

Grey Bruce Community Picture

Grey Bruce Healthy Communities Partnership
2014 Supplement



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August 2014

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Section 1: Background

This report was designed as a supplement to the 2011 Grey Bruce Community Picture, which was created to help us communicate effectively and consistently with respect to the health and well-being of the citizens of Grey Bruce. The 2014 supplement includes updated information on demographic composition, local characteristics, and health indicator/status data. We hope that this information, and the way it is presented, is helpful to you.

Section 2: Introduction

Health starts where we live, learn, work, and play

Grey Bruce is a vibrant community with stunning natural beauty, clean air and sparkling water. As residents we feel a strong sense of belonging to the community and rate our overall health as very good. Yet some indicators of health, such as heavy drinking and injuries, reveal that we are not doing as well as the province of Ontario. We know where people live, learn, work and play has an enormous impact on health and wellbeing. It's time for us to recognize that health is something that starts with our families, schools, workplaces, playgrounds, and parks. The more we see our health in this all-inclusive way, the more opportunities we have to improve it.

Grey Bruce is taking a leadership role in creating a rural Healthy Communities model that will support residents in creating and maintaining good health by building on existing strengths within our communities. We are known for our innovation and resourcefulness. We are also known for coming up with creative solutions to complex problems. The video "*Let's Start a Conversation*" will help you see the role you can play to help improve your community's health (http://www.publichealthgreybruce.on.ca/Healthy_Communities/LetsStartAConversation.htm).

The Grey Bruce Healthy Communities Partnership is working together to shift the focus towards building healthy communities together. We all have a role to play to reduce poverty, ensure clean air, keep our communities safe, improve access to education, encourage active transportation, support a culture of moderation for alcohol and improve access to healthy food choices. What's yours?

2.1 Purpose

The purpose of the Grey Bruce Community Picture – 2014 supplement is to continue to inform the work of the Healthy Communities Partnership. It is a resource to assist individuals, partners, municipalities and others to improve the health of Grey Bruce citizens. By highlighting the strengths and vulnerabilities of the Grey Bruce community, the document will also help to:

- Mobilize community partners around a common goal.
- Support the preparation of community grant proposals.
- Inform the allocation of other local funds or activities.
- Assist local organizations to identify strategic and program priorities.

2.2 Method and Limitations

Much of the data in the Community and Statistical Profile was collected from Statistics Canada and is grouped by the Grey Bruce Health Unit region. Where possible, the most recent Census data (2011) was used and provincial and peer group comparisons offered. When unavailable, data was gathered from the next most recent year available (2006). A variety of other sources were used to supplement data obtained from Statistics Canada. A large proportion of the health status data was obtained from existing Grey Bruce Health Unit reports. Data about the social, political, historical, and natural and built environments was largely gathered from the County of Grey, County of Bruce and other local historical and cultural websites. As with any community assessment, this document represents a time sensitive “snap shot”. This may be a limitation as communities are dynamic and tend to change over time.

Unfortunately, due to the Federal Government’s cancellation of the mandatory Long-Form Census (LFC), the 2006 Census results are the last available reliable source of information for most socio-demographic and determinants of health indicators until other data sources are made available. In 2011, Statistics Canada replaced the mandatory Long-Form Census with the voluntary National Household Survey (NHS). It was decided that due to the increased bias and other issues, that the Grey Bruce Health Unit would not be using this data source. Therefore, this supplement continues to use the 2006 Census. If anyone wishes to use the NHS, it can be found at: <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E>

Section 3: Community Assessment

3.1 Community & Statistical Profile

3.1.1 History & Culture

Grey and Bruce Counties are rich in history and heritage. Early history shows that the area was inhabited by Aboriginal peoples with the territory now known as the Bruce Peninsula controlled by the Saugeen Ojibway Nations. The nations included the Chippewas of Nawash Unceded First Nation and Saugeen First Nation (Bruce County Museum & Cultural Centre, 2010). In the mid 19th century, European settlement began, with settlers coming from Upper Canada (Ontario), Lower Canada (Quebec) and the Maritimes. Many settlers had been born in Scotland, Ireland, England and Germany (Bruce County Genealogical Society, 2010).

Natural resources were integral to the development and expansion of trade and commerce in the area. Resources such as fish, fur, and minerals were of great importance and the growth of gristmills and sawmills required the use of the area's river power (Grey Roots: Museum & Archives, 2010). The moderating effect of the water and prevailing southwest winds provided the community with a growing season to support Canada's finest apple orchards. Today's economy remains largely based on agriculture. In addition, with the discovery of the area as a holiday destination in the 1920s, tourism has become increasingly important.

The County of Grey was established in 1852. It united various townships under a common name and by 1854 Grey County became fully independent from the counties of Wellington and Simcoe (Grey Roots: Museum & Archives, 2010). In 1867, the County of Bruce was established and became fully independent from the counties of Huron and Perth (Bruce County Museum & Cultural Centre, 2010).

In 1998, various municipalities within the County of Bruce amalgamated to form eight municipalities. The same year, the Grey and Bruce County boards of education merged to form the Bluewater School District. In 2001, Grey County amalgamated various townships into nine municipalities.

The rich heritage and tradition of the Grey and Bruce Counties remains important today and are preserved by museums, historical societies and archives. Along with these history-oriented attractions, the area offers a multitude of art galleries, libraries, natural and built recreation options, performing arts events and venues, sport-oriented and water-oriented attractions.

