



# Building Healthy and Supportive Communities

## A Glance at Urbanization and Health Within Waterloo Region



This report summarizes a series of reports focusing on: access to amenities, commuting, use of public transportation, community connectedness and physical and mental health. All reports are based on key findings from a Statistics Canada survey of selected areas in Waterloo Region.

This report and others are available on the [Region of Waterloo Public Health website](http://www.region.waterloo.on.ca/ph):

[www.region.waterloo.on.ca/ph](http://www.region.waterloo.on.ca/ph)  
(Resources/ Reports and Factsheets)

### INTRODUCTION

Waterloo Region has a unique balance of urban and rural areas and as such, community sizes and characteristics (i.e. population density, land use, accessibility to services) vary considerably. Individuals choose their place of residence for a number of economic or social reasons. Research suggests that individuals migrate to rural settlement areas out of a desire for more space and to escape city noise and congestion, and that proximity to their job, school or amenities is not always a major factor in selection of neighbourhood (Fernandez, Brown, Marans, & Nassauer, 2005; Mitchell, 2003).

On behalf of Region of Waterloo Public Health, Statistics Canada collected data to explore differences in community size and composition as they relate to certain aspects of health (Statistics Canada, 2007). Randomly selected residents (n=644) in the geographically small urbanized rural areas (Ayr and Wellesley), larger urbanized rural areas (Elmira and New Hamburg) and two urban neighbourhoods (Fairfield and Willowdale neighbourhoods, Kitchener/Waterloo) were surveyed in May 2007. The selected areas of Waterloo Region were chosen for their varying degrees of urbanization. Residents were asked about how connected they feel to their community, where they access amenities, their commuting patterns, their physical and mental health, and use of public transportation. Data collected from residents were adjusted to reflect the population size in the respective community (see Table 1). Results denoted by “§” are to be interpreted with caution because the sample size was not large enough to ensure precise estimates.

### ABOUT THE SELECTED AREAS OF STUDY

Table 1 illustrates the demographic characteristics of the selected study areas. The population estimates for each study area are based on the 2006 Census Populations (Ayr and Wellesley: 4,627 residents; Elmira and New Hamburg: 10,744 residents; Fairfield and Willowdale: 8,579 residents). Information about age, household income, children in the household, seniors only households and length of residency reflect the residents who responded to the survey. Seniors only households are households with no one under the age of 65. Overall, age, household income and length of residency are similar across residents in all study areas. Differences between the selected study areas are described under “Comparison of Communities Surveyed”.

**Table 1.** Demographic Characteristics of Selected Areas of Study, Waterloo Region, 2007

	Ayr and Wellesley	Elmira and New Hamburg	Fairfield and Willowdale
<b>Type of area</b>	Small urbanized rural	Large urbanized rural	Urban
<b>Total population</b>	4,647	10,744	8,579
<b>Age</b>			
18-34	25% <sup>§</sup>	27%	32%
35-49	43%	32%	18%
50-64	21%	23%	22%
65 and over	12% <sup>a§</sup>	17% <sup>b§</sup>	28% <sup>a,b§</sup>
<b>Household income</b>			
Less than \$30,000	5% <sup>§</sup>	9% <sup>§</sup>	15% <sup>§</sup>
\$30,000 to \$54,000	16% <sup>§</sup>	23% <sup>§</sup>	30%
\$55,000 to \$84,000	29%	34%	30%
\$85,000 and over	50% <sup>c,d</sup>	35% <sup>c</sup>	25% <sup>d§</sup>
<b>Children in the household</b>	51% <sup>e,f</sup>	36% <sup>e</sup>	22% <sup>f§</sup>
<b>Seniors only in the household</b>	9% <sup>g§</sup>	12% <sup>h</sup>	22% <sup>g,h§</sup>
<b>Residency less than five years</b>	25% <sup>§</sup>	15% <sup>§</sup>	17%

<sup>a, b, c, ...</sup> Represent statistically significant differences between two proportions (%) at  $p < 0.10$ , e.g. two proportions with an "a" next to them are statistically different from each other

The three most attractive features of their community identified by residents across community types were small/quiet/peaceful, contain friendly people, and central and convenient location. Three quarters of all residents reported having a very strong or somewhat strong sense of belonging to their communities; almost half reported having more than ten family members or close friends within their community.

