nor public transit, are less likely to have left their house during the reference day or to have done volunteer work in the previous year. One would expect that their restricted access to transportation would affect many aspects of their lives; for example, seniors would presumably find it more difficult to get to a doctor's appointment, to visit family members, to participate in various social activities and so on.



## Women and seniors with lower incomes are more likely to be disadvantaged with respect to access to transportation



Source: Statistics Canada, General Social Survey on time use, 2005.

It thus becomes important to develop a profile of those seniors who are the most (and the least) likely to have limited access to transportation.

Not surprisingly, certain socio-economic characteristics are strongly associated with the probability that a senior lacks sufficient access to transportation. Seniors with household incomes under \$20,000 were particularly vulnerable to belonging to this group (13%). In contrast, close to 90% of seniors living in households with incomes over \$40,000 owned a vehicle and had access to it as a driver; almost no senior in this income category struggled with inadequate transportation. The same was observed among those with a high level of educational attainment. Also, women and seniors aged 85 and over were much more likely to be limited in their ability to "get around town" than men and 65- to 74-year-olds.

Having access to a household vehicle as a driver does not differ much between regions of the country. The most marked disparity was found

between the Atlantic Provinces, where 9% of seniors did not have access to a household vehicle or to public transit, and British Columbia, where only 3% of seniors reported that their mobility was severely limited.

The splits between rural and urban areas are, however, more pronounced. Compared with seniors living in urban areas (especially those in the most densely populated neighbourhoods of census metropolitan areas), seniors in rural areas are much less likely to have access to public transport. While proportionally more rural seniors owned a vehicle and were able to drive it, they more often found themselves in a vulnerable position regarding mobility. According to some authors, this situation would suggest that older persons living in rural areas without a car are particularly at risk for social isolation, as well as difficulty in accessing community and medical services.<sup>13</sup>