There are an abundance of events and festivals throughout the year that are well attended by locals and visitors from surrounding areas. These include, but are certainly not limited to: Canada Day festivities, Pow Wows, farmers' markets, dances, Santa Claus parades, craft shows, and maple syrup festivals. Agricultural fairs are important events throughout the harvest season where communities gather to view a showcase of crops, livestock, quilting and crafts.

Cultural activities, rich history and natural beauty contribute to the strong sense of community within Grey and Bruce Counties. These assets also continue to attract permanent and seasonal residents. Today, Grey and Bruce Counties are vibrant communities in which to live, work and play.

3.1.2 Location, Geography/Physical Characteristics

Grey and Bruce counties are located in the South West Region of Ontario and have a land area of 8,601 square kilometers (Grey: 4513 sq km, Bruce: 4088 sq km (Statistics Canada, 2012b). The region is bordered by Georgian Bay to the north, Lake Huron to the west, Huron and Wellington Counties to the south, and Simcoe and Dufferin Counties to the east.

The proximity to Georgian Bay, Lake Huron, and other geographic features, such as the Niagara Escarpment, offers a variety of outdoor recreational opportunities for residents and visitors. Boating and fishing are popular on Lake Huron and Georgian Bay. Grey Bruce's scenic landscape features numerous parks, rivers and beaches. The sheer and broken cliffs of the Niagara Escarpment provide a stunning backdrop to an extensive trail network. These unique geographical features support the area's recreation, agriculture, and tourism industries.

3.1.3 Municipalities

The Grey Bruce population totals 158,670 people (Grey Bruce Health Unit, 2012b) living in the two upper tier municipalities of Grey and Bruce counties, which are themselves comprised of 17 lower tier municipalities (8 in Bruce and 9 in Grey), and two First Nation reserves (Figure 1). Saugeen First Nation No. 29 is at the mouth of the Saugeen River and Chippewas of Nawash First Nation No. 27 (Cape Croker) is on the east side of the Bruce Peninsula.

Figure 1: Map of Grey Bruce Municipalities



3.1.4 Rural/Urban Centres

Fifty-three percent (53%) of the Grey Bruce population lives in a rural area, while 47% lives in small population centres. By comparison, only 19% of Ontarians live in a rural area, with 12% living in small population centres, 9% living in medium population centres, and the remaining 60% living in large urban population centres (Statistics Canada, 2013). The largest of our small population centres is Owen Sound, with a population of approximately 22,000. It is also the only small population centre large enough to be classified as a 'city' in Grey Bruce.

3.2 Socio-demographic Information

3.2.1 Population Data

Age Groups

Median age is the cut-point where a population is divided in half (i.e., 50% are older and 50% are younger than the stated median age). In 2011, the median ages in Grey and Bruce were 47.3 and 47.0 respectively, while the median age in Ontario was younger at 40.4 (Grey Bruce Health Unit, 2012a).

In Grey Bruce, 20.7% of population were seniors, compared to only 14.6% of the Ontario population. The municipalities with the highest percentages of seniors were Northern Bruce Peninsula at 31.7% and The Blue Mountains at 28.4%, while those with the lowest were Saugeen 29 at 6.9%¹ and Southgate at 14.0% (Grey Bruce Health Unit, 2012a).

Only 15.1% of the Grey Bruce population was under 15 years old, compared to 17.0% of the Ontario population (Grey Bruce Health Unit, 2012a). The municipalities with the highest percentages of children (aged 0 to 14) were Saugeen First Nation (24.0%¹) and Southgate (19.6%), while those with the lowest were Northern Bruce Peninsula (9.5%) and The Blue Mountains (10.9%).

Population Growth

Population growth can be determined by looking at the change in population since the last census. In Ontario the population increased by almost 5.7% between the 2006 and 2011 census. In Grey County, the population increase was a mere 0.2% while in Bruce County the population increase was 1.2%, for an overall Grey Bruce population increase of just 0.6%.

The top three communities in terms of population growth were: Chippewas of Nawash First Nation (Cape Croker) (12.9% growth), Saugeen Shores (8.0% growth), and Hanover (4.8% growth). The top three communities in terms of population loss were: The Blue Mountains (5.5% loss), South Bruce (4.3% loss), and Saugeen First Nation (4.2% loss). (Grey Bruce Health Unit, 2012b)

Cultural Diversity

Grey Bruce is less ethnically diverse than the province as a whole. The immigration rate is relatively low at 8%, compared to Ontario at 28% (Leffley, 2010). Less than 2% of Grey Bruce residents are visible minorities (Statistics Canada, 2006).

It has been estimated that Grey Bruce has an aboriginal population of 3,655 people representing about 2.4% of the total population (Statistics Canada, 2006). There are many aboriginal families living in communities throughout Grey Bruce, including the two First Nation Reserves located in Bruce County. There are also several Mennonite and Amish communities; however their numbers are difficult to ascertain (GBCA, 2010).

¹ Saugeen First Nation had an enumeration rate between 75% and 90%, and data are therefore unreliable.

3.2.2 Priority Populations

According to the Ontario Public Health Standards, “Priority populations are identified by surveillance, epidemiological, or other research studies and are those populations that are at risk and for whom public health interventions may be reasonably considered to have a substantial impact at the population level” (2008).