## COMPARISON OF COMMUNITIES SURVEYED

Selected study areas were compared to each other to explore how community size related to physical and community connectedness and personal health. Only the key findings that were significantly different ( $p < 0.10$ ) between the selected study areas are presented.

### Distinctions in Urban Areas – Fairfield and Willowdale

The urban areas of Fairfield and Willowdale had more seniors only households, more residents aged 65 and older (seniors) and more non-working residents, in comparison to the other study areas.

Residents in Fairfield and Willowdale were more likely to report discontent with traffic in their community. But they were more likely than the other study areas to report that they liked the friendly people in their community. The amount of time spent in their community was not a part of this survey; this may be an area to consider for future research.

Of the selected study areas, public transportation is only available in Fairfield and Willowdale neighbourhoods. Thirty per cent of residents in Fairfield and Willowdale neighbourhoods reported using public transit. The main reasons for not using public transportation include the lack of need (70 per cent) and inconvenient routes (13 per cent<sup>§</sup>). Only 12 per cent of seniors only households reported using public transportation.

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## **Distinctions in Rural Areas**

As the three selected study areas represent varying degrees of urbanization, it is obvious that the accessibility of amenities (e.g. grocery, retail, recreational facilities, and health services) and of public transportation is different than in urban areas. Rural residents were more likely to indicate that their communities had too few amenities compared to urban residents.

Currently there are no public transportation options for residents in the rural study areas. When asked about their likelihood of using public transportation, only 34 per cent of rural residents reported that they would likely use it if available to them. If public transportation were available, the most popular response to the price of a one-way fare was between \$2 and \$5. A survey conducted by Grand River Transit (GRT) of Elmira and Wellesley in 2007 also indicated some interest and support for a public transit service to these communities (Paradigm Transportation Solutions Limited, 2007).

### **Ayr and Wellesley**

The small urbanized rural areas of Ayr and Wellesley had more households with children and more households with annual incomes of \$85 000 or more, compared to the other study areas.

Sixty-three per cent of residents in Ayr and Wellesley indicated commuting to work or school alone in a motor vehicle. These commuters reported the greatest commuting distances compared to the other study areas.

In comparison to the other study areas, residents of Ayr and Wellesley spent more time in a vehicle on a typical weekday. They also made more trips outside their community for grocery and retail shopping, recreational facilities and medical visits. This may be related to the greater commuting patterns in this study area.

### **Elmira and New Hamburg**

The larger urbanized rural area of Elmira and New Hamburg has urban characteristics of Fairfield and Willowdale, but is rural like Ayr and Wellesley. The study area of Elmira and New Hamburg was generally comparable to the other study areas, with the following exceptions: there were fewer residents who self-reported fair or poor physical health and having no family or close friends living in their community.

## **SOCIAL DETERMINANTS**

A wealth of evidence suggests that sociodemographic circumstances contribute to personal health behaviours. The following sociodemographic variables were measured: age, children in the household, education, gender, household income, length of residency, and seniors only household. Statistically significant relationships ( $p < 0.10$ ) are reported where found.

### **Age**

Residents aged 35 to 49 years were more likely to be categorized as obese compared to those aged 18 to 34 years.

Residents aged 18 to 34 years were more likely to use public transportation and indicate a very strong sense of belonging to their community compared to those aged 35 years of age or older.

### **Children in the Household**

Residents with children at home were more likely than those without children to report liking community features such as activities/sports and safety, disliked that their community had too few amenities, and reported that their usual mode of commuting to work/school was in a motor vehicle alone.

Households without children were more likely to report that they were not grocery or retail shopping or using recreational facilities outside of their communities compared to those households with children.

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## **Education**

Residents with less than high school education were more likely to report fair or poor mental health compared to those who completed more schooling.

