A Snapshot of the
HALDIMAND COUNTY
AND NORFOLK COUNTY
COMMUNITIES
2011

Prepared for the Healthy Communities Partnership Haldimand-Norfolk
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Designed by Communication Services Team - H-N Health Unit
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Citation:

This Report provides a comprehensive overview of Haldimand County and Norfolk County communities with a particular emphasis on the community environment, health status, health behaviours and factors affecting health. The purpose of this section is to inform comprehensive action for Healthy Communities in the counties of Haldimand and Norfolk.

**METHODOLOGY**

The report uses data extracted from national surveys and census results and data that had already been published in other reports. Information for the community description was derived largely from the municipal websites of both Haldimand County and Norfolk County, municipal reports and documents, Statistics Canada and existing HNHU reports. Data for the community profile, health status, health behaviours and factors affecting health were provided by the HNHU epidemiologist and data analyst / program evaluator for the Healthy Communities Initiative from various public health databases or surveys, or were available from other HNHU reports. Four of these reports were of particular significance: Chronic Disease Prevention Health Status Report (2009), Mental Health Report with a Focus on Suicide (2009), Cancer Report (2007), and the Unintentional Injuries Report (2006). Two other data sources had been created by the HNHU for the Healthy Communities initiative and were used for this report: Healthy Communities: Baseline Data Assessment for Haldimand and Norfolk (2010) and Healthy Communities Haldimand and Norfolk Community Picture (2011).

Other data was gathered from local agencies and service providers. The consultants used contact lists provided by health unit staff to contact local agencies and service providers by email and phone for data particular to their services, including service utilization data. Haldimand-Norfolk Health and Social Services Department provided data on supporting housing utilization and waiting lists, Haldimand and Norfolk Women’s Services provided annual report data on the number of families who used shelter services, and the Ontario Provincial Police provided offences data for 2006-2010. Additionally, the Haldimand-Norfolk Health and Social Services Department’s Public Transportation Systems in Haldimand County and Norfolk County Feasibility Study (2009) provided valuable data on the need for public transportation in the community.

Using data from these sources, new tables and figures were created for the report. Where possible, data was provided for Haldimand County and Norfolk County separately and compared to Ontario data. In some cases, data was provided by urban areas within the counties. Urban areas as identified in the report are defined by Statistics Canada with reference to continuous population density. Some data (for example, hospital separations) was provided only for Haldimand and Norfolk counties combined and thus is reported here in the same manner.

In this report, data is reported in four main chapters: Community Profile, Health Status, Health Behaviour Profile, and Factors Affecting Health. Within each chapter, there are different sections for factors or issues that affect the community’s health. These factors and issues are listed by section below:
Community Description and Profile

- Population – Area and Geographic Distribution
- Population – Area, Sex and Marital Status
- Population – Immigration, Visible Minority, Aboriginal Identity and Language
- Income
- Education
- Occupation, Labour Force Participation and Employment

Health Status

- Mortality
- Unintentional Injuries
- Unintentional Injuries – Motor Vehicle Traffic Crashes
- Unintentional Injuries – Falls
- Unintentional Injuries – Other Off-Road Motor Vehicles
- Obesity

A summary of key findings is provided at the beginning of each chapter. Within each section, each main factor or issue is described with the intent to understand how the issue or factor impacts on health, the status or situation in Haldimand County and Norfolk County regarding the factor or issue is summarized and local community action on the issue is identified. Importantly, key data that is missing or could not be collected in time for this report is highlighted. Suggestions on where to find additional information is also provided where available. Data and analysis is provided in greater detail in an analysis sub-section with key data presented in figures and tables. Data sources and notes are provided for each figure or graph.

Age-standardized rates are used in this report where appropriate to show comparisons between rates of occurrence in Haldimand and Norfolk counties, as compared to rates of occurrence in Ontario. Age-standardized rates are overall rates that take the underlying age structure of the populations being compared into account. The number of occurrences of an illness or incident in a community (in this case, the counties of Haldimand and Norfolk) are standardized by age to another community (in this case, Ontario) to produce a rate per 1,000, or 100,000 of the population. Differences in age between the two populations are eliminated (by weighting data) so that the rate of occurrence of a specific type of illness or injury can be compared without differences in age affecting the data.

Confidence intervals (CI) are reported where the cell sizes or populations being considered are relatively small compared to the overall size of the population. They are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. A wide confidence interval means that there is a higher degree of uncertainty about the data. The CI is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question. In figures, the upper and lower ranges are presented along with the actual percentage and listed in the data table. In text, the actual percentage is listed and the range, preceded by “CI ±”, is provided to show the potential upper and lower range.
LIMITATIONS

This report is rich with data reported across a broad spectrum of health and behaviour areas. Data from a wide spectrum of sources – from national health surveys to local utilization data – were used to provide as comprehensive and meaningful a snapshot as possible of the community’s health. It is sometimes difficult for local agencies and groups to collect data in ways that are standardized or scientifically based. Nonetheless, utilization and survey data conducted at the local level provide meaningful context and are included where appropriate.

The community description and profile is a critical building block for community data gathering processes, but not an endpoint. While considerable efforts have been made to provide as comprehensive a report as possible, there are important gaps and limitations in the data available at this time. To support future data gathering efforts, additional data needs and gaps are identified within each indicator area.

Data sources, descriptions of the data and limitations specific to the issue area are identified within the appropriate section. Generally, however, there are some key limitations in the data, and these are noted here.

Some data required for the report was not available in time, or in an appropriate format, for inclusion in the report. For example, in the section on unintentional injuries by type of injury, data for falls and other off-road vehicles was not available past 2004, and data on specific health behaviours like healthy eating and physical activity were not available after 2008. Therefore, the data presented here may not present as fulsome a profile of the community’s health as possible.

Comparisons to Ontario data were frequently needed to provide context and understanding of specific community factors, health status indicators, health behaviours or factors that affected health. For example, data on community crime rates may sound alarming, but may well be lower than provincial rates. Where it was not possible to compare data to other communities or Ontario as a whole, it was sometimes difficult to assess what the data means for the community’s health in the counties of Haldimand and Norfolk.

The data presented in this report from Statistics Canada were from two different geographic boundaries, Health Regions and Census Subdivisions. Where Haldimand County and Norfolk County data are presented, these data were derived from Statistics Canada Health Region data. Where data for Haldimand and Norfolk urban areas are presented in this report, these data were derived from Statistics Canada Census Subdivision data. Statistics Canada’s Census Subdivision data includes a wider geographical area that encompasses the Six Nations of the Grand River reserve. The difference between population and dwelling characteristics between the two geographies was quite small. Census subdivisions represent an additional 45 dwellings and 37 people. Other data sources, specifically the Canadian Community Health Survey (CCHS), use health regions as the geographic boundary thus Statistics Canada Health Regions data were used where possible. Data sources are noted below each figure or graph and in accompanying text.

The comparatively small population of Haldimand County and Norfolk County also provided some limitations. When considering specific population cohorts for relatively rare behaviours like suicide, the population sizes can be too small to provide meaningful information. Where available and appropriate, confidence intervals (CI) are provided in the report to help understand the reliability of the data presented. Confidence Intervals are described on page 70.
Almost all the figures in the report were created for the report by the authors using data from other reports, or provided by organizations and community stakeholders. All data sources are cited within the text and below the figures. In the section Factors Affecting Health, the issue of transportation is addressed. In this case, the data tables with actual numbers were not available from the Public Transportation Systems in Haldimand County and Norfolk County Feasibility Study (2009). Data was only available as images and was copied and pasted into this report, rather than recreated.

Ultimately, this report provides best available data at the time, and a solid foundation for moving forward on Healthy Communities’ initiatives. Moving forward, it will be important to continue to improve the quality of data available for key indicators as identified by the Healthy Communities Core Committee.
GENERAL COMMUNITY DESCRIPTION

Haldimand County and Norfolk County are neighbouring rural municipalities located in Southwestern Ontario, along the shore of Lake Erie. Haldimand-Norfolk is a federal electoral district that is represented in the House of Commons and includes all of the counties of Haldimand and Norfolk except those parts of Haldimand, and adjacent to Norfolk, which comprise the Six Nations of the Grand River and the Mississaugas of the New Credit (Statistics Canada, 2010). Haldimand-Norfolk is one of 36 public health unit areas in the province of Ontario, an administrative geographic unit through which public health services are delivered in Haldimand and Norfolk counties (Ministry of Health and Long Term Care, 2009).

Norfolk County was first created as a county in 1792, and in 1800, Haldimand County was formed from the eastern portion of Norfolk. They existed as separate counties until 1974 when they were amalgamated into a regional municipality (Norfolk County, 2009). Despite this shared municipal structure, they developed fairly independently and have remained largely distinct communities socially, culturally and economically.

On January 1, 2001, the regional municipality was dissolved into two single-tier municipalities - Haldimand County and Norfolk County; (Haldimand County Economic Development Division, 2006); (Norfolk County Planning and Economic Development Services, 2008). Despite this administrative dissolution, public health and social services are still administered across both counties by a single Health and Social Services Department under the direction of Norfolk County (as the Consolidated Municipal Services Manager and the Board of Health). A Health and Social Services Advisory Committee, with three members from each County’s elected officials, accepts reports and discusses matters related to the delivery of services provided. Recommendations from the Advisory Committee are forwarded to Haldimand Council for information purposes only and to Norfolk Council as the approving body (Haldimand-Norfolk Health and Social Services Department, 2008).

From a services perspective, while Haldimand and Norfolk counties are sometimes served by separate organizations (Norfolk District Business Development Corporation, Grand Erie Business Centre Inc., Community Living Haldimand, Norfolk Association for Community Living), the two counties are also frequently served by a single organization (e.g., the Haldimand-Norfolk Health Unit, Haldimand-Norfolk Health and Social Services Department, Haldimand and Norfolk Women’s Services, et cetera). Still other services are provided across larger geographic areas, (Hamilton Niagara Brant Haldimand Norfolk Community Care Access Centre, the Grand Erie District School Board and the Workforce Planning Board of Grand Erie which include Haldimand, Norfolk and Brant).

From a health services perspective, almost all of both counties are included as part of the larger Hamilton Niagara Haldimand Brant Local Health Integration Network ( LHIN) with the exception of a small Southwestern portion of Norfolk County adjacent to Oxford County and Elgin County which is part of the South West LHIN (Local Health Integration Network, 2011). As a result, data collected centrally to inform local planning is frequently not collected specific to either Haldimand or Norfolk counties or even the two counties together.
According to the 2006 Census, the population of both Haldimand and Norfolk counties combined was 107,775. It had a land area of 2,858.5 square kilometres, with a population density of 37.7 per square kilometre and 44,913 private dwellings (Haldimand-Norfolk Health Unit, 2011). Based on Organization of Economic Co-operation and Development (OECD) definitions, Haldimand County and Norfolk County are considered rural areas because there are fewer than 150 persons per square kilometre (Haldimand-Norfolk Health Unit, 2011). Norfolk County has a larger population and geographic area compared to Haldimand and the population growth rate from 2001 to 2006 was higher in Haldimand compared to Norfolk (Haldimand-Norfolk Health Unit, 2011).

**HALDIMAND COUNTY**

Haldimand County is defined as a “rural city-status single-tier municipality” by Statistics Canada. Originally created from a portion of Norfolk, Haldimand County is located on the Niagara Peninsula in southern Ontario, and is bounded to the west by Norfolk County, the Six Nations and New Credit reserves, to the north by the City of Hamilton, northwest by Brant County, to the south by Lake Erie, and to the east by the Niagara Region. The Grand River is a Canadian Heritage River and extends from the Bruce Peninsula, south all the way to Lake Erie. This is a significant waterway that runs through Haldimand County (Haldimand County Economic Development, 2010).

In 2006, Haldimand County had a population of 45,212. Less than half of the County’s population (21,988, 48.6%) lived in rural towns (see Table 1) (Haldimand-Norfolk Health Unit, 2011). Haldimand County’s census population rose 3.4% between 2001 and 2006 (Haldimand-Norfolk Health Unit, 2011) which was lower than the provincial growth rate for the same period (6.6%) (Planning and Economic Development Services, Norfolk County, 2008). For a map of Haldimand County, see Figure1.

<table>
<thead>
<tr>
<th>Urban Area</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caledonia</td>
<td>9740</td>
</tr>
<tr>
<td>Cayuga</td>
<td>1575</td>
</tr>
<tr>
<td>Dunnville</td>
<td>5729</td>
</tr>
<tr>
<td>Hagersville</td>
<td>2527</td>
</tr>
<tr>
<td>Jarvis</td>
<td>2417</td>
</tr>
</tbody>
</table>

Data Source: Census, Beyond 20/20, 2006
After the dissolution of the Regional Municipality of Haldimand-Norfolk in 2001, Haldimand County was created from the former Towns of Dunnville and Haldimand, and half of the City of Nanticoke (Haldimand County Economic Development Division, 2006). The current municipality of Haldimand County is a single-tier municipality with an elected mayor and six elected councillors each representing a different geographical ward in the county (Haldimand County, 2011). The county has four divisions that offer municipal services including:

- **Community Services** which includes Emergency Services, Grandview Lodge (long term care facility), Facilities and Park Operations and the Public Library.
- **Corporate Services** which provides all the common business and government support services necessary to allow the municipality to function efficiently and effectively and includes liaising with police services.
- **The Public Works Department** is generally responsible for providing the public with potable water, disposal of sanitary and solid wastes, road construction and maintenance services.
- **Planning and Economic Development** which includes building and by-law enforcement, economic development and tourism, community development and partnerships and planning and development (Haldimand County, 2011).
Historically Haldimand County has been predominantly an agricultural community; however a growing industrial and tourism base are important features. The Haldimand County Official Plan (2006) noted:

Maintaining, stimulating and expanding appropriate sectors of the County’s economy are of primary importance to ensure a strong corporate community. Agriculture has played a key role in the development of Haldimand County and continues in its role as a sector of primary importance. Stimulation of other commercial and industrial interests (by nurturing existing businesses and attracting new ones) and areas for growth (such as tourism), through appropriate allocation of resources will allow Haldimand County to use its strategic location and many resources to attain its vision of having a strong and diverse economy for its residents and corporate citizens (Haldimand County Planning and Economic Development Department, 2009), p. 15).

Haldimand County’s industry concentrations are in heavy industry (steel mill, electrical energy generation, petroleum refining), food and food processing (consumer condiments, poultry, dairy, soil conditioner), transportation (trucking) and mining and processing (gypsum mining and wallboard products). Major employers in the County are U.S. Steel Canada Lake Erie Works, Ontario Power Generating Station, Imperial Oil, Nelson Steel, J.M. Smucker (Canada) Inc. and the Canadian Gypsum Company (Haldimand County Economic Development, 2010). However, recent announcements regarding the closure of the coal-fired Ontario Power Generating Station and the Bick’s pickling plant (J.M. Smucker) will have a significant impact on the industrial base in Haldimand County (TorStar News Service, 2004) (DeGroote, 2009).

As reported in Haldimand County’s Community Profile, almost four out of 10 (37.8%) of the county’s total employed workforce population 15 years of age and older in 2006 worked in their municipality of residence and another four out of 10 (40.6%) commuted outside their municipality. One out of 10 (10.8%) worked at home (Haldimand County Economic Development, 2010).

Haldimand County has a strong industrial base. It was designated as part of the industrial heartland of North America and contains Lake Erie Industrial Park (LEIP), one of the largest industrial parks in Ontario. Haldimand County has a slightly higher percentage of people participating in the labour force when compared to Ontario, and slightly lower unemployment rate than Ontario. The manufacturing industries of the community comprise the majority of the total labour force (19.1%) followed by retail trade (10.9%), health care and social assistance (8.9%), construction (7.7%), and agriculture, forestry, fishing and hunting (7.1%) (Haldimand County Economic Development, 2010). Haldimand also has a strong agricultural sector, with 222,396 acres of farmland producing fruit, vegetables, and livestock. Agriculture plays a large role in the community’s workforce, with most of the farms used for grain and oilseed (except wheat), cattle (beef), and dairy (Haldimand County Economic Development, 2010).

With its location on the scenic Canadian Heritage Grand River, Haldimand County also includes many protected areas including the Haldimand Conservation Area, Hedley Forest Conservation Area, and Rock Point Provincial Park. An extensive trail system and many heritage properties offer opportunities for community connection and outdoor activities including hiking, bird watching, cycling and canoeing (Haldimand County Economic Development, 2010) (Haldimand County, 2011).

Each year more than 600,000 visitors come to Haldimand County, providing about $17 million labour income and $1 million in commercial taxes to the economy through tourism, in large part due to the outdoor opportunities afforded by Lake Erie and the Grand River. Visitors travel to Haldimand County to scuba dive, swim, and boat along the Lake Erie coastline. The county hosts over 175 annual festivals, fairs and events (Haldimand County Economic Development, 2010) (Haldimand County, 2011).
NORFOLK COUNTY

Like Haldimand County, Norfolk County is defined as a “rural city-status single-tier municipality” by Statistics Canada. Located on the north shore of Lake Erie in Southwestern Ontario, Norfolk County is bounded to the west by Elgin County and Tillsonburg, to the north by the County of Oxford, Brant County, and the Six Nations of the Grand River, to the south by Lake Erie, and to the east by Haldimand County. In 2006 Norfolk had a population of 62,563 (Haldimand-Norfolk Health Unit, 2011). About four out of every 10 (43.9%) Norfolk residents lived in the urban centres of Delhi, Port Dover, Simcoe and Waterford (see Table 3.2). Norfolk County’s census population rose 2.8% between 2001 and 2006 (Haldimand-Norfolk Health Unit, 2011) (Haldimand-Norfolk Health Unit, 2011) which was lower than the provincial growth rate for the same period (6.6%) (Norfolk County Planning and Economic Development Services, 2008). There are 42 hamlets in Norfolk County and four urban areas (see Table 2) (Norfolk County Planning and Economic Development Services, 2008). For a map of Norfolk County, see Figure 2.
While Norfolk County’s population is primarily white Caucasian with few visible minorities and immigrants (Statistics Canada, 2006), a concentrated population of between 8,000 and 10,000 Low German-speaking Mennonites live in the western portion of Norfolk County, Elgin County and Leamington. Seeking religious freedom and agricultural opportunities, Low German-speaking Mennonites follow a very traditional religious and cultural lifestyle and primarily work and live on farms.

Table 2: Population, Norfolk County Urban Areas, 2006

<table>
<thead>
<tr>
<th>Urban Area</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delhi</td>
<td>4070</td>
</tr>
<tr>
<td>Port Dover</td>
<td>5949</td>
</tr>
<tr>
<td>Simcoe</td>
<td>14522</td>
</tr>
<tr>
<td>Waterford</td>
<td>2931</td>
</tr>
</tbody>
</table>

Data Source: Census, Beyond 20/20, 2006
Having immigrated to Canada originally from Germany, then immigrating to Mexico in the early part of the twentieth century, this community has been returning to Canada since the 1980s, frequently following a seasonal migration pattern back to Mexico in the winter months (Morris, 2009).

Norfolk County was re-formed as a municipal structure on January 1, 2001, when the former regional Municipality of Haldimand-Norfolk was dissolved and the former Town of Simcoe, Townships of Delhi and Norfolk, and half of the City of Nanticoke amalgamated (Norfolk County Planning and Economic Development Services, 2008). The current municipality of Norfolk County is a single-tier municipality with an elected mayor and eight elected councillors representing seven geographical wards in the county (Norfolk County, n.d.). The county offers municipal services in seven departments including:

- County Manager which administers and supervises the management of business and affairs in the county.
- Corporate Services provides necessary business and government support services.
- Health and Social Services oversees long-term care services, public health, social housing and social services in the county and acts as the Consolidated Municipal Services Manager and the Board of Health for Health and Social Services in both Haldimand County and Norfolk County.
- Human Resources and Staff Development is accountable for the management of all Corporate Human Resources and related services, programs, policies, and procedures.
- Planning and Economic Development includes community planning, tourism and economic development, building and by-law, and heritage and culture.
- Public Works and Environmental Services is responsible for the management, maintenance, operations and capital works for the roads, fleet and facilities, water, storm and sanitary sewers.
- Community Services has seven divisions: parks and recreation, fire and rescue services, emergency services, forestry, cemeteries, Simcoe Farmers Market, and advertising and sponsorship opportunities (Norfolk County, n.d.).

Norfolk’s economy is highly varied from agri-business and manufacturing, to tourist resort communities. Major private sector employers in the county are Good Humor–Breyers (ice cream, frozen desserts, and novelties), Scotlynn Commodities (transportation), Toyotetsu Canada, Inc. (auto parts manufacturing), and Lower Lakes Towing (bulk freight shipping services) (Norfolk County, 2009). In 2008, Norfolk’s Economic Base Study indicated employment growth in the areas of professional services and health services related occupations and a decline in employment in the agricultural sector. Using data from the federal Human Resources Social Development Canada’s Foreign Worker Programs, almost 4,000 seasonal, offshore workers were approved to work in Norfolk County in 2008. Seasonal offshore workers typically come from Jamaica and Mexico to work on local farms for the growing season, arriving in the spring and returning to their own countries after harvest in the late fall. Approvals for seasonal offshore workers declined between 2001 and 2008 (Norfolk County Planning and Economic Development Services, 2008).
Norfolk County ranks as the fifth largest agricultural region in Ontario, averaged on a per-farm basis, with annual farm gross receipts totalling $419 million. Norfolk County has long been the centre of the Ontario tobacco belt, growing 58% of Ontario's tobacco harvest in 2006. According to the 2006 Census of Agriculture conducted by Statistics Canada, Norfolk County is Ontario's largest producer of cucumbers, asparagus, apples, cabbage, sour cherries, sweet corn, strawberries, shallots, green onions, Saskatoon berries, pumpkins, squash and zucchini, (Norfolk County Economic Development, n.d.), and also produces over half of Ontario's asparagus crop (54%), rye (52%) and ginseng (51%) (Norfolk County Economic Development, n.d.).