Priority populations often carry a disproportionate burden of poor health and risk for poor health. The following individuals/groups are considered priority populations because they are at risk or are particularly vulnerable to poor health due to social determinants of health. These determinants of health may include: income, insufficient social support networks, education, working conditions, social and physical environments including housing, food insecurity, unemployment, social exclusion, early childhood development, gender, culture and age.

Priority populations within Grey Bruce include:

- Aboriginal people
- Mennonite/Amish people
- Children and youth
- Seniors
- Pregnant women and families
- People living with low income
- People with mental health issues
- People with addictions
- People with physical and intellectual disabilities
- People who are Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ)

Because these individuals and groups often have more negative health outcomes, it is important that programs and policies be designed to meet their needs. Developing programs and policies to address the needs of priority populations will, at the same time, support the rest of the population. When communities are created to support the most vulnerable, health inequities will be reduced and greater gains will be made to the overall health of the community.

3.3 Current Health Status and Health Behaviours Data

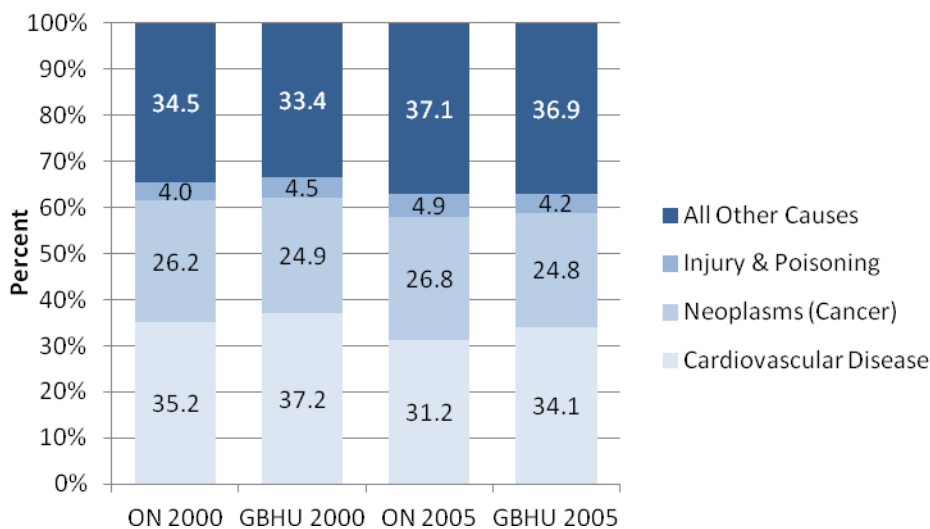
3.3.1 Leading Causes of Death

The proportion of Grey Bruce deaths attributable to cardiovascular disease is higher than the provincial proportion, a difference that is statistically significant. The local proportions of deaths attributable to neoplasms (cancers) and to injury and poisoning (includes intentional injuries, injuries of undetermined intent and unintentional injuries) are not significantly different from the provincial proportions.

It appears that a slightly lower proportion of deaths in 2005 was attributable to cardiovascular disease compared to 2000; however because the local annual count of deaths is small, this doesn't represent a statistically significant change.

Figure 2 presents proportions of the three major causes of death and a remaining category for the years 2000 and 2005 for Grey Bruce, and proportions of these same areas for Ontario.

Figure 2: Leading Causes of Death in Grey Bruce



Source: McFarland, V. (2010) Special tabulation.

Data Source: Ontario Registrar General. 1986-2005, Ontario Mortality Data. IntelliHEALTH Ontario, Extracted 1 September 2010.

The category of *all other causes* includes such items as diabetes mellitus, Alzheimer's disease, influenza and pneumonia, kidney disease, and all other causes not subsumed under the categories of injury and poisoning, neoplasms and cardiovascular disease.

Locally, the age-standardized death rate is significantly higher than that of Ontario. Other causes of death with higher rates locally than provincially are: ischaemic heart disease, cerebrovascular disease, colorectal cancer, and unintentional Injuries.

The age-standardized death rate for males is significantly higher than that for females for all deaths, as well as for ischaemic heart disease, lung/trachea/bronchus cancers, colorectal cancers, unintentional Injuries and self-inflicted Injuries.

Table 1 lists the age-standardized death rates in Grey Bruce and Ontario. These rates are an average over a 3-year period (2003 to 2005) and have been adjusted for variations in the population age distribution over time and across geographic regions.

Table 1: Age-standardized Death Rates in Grey Bruce and Ontario, 2003-2005 for Selected Causes of Death

Cause of Death	Grey Bruce (per 100,000)			Ontario (per 100,000)		
	Total	Male	Female	Total	Male	Female
All Causes of Death¹	616.1	729.7	515.2	559.5	689.8	461.0
Circulatory						
Ischemic¹	118.4	149.5	89.3	101.5	139.2	72.5
Cerebrovascular¹	46.3	48.9	42.8	36.0	39.3	33.4
Cancers						
Lung, Trachea, Bronchus¹	40.9	48.3	34.3	41.7	53.8	32.7
Prostate¹	...	23.0	22.7	...
Female Breast¹	28.9	23.8
Colorectal¹	25.7	31.1	20.4	21.0	26.7	16.7
Injuries						
Unintentional Injuries²	29.0	38.1	19.2	22.7	30.6	15.6
Self-inflicted Injuries¹ (Suicides)	8.4	15.0	2.3	8.0	12.4	3.9

Source: McFarland, V. (2010). *Leading Causes of Death in Grey Bruce*. Owen Sound: Grey Bruce Health Unit.