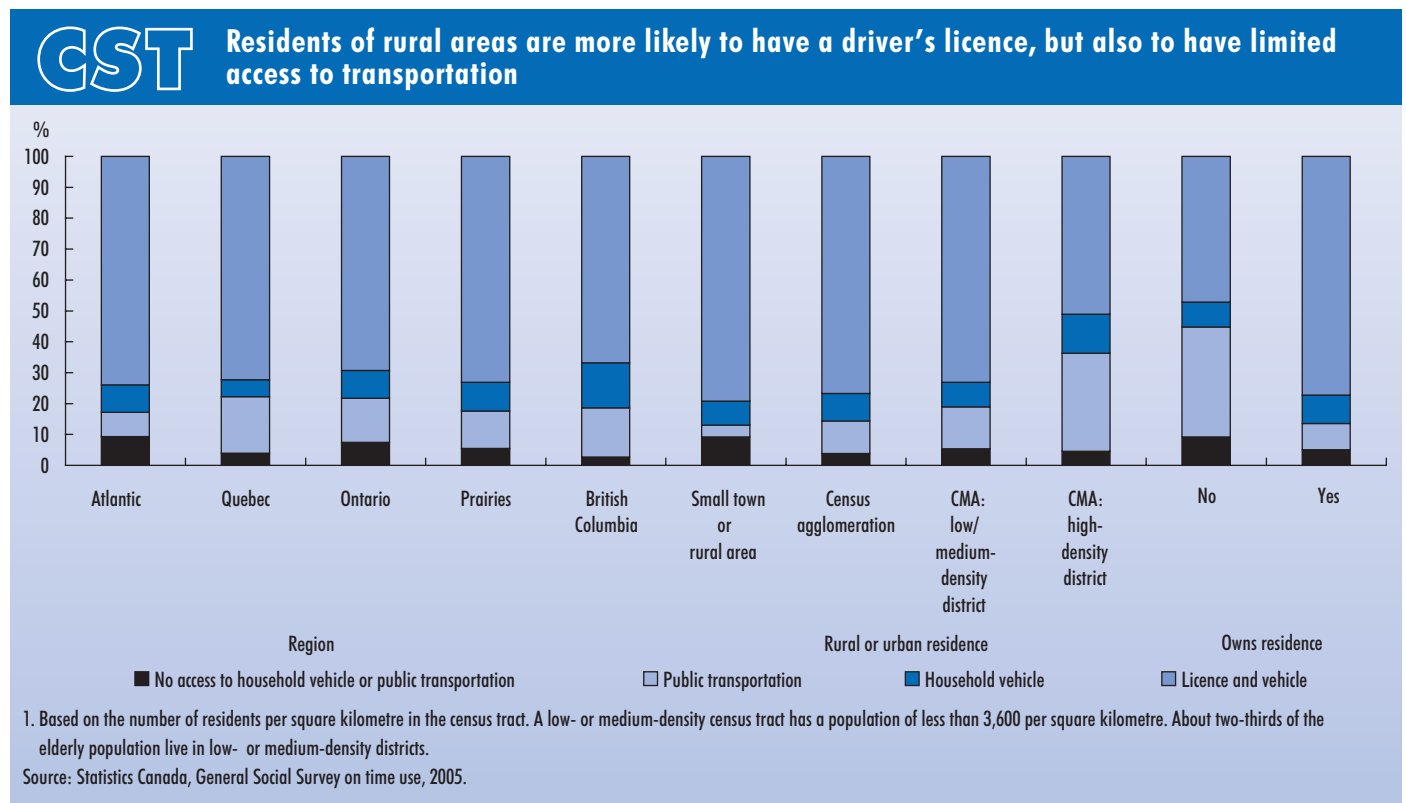
### Summary

The majority of studies that address the issue of transportation in the

senior population concern themselves with questions of safety, for example the risk of road accidents and the risks of injury or death.<sup>14</sup> Other analyses try to develop appropriate policies to limit the driving of seniors considered "at risk", without creating more age discrimination.<sup>15</sup> Still other researchers, concerned about the increasing dependence of older people on the automobile, have wondered about the environmental consequences of seniors' driving habits.<sup>16</sup>

The approach adopted in this study is different. Analysis of the data from the 2005 GSS has demonstrated (among other things) that when seniors have inadequate access to means of transportation, it can translate into negative consequences for their daily lives, among others a lesser probability of getting out of the house on a given day and a lesser probability of having done volunteer work in the preceding year.

This study has also shown that older people who are completely deprived of transportation constitute





One of the things that contribute to the well-being of seniors, aside from their health, their independence and their financial security, is the opportunity to socialize and have meaningful contact with others. The risk of isolation is probably greater for those who live alone than for those who live with their spouse or other people. And the risk of social isolation is probably even higher when access to transportation is limited, which may make it more difficult to visit friends or take part in social activities.<sup>1</sup>

The data from the General Social Survey on time use provide some support for this idea. Sixty-one percent of seniors who lived alone but had a vehicle engaged in some kind of social activity on the reference day (e.g., visiting someone else's home, having a visitor at their home, or going to a restaurant with another person). In contrast, only 47% of those who only had access to public transportation and 42% of those who had no access to a vehicle or to public transportation had engaged in that kind of social activity.

More generally, the proportion of people who had no access to a vehicle or public transportation and spent

the whole of the previous day alone was higher than the proportion of people who had a driver's licence. People who have more limited access to transportation may have a lower tendency to want many social relationships than those who have a licence.

Nevertheless, it is quite plausible to conclude that many seniors were limited in their social activities because of their problem with access to transportation. The difference in social activity between seniors who lived alone and had access to a private vehicle and other seniors remained significant, even when other factors in a statistical model were controlled for (results not presented here), such as size of social network, age, income, education and limitations on activities related to leisure and travel.

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a minority of the senior population. Moreover, there are indications that seniors' vulnerability to transportation problems will diminish considerably as the baby boom enters its golden years. Indeed, the members of this generation have higher incomes and are more likely than the current generation of seniors (men as well as women) to have had access (and to continue to have access) to a private vehicle. Consequently, it is probable that seniors' use of transportation will change considerably with a new generation of older people.

Before the baby boom generation reaches its 65th year, though, one must nevertheless remember that some people, among them women and people aged 85 and over living in rural areas, are particularly vulnerable to having limited mobility. As has been seen in this study, restricted access can have a concrete impact

on their quality of life and their ability to live an active life.



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*revue canadienne du vieillissement* 25 (1): 65-76.; Smith, G.C and G.M. Sylvestre. 2001. "Determinants of travel behavior of the suburban elderly," *Growth and Change* 32: 395-412.; Shope, Jean T. 2003. "What does giving up driving mean to older drivers, and why is it so difficult?" *Generations* (Summer 2003): 57-59.

4. It is important to note that for seniors having a valid driver's licence and owning a car, their greater probability of having gone out during the reference day cannot be explained by the fact that they are younger, in better health or less limited in their activities in terms of travel or leisure; these factors were kept constant in the statistical analysis. If these factors were not taken into account, the difference in the propensity to leave the house between seniors having a licence and a car and those in the other groups would be even larger.
5. Glasgow, N. and R. M. Blakely. 2000. "Older Nonmetropolitan residents' evaluations of their transportation arrangements," *The Journal of Applied Gerontology* 19 (1): 95-116.

6. Colliа, D. V., J. Sharp and L. Giesbrecht. 2003. "The 2001 national household travel survey: A look into the travel patterns of older Americans," *Journal of Safety Research* 34: 461-470.
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10. Rosenbloom, 2001.
11. Hall, M., D. Lasby, G. Gumulka and C. Tryon. 2006. *Caring Canadians, Involved Canadians: Highlights from the 2004 Canada Survey of Giving, Volunteering and Participating* (Statistics Canada Catalogue no. 71-542-XIE) Ottawa, Statistics Canada.
12. For a description of the different factors that have been identified in studies as influencing voluntary participation, see J. Wilson, 2000. "Volunteering," *Annual Review of Sociology* 26: 215-240.
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