Norfolk County's cultural amenities provide opportunities for community involvement located at many historical sites. Many of the county's libraries, museums, and lush park systems commemorate cultural and historical tradition and reside in many of the community's historically significant locales. Local leisure activities include live theatre, boating, waterskiing and swimming, as well as the numerous shops in the area including antiques, gift shops and farm markets. Norfolk County also includes several significant natural areas including the Long Point Biosphere Reserve, Big Creek National Wildlife Area and the Backus Woods Conservation Area, and is home to many festivals that celebrate local agriculture and industry, making tourism a major part of the economy. (Norfolk County Tourism and Economic Development, n.d.). In 2006, Norfolk County received about 1 million visitors, generating $51.5 million in visitor spending and $21.8 million in wages (Norfolk County, 2009).
COMMUNITY PROFILE

The community profile chapter provides important context for understanding the health of the Haldimand County and Norfolk County communities. There are six sections in this chapter:

- Population - area and geographic distribution;
- Population - age, sex, marital status;
- Population - immigration, visible minority, aboriginal identity and language;
- Income;
- Education;
- Occupation, labour force participation and employment.

KEY FINDINGS

- In 2006, Norfolk County was greater in area (56.2%) and population (58.0%) than Haldimand County (Figure 3).
- Considered by population in 2006, the largest urban centre in both counties was Simcoe (14,522) (Figure 5). In Haldimand County, the largest urban centre was Caledonia (9,740) (Figure 4).
- A slightly greater proportion of Haldimand County residents (48.6%) than Norfolk County residents (43.9%) lived in urban areas in 2006 (Figure 4 and Figure 5).
- The population of Haldimand County and Norfolk County grew slightly between 2001 and 2006, and is expected to grow modestly between 2010 and 2020.
- The proportion of the population 55 years and older will increase in Haldimand County and Norfolk County by about 2.8% each year until 2020 for a projected population of 45,210 combined. The age dependency ratio, an indicator showing the approximate ratio between retirees and working age populations, is expected to rise from 28 in 2010 to 40.8 in 2020 in Haldimand and Norfolk counties combined, showing increased dependency of the aging population on those of working age.
- In 2006 both Haldimand County and Norfolk County had a very small proportion of residents who were immigrants, from a visible minority, identified themselves as having an aboriginal identity or spoke a language other than English as a mother tongue (Figure 8-Figure 13).
- Norfolk County had a lower median individual after tax income level ($22,052) and a lower median private household after tax income level ($46,973) among residents 15 years and older in 2006 than both Haldimand County (individual $23,945; private household $53,068) and Ontario (individual $27,258; private household $52,117) (Figure 15).
- Haldimand County had a lower median individual after tax income level ($23,945) and a higher median private household after tax income level ($53,068) among residents 15 years and older in 2006 than Ontario (individual $27,258; private household $52,117) (Figure 14).
- Delhi ($38,970) and Dunnville ($39,776) had the lowest median private household after tax income in Norfolk County and Haldimand County respectively in 2006 (Figure 14 and Figure 15).
- Haldimand (55.3%) and Norfolk (58.6%) counties had a higher proportion of residents 15 years and older who completed high school or less compared to Ontario residents (49.0%) in 2006. Three urban areas in Haldimand and Norfolk (Delhi, Dunnville and Waterford) had at least a 10% greater proportion of individuals who had a high school education or less compared to the Ontario population (Figure 17 and Figure 18).
- Considered by type of occupation, the labour force in Haldimand and Norfolk counties was highly diversified in 2006. The highest concentrations were in trades, transport and equipment operator occupations and related industries (Haldimand County 24.0%; Norfolk County 20.2%) and sales and service occupations (Haldimand County 22.4%; Norfolk County 20.3%) (Figure 19).
- The proportion of the population engaged in the paid labour force (Haldimand County 68.6%; Norfolk County 64.6%) and the rates of individuals 15 years and older who were unemployed in Haldimand (4.8%) and Norfolk counties (6.8%) were fairly similar to Ontario (labour force participation rate 67.1%; unemployment rate 6.4%) (Figure 20 and Figure 21 ).
FOR MORE INFORMATION

- Brant Haldimand Norfolk Catholic District School Board www.bhncdsb.ca
- Grand Erie District School Board www.granderie.ca
- Haldimand County website www.haldimandcounty.ca
- Norfolk County website www.norfolkcounty.ca
- Workforce Planning Board of Grand Erie www.workforceplanningboard.org
POPULATION – AREA AND GEOGRAPHIC DISTRIBUTION

Haldimand and Norfolk counties combined had a population of 107,775 in 2006, with the majority (58.0%) residing in Norfolk County, and the remainder, 41.9%, in Haldimand County (Figure 3). In 2006, almost half (48.6%) of residents in Haldimand and more than four out of 10 (43.9%) residents in Norfolk, lived in urban areas (Figure 4 and Figure 5). The total land area of Haldimand and Norfolk counties combined was 2,858.5 square kilometres, with Haldimand constituting 43.8% of the area and Norfolk 56.2%. In each of the counties, urban areas comprised only 2.4% and 2.6% of the total area of Haldimand County and Norfolk County respectively.

The rural nature of both Haldimand County and Norfolk County is important context for understanding the provision and availability of health and social services in these communities. It has been widely acknowledged that rural Ontarians have “higher health care needs and less access to care (The Ontario Rural Council, 2009).” According to Dr. Roger Pitbaldo speaking at a forum on rural health issues for Local Health Integration Networks (LHINs), a 2006 CIHI report on the health of rural Canadians concludes that:

“...rural residents in Canada are more likely to be in poorer socioeconomic conditions, to have lower educational attainment, to be involved in economic activities with higher health risks (for example, farming, fishing, mining and logging) and to exhibit less desirable health behaviours. These factors may be compounded by less access to prevention, early detection, treatment or support services to make good health status even more difficult to achieve in rural or remote areas (The Ontario Rural Council, 2007)”

Moreover, a recent forum on rural health and healthcare noted rural residents may face additional barriers (technology, culture, age) in taking ownership and responsibility for their own health to prevent illness and disease (The Ontario Rural Council, 2009). Rural Ontarians face greater challenges with accessing services than their urban neighbours (Ontario Trillium Foundation, 2007). Health issues facing rural Ontarians are not unique; however addressing these health issues requires strategies and approaches that understand this rural reality.

ANALYSIS

• With a total population of more than 100,000 in 2006, slightly greater than four out of 10 (41.9%) resided in Haldimand County, and almost six out of 10 (58.0%) in Norfolk County (Figure 3). This corresponds roughly to the area of the counties – Haldimand County constitutes about 43.8% of the area of both counties and Norfolk constitutes about 56.2% (Haldimand-Norfolk Health Unit, 2011).
In 2006 almost half of the population of Haldimand (48.6%) (Figure 4), and four out of 10 residents in Norfolk (43.9%) (Figure 5), lived in urban areas. In each county, urban areas comprise between 2.4% (Haldimand) and 2.6% (Norfolk) of the physical area (Haldimand-Norfolk Health Unit, 2011).

In 2006 the town of Simcoe in Norfolk County was the largest urban community in both Haldimand and Norfolk counties combined (see Figure 5). Its population was more than one-fifth (23.2%) the population of Norfolk County. Similarly, the largest urban centre in Haldimand County was Caledonia with a population one-fifth (21.5%) of the county population (see Figure 4).
Figure 5: Population, Norfolk County Urban Areas, 2001 and 2006

Data Source: Census, Beyond 20/20, 2006
POPULATION - AGE, SEX AND MARITAL STATUS

Several studies have indicated that rural Ontario has a higher proportion of older adults than urban areas of Ontario, and that the proportion of older adults is growing faster in rural communities (Ontario Rural Research and Services Committee, 2007) (Ontario Trillium Foundation, 2007). This, along with other factors, can have a significant impact on the health of a community.

According to the 2006 census, the population of Haldimand and Norfolk counties combined was relatively stable, with an almost equal proportion of middle-aged (35-54) (30.5%) and older (55 and older) adults (28.6%). Figure 6 compares the populations by age of Haldimand County and Norfolk County. In this figure, the proportion of older adults was higher in Norfolk County than Haldimand. Looking towards the future, while the population will remain stable, the proportion of older adults will increase, while the proportion of younger adults will decrease in both counties.

When considered by urban area in Figure 7, it is evident that the proportion of older adults in 2006 was particularly significant in the communities of Port Dover and Simcoe (Norfolk County) and Dunnville (Haldimand County). The majority of residents 15 years and older in both counties were married (56.5%), and another quarter (26.2%) were single. About two out of 10 residents (17.3%) were separated (3.5%), divorced (7.0%) or widowed (6.8%).

Clearly, the aging nature of population in Haldimand and Norfolk counties, and in particular in Norfolk County, was an important characteristic that necessarily will impact Healthy Communities planning in the area, especially as the population ages in the future. However, the current proportion of older to middle aged adults was relatively the same - about three out of every 10 residents in Haldimand and Norfolk counties combined are middle aged adults, and another three out of every 10 are older adults. The counties of Haldimand and Norfolk will need to plan for the aging of their population, while providing services for families and middle aged adults in the current timeframe. To better understand the trend towards a higher proportion of older adults in the counties of Haldimand and Norfolk counties combined, it will be important to consider age distribution in the counties with age distribution in Ontario or neighbouring communities.

ANALYSIS

- Between 2001 and 2006, the population of Haldimand County increased from 43,728 to 45,212, an increase of 3.4%. Norfolk County increased from 60,847 to 62,563, an increase of 2.8% (Haldimand-Norfolk Health Unit, 2011).
- Haldimand and Norfolk counties combined increased from 104,575 to 107,775, an increase of 3.1% (Haldimand-Norfolk Health Unit, 2011).
- Population projections estimate that the population in both counties will remain relatively stable from 2010 to 2020 (Haldimand-Norfolk Health Unit, 2011).
- The population of older adults (55 years and older) will increase in Haldimand County and Norfolk County by about 2.8% each year until 2020 for a projected population of 45,210 combined (Haldimand-Norfolk Health Unit, 2011).
- It was projected that between 2015 and 2020, the population of individuals under 55 years of age in Haldimand and Norfolk counties combined will decrease (Haldimand-Norfolk Health Unit, 2011).
- The proportion of females (Haldimand 50.2%, Norfolk 50.5%) and males (Haldimand 49.8%, Norfolk 49.5%) was relatively the same in 2006 (Haldimand-Norfolk Health Unit, 2011).
- As illustrated in Figure 6, about a quarter of the population in Haldimand (25.6%) and three out of 10 residents in Norfolk (30.8%) were aged 55 and older in 2006. In Haldimand and Norfolk counties combined, about three out of 10 are between the ages of 35-54 (Haldimand 31.4%, Norfolk 29.8%). More than one of every 10 residents of Haldimand County (15.9%) and Norfolk County (15.0%) was a young adult (20-34) and approximately a quarter are children and youth (under 20) (Haldimand 27.2%, Norfolk 24.3%).
In 2006, there was a higher proportion of persons who are older adults (55 years and over) living in the urban areas of Port Dover, (39.2%), Simcoe (35.6%), Dunnville (33.8%) and Delhi (32.8%) as illustrated in Figure 7.

About three out of 10 residents in each of the urban areas of Caledonia (32.7%), Waterford (30.4%) and Port Dover (29.6%) were middle-aged adults (35-54) in 2006. Each of these urban areas had a higher proportion of individuals who were middle-aged adults (35-54) compared to other urban areas in Haldimand and Norfolk counties (Figure 7).

The community of Caledonia (30.9%), followed by Jarvis (27.5%) had the highest proportion of children and youth aged 0-19 of all urban areas in both Haldimand and Norfolk counties in 2006 (Figure 7).
• Age dependency ratio is an indicator showing the approximate ratio between retirees and working age populations. It shows the potential future financial burden of care for the elderly, especially pensions. The age dependency ratio in Haldimand and Norfolk counties combined is expected to rise from 28 in 2010 to 40.8 in 2020, showing increased dependency of the aging population on those of working age for support (Haldimand-Norfolk Health Unit, 2011).

• In 2006, over half of residents over the age of 15 in Haldimand (58.0%) and Norfolk (55.5%) counties were married. Approximately another quarter identified themselves as being single (never legally married) (Haldimand 26.2%, Norfolk 26.1%). Less than one in 10 was either divorced (Haldimand 6.4%, Norfolk 7.3%) or widowed (Haldimand 6.0%, Norfolk 7.4%) (Haldimand-Norfolk Health Unit, 2011).
POPULATION – IMMIGRATION, VISIBLE MINORITY, ABORIGINAL IDENTITY AND LANGUAGE

Rural communities in Ontario tend to have fewer immigrants, and fewer immigrants from diverse ethnic backgrounds, than urban Canada (Federation of Canadian Municipalities, 2009). According to Statistics Canada, about one in five (19.8%) Canadians were immigrants in 2006; however, in rural Canada, only one in 20 (5.3%) resided in rural areas of Canada, and most of these are well-established pre-1986 immigrants (Statistics Canada, 2009). Aboriginal people are the fastest growing rural population in Canada, as well as rural Canada, and especially in the Western Canada (Federation of Canadian Municipalities, 2009).

Haldimand County and Norfolk County mirror the overall Canadian experience. Very few residents in both Haldimand and Norfolk counties combined in 2006, about one out of every 10, were immigrants (Haldimand County 9.0%, Norfolk County 12.7%) (Figure 8 and Figure 9). About the same proportion of the population in both counties had an Aboriginal Identity (1.9%) (Figure 12 and Figure 13 or were a visible minority (1.5%) (Figure 10 and Figure 11). The vast majority of Haldimand County and Norfolk County residents speak English as their first, and only, language. In future, it would be informative to consider the ethnic diversity of the counties by ethnicity or race.

While Haldimand County and Norfolk County had few new immigrants or individuals with visible minorities, comparison to the immigration and visible minority status of Ontario or neighbouring communities would provide a stronger understanding of this data. Given the overwhelming homogeneous make-up of the counties, it is imperative that the experiences of minority groups are monitored closely to ensure their needs are not overlooked. Moreover, two population groups are unique in Norfolk County. There was a concentrated population of Low-German speaking Mennonites in the western area of Norfolk County, and migrant offshore workers from the Caribbean and Central America who work seasonally in Norfolk County (see General Community Description section, Norfolk County, page 30). Finally, census data does not provide the number of individuals residing on each of the two First Nations reserves adjacent to the counties of Haldimand and Norfolk, who may be accessing services in the counties.

ANALYSIS

- As illustrated in Figure 8 and Figure 9, in 2006 about one in every 10 residents of Haldimand County (9.0%) and Norfolk County (12.7%) were immigrants. Among immigrants in Haldimand County, eight out of 10 (83.0%) were from Europe and less than one out of 10 (6.8%) were from the United States. In Norfolk County, two-thirds (66.8%) of immigrants were from Europe and two out of 10 (21.0%) were from Central America.
Only 1.5% of the population in both Haldimand and Norfolk counties combined identified themselves as being a “visible minority” in 2006 (see Figure 10 and Figure 11). Among those who were a visible minority, almost four out of 10 in Haldimand (37.4%) and Norfolk (39.5%) were Black and fewer than one out of ten in Haldimand (8.7%) and about two out of ten in Norfolk (22.0%) were Chinese.
Figure 10: Population by Type of Visible Minority, Haldimand County, 2006

Data Source: Census, Community Profiles, by Health Region, 2006. Data Notes: The EMPLOYMENT EQUITY ACT defines visible minorities as ‘persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in colour.’ Other categories includes: Arab, West Asian, Visible minority n.i.e., Japanese, Southeast Asian, Multiple visible minority and Filipino.

Figure 11: Population by Type of Visible Minority, Norfolk County, 2006

Data Source: Census, Community Profiles, by Health Region, 2006. Data Notes: The EMPLOYMENT EQUITY ACT defines visible minorities as ‘persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in colour.’ Other category includes Arab, West Asian, Visible minority n.i.e., Southeast Asian, Japanese, Multiple visible minority and Korean.

- Figure 12 and Figure 13 illustrate that fewer than 2% of the population of Haldimand and Norfolk counties combined identified themselves as Aboriginal (1.9%) in 2006, equally distributed between the two counties. Aboriginal identity population is defined by Statistics Canada Census as those persons who reported identifying with at least one Aboriginal group, that is, North American Indian, Métis or Inuit, and / or those who reported being a Treaty Indian or a Registered Indian, as defined by the Indian Act of Canada, and / or those who reported they were members of an Indian band or First Nation. It is important to note that the Census Data for Haldimand and Norfolk counties did not include the on-reserve First Nations populations of either the Six Nations or the New Credit Reserves.
- Among urban areas, Waterford (3.4%), Hagersville (3.3%) Simcoe (2.9%), Jarvis (2.7%) and Dunnville (2.4%) had the highest proportion of Aboriginal population (Figure 12 and Figure 13).
In 2006, about nine out of 10 residents in Haldimand (92.0%) and Norfolk (85.1%) counties’ first language (mother tongue) was English. “Mother tongue” as considered by Statistics Canada Census includes single responses of a non-official language and multiple responses where one non-official language is in combination either with English or French, or with both official languages (Haldimand-Norfolk Health Unit, 2011).
INCOME

Income, along with other socioeconomic status indicators, is an important social determinant of health. The World Health Organization stated, “In countries at all levels of income, health and illness follow a social gradient: the lower the socioeconomic position, the worse the health” (World Health Organization, 2008). The Canadian Institute for Health Information’s 2006 Report “How Healthy Are Rural Canadians?” noted that rural Canadians frequently experience lower income levels than their urban counterparts. The report also noted that personal or family income, along with education and occupation, bore a strong correlation to most indicators of health status, access to health care and health-related behaviours (Canada Institute for Health Information, 2006).

As illustrated in Figure 14 and Figure 15, when considered by both median individual after tax income and median private household after tax income among residents aged 15 years and older in 2006, Norfolk County had a lower income level (individual $22,052; private household $46,793) than Haldimand County (individual $23,945; private household $53,068) and Ontario (individual $27,258; private household $52,117). Haldimand County had a lower median individual after tax income ($23,946) and a higher private household after tax income ($53,068) compared to the province (individual $27,258; private household $52,117).

Considered by urban area and shown in Figure 14 and Figure 15, both Delhi ($38,970) and Dunnville ($39,776) had the lowest median private household after tax income in Norfolk County and Haldimand County respectively. Within Haldimand County, and considered by median private household after tax income only (15 years and over) and urban areas, there was a wider range of income reported (from $39,776 in Dunnville to $63,647 in Caledonia) while in Norfolk County the range was more narrow (from $38,970 in Delhi to $49,112 in Port Dover), and consistently below the provincial median.

ANALYSIS

- Income levels considered by median individual after tax income for individuals 15 years and older were lower by 12.2% in Haldimand County ($23,945) and 19.1% in Norfolk County ($22,052) than the province ($27,258) in 2006. When considered by Haldimand and Norfolk counties combined, the median individual after tax income of both counties ($22,745) was 16.6% lower than Ontario’s ($27,258) (Haldimand-Norfolk Health Unit, 2011).
- The median income after tax of private households aged 15 years and over in Haldimand County ($53,068) was slightly higher than the provincial median ($52,117) by 1.8% for the same year (Figure 14).
- In Haldimand County and considered by urban areas only, median private household income among those 15 years and older in 2006 ranged from 23.7% below the provincial median ($52,117) in Dunnville ($39,776) to a high of 22.1% above the provincial median in Caledonia ($63,647) (Figure 14).
The median income after tax of private households in Norfolk County ($46,793) was lower than that in Haldimand County ($53,068) by 11.8% and lower than the provincial median ($52,117) by 10.2% in 2006 (Figure 15).

In Norfolk County the range in median private household income among urban communities in 2006 was narrower than in Haldimand County. Median after tax household income for individuals aged 15 years and older ranges from 25.2% lower than the provincial median ($52,117) in Delhi ($38,970) to 5.8% lower than the same in Port Dover ($49,112) (Figure 15).
Figure 15: Median Income (after tax), Private Households 15 Years and Older, Norfolk County Urban Areas and Ontario, 2006

<table>
<thead>
<tr>
<th>Location</th>
<th>Median Income (after tax)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ontario</td>
<td>$52,117</td>
</tr>
<tr>
<td>Norfolk</td>
<td>$46,793</td>
</tr>
<tr>
<td>Delhi</td>
<td>$38,970</td>
</tr>
<tr>
<td>Port Dover</td>
<td>$49,112</td>
</tr>
<tr>
<td>Simcoe</td>
<td>$41,361</td>
</tr>
<tr>
<td>Waterford</td>
<td>$47,274</td>
</tr>
</tbody>
</table>

Data Sources: (1) Haldimand and Norfolk: Census, Community Profiles, by Health Region, 2006. (2) Urban Areas: Census, Beyond 20/20, by Census Division, 2006. Data Notes: The after-tax income of a household is the sum of the after-tax incomes of all members of that household. After-tax income refers to total income from all sources minus federal, provincial and territorial taxes paid for 2005.
EDUCATION

Educational attainment, along with income, is an important social determinant of health. In fact, education is frequently used as a proxy for socioeconomic status. Typically, individuals with low levels of educational attainment suffer poorer health and well-being (C. Ungerleider, 2008). The World Health Organization had noted that “the lower the socioeconomic position [of a country], the worse the health (World Health Organization, 2008).” According to the Canadian Institutes for Health Information, rural Canadians are more likely to have lower educational attainment, poorer economic status and be involved in economic activities with higher health risks and to have less desirable health behaviours than urban Canadians (Canada Institute for Health Information, 2006).