Data Sources: (1) Ontario Registrar General 1986–2005 Mortality Data. IntelliHEALTH Ontario, Extracted 4 August 2010; Ontario Population Data 1986-2009, IntelliHEALTH Ontario, Extracted October 19, 2006, Ontario MOHLTC. (2) Ontario Registrar General 1986–2005 Mortality Data. IntelliHEALTH Ontario, Extracted 12 October 2010; Ontario Population Data 1986–2009, IntelliHEALTH Ontario, Extracted October 19, 2006, Ontario MOHLTC.

3.3.2 General Health and Well-being

Self-rated Health

About three out of five Grey Bruce residents (59%) rate their general health as very good or excellent. This rate is similar to that of the peer group, the province, and the country; and rates of very good to excellent self-rated health in Grey Bruce have not significantly changed since 2000/01. (Grey Bruce Health Unit, 2013h)

Self-rated Mental Health

About three out of four Grey Bruce residents (71%) rate their mental health as very good or excellent. The rate is similar to that of the peer group, the province, and the country; rates of very good to excellent self-rated mental health in Grey Bruce have not significantly changed since 2003. (Grey Bruce Health Unit, 2013h)

Life Satisfaction

More than 9 in 10 Grey Bruce residents (93%) report being very satisfied or satisfied with life as a whole. This rate is similar to that of the peer group, the province and the country, and has not significantly changed since 2003. (Grey Bruce Health Unit, 2013h)

Sense of Belonging

Just over two thirds of the population in Grey Bruce (70%) feel a sense of belonging to the community. This rate is similar to that of the peer group, the province and the country, and has not changed significantly since 2003. (Grey Bruce Health Unit, 2013h)

Life Stress

More than 80% of Grey Bruce residents *are not* experiencing a lot of stress. However, about one fifth (19%) of residents are experiencing quite a lot of life stress. This rate does not differ significantly from the provincial, peer group or national rates. (Grey Bruce Health Unit, 2013h)

Mood Disorders

About one in ten Grey Bruce residents (9.5%) report having a mood disorder. This rate is similar to that of the peer group, the province and the country, and has not changed significantly over time. (Grey Bruce Health Unit, 2013h)

Disability

Thirty-two percent (32%) of Grey Bruce residents sometimes or often can't participate in certain activities (home, school, work and other activities) because of a physical condition, mental condition or health problem which has lasted or is expected to last six months or longer. This does not differ significantly from previous years, or from rates for the province, peer group or country. (Grey Bruce Health Unit, 2013h)

3.3.3 Chronic Disease

Arthritis

Just over one in five people in Grey Bruce has arthritis. This rate has been stable over the years, and is significantly higher than the Canadian, Ontarian, and peer group rates (Table 2).

Rates are likely to be higher in Grey and Bruce than in the province or the country as there is a larger proportion of people who are more likely to be arthritis sufferers (seniors) in the area. (Grey Bruce Health Unit, 2013a)

Table 2: Percentage of Population with Arthritis

	GBHU	Peer Group	Ontario	Canada
2000/01	18.8	N/A	16.6	15.2
2003	24.8	N/A	18.4	16.8
2005	24.7	N/A	18.0	16.4
2007/08	23.6	18.8	17.4	15.9
2009/10	21.8	18.3	17.3	15.8
2011/12	22.7	18.8	17.2	16.2

Asthma

One in ten people (10%) in Grey Bruce has asthma. This rate has been stable over the years, and is no different than the Canadian, Ontarian, and peer group rates. (Grey Bruce Health Unit, 2013b)

Diabetes

About 1 in 14, or 7% of people in Grey Bruce report having diabetes. This rate is no different than the Canadian, Ontarian, and peer group rates (Table 3). Nationally and provincially, the rate of diabetes has been increasing, and though it can't be confirmed because of large confidence intervals, a similar trend is apparent at the local level. (Grey Bruce Health Unit, 2013e)

Table 3: Percentage of Population Who Have Diabetes

	GBHU	Peer Group	Ontario	Canada
2000/01	5.5	N/A	4.2	4.1
2003	6.6	N/A	4.6	4.6
2005	8.0	N/A	4.8	4.9
2007/08	6.1	6.0	6.1	5.8
2009/10	9.0	7.1	6.8	6.2
2011/12	7.1	6.1	6.6	6.3

High Blood Pressure (Hypertension)

The rate of high blood pressure in Grey Bruce is 20%, or about 1 in 5 people

Table 4). This rate is not significantly different from the Canada, Ontario and peer group rates. For Canada and Ontario, there is an increasing trend of rates of high blood pressure, and at the local level the rate increased after 2000/01. (Grey Bruce Health Unit, 2013j)

Table 4: Percentage of Population with High Blood Pressure

	GBHU	Peer Group	Ontario	Canada
2000/01	14.1	N/A	13.0	12.6
2003	19.6	N/A	14.4	14.4
2005	20.3	N/A	15.0	15.0
2007/08	21.6	18.8	16.2	16.2
2009/10	20.8	19.2	17.0	17.0
2011/12	20.2	19.4	17.5	17.5