Residents who completed university were more likely than those in other education categories to indicate they liked their community because it has employment and education opportunities, good athletics/ sports, big city amenities and is centrally and conveniently located.

## **Gender**

Males were more likely to be categorized as overweight or obese and to also report commuting 30 km or more to work/school compared to females.

When asked about likelihood of using public transit (if existed), more males than females in rural areas reported that this would be very unlikely.

## **Household Income**

Significantly more residents with annual household incomes less than \$30,000 reported that they would “very likely” use potential public transportation in their rural community in comparison with residents in other income groups.

Residents with annual household income greater than \$85,000 were more likely to commute 30 km and over to work or school (one-way) and to spend 90 or more minutes in a vehicle in a typical weekday, compared to residents in the lower income categories.

## **Length of Residency**

More respondents, who have resided in their community for five years or more, reported retail shopping within their community in a typical four week period, having a very or somewhat strong sense of belonging in their communities, and having more local friends and family, compared to respondents who have resided in their community less than five years.

## **Seniors Only Households**

Seniors only household residents were more likely to report a very strong sense of belonging to their community, to not retail shop outside their community in a typical four week period, and spend no weekend minutes in a motor vehicle, as compared to households that are not seniors only.

Seniors only households were less likely to use public transportation and to report commuting to work/school in a motor vehicle alone, as compared to those households that were not only seniors.

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## IMPLICATIONS

- Making motor vehicle trips outside one's community for groceries, retail, recreation, and to access other amenities has many implications for health and safety. Motor vehicle usage contributes to poorer air quality and close to 40 per cent of all motor vehicle collisions occur in rural areas (CIHI, 2006). Accessing available services in one's community will help reduce motor vehicle emissions, reduce time spent on two-lane rural roads, and is a great opportunity to support one's local economy. Results support literature indicating that rural communities appeal to residents who have children and that choice to live there has more to do with larger house and lot size and the perception of a positive place to raise a family, than availability and access to services (Fernandez et al., 2005).
- Aside from contributing to air pollution, lengthy commuting behaviour, especially in motor vehicles, is associated with many adverse health outcomes. In fact, Toronto Public Health (2007) estimates that traffic pollution gives rise to about 440 premature deaths and 1,700 hospitalizations per year in Toronto. Lengthy commutes may be related to an increased risk of overweight and obesity, which has implications for heart disease, high blood pressure, and other chronic diseases. Previous research on selected urban areas within Waterloo Region found that those who drive more than 30 minutes a day were 1.6 times more likely to be overweight or obese than those who drive less than 30 minutes a day (Fisher, 2005). This survey considered urban and rural residents combined and did not confirm the relationship between obesity, commuting and time spent in a vehicle. However, further research focusing on rural areas only and gender differences may reveal some relationships.
- Results point to an opportunity to encourage greater use of public transit and active modes of transportation. Active modes of transportation have been shown to reduce risk for overweight and obesity and *iXpress*, an express route service in Waterloo Region, is currently responsible for the reduction of approximately 1.5 million kilometres of personal automobile trips per year, with an associated reduction of approximately 500 tonnes of greenhouse gas emissions (Hellinga & Cicuttin, 2007).
- Less than one third of respondents in the urban area surveyed reported using public transportation, despite being well-served. In these areas, young people are the most common users of public transportation service. Some rural residents who do not currently have public transportation service in their area reported likely or somewhat likely to use a potential rural transit service, echoing other research (Paradigm Transportation Solutions Limited, 2007; Region of Waterloo Public Health, 2006). The challenge with extensive automobile usage and associated environmental impacts will be compounded in Waterloo Region as a result of tremendous growth pressure. The population in Waterloo Region is predicted to grow by nearly 60 per cent, from 456,000 in 2001 to 729,000 in 2031, which is expected to greatly intensify impacts on transportation infrastructure, air quality and greenhouse gas emission (Hellinga & Cicuttin, 2007). Results point to an opportunity to encourage greater use of public transit. The use of transit in Waterloo Region has been proven to significantly improve air quality emissions (Hellinga & Cicuttin, 2007).
- Community connectedness may have physical and mental health implications; how connected one feels to one's community may help in reducing stress, anxiety, and feelings of isolation. Lack of social supports and networks, which contribute to feelings of community connectedness, have been shown to have a negative impact on health (OPHA, 2001). This survey measured Waterloo Region residents' sense of belonging to their local community through likes and dislikes, the number of family and close friends nearby, and place of work. Overall, the majority of residents reported a 'strong' sense of belonging to their community, which is consistent with findings of the PMG Consulting public survey of Waterloo Region residents (2007). Similar consistency is found in results on community likes and dislikes. The public survey (PMG Consulting, 2007) findings were used to inform Waterloo Regional Council's Strategic Plan for the 2007-2010 term, which ensures that the evolving needs of the community are continually met through a common focus and set of priorities. It is worth noting that more than one-quarter of residents reported that there was 'nothing' they didn't like about their community.