Educational attainment across Haldimand and Norfolk counties was very similar in 2006 (Figure 16). A greater proportion of residents 15 years and older in Haldimand (55.3%) and Norfolk (58.6%) counties completed high school or less compared to Ontario residents (49.0%). Figure 17 and Figure 18 show the proportion of individuals who completed high school education or less by urban areas in Haldimand County and Norfolk County. Considered by this measure, the urban areas of Delhi, Dunnville and Waterford had at least a 10% greater proportion of individuals who had a high school education or less compared to the Ontario population.

ANALYSIS

- Overall, educational attainment across Haldimand and Norfolk counties in 2006 was very similar, and has remained relatively stable since 1996 (Haldimand-Norfolk Health Unit, 2011).
- As illustrated in Figure 16, about three out of 10 residents in Haldimand County (27.0%) and Norfolk County (31.6%) 15 years and older did not complete high school, and another three out of 10 (Haldimand 28.3%. Norfolk 27.0%) completed high school or the equivalent. Two out of 10 residents in Haldimand (22.1%) and Norfolk (19.5%) had a college or other non-university certificate or diploma and one out of ten (Haldimand 12.5% and Norfolk 11.3%) had an apprenticeship or trades certificates or diploma. Very few – just 2.5% in Haldimand County and 2.0% in Norfolk County had a university certificate or diploma below the bachelor level and almost one out of 10 (Haldimand 7.5% and Norfolk 8.6%) had a university certificate, diploma or degree in 2006.
Considered by urban area and reported in Figure 17 and Figure 18, the percentage of residents aged 15 years and older who had high school education or less ranged from almost half in Caledonia (46.1%) and Port Dover (49.1%) to more than six out of 10 in Dunnville (63.6%) and Delhi (65.1%).

In Ontario, 49.0% of those aged 15 years and older had a high school education or less in 2006 compared to more than half in both Haldimand County (55.3%) and Norfolk County (58.6%) (Figure 17 and Figure 18).
Figure 17: High School or Less Educational Attainment 15 Years and Older, Haldimand County Urban Areas and Ontario, 2006

Data Sources: (1) Haldimand and Norfolk: Census, Community Profiles, by Health Region, 2006 (2) Urban Areas: Census, Beyond 20/20, by Census Division, 2006. Data Notes: (1) ‘High school certificate or equivalent’ includes persons who have graduated from a secondary school or equivalent. Excludes persons with a postsecondary certificate, diploma or degree. Examples of postsecondary institutions include community colleges, institutes of technology, CEGEPs, private trade schools, private business colleges, schools of nursing and universities.

Figure 18: High School or Less Educational Attainment 15 Years and Older, Norfolk County Urban Areas and Ontario, 2006

Data Source: (1) Haldimand and Norfolk: Census, Community Profiles, by Health Region, 2006 (2) Urban Areas: Census, Beyond 20/20, by Census Division, 2006. Data Notes: (1) ‘High school certificate or equivalent’ includes persons who have graduated from a secondary school or equivalent. Excludes persons with a postsecondary certificate, diploma or degree. Examples of postsecondary institutions include community colleges, institutes of technology, CEGEPs, private trade schools, private business colleges, schools of nursing and universities.
OCCUPATION, LABOUR FORCE PARTICIPATION AND EMPLOYMENT

The extent to which residents engage in labour activity, and the nature and type of occupations, has a tremendous impact on income levels and sustainability of a community. Rural communities tend to have a higher dependency on resource-based or primary industries for economic sustainability and employment is generally concentrated in the manufacturing, government/social services/public administration and service sectors (Ontario Rural Research and Services Committee, 2007). Other research indicates that rural Canadians experience higher rates of unemployment (Canada Institute for Health Information, 2006). Economic diversification, employment opportunities and sustainable economic development rank within the top ten research priorities identified by the Ontario Rural Council in 2010 (Ontario Research Council, 2010). Both Haldimand County and Norfolk County have identified that retaining and growing existing businesses and industries while supporting efforts to diversify and attract new businesses are key components of their respective strategic plans; (Haldimand County Economic Development Division, 2006); (Norfolk County, 2009).

Considered by type of occupation in Figure 19, the labour force in both Haldimand and Norfolk counties was highly diversified in 2006. Almost half (46.4%) of Haldimand County residents aged 15 and older were either working in trades, transport and equipment operator occupations and related industries (24.0%) or sales and service occupations (22.4%). Four out of ten (40.5%) Norfolk County residents aged 15 and older were working in the same industries (i.e. trades, transport and equipment operator occupations and related industries 20.2% and sales and service occupations 20.3%). Residents in both Haldimand and Norfolk counties were employed in types of occupations in relatively similar proportions, although in Norfolk County more residents pursued primary industry occupations (12.7%), and processing and manufacturing (11.2%) compared to Haldimand County. In Haldimand County, more residents pursued trades, transportation and equipment operation and related occupations (24.0%) compared to Norfolk.

Using Statistics Canada Census 2006 data, the proportion of the population in the paid labour force and the rates of individuals 15 years and older who were unemployed in Haldimand and Norfolk counties were fairly similar to Ontario (see Figure 21 and Figure 22). Norfolk County experienced slightly higher unemployment rates (6.8%) than that experienced in Ontario (6.4%) or Haldimand County (4.8%). There was a higher proportion of residents who reported being unemployed in the urban areas of Hagersville (9.0%) and Delhi (8.9%).

To better understand labour participation rates, it was important to understand how else residents of both counties are occupied – for example – the proportion of the population in each county who are retired, work inside the home, or are attending school. This data was not available at the time of this report. Because of the substantial change in the Canadian economic situation since 2006, more up-to-date labour and unemployment data are required to better understand the employment situation in Haldimand County and Norfolk County currently, as compared to Ontario.

ANALYSIS

• As illustrated in Figure 19, residents 15 years and older in Haldimand County and Norfolk County were employed in occupations in roughly the same proportion in 2006. One-quarter of residents in Haldimand County (24.0%) and one-fifth in Norfolk County (20.2%) were employed in trades, transport and equipment operator occupations and related industries. A fifth in both counties (Haldimand 22.4%, Norfolk 20.3%) were engaged in sales and service occupations. One out of 10 residents of Haldimand County (12.6%) and Norfolk County (11.9%) were engaged in business, finance and administration occupations and another one out of 10 (Haldimand 8.0%, Norfolk 12.7%) were engaged in occupations unique to primary industry.
Figure 19: Occupation by Industry 15 Years and Older, Haldimand County and Norfolk County, 2006

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art, Cult., Rec’n, Sport</td>
<td>2.1%</td>
</tr>
<tr>
<td>Bus., Finance, Admin</td>
<td>12.6%</td>
</tr>
<tr>
<td>Health</td>
<td>6.8%</td>
</tr>
<tr>
<td>Management</td>
<td>6.9%</td>
</tr>
<tr>
<td>Natural &amp; Applied Sci.</td>
<td>3.1%</td>
</tr>
<tr>
<td>Primary Ind’y</td>
<td>8.0%</td>
</tr>
<tr>
<td>Proc’g, Manu. &amp; Utilities</td>
<td>7.4%</td>
</tr>
<tr>
<td>Sales &amp; Service</td>
<td>22.4%</td>
</tr>
<tr>
<td>Social Science, Educ’n, Gov’t, Rel’n</td>
<td>6.6%</td>
</tr>
<tr>
<td>Trades, Transp. &amp; Equip. Op.</td>
<td>24.0%</td>
</tr>
<tr>
<td><strong>Haldimand</strong></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Norfolk</strong></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Data Source: Census, Community Profiles, by Health Region, 2006. Data Notes: Census data for occupation groups in Broad occupational category A - Management occupations should be used with caution. Some coding errors were made in assigning the appropriate level of management, e.g., senior manager as opposed to middle manager, and in determining the appropriate area of specialization or activity, e.g., a manager of a health care program in a hospital as opposed to a government manager in health policy administration. Some non-management occupations have also been miscoded to management due to confusion over titles such as program manager and project manager. Data users may wish to use data for management occupations in conjunction with other variables such as Income, Age and Education.

- The proportion of residents 15 years and older in the counties of Haldimand and Norfolk who participated in the paid labour force was relatively consistent over the period 1996-2006. Throughout this period, two-thirds of the counties’ residents aged 15 years and older participated in the labour force (Haldimand-Norfolk Health Unit, 2011).
- In 2006, 68.6% of Haldimand County residents and 64.6% of Norfolk County residents 15 years and older participated in the labour force (Figure 20). This was very similar to the rest of Ontario – where 67.1% of residents 15 years and older participated in the labour force in 2006 (Haldimand-Norfolk Health Unit, 2011).
Between 1996 and 2006, the unemployment rate in Haldimand and Norfolk counties combined has decreased from 9.3% to 6.0% (Haldimand-Norfolk Health Unit, 2011).

As illustrated in Figure 21 and Figure 22, the unemployment rate in Haldimand County (4.8%) was lower than the provincial rate (6.4%) and the Norfolk County rate (6.8%) was slightly higher than Ontario’s.

When considered by urban areas, the unemployment rate ranged from a high of 9.0% in Hagersville and 8.9% in Delhi to a low of 2.3% in Cayuga.
Figure 21: Unemployment 15 Years and Older, Haldimand County and Urban Areas, 2006

Data Source: (1) Haldimand and Norfolk: Census, Community Profiles, by Health Region, 2006 (2) Urban Areas: Census, Beyond 20/20, by Census Division, 2006. Data Notes: Unemployment rate - Refers to the unemployed expressed as a percentage of the labour force in the week (Sunday to Saturday) prior to Census Day (May 16, 2006).

Figure 22: Unemployment 15 Years and Older, Norfolk County and Urban Areas, 2006

Data Sources: (1) Haldimand and Norfolk: Census, Community Profiles, by Health Region, 2006 (2) Urban Areas: Census, Beyond 20/20, by Census Division, 2006. Data Notes: Unemployment rate - Refers to the unemployed expressed as a percentage of the labour force in the week (Sunday to Saturday) prior to Census Day (May 16, 2006).
HEALTH STATUS
HEALTH STATUS

This chapter on health status provides data about Haldimand County and Norfolk County’s health status considered by mortality, unintentional injuries and obesity. Data on mortality and unintentional injuries is provided using age-standardized rates for Haldimand and Norfolk counties combined compared to Ontario, for the total population and by sex. Leading categories of mortality for the total population and by sex are also provided. In addition to reporting on overall unintentional injuries, three categories of unintentional injuries (motor vehicle traffic crashes (MVTC), falls and other off-road vehicles) are examined in greater detail. Obesity, defined by Body Mass Index (BMI), and derived from height and weight data using the Canadian Community Health Survey, is reported as a percentage of the population and not age-standardized rates. For a definition of age-standardized rates, please see the Methodology Chapter, page 7.

KEY FINDINGS

- Haldimand and Norfolk counties combined had a higher rate of age-standardized mortality for all causes than Ontario for all years reported (Figure 23). In 2003, 2004 and 2005 the age-standardized rate of mortality in Haldimand and Norfolk counties combined was 697.5, 641.5 per 100,000 and 640.0 per 100,000 respectively compared to Ontario’s rates of 576.6, 552.0 and 549.3 per 100,000.  
- Between 2003 and 2005 almost four out of 10 (2003 – 35.3%; 2004 – 38.8%; 2005 – 39.7%) residents in Haldimand and Norfolk counties combined died from circulatory diseases (for example, stroke, high blood pressure and ischemic heart disease) (Figure 24).  
- During the same timeframe almost three out of 10 (2003 – 28.7%; 2004 – 29.6%; 2005 – 28.6%) residents in Haldimand and Norfolk counties combined died from neoplasms (for example, cancers) (Figure 24).  
- When considered by age-standardized rates, residents in Haldimand and Norfolk counties combined visited hospital emergency departments for unintentional injuries (2004), were discharged from hospital (2003-2009), and experienced mortality (2000-2002), at higher average rates than Ontario residents (Figure 23 - Figure 41).  
- Residents of Haldimand and Norfolk counties combined had higher age-standardized rates of MVTC-related injuries and mortality compared to Ontario considered by emergency department visits (2004 - 10.5 vs 6.4 per 1,000), hospital separations (average between 2003-2009 - 96.3. vs 44.7 per 100,000) (Figure 34) and mortality (average between 2000-2002 - 8.1 vs 5.1 per 100,000) (Figure 37).  
- For the years reported and considered by age standardized rates, residents in Haldimand and Norfolk counties visited emergency departments (2004), were hospitalized (2000-2004) or died (2001-2002) because of falls-related unintentional injuries at a higher rate than other types of unintentional injuries (Figure 38).  
- Considered by age standardized rates, falls-related injuries and mortality were higher among residents of Haldimand and Norfolk counties combined compared to Ontario for emergency department visits (41.0 vs 28.3 per 1,000), hospital separations (328.5 vs 284.1 per 100,000) (Figure 38) and mortality (6.9 vs 5.5 per 100,000) (Figure 41).  
- Emergency department visits and hospitalization separations as a result of other off-road motor vehicles were relatively uncommon in Haldimand and Norfolk counties between 2000 and 2004, but considered by age-standardized rates, the residents of Haldimand and Norfolk counties combined experienced these injuries at a higher rate than Ontario residents. Rates of hospital separations for other off-road motor vehicles were on average almost three times higher in Haldimand and Norfolk counties combined than in Ontario (Figure 42).  

1According to the Haldimand-Norfolk Unintentional Injuries Report (2006), other off-road vehicles refers to vehicles like snowmobiles, all-terrain vehicles (ATVs), tractors, golf-carts, and mini-bikes.
• The age-standardized rate for hospitalizations as a result of other off-road motor vehicles among males in Haldimand and Norfolk counties combined was almost double in 2000, and grew to more than three times as high in 2004 (Figure 43). The differences between Haldimand and Norfolk counties combined rates and Ontario rates were statistically significant when considered by both the entire population from 2000-2004 and among males only from 2001-2004.

• The percentage of residents in Haldimand and Norfolk counties combined who were considered overweight or obese increased by 10.6% from 53.4% in 2005 to 64.0% in 2008. During the same period, the percent age of Ontario residents who were overweight or obese increased just 1.1%, from 48.6% in 2005 to 49.7% in 2008 (Figure 42).

FOR MORE INFORMATION

• Cancer Care Ontario. Ontario Cancer Plan. Available at http://ocp.cancercare.on.ca/
• Rural Ontario Institute (2007). Local Health Integration Networks (LHINs) and The Future of Rural Health The Ontario Rural Council. Available at http://ruralontarioinstitute.ca/file.aspx?id=b77a1c89-6dc2-41c7-835e-f32312097db1
HEALTH STATUS, MORTALITY

A landmark report on the health of rural Canadians by the Canada Institute for Health Information noted that general mortality rates were higher in rural communities than urban communities due to chronic disease conditions, unintentional injuries, incidences of suicide, rates of obesity, lack of physical activity and poorer nutrition (Canada Institute for Health Information, 2006). This situation is reflected in Haldimand County and Norfolk County where residents experience a higher mortality rate than Ontario residents (Figure 23) when considered by age-standardized rates for the years 2003-2005. The leading causes of death between 2003 and 2005, illustrated in Figure 24, were chronic diseases including circulatory diseases (for example stroke, high blood pressure and ischemic heart disease), neoplasms (for example, cancers) and respiratory diseases (for example, chronic obstructive pulmonary disease and asthma). The proportion of individuals who died in Haldimand and Norfolk counties combined by leading cause of death remained relatively stable over the period. Figure 25 illustrates mortality rate in Haldimand and Norfolk counties combined and shows there were few differences in cause of death by sex with the exception of a higher rate of deaths among males for deaths from external causes, including unintentional injuries.

In future, it will be important to consider the rate of incidence of mortality and leading causes of death in communities similar to Haldimand County and Norfolk County to understand these rates within the context of other rural communities’ experiences. Data specific to each county will also provide a more sensitive analysis of mortality rates, and thus enable more directive and focused action to address the issue.

It is important to note that data presented here was for a fairly narrow timeframe (2003-2005). Data over a longer, consistent timeframe was required in order to better understand trends over time. Additionally, data on morbidity – causes for illness in Haldimand and Norfolk counties – is an important consideration that has not been examined here. Morbidity refers to the illness, disease and disability experienced by a population. Examining this data will be an important component of an updated community health profile.

ANALYSIS

- Considered by all causes of mortality, the age-standardized rate of death per 100,000 in Haldimand and Norfolk counties combined was much higher than Ontario as illustrated in Figure 23. Between 2003 and 2005, the age-standardized rate for Haldimand and Norfolk counties combined was 697.5, 641.5 and 640.0 deaths per 100,000. In Ontario during the same time period, the age-standardized mortality rate was 576.6, 552.0, and 549.3 deaths per 100,000.
The leading cause of death among residents of Haldimand and Norfolk counties combined remained relatively stable between 2003 and 2005 (Figure 24).

Figure 24 shows that deaths from circulatory diseases (for example, stroke, high blood pressure, and ischemic heart disease) were the leading cause of death for residents of Haldimand and Norfolk counties combined between 2003 and 2005, rising from 35.3% in 2003 to 39.7% -- or four out of every 10 deaths – in 2005.

Deaths from neoplasms (for example, cancers) claimed the lives of about three out of 10 Haldimand and Norfolk counties combined residents throughout the period (2003 - 28.7%; 2004 – 29.6%; 2005 – 28.6%) (Figure 24).

Diseases of the respiratory system (for example, chronic obstructive pulmonary disease, asthma) accounted for less than one of every 10 deaths in Haldimand and Norfolk counties combined and decreased slightly between 2003 and 2005 (2003 – 8.0%; 2004 – 7.3%; 2005 – 6.9%) (Figure 24).

The fourth most common cause of death among residents of Haldimand and Norfolk counties combined was diseases of the nervous system (for example, multiple sclerosis and Alzheimer’s Disease) accounting for about 6% of all deaths in the combined counties between 2003 and 2005 (2003 – 5.5%; 2004 – 5.8%; 2005– 5.8%) (Figure 24).
Figure 24: Leading Category of Death, Haldimand and Norfolk Counties Combined, 2003-2005


- As illustrated in Figure 25, there was little difference in leading causes of mortality by sex except for external causes. Considered by sex, 7.0% of male deaths and 3.7% of female deaths were attributed to external causes (including injuries).

Figure 25: Leading Category of Death by Sex, Haldimand and Norfolk Counties Combined, 2005

HEALTH STATUS, UNINTENTIONAL INJURIES

A higher rate of unintentional injuries in rural areas is considered to be one reason that rural Canadians have higher mortality rates than urban Canadians. (Canada Institute for Health Information, 2006). According to the Commission on the Future of Health Care in Canada (2002), the mortality rate for unintentional injury was higher in predominantly rural areas than predominantly urban areas (Haldimand-Norfolk Health Unit, 2006).

Data from several perspectives are used to understand the age-standardized rate of unintentional injuries in Haldimand and Norfolk counties combined compared to Ontario:

- emergency department visits for 2004;
- hospital separations (discharge from hospital) as a whole and by sex for 2003-2009;

In subsequent sections, rates of unintentional injuries by cause of injury are also explored. A definition of age-standardized rates is included in Methodology Chapter, page 33.

When considered by age-standardized rates, residents in Haldimand and Norfolk counties combined had a higher rate of visiting hospital emergency departments for unintentional injuries more frequently than Ontario residents in 2004. Considered by type of injury, injuries which had the highest rate of emergency department visits by residents in Haldimand and Norfolk counties combined were injuries resulting from falls (41.0 per 1,000), motor vehicle traffic crashes (MVTC) (10.5 per 1,000) and sports injuries (4.9 per 1,000).

As illustrated in Figure 26 age-standardized hospital separation rates for unintentional injuries for Haldimand and Norfolk counties combined compared to Ontario for 2003-2009. When considered by all residents and by sex, Haldimand and Norfolk counties combined residents were hospitalized for unintentional injuries at a higher rate than Ontario residents. Indeed, the average age-standardized rate for hospitalization separations as a result of unintentional injuries in Haldimand and Norfolk counties combined was 669.2 per 100,000 and in Ontario was 447.4 per 100,000 (2003-2009).

Age-standardized rates for deaths that resulted from unintentional injuries (mortality rates) were also higher in Haldimand County and Norfolk County (27.3 per 100,000) than Ontario (21.9 per 100,000) for the years 2000-2002. Both females and males in Haldimand and Norfolk counties combined had higher rates of mortality for unintentional injuries during this time, but the rates were not statistically significant (Figure 30 and Figure 31).

It is important to note that data presented here was for a fairly narrow timeframe (especially for emergency department visits and mortality), and timeframes were inconsistent between the various types of data presented. Data over a longer, consistent timeframe is required in order to better understand trends over time.

There are several groups and organizations working on injury prevention in Haldimand County and Norfolk County. The Ontario Provincial Police, Local Health Integration Networks (LHINs), Hamilton Niagara Brant Haldimand Norfolk Community Care Access Centre, Brain Injury Services, Haldimand Abilities Centre, Norfolk County Recreation and Pathways for People are all seeking to make progress in this important area.

ANALYSIS

- The age-specific rate for unintentional injury emergency department visits was higher in Haldimand County and Norfolk counties combined (157.1 per 1,000) compared to Ontario (98.4 per 1,000) in 2004 (Haldimand-Norfolk Health Unit, 2006).
- A higher rate of females (125.2 per 1,000) and males (189.1 per 1,000) in Haldimand and Norfolk counties
combined visited hospital emergency departments as a result of injuries in 2004 than Ontario females (80.5 per 1,000) and males (116.7 per 1,000) (Haldimand-Norfolk Health Unit, 2006).