3.3.4 Tobacco Use/Exposure

Current Smokers

Just over 1 in 5 (22%) people in Grey Bruce report being current smokers (Table 5). This rate has been relatively stable over the years, and is no different than the Canadian, Ontarian, and peer group rates. Nationally and provincially, smoking rates have been declining, though the same trend is not evident at the local level. (Grey Bruce Health Unit, 2013d)

Table 5: Percentage of Population Who Are Current Smokers

	GBHU	Peer Group	Ontario	Canada
2000/01	24.4	N/A	24.5	25.9
2003	19.4	N/A	22.3	23.0
2005	20.9	N/A	20.9	21.8
2007/08	21.7	22.4	20.3	21.7
2009/10	17.9	20.7	18.9	20.4
2011/12	22.1	21.4	19.3	20.1

Daily Smokers

About 18% (or just over 1 in 6 people) in Grey Bruce are daily smokers (Table 6). This rate does not differ significantly from previous years or from current rates for the province, the peer group, or the country. It appears that daily smoking rates for the province, peer group and country are on the decline, but this trend does not hold true at the local level. (Grey Bruce Health Unit, 2013d)

Table 6: Percentage of Population Who Are Daily Smokers

	GBHU	Peer Group	Ontario	Canada
2000/01	N/A	N/A	N/A	N/A
2003	16.3	N/A	16.8	17.9
2005	17.7	N/A	15.8	16.6
2007/08	18.3	17.8	15.9	17.1
2009/10	15.0	16.4	14.5	15.6
2011/12	18.3	16.9	14.4	15.3

Exposure to Second-hand Smoke: At Home

About 1 in 20, or 5% of people in Grey Bruce report being exposed to second-hand smoke at home (Table 7). This rate is no different than the Canadian, Ontarian, and peer group rates. Nationally and provincially, the rate of exposure to second-hand smoke at home has been decreasing, and through it can't be confirmed because of large confidence intervals, the same trend is apparent at the local level. (Grey Bruce Health Unit, 2013f)

Table 7: Percentage of Population Who Are Exposed to Second-Hand Smoke at Home

	GBHU	Peer Group	Ontario	Canada
2000/01	N/A	N/A	N/A	N/A
2003	7.7	N/A	9.2	10.6
2005	6.5	N/A	7.3	8.8
2007/08	7.5	8.7	5.8	7.0
2009/10	3.8	6.8	5.2	6.0
2011/12	5.2	5.9	4.5	5.1

Exposure to Second-hand Smoke: In Vehicles

In Grey Bruce, 5% (or 1 in 20 people) are exposed to second-hand smoke in vehicles (Table 8). This rate is not significantly different from the rates for the province and the country, nor is it significantly different from previous years' estimates. Rates for the province, country and Grey Bruce are all declining. (Grey Bruce Health Unit, 2013f)

Table 8: Percentage of Population Who Are Exposed to Second-hand Smoke in Vehicles

	GBHU	Peer Group	Ontario	Canada
2000/01	N/A	N/A	N/A	N/A
2003	10.6	N/A	9.7	10.2
2005	8.8	N/A	7.8	8.1
2007/08	7.4	8.6	7.5	7.8
2009/10	6.2	7.6	6.5	7.0
2011/12	5.2	7.3	5.8	6.4

Exposure to Second-hand Smoke: In Public Places

In Grey Bruce, about 9% (or 1 in 11 people) are exposed to second-hand smoke in public places. This rate is significantly lower than those of Canada and Ontario, but does not differ significantly from the peer group rate (Table 9). (Grey Bruce Health Unit, 2013f)

Table 9: Percentage of Population Exposed to Second-hand Smoke in Public Places

	GBHU	Peer Group	Ontario	Canada
2000/01	N/A	N/A	N/A	N/A
2003	7.1	N/A	17.9	19.7
2005	9.9	N/A	13.1	14.8
2007/08	8.7	7.7	11.5	10.5
2009/10	9.9	8.0	12.1	10.5
2011/12	8.6	9.6	13.2	12.7

3.3.5 Alcohol

Alcohol use is a significant risk factor for both injury and chronic disease. Heavy drinking puts a person at much higher risk of death or injuries from motor vehicle collisions; alcohol associated illness, falls, drowning and other hazards of poor judgment and reduced coordination. Longer term, heavy drinking can result in high blood pressure, stroke, liver disease, and neurological damage. (Ministry of Health and Long-Term Care & Public Health Division, 2009)

Regular Heavy Drinking

Regular heavy drinking (sometimes referred to as binge drinking) is defined as the consumption of five or more drinks in any one day at least once a month or more frequently. “This level of alcohol consumption can have serious health and social consequences, especially when combined with other behavior such as driving while intoxicated” (Statistics Canada, 2010).