1. Canadian Institute for Health Information. (2006). How Healthy are Rural Canadians? An assessment of Their Health Status and Health Determinants. A Component of the Initiative "Canada's Rural Communities: Understanding Rural Health and Its Determinants". Technical Report.
2. Fernandez, L.E., Brown, D.G., Marans, R.W., & Nassauer, J.I. (2005). Characterizing location preferences in an exurban population: implications for agent-based modeling. *Environment and Planning B: Planning and Design*, 32: p. 799-820.
3. Fisher, P. (2005). Urban Form, Physical Activity and Health – Interim Report. Region of Waterloo Public Health. Waterloo, ON.
4. Hellinga, B., & Cicuttin, J. (2007). Impacts of a New Express Bus Service in Waterloo Region. Report submitted for the Transportation Association of Canada Annual Conference held October 14-17, 2007 in Saskatoon, Saskatchewan.
5. Mitchell, C.J.A. (2003). Making sense of counterurbanization. *Journal of Rural Studies*, 20; 15-34.
6. Ontario Public Health Association (OPHA). (2001). Building Bridges: Food Security and Heart Health – January 1998 to December 31, 2000 – Final Report. Retrieved from [http://www.hhrc.net/pubs/skills/bbridges\\_2000.htm](http://www.hhrc.net/pubs/skills/bbridges_2000.htm)
7. Paradigm Transportation Solutions Limited. (2007). Region of Waterloo Rural Community Transit Travel Survey Technical Report. Waterloo, ON.
8. PMG Consulting. (2007). Public Survey Results; Region of Waterloo – Report of Findings. Retrieved from [www.region.waterloo.on.ca/strategicfocus/files/PublicSurveyResults.pdf](http://www.region.waterloo.on.ca/strategicfocus/files/PublicSurveyResults.pdf)
9. Region of Waterloo Public Health. (2006). Rural Health: Focus on Service Access in Waterloo Region. Waterloo, ON.
10. Statistics Canada. (2007). Urbanization and Health within Waterloo Region: Survey Report. Survey Skills Development Course Report on Survey Findings SSDC-108. Technical Report.
11. Toronto Public Health. (2007). Air Pollution Burden of Illness from Traffic in Toronto. Problems and Solutions. Retrieved from [http://www.toronto.ca/health/hphe/pdf/air\\_pollution\\_burden.pdf](http://www.toronto.ca/health/hphe/pdf/air_pollution_burden.pdf)

The technical report, Urbanization and Health within Waterloo Region: Survey Report (Statistics Canada, 2007), can be obtained from the Region of Waterloo Public Health Resource Centre 519-883-2256 and website: [www.region.waterloo.on.ca/ph](http://www.region.waterloo.on.ca/ph) (Resources/Reports and Fact Sheets).

Additional reports in this series glance at access to amenities, commuting, use of public transportation, community connectedness, physical and mental health and are also available on the website.

For questions, please contact the Health Determinants, Planning and Evaluation Division at the Region of Waterloo Public Health, at 519-883-2004.



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