- When visits to emergency departments for unintentional injury in 2004 were considered by cause of injury using age-standardized rates, falls had the highest rate of emergency department visits (41.0 per 1,000) in Haldimand and Norfolk counties combined followed by MVTC (10.5 per 1,000) and sports injuries (4.9 per 1,000). In these cases, age-standardized rates for cause of injury in Haldimand and Norfolk counties combined was higher than Ontario and especially higher for falls (Haldimand and Norfolk 41.0 per 1,000 vs Ontario 28.3 per 1,000) (Haldimand-Norfolk Health Unit, 2006).

- Residents of Haldimand and Norfolk counties combined experienced a higher rate of hospitalizations for unintentional injuries than Ontario residents between 2003 and 2009. Illustrated in Figure 26, the age-standardized rate for unintentional hospitalizations for injuries in Haldimand and Norfolk counties combined fluctuated throughout the period but remained higher than the Ontario rate.

- As shown in Figure 26, the average age-standardized rate of hospitalization for unintentional injuries in Haldimand and Norfolk counties combined was 669.2 per 100,000 and in Ontario was 447.4 per 100,000 (2005-2009).
Figure 26: Hospitalization Separations, Unintentional Injuries, Haldimand and Norfolk Counties Combined and Ontario, 2003-2009

Data Sources: (1) IntelliHealth Inpatient Diagnosis & External Cause. Data Notes: ICD-10-CA: V01-X59, Y85-Y86. #Dschg (D)(l) (hospital separations) and DAD key was used. Includes Ontario residents with and without health card number. Data from 2000-2004 was extracted March 13, 2006. Data for 2005-2009 was extracted February 2, 2011. For 2000-2004, in some cases patient met both criteria. Therefore, the numbers may be slightly inflated. By showing the description for the ICD-10 Codes in the report, some patients had more than one condition and were included twice in the dataset. A different methodological approach was used in extracting data from 2005 onward. In conjunction with the Haldimand-Norfolk Health Unit Health Status Report (2003), a standardized population, other than the 1991 was used. For trend analysis, the same standardized population was used from 2000 to 2004. The 1991 standardized population was used for years 2005 onward. Since a different methodological approach was used for 2005 onward, make comparisons with caution. (2) IntelliHealth, Population Estimates. Data Notes: Data from 2000-2004 was extracted March 13, 2006. Data for 2005-2009 was extracted January 11, 2011. Limitations: It is interesting to note that there is no validated standardized query for unintentional injuries.

- Data for 2003-2004 is not comparable to the 2005-2009 based on the way that the data was coded (see Data Notes).
- As shown in Figure 27, the age-standardized rates fluctuated. When considered by sex, a higher rate of females in Haldimand and Norfolk counties combined were discharged from hospital for unintentional injuries than in Ontario. Between 2003 and 2009, the age-standardized rate among females fluctuated but ultimately increased from 603.1 per 100,000 in 2003 to 645.0 per 100,000 in 2009. The average age-standardized rate of hospitalization for unintentional injuries among females in Haldimand and Norfolk counties combined was 622.1 per 100,000 compared to Ontario’s rate of 440.9 per 100,000 (2003-2009).
Figure 27: Hospitalization Separations, Unintentional Injuries by Females, Haldimand and Norfolk Counties Combined and Ontario, 2003-2009

Data Sources: (1) IntelliHealth Inpatient Diagnosis & External Cause. Data Notes: ICD-10-CA: V01-X59, Y85-Y86. Dschg (D)(hospital separations) and DAD key was used. Includes Ontario residents with and without health card number. Data from 2000-2004 was extracted March 13, 2006. Data for 2005-2009 was extracted February 2, 2011. For 2000-2004, in some cases patient met both criteria. Therefore, the numbers may be slightly inflated. By showing the description for the ICD-10 Codes in the report, some patients had more than one condition and were included twice in the dataset. A different methodological approach was used in extracting data from 2005 onward. In conjunction with the Haldimand-Norfolk Health Unit Health Status Report (2003), a standardized population, other than the 1991 was used. For trend analysis, the same standardized population was used from 2000 to 2004. The 1991 standardized population was used for years 2005 onward. Since a different methodological approach was used for 2005 onward, make comparisons with caution. (2) IntelliHealth, Population Estimates. Data Notes: Data from 2000-2004 was extracted March 13, 2006. Data for 2005-2009 was extracted January 11, 2011. Limitations: It is interesting to note that there is no validated standardized query for unintentional injuries. Sex-specific age-standardized rates were used.

- Data for 2003-2004 is not comparable to the 2005-2009 based on the way that the data was coded (see Data Notes)
- Among males, illustrated in Figure 28, the age standardized rates also fluctuated. Haldimand County and Norfolk County males were discharged from hospital for unintentional injuries at an age standardized rate of 750.9 per 100,000 to 736.6 per 100,000 between 2003 and 2009 – an average of 720.1 per 100,000 over the time period.
- Ontario saw a decrease in the rate of hospitalization for unintentional injuries among males from 496.4 to 419.2 per 100,000 in 2003 to 2009. Ontario’s average over the time period was 458.5 per 100,000.
The age-standardized mortality rate for death from unintentional injury was higher in Haldimand County and Norfolk County than in Ontario for each successive year between 2000 and 2002 (Figure 29). The average age-standardized rate per 100,000 increased from 25.5 in 2000 to 26.6 in 2001 and 29.9 in 2002 in Haldimand and Norfolk counties, while in Ontario the rate fluctuated from 22.0 per 100,000 in 2000 to 21.4 in 2001 and 22.3 in 2002.
As shown in Figure 30., when considered by age-standardized rates, the unintentional injury mortality rate among females in Haldimand and Norfolk counties combined was the same to Ontario’s in 2000 (18.2 per 100,000), or similar in 2001 (16.7 per 100,000 and 17.3 per 100,000, respectively) before rising in 2002 (25.1 per 100,000 and 18.4 per 100,000, respectively). More investigation is required to understand if this rate continued to increase.
• For every year between 2000 and 2003, Figure 31 illustrates that the age-standardized mortality rate for unintentional injuries remained relatively stable among males in Haldimand and Norfolk counties combined (2000 - 32.5 per 100,000; 2001 - 35.8 per 100,000; 2002 - 34.7 per 100,000). This trend was reflected in Ontario (2000 - 25.9 per 100,000; 2001 - 25.6 per 100,000; 2002 - 26.3 per 100,000).
• While the age-standardized mortality rate for unintentional injuries for males in Haldimand and Norfolk counties combined was higher than Ontario males throughout the period, the differences were not statistically significant (Haldimand-Norfolk Health Unit, 2006).

Data Source: Ontario and Haldimand-Norfolk Population Estimates, Provincial Health Planning Database (PHPDB), (Extracted March 14, 2006) and Vital Statistics, Provincial Health Planning Database (PHPDB), (Extracted March 14, 2006). Data Notes: Includes patient ID Source Code “H” and “D” and excludes out of province Ontario residents.
Figure 31: Mortality, Unintentional Injuries by Males, Haldimand and Norfolk Counties Combined and Ontario, 2000-2002

<table>
<thead>
<tr>
<th>Year</th>
<th>Haldimand &amp; Norfolk</th>
<th>Ontario</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>32.5</td>
<td>25.9</td>
</tr>
<tr>
<td>2001</td>
<td>35.8</td>
<td>25.6</td>
</tr>
<tr>
<td>2002</td>
<td>34.7</td>
<td>26.3</td>
</tr>
</tbody>
</table>

Data Source: Ontario and Haldimand-Norfolk Population Estimates, Provincial Health Planning Database (PHPDB), (Extracted March 14, 2006) and Vital Statistics, Provincial Health Planning Database (PHPDB), (Extracted March 14, 2006). Data Notes: Includes patient ID Source Code “H” and “D” and excludes out of province Ontario residents. Sex-specific age-standardized rates were used.
HEALTH STATUS, UNINTENTIONAL INJURIES - MOTOR VEHICLE TRAFFIC CRASHES

Motor Vehicle Traffic Crashes (MVTC) are a serious cause of unintentional injury in Haldimand and Norfolk counties combined. In general, Transport Canada reported (2004) that the number of fatal collisions in Canada is higher in rural areas than urban areas (Haldimand-Norfolk Health Unit, 2006). The 2006 Haldimand-Norfolk Unintentional Injury Report suggests that rural roads may not be well designed and rural drivers may be less compliant with road safety behaviours, advocating for more research into the issue (Haldimand-Norfolk Health Unit, 2006).

For the purposes of this community profile, MVTC-related unintentional injuries and mortality were measured by MVTC-related emergency department visits (2004 only), hospital discharges (separations) (2000-2004) and mortality (2000-2002) using age-standardized data and compared to Ontario. A definition of age-standardized rate is provided in the Methodology Chapter, page 7.

Residents of Haldimand and Norfolk counties combined had higher rates of MVTC-related emergency department visits than Ontario residents (10.5 vs 6.4 per 1,000) in 2004. Between 2003-2009, the average age-standardized rate for hospitalization separations for (MVTC) in Haldimand and Norfolk counties combined (96.3 per 100,000 of the population) was consistently higher than that in Ontario (44.7 per 100,000 of the population) (Figure 32). Illustrated in Figure 33 and Figure 34, the average age-standardized rates for MTVC-related hospitalizations was also higher in Haldimand and Norfolk counties combined than in Ontario among females (73.5 vs 31.9 per 100,000) and males (122.6 vs 52.1 per 100,000) (2005-2009).

In Figure 35, MVTC-related mortality was considered using age-standardized rates per 100,000 for Haldimand and Norfolk counties combined and Ontario for the years 2000-2002. Using this measure, the average rate for Haldimand and Norfolk counties combined (8.1 per 100,000) was higher than Ontario’s rate (5.1 per 100,000). This difference was not statistically significant.

The higher rate of incidence in Haldimand County and Norfolk County compared to Ontario for MVTC-related hospital separations considered by age-standardized rates could in part be due to several factors, including unsafe vehicles, poor driving and unsafe roads (Haldimand-Norfolk Health Unit, 2006).

Tests for statistical significance were not available for hospitalization separations. These tests are required before drawing any definitive conclusions about MVTC-injury rates compared to Ontario.

ANALYSIS

- In 2004 considered by age-standardized rates per 1,000 population, residents in Haldimand and Norfolk counties combined had a higher rate of emergency department visits for MVTC-related injuries (10.5 per 1,000) compared to Ontario residents (6.4 per 1,000) (Haldimand-Norfolk Health Unit, 2006).
- In 2004 and using the same measure, males (11.7 per 1,000) had a higher rate of emergency department visits for MVTC-related injuries than females (9.2 per 1,000) in Haldimand and Norfolk counties combined. These rates were higher when compared to their Ontario counterparts (males, 6.5 per 1,000; females, 6.2 per 1,000) for the same time period (Haldimand-Norfolk Health Unit, 2006).
- For Figures 32, 33, and 34 data for 2003-2004 is not comparable to the 2005-2009 based on the way that the data was coded (see Data Notes).
• Illustrated in Figure 32, Haldimand County and Norfolk County residents experience a higher number of hospitalizations for MVTC-related injuries than residents in Ontario. From 2005-2009, the age-standardized rate for hospitalizations for MVTC-related injuries fluctuated between a low of 76.7 per 100,000 in 2008 and a high of 118.3 per 100,000 in 2006, resting at 90.2 per 100,000 in 2009. The average age-standardized rate of hospitalization for MVTC-related injuries in Haldimand and Norfolk counties combined between 2005 and 2009 was 98.0 per 100,000.

• As shown in Figure 34, the average age-standardized rate for unintentional hospitalizations for MVTC-related injuries between 2003 and 2009 in Haldimand and Norfolk Counties combined was more than double (98.0 per 100,000) that of Ontario (41.9 per 100,000). Unlike Haldimand and Norfolk, Ontario saw an overall decrease in the rate of hospitalization for MVTC-related injuries throughout the period.
Data Sources: (1) IntelliHealth, Inpatient Diagnosis & External Cause. Data Notes: ICD-10-CA: V02-V04, V09.0, V09.2, V12-V14, V19-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2. #Dschg (D) (hospital separations) and) and DAD key was used. Includes Ontario residents with and without health card number. Data from 2000-2004 was extracted March 13, 2006. Data for 2005-2009 was extracted February 2, 2011. From 2000 to 2004 in conjunction with the Haldimand-Norfolk Health Unit Health Status Report (2003), a standardized population, other than the 1991 was used. The 1991 standardized population was used for years 2005 onward. (2) IntelliHealth, Population Estimates. Data Notes: Data from 2000-2004 was extracted March 13, 2006. Data for 2005-2009 was extracted January 11, 2011. Data Limitations: It is interesting to note that there is no validated standardized query for unintentional injuries.

- Considered by sex, Figure 33 shows that females in Haldimand County and Norfolk County were discharged from hospital for MVTC-related injuries at a higher rate than Ontario females. From 2003-2009 the age standardized rate for MVTC-related injuries among females fluctuated between a low of 51.2 per 100,000 in 2004 and a high of 99.0 per 100,000 in 2006. The average age-standardized rate of hospitalization for MVTC-related injuries among females in Haldimand and Norfolk counties combined was 73.5 per 100,000 compared to Ontario’s rate of 31.9 per 100,000 for the years 2005-2009.
As illustrated in Figure 34, among males the pattern also fluctuated. Haldimand and Norfolk counties combined males were discharged from hospital for MVTC-related injuries at an age standardized rate of 125.3 per 100,000 in 2003, that increased in 2004 to 127.4 per 100,000 before dropping slightly in 2005 (124.5 per 100,000), and increased again in 2006 and 2007 (138.5 per 100,000 and 142.3 per 100,000 respectively) before dropping in 2008 (97.2 per 100,000) and then rising slightly in 2009 (110.4 per 100,000).

Ontario saw an overall decrease in the rate of hospitalization for MVTC-related injuries among males from 64.9 per 100,000 in 2003 to 44.3 per 100,000 in 2009. Ontario’s average over the time period 2005-2009 was 52.1 per 100,000.

Both the average annual and cumulative average (122.6 per 100,000 population) rate of hospital separations for age standardized MVTC-related injuries among males in Haldimand and Norfolk counties combined was higher than that for Ontario (52.1 per 100,000 population) for the same time period (2005-2009).
Figure 34: Hospitalization Separations, Unintentional Injuries, Motor Vehicle Traffic Crashes by Males, Haldimand and Norfolk Counties Combined and Ontario, 2003-2009

![Graph showing hospitalization separations for injuries by males in Haldimand and Norfolk Counties Combined and Ontario from 2003 to 2009.]

Data Sources: (1) IntelliHealth, Inpatient Diagnosis & External Cause. Data Notes: ICD-10-CA: V02-V04, V09.0, V09.2, V12-V14, V19-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2. #Dschg (D)() (hospital separations) and DAD key was used. Includes Ontario residents with and without health card number. Data from 2000-2004 was extracted March 13, 2006. Data for 2005-2009 was extracted February 2, 2011. From 2000 to 2004 in conjunction with the Haldimand-Norfolk Health Unit Health Status Report (2003), a standardized population, other than the 1991 was used. The 1991 standardized population was used for years 2005 onward. (2) IntelliHealth, Population Estimates. Data Notes: Data from 2000-2004 was extracted March 13, 2006. Data for 2005-2009 was extracted January 11, 2011. Data Limitations: It is interesting to note that there is no validated standardized query for unintentional injuries. Sex-specific age-standardized rates were used.

- Figure 35 illustrates that there was very little change in the age standardized MVTC mortality rates in both Haldimand and Norfolk counties combined and Ontario. The mortality rate in Haldimand and Norfolk counties combined was 7.5 per 100,000 in 2000, and rose slightly to 8.3 per 100,000 in 2002.
- In Ontario, the rate decreased very slightly from 5.1 per 100,000 in 2000 and 2001 to 5.0 per 100,000 in 2002.
- There was no statistical significance between the age standardized mortality rates in Haldimand County and Norfolk County combined and Ontario.
Figure 35: Mortality, Unintentional Injuries, Motor Vehicle Traffic Crashes, Haldimand and Norfolk Counties Combined and Ontario, 2000-2002

- The age standardized mortality rates for Haldimand-Norfolk by sex were suppressed due to data constraints (Haldimand-Norfolk Health Unit, 2006).
HEALTH STATUS, UNINTENTIONAL INJURIES - FALLS

As noted in the Haldimand-Norfolk Health Unit’s Unintentional Injury Report (2006), the Chief Medical Officer Report, Injury: Predictable and Preventable (1996), two-thirds of hospitalizations for unintentional injuries in Ontario were the result of falls. According to the same report, more than seven out of 10 days spent in hospital as a result of injuries, were because of falls (Haldimand-Norfolk Health Unit, 2006). The Haldimand-Norfolk Unintentional Injuries Report 2006 noted that among Canadians aged 65 and over, 3.4% died as a result of their injuries and three-quarters (75%) of in-hospital deaths were due to injuries from a fall. In Haldimand and Norfolk counties combined, 12 residents died as a result of falls in 2001 and 8 in 2002 (Haldimand-Norfolk Health Unit, 2006).

Unintentional injures for falls are considered here using data for emergency department visits (2004 only), hospital discharges (2000-2004) and mortality (2001-2002) using age-standardized data. Comparisons to rates in Ontario are provided. A definition of age-standardized rate is provided in the Methodology Chapter, page 7.

Considered by visits to emergency departments, hospital separations and mortality, the rate of falls among residents of Haldimand and Norfolk counties had the highest rate of occurrence of all types of unintentional injuries, and was higher than that experienced by Ontario residents. In 2004 the age-standardized rate of falls-related injury emergency department visits for the total population was 41.0 per 1,000 population among residents of Haldimand and Norfolk counties combined, compared to 28.3 per 1,000 population for Ontario residents. Figure 36 shows that between 2000 and 2004, the average rate of hospital separations for falls among residents of Haldimand and Norfolk counties combined was 328.5 per 100,000 population compared to 284.1 per 100,000 population among Ontario residents. Considered by mortality and illustrated in Figure 39, a slightly higher average age-standardized rate from 2001-2002 of residents of Haldimand and Norfolk counties combined died (6.9 per 100,000) as a result of falls compared to Ontario residents (5.5 per 100,000).

Despite narrow timeframes and older data, this data clearly presents a case for action on falls-related injuries in Haldimand and Norfolk counties. Data over a longer timeframe that is consistent across the three measures (emergency department visits, hospital separations and mortality) will help provide a clearer picture of the situation in Haldimand County and Norfolk County. This will help to inform existing initiatives led by municipal recreation programs, Haldimand-Norfolk Community Senior Support Services, the Hamilton Niagara Brant Haldimand Norfolk Community Care Access Centre and Hamilton Niagara Haldimand Brant LHIN.

ANALYSIS:

- Residents of Haldimand and Norfolk counties combined in 2004 visited emergency departments for falls-related injuries at a higher age-standardized rate for the total population (41.0 per 1,000) than did Ontario residents (28.3 per 1,000) (Haldimand-Norfolk Health Unit, 2006).
- In both Haldimand and Norfolk counties combined (43.3 per 1,000) and Ontario, (28.7 per 1,000) females visited emergency departments for falls-related injuries at a higher rate than did males in Haldimand and Norfolk counties combined (38.6 per 1,000) and Ontario (27.9 per 1,000) in 2004 (Haldimand-Norfolk Health Unit, 2006).
- For Figures 36, 37, and 38 data for 2000-2002 is not comparable to the 2003-2004 based on the way that the data was coded (see Data Notes)
- As illustrated in Figure 36, age-standardized rates for falls-related injuries requiring hospitalization between 2000 and 2004 were consistently higher in Haldimand and Norfolk counties combined than Ontario. The average age-standardized rate for falls-related injuries in Haldimand and Norfolk counties combined was higher than that in Ontario (328.5 vs 284.1 per 100,000 population).
Figure 36: Hospitalization Separations, Unintentional Injuries, Falls, Haldimand and Norfolk Counties Combined and Ontario, 2000-2004

Data Source: Ontario and Haldimand-Norfolk Population Estimates, Provincial Health Planning Database (PHPDB), (Extracted March 13, 2006) and Inpatient Hospitalizations, Provincial Health Planning Database (PHPDB), (Extracted March 14, 2006). Data Notes: Includes patient ID Source Code “H” and “D” and excludes out of province Ontario residents. ICD-9 Codes vs ICD-10 Codes: As of April 1 2002, external cause of injury coding for hospitalizations was converted from ICD-9 to ICD-10. Comparisons of trends for specific causes from 2002 onward must be interpreted with caution. This is illustrated by a dotted line.

- Consistent with the overall population, Figure 37 illustrates that females in Haldimand and Norfolk counties combined were hospitalized for falls-related injuries at a higher age-standardized rate each year between 2000 and 2004 than Ontario females. The average age-standardized rate for falls-related injuries among females in Haldimand and Norfolk counties combined was higher (370.3 vs 337.2 per 100,000).
Figure 37: Hospitalization Separations, Unintentional Injuries, Falls by Females, Haldimand and Norfolk Counties Combined and Ontario, 2000-2004

Data Source: Ontario and Haldimand-Norfolk Population Estimates, Provincial Health Planning Database (PHPDB), (Extracted March 13, 2006) and Inpatient Hospitalizations, Provincial Health Planning Database (PHPDB), (Extracted March 14, 2006). Data Notes: Includes patient ID Source Code “H” and “D” and excludes out of province Ontario residents. ICD-9 Codes vs ICD-10 Codes: As of April 1, 2002, external cause of injury coding for hospitalizations was converted from ICD-9 to ICD-10. Comparisons of trends for specific causes from 2002 onward must be interpreted with caution. This is illustrated by a dotted line. Sex-specific age-standardized rates were used.