About 26% of the Grey Bruce population (aged 12 and over) are regular heavy drinkers (Table 10). In 2011/12, Grey Bruce residents were 42% more likely than Canadians, 53% more likely than Ontarians, and 27% more likely than peer group members to engage in regular heavy drinking. As well, the rate has been fluctuating, over time, with a low in 2003 that was 41% lower than the current rate of 25.8%. It is unknown what factors may be contributing to reductions and resurgences of heavy drinking rates. (Grey Bruce Health Unit, 2013n)

Table 10: Percentage of Population Who Are Regular Heavy Drinkers²

	GBHU	Peer Group	Ontario	Canada
2000/01	23.2	N/A	19.3	18.2
2003	15.1	N/A	16.2	16.6
2005	20.6	N/A	16.8	17.3
2007/08	24.1	19.0	15.9	16.9
2009/10	18.7	18.8	15.9	17.3
2011/12	25.8	20.3	16.9	18.2

Drinking and Driving

Almost 6% of Grey Bruce residents report drinking 2+ drinks in the hour before operating a motor vehicle (car, truck, van or motorcycle), or recreational vehicle, in the past 12 months. Males are about five times as likely as females to engage in drinking and driving behaviours and younger age groups are more likely than older age groups to report drinking-driving in the past 12 months. Those with higher incomes are more likely than those with lower incomes to report drink-driving in the past 12 months. (Grey Bruce Health Unit, 2011a)

² The denominator of this rate was changed in 2009 to include the entire population, and this change has been applied to all estimates (the indicator used to be calculated only for the population who reported having at least one drink in the past 12 months).

Fetal Ethanol (Alcohol) Exposure

Fetal alcohol spectrum disorder (FASD) is a detrimental outcome of maternal alcohol use during pregnancy. In a 2006 Grey Bruce study, 4% of the new born babies studied were significantly exposed to alcohol while in the womb (Gareri, Lynn, Handley, Rao, & Koren, 2008).

In 2012 the Grey Bruce Healthy Communities Partnership produced a report identifying issues as they relate to levels of alcohol consumption in Grey Bruce. The report outlines strategies and interventions known to be effective in addressing alcohol-related harm and provides direction for key community stakeholders to collectively work towards a coordinated approach to addressing the issues. The full report can be found here:
http://www.publichealthgreybruce.on.ca/injury/alcoholdrugs/Reducing_Alcohol_Related_Harms_Grey_Bruce_Position_Paper.pdf

3.3.6 Unintentional Injury

Unintentional injuries are largely preventable injuries, and change in this indicator is a good measure of the effectiveness of injury prevention programs and the need for focus to be placed on the promotion of public health and safety behaviours (Leffley, 2010). This indicator includes a variety of different kinds of injury including, but not limited to, falls, poisoning, suffocation, motor vehicle traffic crashes, and burns.

The report, *Unintentional Injuries in Grey Bruce 2000-2009*³ (Grey Bruce Health Unit, 2011b) takes an in-depth look at unintentional injuries in our area—from emergency room visits to hospitalizations and even deaths. As reported previously, the Grey Bruce area has higher rates of unintentional injuries for many major categories.

Unintentional Injury Emergency Room Visits (ERV)

Grey Bruce has higher age-standardized ERV rates than Ontario for:

- unintentional injuries (101% higher, or two times as likely);
- unintentional falls (72% higher); and
- motor vehicle traffic crashes (43% higher).

Grey Bruce has higher age-standardized ERV rates than SW LHIN for:

- farm-related injuries (72% higher).

Grey Bruce males have higher age-standardized ERV rates than Grey Bruce females for:

- all unintentional injuries (41% higher); and
- farm-related injuries (553% higher, or over six times as likely).

Youth aged 15–24 years in Grey Bruce have higher age-specific ERV rates than other age groups for:

- all unintentional injuries (20% higher); and
- motor vehicle traffic crashes (47% higher).

Children aged 0–14 years in Grey Bruce have higher age-specific ERV rates than other age groups for:

- Unintentional falls. This is 5% higher than seniors (65 and over), which is the age group with the next highest rate.

³ Full report available on the Grey Bruce Health Unit website.

Unintentional Injury Morbidity/hospitalization

Grey Bruce has higher age-standardized hospitalization rates than Ontario for:

- all unintentional injuries (50% higher);
- unintentional falls (39% higher);
- motor vehicle traffic crash injuries (73% higher);
- pedal cycle injuries (26% higher); and
- unintentional burns (52% higher).

Grey Bruce males have higher age-standardized hospitalization rates than Grey Bruce females for:

- all unintentional injuries (27% higher);
- motor vehicle traffic crash injuries (75% higher);
- pedal cycle injuries (402% higher, or five times as likely);
- unintentional burns (192% higher, or nearly three times as likely); and
- other off-road motor vehicle injuries (171% higher, or nearly three times as likely).

Seniors in Grey Bruce have higher age-specific hospitalization rates than other age groups for:

- all unintentional injuries (363% higher, or nearly five times as likely),
- unintentional falls (616% higher, or over seven times as likely), and
- unintentional poisonings (75% higher).

Unintentional Injury Mortality/deaths:

Grey Bruce has higher age-standardized mortality rates than Ontario for:

- all unintentional injuries (36% higher); and
- motor vehicle traffic crashes (71% higher).

Grey Bruce males have higher age-standardized mortality rates than Grey Bruce females for:

- all unintentional injuries (59% higher).

Seniors in Grey Bruce have higher age-specific mortality rates than other age groups for:

- all unintentional injuries (456% higher, or over five times as likely); and
- unintentional falls (rates of other groups are so low they are unreportable).