- Consistent with overall population and female population in Haldimand and Norfolk combined, more males in Haldimand and Norfolk counties combined were hospitalized for falls-related injuries each year between 2000 and 2004 (Figure 38). The average age-standardized rate for falls-related injuries among males in Haldimand and Norfolk counties combined was higher than that in Ontario (288.6 vs 233.2 per 100,000 population).
Figure 38: Hospitalization Separations, Unintentional Injuries, Falls by Males, Haldimand and Norfolk Counties Combined and Ontario, 2000-2004

Data Source: Ontario and Haldimand-Norfolk Population Estimates, Provincial Health Planning Database (PHPDB), (Extracted March 13, 2006) and Inpatient Hospitalizations, Provincial Health Planning Database (PHPDB), (Extracted March 14, 2006). Data Notes: Includes patient ID Source Code “H” and “D” and excludes out of province Ontario residents. ICD-9 Codes vs ICD-10 Codes: As of April 1, 2002, external cause of injury coding for hospitalizations was converted from ICD-9 to ICD-10. Comparisons of trends for specific causes from 2002 onward must be interpreted with caution. This is illustrated by a dotted line. Sex-specific age-standardized rates were used.

- Age standardized rates for falls-related mortality in Haldimand and Norfolk counties combined and Ontario were only available for 2001 and 2002 and are presented in Figure 41. In these years, the age standardized mortality rate for falls in 2001 was 8.3 and 5.5 per 100,000 in Haldimand and Norfolk counties combined and 5.3 and 5.6 per 100,000 in Ontario.

Figure 39: Mortality, Unintentional Injuries, Falls, Haldimand and Norfolk Counties Combined and Ontario, 2001-2002

Data Source: Ontario and Haldimand-Norfolk Population Estimates, Provincial Health Planning Database (PHPDB), (Extracted March 14, 2006) and Vital Statistics, Provincial Health Planning Database (PHPDB), (Extracted March 14, 2006). Data Notes: Includes patient ID Source Code “H” and “D” and excludes out of province Ontario residents.
HEALTH STATUS, UNINTENTIONAL INJURIES – OTHER OFF-ROAD MOTOR VEHICLES

“Other off-road vehicles” includes vehicles like snowmobiles, all-terrain vehicles (ATVs), tractors, golf-carts, and mini-bikes. Tractors and all-terrain vehicles are frequently used in rural areas both for occupational and recreational purposes (Haldimand-Norfolk Health Unit, 2006). The Canadian Institute for Health Information (CIHI) reported a 50% increase in hospitalizations due to ATV use between 1996 and 2001 and more than a third (36%) of these involved children (Canadian Paediatric Society, 2004).

Off-road motor vehicle-related unintentional injuries were relatively uncommon in Haldimand County and Norfolk County; however evidence indicates that Haldimand and Norfolk residents experience injuries from off-road vehicles more frequently than those in other parts of Ontario. Unintentional injuries as a result of other off-road motor vehicles were reported for emergency department visits (2004) and hospital separations only (2000-2004) using age-standardized data. Comparisons to rates in Ontario are provided. A definition of age-standardized rate is provided in the Methodology Chapter, page 7.

Considered by both emergency department visits and hospital separations, injuries as a result of other off-road motor vehicles were higher among residents of Haldimand and Norfolk counties combined compared to Ontario residents. Rates for hospital separations for off-road motor vehicles presented in Figure 40 were on average almost three times higher in Haldimand and Norfolk counties combined (12.4 per 100,000) than in Ontario (4.5 per 100,000) for 2000-2004. The age-standardized rate among males in Haldimand and Norfolk counties combined was almost double in 2000, and grew to more than three times as high in 2004 compared to Ontario (Figure 41). The differences between Haldimand and Norfolk counties combined rates and Ontario rates were statistically significant when considered by both the entire population from 2000-2004 and among males only from 2001-2004.

ANALYSIS

- For Figures 40 and 41 data for 2000-2002 is not comparable to the 2003-2004 based on the way that the data was coded (see Data Notes).
- According to the Haldimand-Norfolk Health Unit’s Unintentional Injury Report 2006 and using age-standardized rates, slightly more Haldimand and Norfolk counties combined residents (1.1 per 1,000 population) visited the emergency department as a result of unintentional injuries caused by other off-road motor vehicles compared to Ontario residents (0.4 per 1,000 population) (Haldimand-Norfolk Health Unit, 2006).
- As illustrated in 0, between 2000 and 2004 the average age-standardized rate of other off-road motor vehicle injury-related hospitalizations among residents of Haldimand and Norfolk counties combined was very high compared to Ontario (12.4 vs 4.5 per 100,000). The differences between the annual age-standardized rates for other off-road motor vehicle injury-related hospitalizations over the five-year period were statistically significant (Haldimand-Norfolk Health Unit, 2006).

Figure 40: Hospitalization Separations, Unintentional Injuries, Other Off-Road Motor Vehicles, Haldimand and Norfolk Counties Combined and Ontario, 2000-2004

Data Source: Ontario and Haldimand-Norfolk Population Estimates, Provincial Health Planning Database (PHPDB), (Extracted March 13, 2006) and Inpatient Hospitalizations, Provincial Health Planning Database (PHPDB), (Extracted March 14, 2006). Data Notes: Includes patient ID Source Code “H” and “D” and excludes out of province Ontario residents. ICD-9 Codes vs ICD-10 Codes: As of April 1 2002, external cause of injury coding for hospitalizations was converted from ICD-9 to ICD-10. Comparisons of trends for specific causes from 2002 onward must be interpreted with caution. This is illustrated by a dotted line. Sex-specific age-standardized rates were used.

- Figure 41 shows that a higher age-standardized rate of males in Haldimand and Norfolk counties combined than those in Ontario were hospitalized for unintentional injuries as a result of other off-road motor vehicles. The differences between these rates were statistically significant between 2001 and 2004.
- Between 2000 and 2004 the average age-standardized rate of other off-road motor vehicle injury-related hospitalizations for males in Haldimand and Norfolk counties combined was higher compared to Ontario (22.3 vs 7.7 per 100,000).
Figure 41: Hospitalization Separation Rates, Unintentional Injuries, Other Off-Road Motor Vehicles by Males, Haldimand and Norfolk Counties Combined and Ontario, 2000-2004

Data Source: Ontario and Haldimand-Norfolk Population Estimates, Provincial Health Planning Database (PHPDB), (Extracted March 13, 2006) and Inpatient Hospitalizations, Provincial Health Planning Database (PHPDB), (Extracted March 14, 2006). Data Notes: Includes patient ID Source Code “H” and “D” and excludes out of province Ontario residents. ICD-9 Codes vs ICD-10 Codes: As of April 1 2002, external cause of injury coding for hospitalizations was converted from ICD-9 to ICD-10. Comparisons of trends for specific causes from 2002 onward must be interpreted with caution. This is illustrated by a dotted line. Sex-specific age-standardized rates were used. Sex-specific age-standardized rates were used.
HEALTH STATUS, OBESITY

Obesity has been identified as a growing concern across Ontario, Canada and the world. The World Health Organization estimates that a billion people worldwide are overweight and 300 million are obese. (World Health Organization, 2009) In 2004, the then Chief Medical Officer of Health for Ontario noted, “… in 2003, almost one out of every two adults in Ontario was overweight or obese. Between 1981 and 1996, the number of obese children in Canada between the ages of seven and 13 tripled (Chief Medical Officer of Health, 2004).”

In 2008, more than six out of 10 (64.0%) Haldimand County and Norfolk County residents were overweight or obese compared to five out of 10 (49.7%) Ontario residents (Figure 42). This rate is alarming. Being overweight or obese is an important risk factor for chronic diseases (Public Health Agency of Canada, 2010) including circulatory diseases and neoplasms (cancers), the leading causes of death in Haldimand and Norfolk counties combined.

Data for overweight and obesity was determined by reported Body Mass Index in the Canadian Community Health Survey (CCHS). Because this is a derived variable, and due to the small population of Haldimand County and Norfolk County, the population samples for Haldimand and Norfolk counties combined were likely relatively small. Confidence intervals were calculated and are shown to help understand the degree of certainty represented by the data for the 12-19 year-old population.

The data shows the beginning of an alarming upward trend that should be monitored closely. Rates for healthy eating, physical activity and sedentary behaviour should also be considered in conjunction with data for overweight and obesity to determine the health of the community. Moreover, considering this data by age, sex and urban area will provide greater detail to inform planning and understand the impact of actions taken to address this serious health issue. Other data gathering mechanisms, appropriate to the community size, are required to better understand the scope of the problem, and the context of the issue in the counties of Haldimand and Norfolk.

There are several organizations and networks working to address obesity in Haldimand County and Norfolk County. Some organizations are geared to child and youth development (Healthy Babies, Healthy Children, Haldimand-Norfolk Resource Education And Counselling and Help (REACH), school boards, Girl Guides, Child Nutrition Network of Haldimand-Norfolk). Other organizations are geared to general populations including Haldimand Health and Wellness, municipal Parks and Recreation Departments and the Haldimand-Norfolk Health Unit. Still other organizations are geared to those with existing health concerns (Haldimand-Norfolk Diabetes and Stroke Prevention Program), or special populations (Brain Injury Services, Haldimand Abilities Centre, Centre for Addiction and Mental Health, Hamilton Niagara Brant Haldimand Norfolk Community Care Access Centre, Haldimand-Norfolk Senior Support Services).

ANALYSIS

- A greater proportion of residents in Haldimand and Norfolk counties combined were overweight or obese compared to Ontario residents between 2005 and 2008. In Figure 42, obesity rates are considered for the years 2005, 2007 and 2008 in Ontario and Haldimand and Norfolk counties combined. The percentage of residents in Haldimand and Norfolk counties combined who reported they were overweight or obese increased by 10.6% from 53.4% in 2005 to 64.0% in 2008. During the same period, the percentage of Ontario residents who were overweight or obese increased just 1.1%, from 48.6% in 2005 to 49.7% in 2008.

3Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.
Figure 42: Overweight or Obese, 18 Years and Older, Haldimand and Norfolk Counties Combined and Ontario, 2005, 2007, 2008

Data Source: Canadian Community Health Survey 2005, 2007 and 2008. Statistics Canada, Share File, Knowledge Management and Reporting Branch, Ontario MOHLTC. Data Notes: Annual estimates were used because these estimates present the most up-to-date population health characteristics and are updated yearly. Derived Variable. * High sampling variability, interpret with caution. ** High sampling variability data is not releasable. Percentages are rounded up. Not stated includes don’t know, refuse, and not stated. Non-Applicable was excluded. Note: On average there is about a 2% difference between the estimated produced between the Ontario Share File and the Master File used by Statistics Canada. The Ontario Share File has fewer respondents than the Master File. In Order to be included in the Share File, Ontario residents must consent to sharing their information. Body mass index (BMI) is calculated by dividing the respondent’s body weight (in kilograms) by their height (in metres) squared. According to the World Health Organization (WHO) and Health Canada guidelines, the index for body weight classification is: less than 18.50 (underweight); 18.50 to 24.99 (normal weight); 25.00 to 29.99 (overweight); 30.00 to 34.99 (obese, class I); 35.00 to 39.99 (obese, class II); 40.00 or greater (obese, class III).

Among youth aged 12 to 17 in 2007, almost three-quarters (74.3% CI ± 20.5) were neither obese nor over weight. This was slightly higher than Ontario youth where seven out of 10 (71.7%, CI ± 3.1) were neither obese nor overweight (Haldimand-Norfolk Health Unit, 2009). The data for Haldimand and Norfolk counties combined has a very wide confidence interval range and overlaps with Ontario rates. This data is highly variable and should be interpreted with caution.
HEALTH BEHAVIOUR PROFILE

The Health Behaviour Profile chapter reports on several health behaviours that are known to impact on health including healthy eating, mental health, physical activity, substance and alcohol misuse and tobacco use and exposure. Data reported in this section is from national and Ontario-level health and behaviour survey data and emergency visits, hospital separations and mortality rates (mental health). This latter data uses age-standardized rates to compare rates in Haldimand and Norfolk counties combined with Ontario rates. For a definition of age-standardized rates, please see the Methodology Chapter, page 7.

KEY FINDINGS

- The percentage of residents in Haldimand and Norfolk counties combined who reported consuming five or more fruits and vegetables each day declined slightly in Haldimand and Norfolk counties combined, from almost six out of 10 (58.3%) in 2005 to five out of 10 (50.6%) in 2008 (Figure 43).
- The age-standardized rate for emergency departments visits for suicide attempts (reported for 2003-2009) and completed suicides (reported for 2000-2004) (Figure 44), was highly variable throughout the periods of study.
- Considered as an average across the period (2000-2004), the average age-standardized rate of completed suicides in Haldimand and Norfolk counties combined was slightly higher than in Ontario (8.5 vs 7.7 per 100,000) (Figure 44), with a greater difference among males in Haldimand and Norfolk compared to Ontario (13.4 vs 11.8 per 100,000) (Figure 44).
- Like youth across Ontario, between 2003 and 2009 Haldimand and Norfolk youth 15-19 made the most frequent visits to hospital emergency departments for suicide attempts, followed by those aged 35-39 and 40-44 year olds (Haldimand-Norfolk Health Unit, 2011).
- In 2007, residents of Haldimand and Norfolk counties reported consistently lower levels of life and work stress and higher levels of good mental health as Ontario residents.
- Males 20 years and older in Haldimand and Norfolk counties combined appeared to be twice as likely as Ontario males 20 years and older to have suicidal thoughts in their lifetime in 2009 (18.5% CI ± 9.8 vs 6.7% CI ± 0.8) (Figure 47). Confidence intervals did not overlap, however caution is urged when interpreting the data for Haldimand and Norfolk counties combined; there was high sampling variability with this data.
- Using data from the Canadian Community Health Survey between 2005 and 2008, about one-quarter (27.3% CI ± 6.3) of Haldimand and Norfolk counties combined residents 12 years and over reported being “active”, about two out of 10 (21.6% CI ± 5.2) reported being “moderately active” and about half (50.2% CI ± 6.8) were “inactive” (Figure 48-Figure 50). This data had a high level of variability but was generally consistent with rates reported by Ontario residents aged 12 and over for the same time period.
- Over the three years reported, about four out of 10 residents of Haldimand and Norfolk counties combined reported heavy drinking in the previous 12 months (2005 - 41.2% CI ± 4.3; 2007 - 43.2% CI ± 6.2; 2008 - 43.7% CI ± 8.1) (Figure 51).
- About seven out of 10 (70.3% CI ± 5.8) residents in Haldimand and Norfolk counties combined reported in 2007 that they were a regular drinker in the prior 12 months. Among Ontario residents, six out of 10 (61.5% CI ± 1.1) reported the same.
- In 2007, two-thirds of youth (64.0% CI ± 16.8) aged 12-18 in Haldimand and Norfolk counties combined reported drinking in the past 12 months compared to four out of 10 Ontario youth (41.4% CI ± 3.1). This difference was statistically significant.
- In 2007, almost one-quarter (24.7% CI ± 15.1) of youth aged 12-18 in Haldimand and Norfolk counties combined reported smoking daily or occasionally while in Ontario less than one in 10 youth (9.5% CI ± 1.6) reported the same (Figure 53). This data had a high level of variability and should be interpreted with caution.

*Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.*
FOR MORE INFORMATION

- Children’s Mental Health Ontario (2007). Evidence Based Practice Research Reports. Available at www.kidsmentalhealth.ca/resources/evidence_based_practices.php#Suicide%20Prevention121
• Ministry of Health Promotion and Sport, Eat Right Ontario. Available at www.eatrightontario.ca/en/HealthyEating.aspx
• Public Health Agency of Canada (2009), Canadian Heart Health Strategy and Action Plan. Available at www.chhs.ca/en
HEALTHY EATING

Healthy eating was a key factor in healthy growth and development and maintaining a healthy weight as well as several leading causes of death including circulatory diseases (such as high blood pressure, ischemic heart disease) and neoplasms (such as cancers). Vegetable and fruit intake is one indicator for healthy eating status. The current recommendation (2009) is for adults to consume at least seven servings of vegetables and fruit daily. However, since the CCHS (2007) used the prior recommendation of at least five servings of vegetables and fruit daily, this was the standard used in this report.

Figure 43 presents the percentage of residents 12 years and older who reported consuming fewer than five daily servings of fruits and vegetables in Haldimand and Norfolk counties combined and Ontario for the years 2005, 2007 and 2008. The proportion of Haldimand and Norfolk counties residents who reported eating fewer than five daily servings of vegetables and fruit a day appears to have decreased in this time, suggesting that more Haldimand and Norfolk counties residents are eating more than five servings of fruit and vegetables daily. At the same time, the proportion of Ontario residents who eat fewer than five servings of fruit and vegetables a day has increased, suggesting that more Ontario residents appear to be eating less than five servings a day. However, the population samples for Haldimand and Norfolk counties combined were relatively small, resulting in a higher degree of uncertainty about the data. As such, the confidence interval around the healthy eating estimate for Haldimand and Norfolk counties combined is wide and overlaps with the confidence interval for Ontario’s rates. This indicates a possibility that the estimate for Haldimand and Norfolk counties combined is not actually different from Ontario, but there is not a large enough sample in Haldimand and Norfolk counties combined to be certain.

Data already presented in this report noted that circulatory diseases and neoplasms were the leading causes of death between 2003 and 2005 (Figure 24) and suggests that the proportion of individuals who are overweight or obese has increased among residents in Haldimand and Norfolk counties combined between 2005 and 2008 (Figure 42). These two issues are closely related to healthy eating and should be considered along with data on access to healthy food to better understand reported rates for healthy eating rates. Addressing healthy eating, along with other key health behaviours, will be important to impact on key causes of mortality in Haldimand and Norfolk counties.

ANALYSIS

- The percentage of residents in Haldimand and Norfolk counties combined who reported consuming fewer than five daily servings of fruits and vegetables declined slightly in Haldimand and Norfolk counties combined, from almost six out of 10 (58.3%) in 2005 to five out of 10 (50.6%) in 2008. This means that the proportion of Haldimand and Norfolk counties combined residents who reported eating at least five or more servings of fruits and vegetables daily increased between 2005 and 2008.
- Among Ontario residents’ reported consumption decreased slightly. The proportion of Ontario residents who reported eating fewer than five daily servings of fruits and vegetables increased from 53.8% in 2005 to 56.2% in 2008 (Figure 43), meaning that more Ontario residents were eating less than five daily servings.
- The population samples for Haldimand and Norfolk counties combined were relatively small, resulting in a higher degree of uncertainty about the data. The confidence interval range shown in Figure 43 illustrates that the healthy eating estimate for Haldimand and Norfolk counties combined is wide and overlaps with the confidence interval for Ontario’s rates.

Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.
Figure 43: Consumed Fewer than Five Daily Servings of Fruits and Vegetables, 12 Years and Older, Haldimand and Norfolk Counties Combines and Ontario, 2005, 2007, 2008

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Data Source: Canadian Community Health Survey 2005, 2007 and 2008. Statistics Canada, Share File, Knowledge Management and Reporting Branch, Ontario MOHLTC. Data Notes: Annual estimates were used because these estimates present the most up-to-date population health characteristics and are updated yearly. Derived Variable. High sampling variability, interpret with caution. Percentages are rounded up. Not stated includes don’t know, refuse, and not stated. Note: On average there is about a 2% difference between the estimated produced between the Ontario Share File and the Master File used by Statistics Canada. The Ontario Share File has fewer respondents than the Master File. In order to be included in the Share File, Ontario residents must consent to sharing their information. *Data is shown including confidence interval range, a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls.

Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.
MENTAL HEALTH

Mental illness has been recognized as a significant and common health issue at every level, yet social stigma remains a tremendous challenge. The World Health Organization reported in 2004 that one in four people will experience a mental health illness in their lifetime and that five of the 10 leading causes of disability and premature death worldwide are psychiatric conditions (World Health Organization, 2004). One in every five Canadians suffered from a serious mental health issue in 2010, but fewer than 30% sought professional help (Ministry of Health and Long Term Care, 2010).

In 2009, the Ministry of Health and Long Term Care produced a 10 year strategy framework for addressing Mental Health and Addictions called, “Every Door is a Right Door (Ministry of Health and Long Term Care, 2009).” The Hamilton Niagara Brant Haldimand Norfolk Local Health Integration Network’s new Integrated Health Services Plan released in December 2009 identified mental health and addictions as a priority area for 2011 - 2012. (Hamilton Niagara Haldimand Brant Local Health Integration Network, 2009) As efforts to decrease the stigma associated with mental health illness, the trend to seek services was projected to increase (Ministry of Health and Long Term Care, 2009). At present, community services are not positioned for proportional service expansion.

In this report, mental health has been considered by visits to the emergency departments for suicide attempts, incidence of suicide, and self-reported suicidal thoughts. Because of the relatively uncommon nature of suicide and small population of Haldimand and Norfolk counties, understanding rates of suicide and suicidal thoughts was challenging. Incidence of suicide and visits to hospital emergency departments are both reported using age-standardized rates to compare the occurrences in Haldimand and Norfolk counties combined with Ontario. A definition of age-standardized rates is included in Methodology Chapter, page 7. Due to small cell counts, confidence intervals (CI) are reported.

The incidence of visits to emergency departments for suicide attempts (reported for 2003-2009) and completed suicides (reported for 2000-2004), was highly variable throughout the periods of study. Both males and females had similar age-standardized rates of emergency department visits as males and females in Ontario. Like youth in Ontario, Haldimand and Norfolk youth 15-19 made the most frequent visits to hospital emergency departments for suicide attempts, followed by those aged 35-39 and 40-44 year olds. Considered as an average across the period (2000-2004), the age-standardized rate of completed suicides in Haldimand and Norfolk counties combined was slightly higher than in Ontario (8.5 vs 7.7 per 100,000 population), with a greater difference among males in Haldimand and Norfolk and Ontario (13.5 vs 12.0 per 100,000).

Self-reported assessments of suicidal thoughts, life and work stress, and mental health, were also considered using the results of the 2007 CCHS. With the exception of suicidal thoughts, residents of Haldimand and Norfolk counties reported consistently lower levels of life and work stress and higher levels of good mental health as Ontario residents. When considered by sex, males 20 years and older in Haldimand and Norfolk counties combined appeared to be twice as likely Ontario males 20 years and older to have suicidal thoughts in their lifetime (18.5% CI ± 9.8 vs 6.7% CI ± 0.8). This is the only occasion where the confidence intervals reported in this section did not overlap. Caution is urged when interpreting the data for Haldimand and Norfolk counties combined; there was high sampling variability with this data.

There is still much to learn about mental health in Haldimand County and Norfolk County. Even with the limitations outlined in the interpretation of this data, the issue of suicide is one of concern in Haldimand and Norfolk. Further investigation of this issue over a longer timeframe and with timeframes that are consistent between the various types of data presented, are needed. Moreover data from additional sources with larger population sizes is required to better understand what is happening in Haldimand County and Norfolk County with regard to mental health. Recent job losses in the counties may have increased rates of stress and related mental health illness. Service utilization rates among services for adults and the nature of potential waiting lists for services are not known. The Ministry of Health and Long Term Care has reported that Canadians with significant mental health issues die 15 to 20 years...
sooner than the general public (Ministry of Health and Long Term Care, 2009). Individuals with mental health illness often suffer from several co-morbid conditions including substance abuse and alcohol misuse, tobacco use and chronic diseases, which increases pressure on the health treatment system (Ministry of Health and Long Term Care, 2009). The rate of incidence of co-morbid conditions in Haldimand County and Norfolk County is not known.

There has been an increase in suicide prevention training in school communities across Haldimand and Norfolk. The lack of acute, tertiary or specialized hospital beds to support individuals with mental illness in the counties of Haldimand and Norfolk is a concern. Organizations and networks working to address this issue include Haldimand-Norfolk Resource Education And Counselling and Help (REACH), Community Addiction and Mental Health Services Treatment and Counselling, the Suicide Prevention Network of Haldimand-Norfolk, Canadian Mental Health Association – Haldimand-Norfolk Branch, Mental Health and Addiction NETWORK of Haldimand-Norfolk, Crisis Assessment and Support Team, Haldimand Health and Wellness Program and the Haldimand-Norfolk Health Unit.

ANALYSIS

• Age-standardized rates of individuals who commit suicide in Haldimand and Norfolk counties combined were highly variable compared to Ontario. Because of the relatively uncommon nature of suicide and small population of Haldimand and Norfolk counties, understanding rates of suicide and suicidal thoughts can be challenging.
• Considered by age-standardized rate, the average number of emergency department visits for 0-19 year olds who attempted suicide between 2003 and 2009 was the same (0.8 per 1,000) in Haldimand and Norfolk counties combined and Ontario (Haldimand-Norfolk Health Unit, 2011).
• On average, and using age-standardized rates per 1,000 for the period 2003-2009, a higher rate of females of all ages in both Haldimand and Norfolk counties combined and Ontario visited hospital emergency departments for suicide attempts (1.1 and 1.2 per 1,000 respectively) compared to males (0.8 and 0.9 per 1,000 respectively) (Haldimand-Norfolk Health Unit, 2011).
• In both Haldimand and Norfolk counties combined and Ontario, out of all age groups, youth aged 15-19 made the most frequent visits to emergency departments for attempted suicide between 2003 and 2009. The second most frequent age group was 35-39 followed by 40-44 year olds. (Haldimand-Norfolk Health Unit, 2011).
• The age-standardized rate of completed suicide in Haldimand and Norfolk counties combined and Ontario is presented in Figure 44 for the years 2000-2005. During this time, the average age-standardized rate of completed suicides in Haldimand and Norfolk counties combined was slightly higher than in Ontario (8.5 vs 7.7 per 100,000).
• Suicide rates in Haldimand and Norfolk counties combined fluctuated widely. Because of the narrow timeframe and low incidence, trends are difficult to identify, however it appears that suicide rates in Haldimand and Norfolk counties combined are generally consistent with those reported across Ontario.

Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.
Figure 44: Completed Suicides, Haldimand and Norfolk Counties Combined and Ontario, 2000-2005

Figure 45 illustrates that among female residents of Haldimand and Norfolk counties combined; there was wide variability in age standardized rates of committed suicide between 2000 and 2005. Considered as an average age standardized rate for the period, females in Haldimand and Norfolk counties combined and in Ontario had a very similar age standardized rate of completed suicide (3.4 vs 3.6 per 100,000 population respectively).

Data Sources: (1) IntelliHealth, Vital Statistics. Data Notes: ICD-10-CA: X60-X84999, Y 87.0. Includes Ontario residents with health card number. Data from 2000-2004 was extracted April 1, 2009. Data for 2005 was extracted January 4, 2010. (2) IntelliHealth, Population Estimates. Data Notes: Data was extracted April 1, 2009. Data Notes: Mortality rates are age-standardized to the 1991 Canadian Population.
Figure 45: Completed Suicide by Females, Haldimand and Norfolk Counties Combined and Ontario, 2000-2005

Figure 46 shows that male residents of Haldimand and Norfolk counties combined also had a wide fluctuation in age standardized completed suicide rates while Ontario rates remained relatively stable between 2000 and 2005. Considered as an average age-standardized rate for the period, more male residents of Haldimand and Norfolk counties combined completed suicide (13.4 per 100,000 population) compared to Ontario males (11.8 per 100,000 population).
The Canadian Community Health Survey (2007) asked respondents if they had seriously contemplated suicide or taking their own life in their lifetime. Due to small cell counts, confidence intervals (CI) are reported in Figure 47. These survey results showed:

- About one in 10 (11.8% CI ± 4.9) residents of Haldimand and Norfolk counties combined aged 15 years and older reported they had had suicidal thoughts in their lifetime. Fewer Ontario residents aged 15 years and older (7.5% CI ± 0.5) reported having suicidal thoughts in their lifetime. Caution is urged when interpreting the data for Haldimand and Norfolk counties combined; there was high sampling variability with this data (Haldimand-Norfolk Health Unit, 2009).
- Among males aged 15 years and older in Haldimand and Norfolk counties combined, a higher proportion (16.9% CI ± 9.1) reported having suicidal thoughts than females (6.3% CI ±3.9), while in Ontario more slightly more females (8.5% CI ± 0.8) than males (6.5 (CI ± 0.8) reported the same. Caution is urged when interpreting the data for Haldimand and Norfolk counties combined; there was there was high sampling variability with this data (Haldimand-Norfolk Health Unit, 2006).

Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.
Figure 47: Suicidal Thoughts, Total and by Sex, 15 Years and Older, Haldimand and Norfolk Counties Combined and Ontario, 2007*

Data Source: Canadian Community Health Survey 2007, Statistics Canada, Share File, Knowledge Management and Reporting Branch, Ontario MOHLTC Data Notes. * High sampling variability, interpret with caution. Non-applicable was excluded. ‘Suicidal thoughts’ is measured by if the person has ever seriously committed suicide or taken their own life in the past 12 months. Due to small cell counts, the data for H-N was not releasable, so suicidal thoughts in a lifetime was calculated. Data Note: Data is shown including confidence interval range, a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls.

- The question of suicidal thoughts was also reported for adults aged 20 and older in the CCHS. Similar patterns emerged among those aged 20 years and older as those 15 years and older: slightly more residents in Haldimand and Norfolk counties combined (12.5% CI ± 5.3) reported having suicidal thoughts in their lifetime than Ontario residents 20 years and older (7.6% CI ± 0.6). Almost two out of 10 males aged 20 and older in Haldimand and Norfolk counties combined (18.5% CI ± 9.8) reported having suicidal thoughts compared to 6.7% (CI ± 0.8) of males in Ontario. It was not possible to report the rate for females 20 years and older due to small cell counts. Caution is urged when interpreting the data for Haldimand and Norfolk counties combined; there was high sampling variability with this data (Haldimand-Norfolk Health Unit, 2011).

- The CCHS also included data on self-reported life stress, work stress, and mental health. Considered by these variables, residents of Haldimand and Norfolk counties reported consistently lower levels of life and work stress and higher levels of good mental health as Ontario residents. However, confidence intervals overlapped for all of the reported data. The population samples for Haldimand and Norfolk counties combined were relatively small, resulting in a higher degree of uncertainty about the data. As such, the confidence interval around the self-reported levels of life and work stress and good mental health for Haldimand and Norfolk counties combined is wide, and overlaps with the confidence interval for Ontario’s rates. This indicates a possibility that the estimate for Haldimand and Norfolk counties combined is not actually different from Ontario, but there is not a large enough sample in Haldimand and Norfolk counties combined to be certain. Caution is urged when interpreting the data for Haldimand and Norfolk counties combined; there was high sampling variability with this data (Haldimand-Norfolk Health Unit, 2009).

Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.
PHYSICAL ACTIVITY

According to the World Health Organization, physical inactivity is one of the five leading global risk factors for mortality and is estimated to cause 2 million deaths per year. Physical inactivity is estimated to cause between one-fifth and one-quarter of breast cancers and colon cancers, 27% of diabetes and three out of 10 incidences of ischemic heart disease (World Health Organization, 2009). In Canada, about half of Canadian males (54.5%) and under half of Canadian females (46.8%) 12 years and over reported that they were being physically active or moderately active during their leisure time in 2008 (Statistics Canada, 2010). The Chief Medical Officer of Health Report (2004) reported that over half of Ontarians were classified as “inactive” in 2003 (Chief Medical Officer of Health, 2004).

Physical activity is clearly an issue of concern in the counties of Haldimand and Norfolk as well. Physical activity rates were reported in Figure 48, Figure 49 and Figure 50 using the Canadian Community Health Survey for 2005, 2007 and 2008. Reported levels of physical activity among residents of Haldimand and Norfolk counties combined aged 12 and older were generally consistent with rates reported for Ontario residents aged 12 and over for the same time period, and showed little fluctuation. This data showed that similar to their counterparts in Ontario, among residents aged 12 and over in Haldimand and Norfolk counties combined in 2008:

- About one-quarter were “active” (27.3% CI ± 6.3);
- About two out of 10 were “moderately active” (21.6% CI ± 5.2);
- About half were “inactive” (50.2% CI ± 6.8).

However, data for physical activity is a derived variable, and because of the small population of Haldimand-Norfolk, sample sizes were small resulting in a higher level of data variability. Confidence intervals were calculated and showed wide intervals that overlap with the confidence interval for Ontario’s rates. This indicates a possibility that the estimate for Haldimand and Norfolk counties combined is not actually different from Ontario, but there is not a large enough sample in Haldimand and Norfolk counties combined to be certain. Caution is urged when interpreting the data for Haldimand and Norfolk counties combined as a result of high sampling variability with this data.

To best understand the issue of physical activity, more information is required. More reliable data (with larger population counts) is needed to hone in on the exact nature of the problem and determine a population of focus. Rates of physical activity by different sex, age groups and communities are needed. Understanding the nature and availability of physical activity opportunities, and potential barriers to usage, is also important.

There are many groups and organizations addressing physical activity in Haldimand and Norfolk. Organizations and groups working on the issue include: Pathways for People, Caledonia on the Move, both municipal counties’ Parks and Recreation Departments, Haldimand Health & Wellness, Heart and Stroke Foundation of Ontario’s Stroke Prevention Program / Stroke Strategy, area school boards, Haldimand Abilities Centre, Haldimand-Norfolk Health Unit, Norfolk Kidsport / Canadian Tire Jump Start and the South West Norfolk Youth Study.

ANALYSIS

- Physical activity rates are reported for the years 2005, 2007 and 2008 in Figure 48, Figure 49 and Figure 50 for residents of Haldimand County and Norfolk counties combined 12 years and older who reported being active, moderately active or inactive in leisure activities (outside of work or school) during the past three months. The rates are compared to those reported by Ontario residents 12 years and older for the same time period. Confidence intervals are reported for each level of activity (active, moderate and inactive) because of the small sample sizes and high level of variability in the data.
- Figure 48 shows results for residents of Haldimand and Norfolk counties combined and Ontario residents 12 years and older who reported having an “active” level of physical activity in the CCHS. With little variation during the time period, rates of those 12 years and older who reported an “active” level of physical activity
were similar, about one-quarter, in both Haldimand and Norfolk counties combined and Ontario. Using confidence intervals, there is overlap between the rates reported in Haldimand and Norfolk counties combined (2005 – 26.8% CI ± 3.8; 2007 - 24.7% CI ± 6.3; 2008 - 27.3% CI ± 6.3) and Ontario (2005 – 27.6% CI ± 0.7; 2007 – 25.4% CI ± 0.9; 2008 – 25.0% CI ± 0.9) meaning that there is a higher degree of uncertainty about the data.

Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.
Figure 48: Active Participation in Leisure Time Physical Activity, 12 Years and Older, Haldimand and Norfolk Counties Combined and Ontario, 2005, 2007, 2008

<table>
<thead>
<tr>
<th>Year</th>
<th>Haldimand &amp; Norfolk</th>
<th>Ontario</th>
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<tbody>
<tr>
<td>2005</td>
<td>26.8%</td>
<td>27.6%</td>
</tr>
<tr>
<td>2007</td>
<td>24.7%</td>
<td>25.4%</td>
</tr>
<tr>
<td>2008</td>
<td>21.6%</td>
<td>25.9%</td>
</tr>
</tbody>
</table>

Data Source: Canadian Community Health Survey 2005, 2007 and 2008. Statistics Canada, Share File, Knowledge Management and Reporting Branch, Ontario MOHLTC. Data Notes: Annual estimates were used because these estimates present the most up-to-date population health characteristics and are updated yearly. Derived Variable. High sampling variability; interpret with caution. High sampling variability data is not releasable. NC: Not able to compute. Percentages are rounded up. Not stated includes don’t know, refuse, and not stated. Note: The Physical Activity Index is calculated as the sum of the average daily energy expenditures of all leisure time activities. Individuals are classified as follows: ≥3.0kcal/kg/day or more = physically active, 1.5-2.9kcal/kg/day = moderately active; less than 1.5kcal/day = inactive. Leisure-time physical activity refers to any type of physical activity done outside of work and school. On average there is about a 2% difference between the estimated produced between the Ontario Share File and the Master File used by Statistics Canada. The Ontario Share File has fewer respondents than the Master File. In order to be included in the Share File, Ontario residents must consent to sharing their information. Data is shown including confidence interval range, a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls.

- A slightly lower percentage of residents 12 and over in Haldimand and Norfolk counties combined and in Ontario reported being moderately active in 2005, 2007 and 2008. As illustrated in Figure 49, about two out of 10 residents 12 years and older in both Haldimand and Norfolk counties combined (2005 – 24.3% CI ± 4.1; 2007 – 22.1% CI ± 4.4; 2008 – 21.6% CI ± 5.2) and Ontario (2005 – 24.1% CI ± 0.6 CI ±; 2007 – 23.2% CI ± 0.9; 2008 – 23.7% ± 1.0) reported being moderately physically active. Using confidence intervals, there is overlap between the rates reported in Haldimand and Norfolk counties combined and Ontario meaning that there is a higher degree of uncertainty about the data.
Figure 49: Moderately Active Participation in Leisure Time Physical Activity, 12 Years and older, Haldimand and Norfolk Counties Combined and Ontario, 2005, 2007, 2008

Data Source: Canadian Community Health Survey 2005, 2007 and 2008. Statistics Canada, Share File, Knowledge Management and Reporting Branch, Ontario MOHLTC. Data Notes: Annual estimates were used because these estimates present the most up-to-date population health characteristics and are updated yearly. Derived Variable. High sampling variability, interpret with caution. High sampling variability data is not releasable. NC: Not able to compute. Percentages are rounded up. Not stated includes don’t know, refuse, and not stated. Note: The Physical Activity Index is calculated as the sum of the average daily energy expenditures of all leisure time activities. Individuals are classified as follows: 3.0kcal/kg/day or more=physical active, 1.5-2.9kcal/kg/day=moderately active; less than 1.5kcal/day=inactive. Leisure-time physical activity refers to any type of physical activity done outside of work and school. On average there is about a 2% difference between the estimated produced between the Ontario Share File and the Master File used by Statistics Canada. The Ontario Share File has fewer respondents than the Master File. In order to be included in the Share File, Ontario residents must consent to sharing their information. Data is shown including confidence interval range, a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls.

- The reported rates of inactivity levels for 2005, 2007 and 2008 shown in Figure 50 increased slightly in both Haldimand and Norfolk counties combined and Ontario. Between 2005 and 2008, rates of residents 12 years and older in Haldimand and Norfolk counties combined who were inactive increased from 45.9% (CI ± 4.8) to about half (52.1% CI ± 6.7) in 2007 and 2008 (50.2% CI ± 6.8). In Ontario, the rate increased from 46.0% (CI ± 0.8) to half (49.0% CI ± 1.0) in 2007 and 2008 (49.5% CI ± 1.1). Using confidence intervals, there is overlap between the rates reported in Haldimand and Norfolk counties combined and Ontario meaning that there is a higher degree of uncertainty about the data.
Figure 50: Inactive Level of Participation in Leisure Time Physical Activity, 12 Years and Older, Haldimand and Norfolk Counties Combined and Ontario, 2005, 2007, 2008

Data Source: Canadian Community Health Survey 2005, 2007 and 2008. Statistics Canada, Share File, Knowledge Management and Reporting Branch, Ontario MOHLTC. Data Notes: Annual estimates were used because these estimates present the most up-to-date population health characteristics and are updated yearly. Derived Variable. High sampling variability, interpret with caution. High sampling variability data is not releasable. NC: Not able to compute. Percentages are rounded up. Not stated includes don’t know, refuse, and not stated. Note: The Physical Activity Index is calculated as the sum of the average daily energy expenditures of all leisure time activities. Individuals are classified as follows: 3.0kcal/kg/day or more=physical active, 1.5-2.9kcal/kg/day=moderately active; less than 1.5kcal/day=inactive. Leisure-time physical activity refers to any type of physical activity done outside of work and school. On average there is about a 2% difference between the estimated produced between the Ontario Share File and the Master File used by Statistics Canada. The Ontario Share File has fewer respondents than the Master File. In order to be included in the Share File, Ontario residents must consent to sharing their information. Data is shown including confidence interval range, a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls.
SUBSTANCE AND ALCOHOL MISUSE

The World Health Organization (WHO) rated alcohol use as the second most important risk factor for disease and disability in high income countries measured by disability-adjusted life years. Alcohol use has been linked to over 60 different medical conditions, placing a heavy burden on public health (World Health Organization, 2009). In Canada, the 2005 Canadian Addiction Survey reported that almost eight out of 10 Canadians (79.3%) aged 15 and older consumed alcohol in the past year, and that a quarter of these (25.5%) reported binge drinking (having five or more standard drinks at one sitting in the past month) (Haldimand-Norfolk Health Unit, 2008).

Substance use and alcohol misuse are reported in this section using data from the Canadian Community Health Survey for 2005, 2007 and 2008 and the Brant County Health Unit and Haldimand-Norfolk Health Unit Student Health Survey (focus on alcohol, cannabis and other drug use). Figure 51 illustrated that in 2005, 2007 and 2008, the proportion of residents aged 20 and older in Haldimand and Norfolk counties combined who reported heavy drinking (five or more drinks on at least one occasion in the prior 12 months) was higher compared to Ontario. In this analysis, about four out of 10 residents of Haldimand and Norfolk counties combined reported heavy drinking (2005 - 41.2% CI ± 4.3; 2007 - 43.2% CI ± 6.2; 2008 - 43.7% CI ± 8.1,) while the rate decreased in Ontario from about four out of 10 in 2005 (2005 - 36.0% CI ± 0.7) to three out of 10 in 2007 (34.6% CI ± 1.1) and 2008 (33.9% CI ± 1.0). The rates for individuals 20 years and older who reported being “regular drinkers” was also higher in Haldimand and Norfolk counties combined compared to Ontario in 2007. In Figure 52, seven out of 10 (70.3% CI ± 5.8) residents in Haldimand and Norfolk counties combined reported that they were a regular drinker in the prior 12 months while among Ontario residents, six out of 10 (61.5% CI ± 1.1) reported the same.

Data from two HNHU reports underscore some important areas of concern with respect to alcohol misuse. The Haldimand-Norfolk Health Unit report on Chronic Disease Prevention (2009) used 2007 CCHS data and found that almost two-thirds (64.0% CI ± 16.8) of youth 12-18 in Haldimand and Norfolk counties combined reported drinking in the past 12 months, while four out of 10 (41.4% CI ± 3.1) of youth in Ontario reported the same. This difference was statistically significant (Haldimand-Norfolk Health Unit, 2009). Likewise, the HNHU Chronic Disease Prevention report used 2005 CCHS data to report on binge drinking (having five or more standard drinks at one sitting in the past month). This report showed that among persons 20 years and older who reported drinking alcohol in the past 12 months, a significantly higher proportion of residents in Haldimand and Norfolk counties combined (53.2% CI ± 5.4%) residents compared to their Ontario counterparts (45.2% CI ± 0.9%) reported binge drinking, and this was particularly pronounced among females in both Haldimand and Norfolk and Ontario. In 2005 when males and females in Haldimand and Norfolk counties combined were compared, a significantly higher proportion of males (64.3% ± 7.9%) than females (40.7% ± 6.9%) reported binge drinking (Haldimand-Norfolk Health Unit, 2008).