It is crucial that factors contributing to unintentional injuries of Grey Bruce residents be addressed using a comprehensive, community-focused approach. Underlying issues such as alcohol use, obesity rates, physical activity opportunities and the unique rural nature of the area must be considered when developing approaches to injury prevention across the lifespan.

Severe injuries cause morbidity, loss of independence, diminished quality of life, needless deaths and are a significant cost to our health care system as well as to our community. Recognizing and understanding of risk factors leading to unintentional injury and rates of unintentional injury in Grey Bruce will help to create a safer place for us all to live, work, play, learn and age.

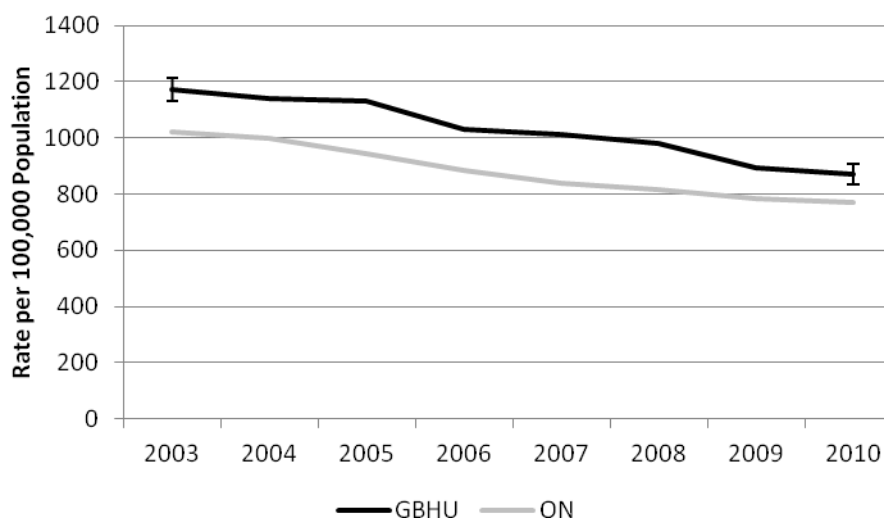
Grey Bruce has taken a leadership role in developing a collaborative Falls Prevention and Intervention program for older adults aged 65 and over. For more information visit: <http://www.findingbalanceontario.ca/>

3.3.7 Cardiovascular Disease

Cardiovascular Disease Hospitalization

Age-standardized rates of cardiovascular disease hospitalization in Grey Bruce and Ontario have declined by 26% and 25%, respectively, since 2003 (Grey Bruce Health Unit, 2012c). The 2010 age-standardized cardiovascular disease hospitalization rate in Grey Bruce was 872.3 hospitalizations per 100,000 population (Figure 3). Each week on average in Grey Bruce, 47 people are hospitalized with cardiovascular disease.

Figure 3: Time trend in rates of cardiovascular disease hospitalization, GBHU and Ontario



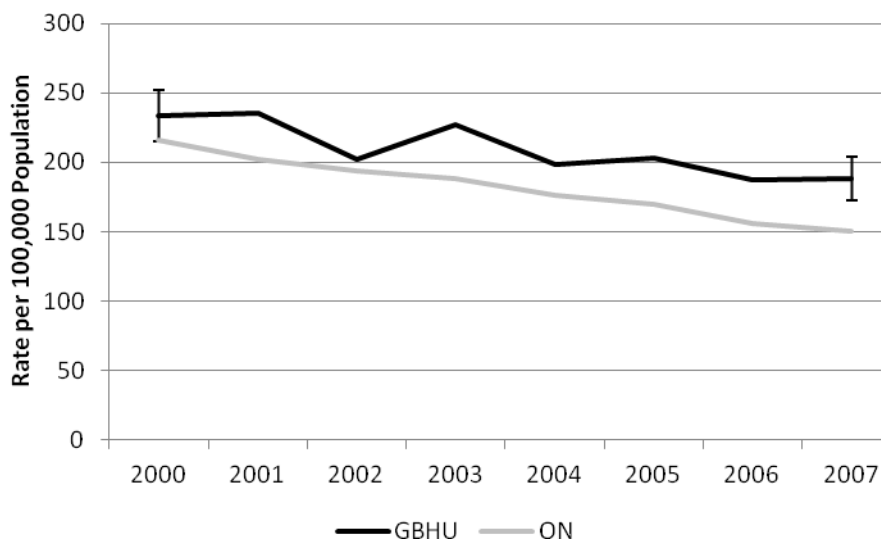
Source: Grey Bruce Health Unit. (2012). *Cardiovascular Disease in Grey Bruce: 2000 – 2010*. Owen Sound: Grey Bruce Health Unit. Data Sources: (1) Inpatient Discharges 1996–2010. Ontario Ministry of Health and Long-term Dcare, IntelliHEALTH Ontario. Date Extracted: December 13, 2011. (2) Population Estimates 1986–2011, Ontario Ministry of Health and Long-term Care, IntelliHEALTH Ontario, Date Extracted: December 15, 2011.

Bruce County residents have a 17% higher age-standardized rate of cardiovascular disease hospitalization than Grey County residents. In 2010, the rate of cardiovascular disease hospitalization among seniors in Grey Bruce was 5480.4 per 100,000—a rate 18% higher than that for seniors in Ontario. Ischaemic heart disease contributes about 40% of all cardiovascular disease hospitalizations in Grey Bruce, while cerebrovascular disease contributes about 13%.