This data suggests that alcohol use in Haldimand and Norfolk among both adults and youth is a considerable problem, however more information is required. More up-to-date data, over a longer timeframe and using consistent indicators, will be important to understand the misuse of alcohol. Data on substance abuse is also needed. The small population of Haldimand and Norfolk will provide a challenge in using provincial and national level surveys to understand substance abuse. Local or regional surveys or other data collection tools may provide a more comprehensive understanding of the experiences of Haldimand and Norfolk residents with respect to this important issue.

Substance misuse prevention programs in Haldimand County and Norfolk County offer a broad scope of community and school-based awareness and skill-building initiatives, as well as advocacy for healthy public policies. Programming is based on harm reduction approaches that aim to minimize harms to individuals, groups and society caused by certain conditions involving alcohol and/or other drugs. Organizations and groups addressing alcohol and substance misuse in Haldimand and Norfolk counties include the Ontario Provincial Police, the Ministry of Transportation, local school boards, Community Addiction and Mental Health Services on Haldimand and Norfolk, Norfolk General Hospital, Haldimand-Norfolk REACH, the Children’s Aid Society of Haldimand and Norfolk and the Centre for Addiction and Mental Health.
ANALYSIS

- Figure 52 used CCHS data for 2005, 2007 and 2008 to compare the proportion of residents aged 20 and older in Haldimand and Norfolk counties combined and Ontario who reported “heavy drinking” in the prior 12 months. Heavy drinking is defined as five or more drinks on more than one occasion, 12 or more times a year in the prior 12 months. Between 2005 and 2008, four out of 10 residents of Haldimand and Norfolk counties combined reported heavy drinking (2005 - 41.2% CI ± 4.3; 2007 - 43.2% CI ± 6.2; 2008 - 43.7% CI ± 8.1,) while in Ontario, the rate decreased slightly from four out of 10 (36.0% CI ± 0.7) in 2005 to three out of 10 (33.9% CI ± 1.0) in 2008.
Considered only for 2007, Figure 52 illustrates that seven out of 10 (70.3% CI ± 5.8) residents in Haldimand and Norfolk counties combined reported that they were a regular drinker in the prior 12 months in 2007. Among Ontario residents, six out of 10 (61.5% CI ± 1.1) reported the same.
Among youth aged 12-18 in Haldimand and Norfolk counties combined, almost two-thirds (64.0% CI ± 16.8) reported drinking in the past 12 months in 2007. This was substantially higher than that reported by youth aged 12-18 in Ontario. Only four out of 10 (41.4% CI ± 3.1) reported drinking in the past 12 months (Haldimand-Norfolk Health Unit, 2009).

According to the CCHS 2005:
- Of the proportion of persons age 20 and older who reported drinking alcohol in the past 12 months, a significantly higher proportion of residents in Haldimand and Norfolk counties combined (53.2% CI ± 5.4%) reported binge drinking (having five or more standard drinks at one sitting in the past month) compared to their Ontario counterparts (45.2% CI ± 0.9%).
- A significantly higher proportion of females in Haldimand and Norfolk counties combined (40.7% CI ± 6.9%) reported having at least one occasion of binge drinking in the past year compared to Ontario (32.6% CI ± 1.1%).
- A significantly higher proportion of males in Haldimand and Norfolk counties combined (64.3% CI ± 7.9%) than females in Haldimand and Norfolk counties combined reported binge drinking (40.7% CI ± 6.9%) (Haldimand-Norfolk Health Unit, 2008).

In 2003, a survey of students in Haldimand, Norfolk and Brant found that:
- 38% of students in Grades 5 and 7 drank alcohol in the past 12 months.
- 41% of students in Grades 9 and 11 drank alcohol in the past four weeks, of which nearly 29% drank on a weekly basis.
- 40% of alcohol users in Grade 11 reported binge drinking during the past four weeks (i.e., drinking five or more drinks on one occasion) (Haldimand-Norfolk Health Unit, 2008).
TOBACCO USE AND EXPOSURE

Tobacco use is a key health indicator and a major lifestyle risk factor for all types of chronic diseases. The World Health Organization (WHO) rated tobacco use as the most important risk factor for disease and disability in high income countries when measured by disability adjusted life years. The same report noted, “For high-and middle-income countries, the most important risk factors are those associated with chronic diseases such as heart diseases and cancer. Tobacco is one of the leading risks for both: accounting for 11% of the disease burden and 18% of deaths in high-income countries (World Health Organization, 2009).” According to the Report on Cancer 2020 (2006), tobacco was the leading cause of cancer. Tobacco use has been associated with cancers of the lip, lung, pharynx, larynx, stomach, esophagus, pancreas, bladder and kidney, increases the risk of cervical, colorectal and possibly multiple myeloma, liver and breast cancer (Provincial Prevention and Screening Council, 2006).

While the smoking rate among adults aged 20 and older in Haldimand and Norfolk counties combined (26.8% CI ± 6.8) appeared to be fairly similar to that of Ontario (22.2% CI ± 0.9) in 2007, results from the Canadian Community Health Survey suggests that after decades of action to address tobacco use, youth smoking in Haldimand and Norfolk continues to be of concern. As illustrated in Figure 53, two out of 10 Haldimand and Norfolk youth (21.2% CI ± 11.7) aged 12-19 reported smoking daily or occasionally in 2005, and that the rate increased in 2007 to almost one-quarter (24.7% CI ± 15.1) while in Ontario the rates continued to decline from 10.6% (CI ± 1.1) in 2005 to 9.5% (CI ± 1.6) in 2007.

This potential increase, and the youth smoking rate at double the provincial rate in Haldimand and Norfolk, is alarming. However, the population samples for Haldimand and Norfolk counties combined were relatively small, resulting in a higher degree of uncertainty about the data. As such, the confidence interval around the tobacco use estimate for Haldimand and Norfolk counties combined overlaps with the confidence interval for Ontario’s rates. This indicates a possibility that the estimate for Haldimand and Norfolk counties combined is not actually different from Ontario, but there is not a large enough sample in Haldimand and Norfolk counties combined to be certain. The tobacco use rates require further investigation.

Tobacco use in Haldimand and Ontario remains a significant health issue. Tobacco use is a key risk factor in risk factor for chronic diseases (World Health Organization, 2009) including circulatory diseases and neoplasms (cancers), the leading causes of death in Haldimand and Norfolk counties combined. Continued action to address tobacco use, particularly among youth, is needed.

ANALYSIS

- According to the CCHS (2007), one-quarter (26.8% CI ± 6.8) of residents aged 20 and older in Haldimand and Norfolk counties combined smoked daily or occasionally compared to about two out of 10 (22.2% CI ± 0.9) Ontarians (Haldimand-Norfolk Health Unit, 2009).
- Data from the CCHS in 2005 and 2007 is illustrated in Figure 55 for youth aged 12-19 who reported smoking daily or occasionally. In 2005, two out of 10 (21.2% CI ± 11.7) youth in Haldimand and Norfolk counties combined reported being either daily or occasional smokers, while in Ontario just one out of 10 youth (10.6% CI ± 1.1) reported the same. In 2007, almost one-quarter (24.7% CI ± 15.1) of Haldimand and Norfolk counties combined youth reported smoking daily or occasionally, while in Ontario the rate declined to 9.5% (CI ± 1.6). While the rate of youth in Haldimand and Norfolk who reported smoking appears alarming, the data should be interpreted with caution given the wide confidence interval reported.

11Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.
12Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.
Figure 53: Daily or Occasional Smoking, Youth 12-19, Haldimand and Norfolk Counties Combined and Ontario, 2005, 2007*

Data Source: Canadian Community Health Survey 2005 and 2007. Statistics Canada, Share File, Knowledge Management and Reporting Branch, Ontario MOHLTC. Data Notes: For years 2008 and 2009 annual estimates were not released due to high sampling variability. Annual estimates were used because these estimates present the most up-to-date population health characteristics and are updated yearly. Derived Variable. High sampling variability, interpret with caution. Percentages are rounded up. Daily Smokers refers to those who reported smoking cigarettes every day. Occasional smokers refers to those who reported smoking cigarettes occasionally. This includes former daily smokers who now smoke occasionally. On average there is about a 2% difference between the estimated produced between the Ontario Share File and the Master File used by Statistics Canada. The Ontario Share File has fewer respondents than the Master File. In order to be included in the Share File, Ontario residents must consent to sharing their information. Moreover, since the sample is much smaller (12-19) it may be more sensitive to fluctuations in the estimates. Data is shown including confidence interval range, a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls.

- In 2007 nine out of 10 (93.4% CI ± 3.4%) households in Haldimand and Norfolk counties combined were smoke-free, which was only a slightly lower proportion than for households in Ontario (Haldimand-Norfolk Health Unit, 2009).
FACTORS AFFECTING HEALTH
FACTORS AFFECTING HEALTH

Factors affecting health, the social and economic conditions in which people are born, grow, live, work, and age, are called the social determinants of health. Since the mid 1980s, the understanding that these determinants of health are critical to the health and well-being of populations has grown and the determinants of health are now almost universally accepted by health systems across the world. (Wilkinson & Marmot, 2003). The Public Health Agency of Canada identified 12 key determinants of health in 2010 (Public Health Agency of Canada, 2010):

- Income and social status
- Social support networks
- Education and literacy
- Employment / working conditions
- Social environments
- Physical environments
- Personal health practices and coping skills
- Healthy child development
- Biology and genetic endowment
- Health services
- Gender
- Culture

For the purposes of this report, five factors affecting health are discussed:

- Housing
- Poverty
- Safety
- Sense of belonging
- Transportation

Data reported in this section are from a wide variety of sources - organizational utilization data, national census, enforcement agency occurrence data and national and local survey data.
KEY FINDINGS

- Between 2009 and 2010, about 100 women and their families used emergency housing available through Haldimand and Norfolk Women’s Services (Figure 54).
- The number of applications for social housing in Haldimand and Norfolk remained fairly stable between 2008 and 2010 (Figure 55).
- Among the types of applicants for social housing in Haldimand and Norfolk counties combined, the number of single individuals applying for social housing increased from 151 in 2008 to 167 in 2010 (Figure 55).
- Between 2008 and 2010 between 115 and 120 applicants were housed each year.
- Fewer private households in Haldimand County (5.5%) and Norfolk County (5.9%) reported incomes below the low income cut-offs (LICOs) using after tax income than in Ontario (11.1%) in 2006 (Figure 56).
- Considered by urban area, there was a wide range in low income households from 3.4% in Caledonia to 13.0% in Cayuga (Figure 57 and Figure 58).
- The Haldimand-Norfolk Health and Social Services Department Ontario Works caseload increased 44.0% between 2006 and 2010 (reported for the months January to October annually) (Figure 59).
- The overall number of primary offences reported to the OPP in Haldimand County (Figure 61) decreased by almost 10% (9.6%) between 2006 and 2010.
- The overall number of primary offences reported to the OPP in Norfolk County (Figure 63) fluctuated between 2006 and 2010 before ultimately increasing slightly from 20,827 to 20,867 in the five years.
- Considered by types of offences, the most significant decreases were violent offences in Haldimand County (Figure 63) which decreased 26.8% between 2006 and 2010, and property offences in Norfolk County (Figure 64) which decreased 13.2% for the same time period.
- The number of domestic offences reported to the OPP in Haldimand County (Figure 62) increased 20.0% between 2006 and 2010 and the number reported in Norfolk County increased by almost 60% (59.5%).
- The proportion of residents 12 years and older in Haldimand and Norfolk counties combined who reported having a strong sense of belonging increased between 2005 (63.2% CI ±4.7) and 2008 (75.2% CI ± 5.7) and in 2008 was higher than that reported in Ontario (65.1% CI ± 1.1) (Figure 66).
- The vast majority of respondents (92%) to the Haldimand-Norfolk Rural Transportation Initiative (H&N RTI) survey believed that a public transportation system is needed in Haldimand and Norfolk counties (Haldimand-Norfolk Health and Social Services Department, 2009).
- According to the H&N RTI survey, individuals who were students, retired, unemployed and other had the greatest difficulty travelling whenever they needed / wanted to (Figure 68).
- More than half of all respondents in all types of employment and education who responded to the H&N RTI survey reported a willingness to use public transportation if it was made available to them (Figure 70).
FOR MORE INFORMATION

- Child Nutrition Network of Haldimand-Norfolk [website]
- Haldimand-Norfolk Health and Social Services Department (2009). Public Transportation Systems in Haldimand County and Norfolk County Feasibility Study
- Haldimand-Norfolk Health and Social Services Department, Social Housing Division [website]
- Haldimand and Norfolk Rural Transportation Initiative (2008), Spinning Your Wheels Update. Available at [website]
- Salvation Army Family and Community Services (Dunnville) [website]
- United Way of Haldimand and Norfolk [website]
According to Humans Resources and Skills Development Canada, “A safe and comfortable place to live is fundamental to our sense of wellbeing. When housing is inadequate or unavailable, individual as well as community wellbeing may suffer (Human Resources and Skills Development Canada, 2011).” As the largest component of a household budget, housing is also recognized as an important factor in the financial security of Canadians (Human Resources and Skills Development Canada, 2011). Numerous studies show that the lack of quality housing and homelessness are “clear threats to the health of Canadians (Mikkonen & Raphael, 2010).”

Between 2009 and 2010, about 100 women and their families used emergency housing available through Haldimand-Norfolk Women’s Services (Figure 54). Illustrated in Figure 55, the number of applications for social housing remained fairly stable between 2008 and 2010. Among the types of applicants, the number of single individuals applying for social housing increased from 151 in 2008 to 167 in 2010. For the years 2008 – 2010, between 115 and 120 applicants were housed each year. Utilization of these services reflects a number of factors, including demand and available agency resources and should not be considered as a reflection of need.

There are a number of groups and organizations working to address affordable housing in the community including Haldimand-Norfolk Social Housing, Salvation Army Family and Community Services (Dunnville office) and Haldimand and Norfolk Women’s Services. The Haldimand-Norfolk Health Unit recently prepared a report for Norfolk County’s Health and Social Services Committee outlining key poverty issues for residents in Haldimand County and Norfolk County, including affordable housing.

ANALYSIS

- There are several agencies providing housing support in Haldimand County and Norfolk County including Haldimand-Norfolk Social Housing, Salvation Army Family and Community Services (Dunnville office) and Haldimand and Norfolk Women’s Services.
- Haldimand and Norfolk Women’s Services provides emergency and transitional shelter for women and their families who are victims of domestic violence. Utilization data presented in Figure 54 shows that between 2009 and 2010, slightly more than 100 women and their families used emergency shelter, and use of transitional housing increased from 116 in 2009 to 148 in 2010.
Figure 54: Supportive and Transitional Housing, Women and Families, by Type, Haldimand and Norfolk Counties, 2009-2010

- Social housing had 826 housing units in Haldimand and Norfolk counties combined for the years 2008-2010 (Haldimand-Norfolk Health and Social Services Housing Division, 2011).
- Between 115 and 120 applicants were housed each year for 2008-2010 (Haldimand-Norfolk Health and Social Services Housing Division, 2011).
- The typical waiting list duration was between one and three years, depending on the housing location (Haldimand-Norfolk Health and Social Services Housing Division, 2011).
- Demand for Haldimand-Norfolk Social Housing remained fairly stable between 2008 and 2010. Figure 55 illustrates that Haldimand-Norfolk Social Housing received 279 applications for supportive housing in 2008 and 286 in each of 2009 and 2010.
- The number of families and single individuals under 65 who apply for social housing increased from 89 families and 151 single individuals under 65 to 92 families and 167 single individuals under 65 in 2010 (Figure 55).

Data Source: Haldimand-Norfolk Women’s Services, Annual Reports 2009 and 2010.
Figure 55: Social Housing Applicants by Type, Haldimand County and Norfolk County, 2008-2010

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<th>Type</th>
<th>2008</th>
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<tr>
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<td>Singles &lt;65</td>
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<td>164</td>
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Data Source: Haldimand-Norfolk Social Housing, March 2011
POVERTY

Poverty has been recognized as a critical factor in the social determinants of health. Mikkonen and Raphael note in their 2010 monograph on the social determinants of health in Canada that, “Level of income shapes overall living conditions, affects psychological functioning, and influences health-related behaviours such as quality of diet, extent of physical activity, tobacco use, and excessive alcohol use (Mikkonen & Raphael, 2010).”

To underscore this point, Mikkonen and Raphael cited a 30-year Canadian study that examined mortality by neighbourhood income in urban Canada. The study, published in 2007, found that men who lived in the wealthiest 20% of neighbourhoods in Canada lived on average more than four years longer than men who lived in the poorest 20% of neighbourhoods. Death rates in the least deprived neighbourhoods were 28% lower than death rates in the most deprived neighbourhoods. (Mikkonen & Raphael, 2010) Food insecurity, a component of poverty, is reported to be an excellent predictor for Canadians reporting poor or fair health. Individuals who reported living in a “food insecure household” were more likely to experience poor functional health, multiple chronic diseases and major depression or distress (Vozoris & Tarasuk, 2003). In 2010, the Ontario provincial government introduced a new strategy to address poverty in Ontario called “Breaking the Cycle” (Government of Ontario, 2010).

One measure developed and used by Statistics Canada to convey the income level at which a family may be in “straitemented circumstances” is called “low income cut-offs” (LICOs). It is considered a low income cut-off because under that level, a family must spend a greater portion of its income on the basics (food, clothing and shelter) than does the average family of similar size. The LICOs vary by family size and by size of community (Statistics Canada, 2011). Illustrated in Figure 56, fewer private households in Haldimand County (5.5%) and Norfolk County (5.9%) reported incomes below the low income cut-offs (LICOs) using after tax income than in Ontario (11.1%) in 2006. Considered by urban areas, Figure 57 and Figure 58 show that Cayuga (13.0%), Simcoe (8.8%), Dunnville (8.7%) and Delhi (8.1%) had a higher percentage of private households reporting incomes lower than the LICOs and that Waterford (4.1%) and Caledonia (3.4%) had the lowest proportion of the same in 2006. The Haldimand-Norfal Health and Social Services Department Ontario Works caseload reported in Figure 59 showed a dramatic increase (44.0%) in the number of cases between 2006 and 2010 (reported for the months January to October annually). Between 1998 and 2010 the number of Student Nutrition Programs in Haldimand and Norfolk grew four-fold (Figure 60).

Updated data for 2010 is needed to understand how the recent economic situation in Ontario and nationally has impacted on residents in Haldimand and Norfolk. Further investigation of the low income levels in specific communities, and by lone parent families, will help to understand the nature of low income in the Haldimand and Norfolk communities and target efforts to address areas of greatest priority.

Numerous community groups are working to address the issue of poverty in the Haldimand and Norfolk communities including the Children’s Aid Society of Haldimand and Norfolk, Haldimand-Norfal Community Action Plan for Children, Haldimand-Norfal Health and Social Services Department, Haldimand and Norfolk Women’s Services, Ontario Provincial Police (Haldimand and Norfolk detachments), the Salvation Army Family and Community Services (Dunnville office), the United Way of Haldimand and Norfolk and numerous churches, service clubs, community groups and individuals. The Haldimand-Norfal Health Unit prepared a report for Norfolk County’s Health and Social Services Committee in January 2011 outlining key poverty issues for residents in the counties, including affordable housing. The report summarized recent initiatives to address issues around poverty in Haldimand and Norfolk, including:

• Forming a Community Stability Forum which included a large group of service providers, local politicians and volunteers interested in addressing how to best assist the community during the recession. The Forum developed two initiatives to build dialogue between service providers and those with low incomes (Living on a Budget and Do the Math).
• Accessed funding through the Norfolk District Business Development Corporation for funds to continue to build community awareness through the Community Stability Forum.
• The ongoing work of the Healthy Communities Initiative to improve access to priority health promotion programs and services in Ontario.
ANALYSIS

- One in ten private households (11.6%) in Haldimand and Norfolk counties combined were lone parent families in 2006. In Ontario, 15.8% of families are lone-parent families. More than three-quarters of lone parent families in Haldimand and Norfolk counties combined were led by females (76.4%) (Haldimand-Norfolk Health Unit, 2011).
- In 2007, 5.7% of households in Haldimand and Norfolk counties combined were classified as “food insecure” compared to Ontario at 7.1% (Haldimand-Norfolk Health Unit, 2009).
- Considered by both before and after tax income, the proportion of private households in Haldimand County and Norfolk County who lived below the low income cut-offs was lower than in Ontario (Haldimand-Norfolk Health Unit, 2011).
- Using before tax income, the percentage of private households in Haldimand and Norfolk counties combined who reported incomes below the low income cut-offs decreased slightly between 2001 and 2006, from 9.0% to 8.7%. In Ontario the percentage of private households who reported incomes below the low income cut-offs increased slightly for the same time period, from 14.4% to 14.7% (Haldimand-Norfolk Health Unit, 2011).
- Considered by after tax income in 2006 and illustrated in Figure 56, only 5.5% of private households in Haldimand County lived below the low income cut-off compared to 5.9% in Norfolk County and 11.1% in Ontario.

Figure 56: Low-Income Cut-Offs After Tax Income, Private Households 15 Years and Older, Haldimand County, Norfolk County and Ontario, 2006

Data Source: Census, Community Profiles, by Health Region, 2006. Data Notes: Private household refers to a person or a group of persons (other than foreign residents) who occupy the same dwelling and do not have a usual place of residence elsewhere in Canada.

- Considered by Haldimand County urban areas and after tax income for all residents 15 years and older in 2006, Figure 57 shows that Cayuga had the highest percentage (13.0%) of private households living below the low income cut-offs and Caledonia had the lowest (3.4%) in the County.
Factors Affecting Health

Figure 57: Low-Income Cut-Offs After Tax Income, Private Households 15 Years and Older, Haldimand County and Urban Areas, 2006

Data Sources: Census, Community Profiles, by Health Region, 2006. Data Notes: Private household refers to a person or a group of persons (other than foreign residents) who occupy the same dwelling and do not have a usual place of residence elsewhere in Canada.

- Considered by Norfolk County urban areas and after tax income for all residents 15 years and older in 2006, Figure 58 shows that Simcoe had the highest percentage (8.8%) of private households living below the low income cut-offs followed closely by Delhi (8.1%). Waterford has the lowest percentage of residents 15 years and older (4.1%) who were living below LICOs in the County.

Figure 58: Low-Income Cut-Offs, After Tax Income, Private Households 15 Years and Older, Norfolk County and Urban Areas, 2006

Data Sources: Census, Community Profiles, by Health Region, 2006. Data Notes: Private household refers to a person or a group of persons (other than foreign residents) who occupy the same dwelling and do not have a usual place of residence elsewhere in Canada.

- When considered by private households of persons 17 and under and using before tax income (data using after tax income was not available), the proportion of private households of persons 17 and under who reported incomes below LICOs increased slightly from 2001 to 2006 in Haldimand and Norfolk counties combined, from 10.6% to 10.8%, and in Ontario from 17.0% to 18.0%.
Figure 59: Ontario Works Caseload, Haldimand and Norfolk Counties Combined, 2006-2010*  

![Graph showing Ontario Works Caseload, 2006-2010](image)

*Data Source: Haldimand-Norfolk Health and Social Services, Ontario Works Caseload, 2010. *Data is shown for January-October annually. Data excludes data for November and December caseload.

- Figure 59 shows that the number of individuals on the Ontario Works caseload increased 44.0% between 2006 and 2010, from 9,720 to 14,000.
- The cost of a nutritious food basket estimates the cost it would take to feed a family of four (male and female adults aged 31-50 years, one boy aged 14-18 and one girl aged four to eight years) with nutritious foods. In Haldimand County and Norfolk County combined, the estimated cost increased 2.2% between 2009 and 2010, from $163.80 in 2009 to $167.53 (Haldimand-Norfolk Health Unit, 2011).
- Student Nutrition Programs are provided in schools offering breakfast or snacks for all children. Student Nutrition Programs, such as breakfast and snack programs are offered in schools and after-school programs. The programs intent is to support healthy growth and development by providing healthy food to all children. Figure 60 illustrates the growth in this program since 1998 when just seven programs served 280 children and youth. By 2010 there was an almost five-fold increase in the number of programs since 1998 with 40 programs were providing nutritious breakfast and snacks to 7000 children and youth (Haldimand-Norfolk Health Unit, 2006).

Figure 60: Student Nutrition Programs, Haldimand and Norfolk Counties Combined, 1998, 2005, 2007, 2008, 2010  

![Graph showing Student Nutrition Programs, 1998-2010](image)

*Data Source: Health and Social Services, 2010*
Community perceptions of safety are important. A community's perception of safety contributes to a sense of well-being, allows individuals freedom of movement, and reduces unintentional injuries. There are other elements of safety that impact on health. A Canadian research study shows a strong relationship between the commission of crimes and the use of alcohol and drugs (Pernanen K, 2002) (Toronto Drug Strategy Initiative, 2005).

The Haldimand-Norfolk Healthy Communities initiative identified safety as an important indicator of the community's health. The Haldimand-Norfolk Healthy Communities initiative is not alone in considering safety as an important component of health. In 1999, the Ontario Public Health Association built on evidence from the National Forum on Health (1997) to recognize violence as a social determinant of health and a public health issue (Ontario Public Health Association, 1999). Speaking specifically of family violence, the Forum found that family violence had a negative impact on equity, socio-economics, mental, physical and spiritual well-being. In passing a resolution to formally recognize violence as a public health issue in 1999, the Ontario Public Health Association wrote, “Violence is a major contributor to premature death and disability in Ontario. It is a force that damages the physical, mental and spiritual health of individuals. It also threatens basic institutions in Ontario such as the family and the community (Ontario Public Health Association, 1999).”

In this section, safety was considered by five variables provided by the Ontario Provincial Police (OPP), Haldimand Detachment and Norfolk Detachment:

- Primary offences are all offences reported in a jurisdiction. A primary offence may also be logged as a domestic, violent, or property offence.
- Domestic offences are those offences that occur within a domestic relationship.
- Violent offences are those offences that involve physical harm to another individual.
- Property offences are offences in which property was involved, but no individuals are injured.
- Motor vehicle collisions (MVCs) are motor vehicle collisions that are reported to the police.

Another critical aspect in the concept of safety is unintentional injuries. Unintentional injuries have been discussed extensively in Health Status, Unintentional Injuries (page 59).

Offences reported are actual occurrences, not a rate using a standardized population. Because of the different total population in Haldimand County and Norfolk County, this data should not be used to compare the experiences of the two counties, and it is not possible to compare against rates for the same categories of offences in Ontario.

The OPP reported offences for four categories between 2006 and 2010: the overall offence category of “primary offences” (Figure 61) and then the sub-categories of domestic offences (Figure 62), violent offences (Figure 63) and property offences (Figure 64). The number of motor vehicle collisions for 2006-2010 is reported in Figure 65.

Overall, the number of primary offences shown in Figure 61 decreased in Haldimand County by almost 10% (9.6%) between 2006 and 2010, while in Norfolk County they fluctuated but ultimately increased slightly from 20,827 to 20,867 in the five years. Likewise, the number of violent offences (Figure 63) and property offences (Figure 64) reported in each county fluctuated or declined between 2006 and 2010. The most significant decreases were among violent offences in Haldimand County which decreased 26.8% between 2006 and 2010, and property offences in Norfolk County which decreased 13.2% for the same time period. Likewise, the number of reported motor vehicle collisions decreased in each county. Figure 65 illustrates that in Haldimand County, the number of reported MVCs decreased by almost 20% (19.3%) and in Norfolk County the total number reported decreased by 5.2%, between 2006 and 2010.
Among all the types of offences reported, only the number of domestic offences reported to the OPP increased in both Haldimand County and Norfolk County between 2006 and 2010. Shown in Figure 62, the number of domestic offences reported in Haldimand County increased by an alarming 20.0% between 2006 and 2010. For the same time period the number of domestic offences reported in Norfolk County increased dramatically by almost 60% (59.5%).

However, there are three challenges with this data. Changes to laws, and policies about how charges are laid, may have had tremendous impact on the number of offences reported. Second, all of the data in this section shows the number of offences or MVCs reported to the local OPP detachments, not actual incidents. There is evidence that some crimes are under-reported and thus not accurately reflected in statistics that reflect only reported crimes (Statistics Canada, 2010). Finally, without standardized rates, it is difficult to determine whether the reported offences and MVCs in Haldimand County and Norfolk County are either above, or below, those experienced by Ontario as a whole, or even how each County fares in comparison to each other. Creating standardized rates will help to understand the significance of these reported incidences, and identify areas for targeted action.

The Ontario Provincial Police, Children’s Aid Society of Haldimand and Norfolk, CrimeStoppers of Haldimand, Norfolk and Tillsonburg, Haldimand and Norfolk Women’s Services, St. Leonard’s Society, school boards, municipalities, business associations and neighbourhood groups are important stakeholders in addressing safety. However, agencies and organizations who are primarily interested in health issues rarely address safety outside of the area of unintentional injuries. Action by all parties will be important to take action on creating a safer Haldimand and Norfolk.

ANALYSIS

- The Ontario Provincial Police’s Community Satisfaction Survey conducted in 2009 reported that 95.4% of Ontarians felt “safe” or “very safe” in their community (Rigby, 2011).
- The OPP reported offences for four categories between 2006 and 2010: the overall offence category of “primary offences” (Figure 61) and then the sub-categories of domestic offences (Figure 62), violent offences (Figure 63) and property offences (Figure 64). The number of motor vehicle collisions for 2006-2010 is reported in Figure 65.
- Considered by the overall category of primary offences, the frequency of primary offences declined steadily in Haldimand County, from 14,486 reported primary offences in 2006 to 13,096 in 2010, an overall decrease of 9.6%.
- In Norfolk County, the number of primary offences declined from 20,827 in 2006 to 20,375 in 2009 before rising again to 20,867 in 2010.
Figure 61: Primary Offences Reported, Haldimand County and Norfolk County, 2006-2010

Data Source: Ontario Provincial Police, Haldimand Detachment and Norfolk Detachment, February 2011

- Figure 62 shows that the number of domestic offences reported to police in both Haldimand County and Norfolk County increased between 2006 and 2010. In Haldimand County, the number of domestic offences increased from 175 in 2006 to 210 in 2010, an increase of 20.0%. The number of domestic offences in Norfolk County increased dramatically from 299 in 2006 to 477 in 2010, an increase of 59.5%.

Figure 62: Domestic Offences Reported, Haldimand County and Norfolk County, 2006-2010

Data Source: Ontario Provincial Police, Haldimand Detachment and Norfolk Detachment, February 2011

- The number of violent offences, shown in Figure 63, decreased in both Haldimand County and Norfolk County between 2006 and 2010. In 2006, 556 violent offences were reported in Haldimand County, and 407 in 2010, a decrease since 2006 of 26.8%.

- Figure 63 shows that violent offences in Norfolk County fluctuated between 2006 and 2009 before ultimately declining in 2010. In Norfolk County, 745 violent offences were reported in 2006. This number declined in 2007 (681) before increasing in 2008 (746) and 2009 (787), before declining to 693 in 2010, an overall decrease of 7.0% in the time period.
The number of property offences reported in Haldimand County (Figure 64) fluctuated between 2006 (1550) and 2009 (1717), but ultimately remained unchanged at 1550 in 2010.

In Norfolk County the number of property offences reported to the OPP (Figure 64) declined more-or-less steadily from 2640 in 2006, to 2372 in 2007, increased to 2458 in 2008 before declining to 2379 in 2009 and 2291 in 2010, an overall decrease of 13.2% between 2006 and 2010.

Motor vehicle collisions (MVCs) reported to the OPP in Haldimand County and Norfolk County between 2006 and 2010 are shown in Figure 65. In both Haldimand County and Norfolk County, MVCs fluctuated but ultimately declined during the time period.

In Haldimand County there were 864 MVCs were reported in 2006, the number increased in 2007 (996) and 2008 (910) before decreasing in 2009 (853) and 2010 (697), an overall decrease of 19.3%.

MVCs in Norfolk County followed a similar pattern. In 2006, 1140 motor vehicle collisions were reported to OPP in Norfolk County. The total number of MVCs increased to 1212 in 2007 before decreasing to 1134 in 2008 and 1073 in 2009 before increasing slightly to 1081 in 2010, an overall decrease of 5.2% in the time period.
Figure 65: Motor Vehicle Collisions Reported, Haldimand County and Norfolk County, 2006-2010

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<td>910</td>
<td>853</td>
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<td>Norfolk</td>
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<td>1212</td>
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Data Source: Ontario Provincial Police, Haldimand Detachment and Norfolk Detachment, February 2011
SENSE OF BELONGING

A sense of belonging is an important aspect of an individual's sense of well-being. According to Health Canada:

A feeling of belonging to a country, region, and local community can influence people’s sense of identity and the extent to which they participate in society. Generally, a strong sense of belonging is positively associated with better self-reported physical and mental health. A strong sense of belonging also contributes to individual and community wellbeing (Human Resources and Skills Development Canada, 2011).

Moreover, Mikkonen and Raphael (2010) noted that being socially excluded, or having a poor sense of belonging, had adverse social and health effects. They reported that socially excluded Canadians were more likely to be unemployed and earn lower wages and have less access to health and social services and education (Mikkonen & Raphael, 2010).

Human Resources and Skills Development Canada has determined that an individual’s sense of belonging could be assessed by participation in political activities, participation in social activities, charitable donations and volunteering. (Human Resources and Skills Development Canada, 2011). Building on these findings, this report considers “sense of belonging” using the Canadian Community Health Survey results for Haldimand and Norfolk counties combined in 2005, 2007 and 2008 for residents 12 years and over and for youth, 12-19. Rates for Haldimand and Norfolk counties combined were compared to rates reported in Ontario. Confidence intervals are reported to help understand the reliability of the data. Municipal election voter turn-out in 2010 for Haldimand County and Norfolk County is also reported.

Residents of Haldimand and Norfolk counties combined reported a stronger sense of community than other residents in Ontario in 2005, 2007 and 2008, with the sense of belonging becoming stronger over time. Figure 66 illustrates that in 2005, six out of 10 (63.2% CI ± 4.7) residents 12 and over in Haldimand and Norfolk counties combined reported a strong sense of well-being, similar to Ontario residents (63.5% CI ± 0.8). By 2008, the rate reported among residents in Haldimand and Norfolk counties combined increased to three-quarters (75.2% CI ± 5.7) while in Ontario the rate remained stable at about six out of 10 (65.1% CI ± 1.1).

Sense of belonging among youth 12-19 in Haldimand and Norfolk counties combined and Ontario for 2005, 2007 and 2008 is reported in Figure 67. In this case, youth in Haldimand and Norfolk counties combined also reported an increase in their sense of belonging. By 2008 almost nine out of 10 youth (88.0% CI ± 10.5) in Haldimand and Norfolk counties combined reported a strong sense of belonging while fewer, three-quarters (74.2% CI ± 2.5) reported a strong sense of belonging. Confidence intervals overlapped between the Haldimand and Norfolk counties combined rates reported in 2005, but not in 2007 and 2008.

Building social inclusion activities in Haldimand County and Norfolk County is not the single identified domain of any organization. It is the result of action taken on multiple fronts to build social engagement and participation in the community. Efforts should include all facets of the community and in particular those with an interest in social and community services, parks and recreation, municipal services, social justice, education and health.

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Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.
ANALYSIS

- In Haldimand and Norfolk counties combined, Figure 68 shows that the percentage of residents 12 and older who reported a strong sense of belonging increased from about six out of 10 (63.2% CI ±4.7) in 2005 to three-quarters (75.2% CI ± 5.7) in 2008. In Ontario, residents reporting that they had a strong sense of belonging in their community remained relatively stable at about six out of 10 throughout the period (2005 - 63.5% CI ± 0.8; 2007 - 63.0% CI ±1.1; 2008 - 65.1% CI ± 1.1). Confidence intervals overlapped in 2005 but not in 2007 and 2008.
Considered among youth aged 12-19, Haldimand County and Norfolk County again reported higher rates for a strong sense of belonging than Ontario youth (Figure 67). In 2005, two-thirds (67.4% CI ± 10.9) of youth aged 12-19 reported a strong sense of belonging and in 2008, almost nine out of 10 (88.0% CI ±10.5) reported the same. In Ontario, rates remained more consistent, from seven out of 10 (72.4% CI ±1.7) in 2005 to slightly more (74.2% CI ± 2.5) in 2008. Confidence intervals overlapped in 2005 and 2008 but did not overlap in 2007.
Figure 67: Strong Sense of Belonging, Youth 12-19, Haldimand and Norfolk Counties Combined and Ontario, 2005, 2007, 2008

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Data Source: Canadian Community Health Survey 2005, 2007 and 2008. Statistics Canada, Share File, Knowledge Management and Reporting Branch, Ontario MOHLTC. Data Notes: Annual estimates were used because these estimates present the most up-to-date population health characteristics and are updated yearly. High sampling variability, interpret with caution. High sampling variability data is not releasable. NC: Not able to compute. Not stated includes don’t know, refuse, and not stated. Percentages are rounded up. Prevalence of strong sense of belonging = Very Strong, or Somewhat Strong. Prevalence of weak sense of belonging = Somewhat Weak or Very Weak. On average there is about a 2% difference between the estimated produced between the Ontario Share File and the Master File used by Statistics Canada. The Ontario Share File has fewer respondents than the Master File. In order to be included in the Share File, Ontario residents must consent to sharing their information. Moreover, since the sample is much smaller (12-19) it may be more sensitive to fluctuations in the estimates. Data is shown including confidence interval range, a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls.

- The proportion of residents aged 18 and older who vote in municipal elections is also considered an indicator of sense of belonging because it indicates level of engagement in the community. Voter turn-out in Haldimand County was reported by ward only. In the three County wards, voter turn-out was 37.3%, 44.3% and 47.1%. (Haldimand County, 2010)
- In Norfolk County, the overall voter turn-out was slightly lower, at 35.7% (Norfolk County, 2010).
TRANSPORTATION

Transportation has long been an issue of concern for residents in Haldimand County and Norfolk County. As a rural community with numerous several small towns and numerous hamlets and villages spread over almost 3,000 square kilometres, the ability to travel between centres, as well as to access services in larger centres is important. There have been several efforts to provide some level of public transportation within Haldimand County and Norfolk County, and to connect people with centres outside the counties (Haldimand-Norfolk Health and Social Services Department, 2009).

The latest initiative in 2009 was lead by the Haldimand and Norfolk Rural Transportation Initiative (H&N RTI) which included membership from the Best Start Network, Children’s Aid Society of Haldimand and Norfolk, Grand Erie Training & Adjustment Board, Haldimand-Norfolk R.E.A.C.H., Haldimand and Norfolk Women’s Services, Norfolk District Business Development Corporation, Norfolk County (as the Consolidated Municipal Service Manager for Haldimand and Norfolk counties) and the United Way of Haldimand and Norfolk.

As part of this effort, the H&N RTI conducted a public survey to determine attitudes towards public transportation among residents of Haldimand County and Norfolk County. The results of this survey are reported in this section. The survey was made available on-line and paper versions were distributed to selected populations that may not have had access to a computer. The survey was also available in two local newspapers that were distributed to all residents in Haldimand and Norfolk. Through these means 1,259 Haldimand and Norfolk residents completed the survey. Raw data for the survey was not available and thus the figures included here are copied from the H&N RTI report.

It is clear that the vast majority of respondents (92%) to the Rural Transportation Initiative survey believed that a public transportation system is needed in Haldimand and Norfolk counties. Almost seven out of 10 (68%) of survey respondents reported that they would use public transportation if it were available, chiefly for recreational and social activities (69%) and to attend medical appointments (59%). Figure 68 showed that individuals who were students, retired, unemployed and other had the greatest difficulty travelling whenever they needed / wanted to. More than half of all respondents in all types of employment and education who responded to the RTI survey reported a willingness to use public transportation if it was made available to them (Figure 70).

These survey results indicate both the need for, and willingness to use, public transportation services among residents who were surveyed in Haldimand and Norfolk counties. Without transportation, it becomes difficult for people residing in rural communities to access any services – and from a health perspective - physicians, wellness clinics, early childhood resource centres, fitness opportunities, socialization program and educational opportunities. Numerous service providers already offer transportation services for clients, either through funded programs, volunteer drivers, or fee-for service (Haldimand-Norfolk Health and Social Services Department, 2009). Continued collaborative efforts, like those of the Haldimand and Norfolk Rural Transportation Initiative, will be needed to address this important issue.

ANALYSIS

- Nine out of 10 respondents (92%) to the Rural Transportation Initiative survey reported that they believed Haldimand and Norfolk counties needed a public transportation system. There was no difference between residents of Haldimand County and Norfolk County (Haldimand-Norfolk Health and Social Services Department, 2009).
- Nine out of 10 (92%) of low income respondents reported that they are prevented from travelling some or all of the time due to a lack of public transit (Haldimand-Norfolk Health and Social Services Department, 2009).
- Overall, seven out of 10 (68%) of survey respondents reported that they would use public transportation if it were available to them (Haldimand-Norfolk Health and Social Services Department, 2009).
- Almost seven out of 10 (69%) survey respondents reported that they would use public transportation for recreational and social activities and almost six out of 10 (59%) reported that they would use public transportation to attend medical appointments (Haldimand-Norfolk Health and Social Services Department, 2009).
Respondents who were younger reported that they would use public transportation more frequently for recreational and social activities (81%) followed by attending employment (73%) (Haldimand-Norfolk Health and Social Services Department, 2009).

Respondents who were older reported that they would use public transportation more frequently to attend medical appointments (75%) followed by recreational and social activities (63%) (Haldimand-Norfolk Health and Social Services Department, 2009).

Considered by income status, survey respondents with a lower income level were more likely to use public transportation for medical appointments (78%) and recreational and social activities (77%) (Haldimand-Norfolk Health and Social Services Department, 2009).

Figure 68, Figure 69, and Figure 70 show the results to three different H&N RTI survey questions, exactly as reported in the H&N RTI report. Raw data was not available for analysis. Responses are provided by type of respondents for each survey question. The types of respondents were categorized as follows: elementary / high school student, employed part-time, college / university student, unemployed, employed full-time, retired, and other. Three survey questions are reported here:

- Are you able to travel wherever you need to or want to?
- Does the lack of public transportation service prevent you from travelling?
- If public transportation were available, would you use it?

Ability to travel, illustrated in Figure 68, was clearly impacted by individual’s education or employment status. Survey respondents who were who were students, retired, unemployed and other had the greatest difficulty travelling whenever they needed / wanted to.
Figure 68: Ability to Travel by Education/Employment Status, Haldimand and Norfolk Rural Transportation Initiative Survey, 2009

In Figure 69, over half of elementary and high school students, those who were unemployed who responded and those categorized as “other,” and responded to the RTI survey in Haldimand County and Norfolk County reported that the lack of a public transportation system prevented them from travelling.

About four out of 10 retired persons, college students, employed part-time and “other” also reported that the lack of public transportation service prevented them from travelling.
More than half of all respondents in all types of employment and education who responded to the Rural Transportation Initiative survey reported a willingness to use public transportation if it was made available to them (Figure 70). Among elementary and high school students, the unemployed and “other” category; eight out of 10 reported that they would use a public transportation service.
Figure 70: Willingness to Use Public Transportation by Education/Employment Status, Haldimand and Norfolk Rural Transportation Initiative Survey, 2009

Data Source: Haldimand-Norfolk Rural Transportation Initiative Study, 2009
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