Cardiovascular Disease Mortality

The age-standardized cardiovascular disease mortality rate has fallen 19% in Grey Bruce since 2000, and 30% in Ontario over the same time (Figure 4). The 2007 age-standardized cardiovascular disease mortality rate in Grey Bruce was 188.4 deaths per 100,000 population. Each week in Grey Bruce, 11 people die of cardiovascular disease.(Grey Bruce Health Unit, 2012c)

Figure 4: Time trend in rates of cardiovascular disease mortality, Grey Bruce and Ontario



Source: Grey Bruce Health Unit. (2012). Cardiovascular Disease in Grey Bruce: 2000 – 2010. Owen Sound: Grey Bruce Health Unit. Data Sources: (1) Ontario Mortality Data 1986–2007. Ontario Ministry of Health and Long-term Care, IntelliHEALTH Ontario, Date Extracted: October 12, 2010. (2) Population Estimates 1986–2011, Ontario Ministry of Health and Long-term Care, IntelliHEALTH Ontario, Date Extracted: December 15, 2011.

In 2007, the rate of cardiovascular disease deaths among seniors in Grey Bruce was 1650.3 per 100,000 population—a rate 24% higher than that for seniors in Ontario. Ischaemic heart disease contributes about 58% of all cardiovascular disease deaths in Grey Bruce, while cerebrovascular disease contributes about 20%. (Grey Bruce Health Unit, 2012c)

3.3.8 Influenza Vaccination

The rate of influenza vaccination in Grey Bruce (33.4%) has declined since 2005. Only about 1 in 3 people were vaccinated against influenza in the last year for the most recent two-year CCHS period. An estimated immunization rate of 70% is required to sufficiently protect the population from an influenza epidemic. (Grey Bruce Health Unit, 2013k)

3.3.9 Breastfeeding Behaviours

According to the WHO, “breastfeeding is the ideal way of providing young infants with the nutrients they need for healthy growth and development.” Breast milk transmits a mother’s antibodies to her baby, helping to protect the baby against infections and illness. Studies also suggest that breastfeeding may protect infants against allergies and respiratory infections, and may lower rates of type 2 diabetes later in a child’s life. Additionally, breastfeeding forms a bond between a mother and her child that is thought to contribute to the healthy psychological development of a child. (Ministry of Health and Long-Term Care & Public Health Division, 2009)

Nearly all (98%) mothers in Grey Bruce initiate breastfeeding (Table 11). This rate has been stable over the years, and is higher than the Canadian, Ontarian and peer group rates. In 2011/12 Grey Bruce mothers were 10% more likely than Canadians and Ontarians, and 8% more likely than those in the peer group to initiate breastfeeding.

Table 11: Percentage of Mothers Who Initiate Breastfeeding

	GBHU	Peer Group	Ontario	Canada
2000/01	N/A	N/A	N/A	N/A
2003	85.8	N/A	87.1	84.8
2005	90.4	N/A	87.9	87.0
2007/08	86.2	86.0	89.1	87.7
2009/10	76.3	97.0	88.8	87.4
2011/12	98.0	90.8	88.7	89.4

The rate of exclusive breastfeeding for 6 months is 43%, but this should be interpreted with caution, since the GBHU estimate has a low degree of reliability. The rate is not significantly different from the province or the country, but it is significantly higher than the peer group rate. (Grey Bruce Health Unit, 2013c)

3.3.10 Overweight and Obesity

A healthy body weight is associated with good health. Excess weight can lead to: coronary artery disease; stroke; hypertension; colon cancer; post menopausal breast cancer; type 2 diabetes; gall bladder disease; and osteoarthritis. There are many contributing factors to obesity, including: over eating; low activity levels; genetics; body metabolism; socio-economic status; and psychological/emotional factors. (Ministry of Health and Long-Term Care & Public Health Division, 2009)

The rate of overweight and obesity in Grey Bruce is 59%, or 3 in 5. This rate is significantly higher than that for Ontario and Canada. (Grey Bruce Health Unit, 2013l)

Overweight

The rate of overweight (BMI of 25 to less than 30) in Grey Bruce is 37%, or 1 in 3 (Table 12). This is significantly higher than that of Canada. It is not statistically different from that of Ontario or that of the peer group, nor is it different from previous years' estimates. (Grey Bruce Health Unit, 2013l)

Table 12: Percentage of Population Who Are Overweight

	GBHU	Peer Group	Ontario	Canada
2000/01	N/A	N/A	N/A	N/A
2003	35.3	N/A	34.2	34.1
2005	34.5	N/A	34.3	34.2
2007/08	39.1	37.2	34.6	33.9
2009/10	32.4	36.2	34.0	33.9
2011/12	37.0	34.7	34.3	34.0

Obesity

The rate of obesity (BMI of 30 or greater) is 22%, or more than 1 in 5 (

Table 13). This is not significantly higher than the Canadian, Ontarian and peer group rates. There has been a definite rise in rates at the provincial and federal levels over time, though the local obesity rate has not changed substantially since 2003. (Grey Bruce Health Unit, 2013l)

Table 13: Percentage of Population Who Are Obese

	GBHU	Peer Group	Ontario	Canada
2000/01	N/A	N/A	N/A	N/A
2003	22.7	N/A	15.2	15.3
2005	18.7	N/A	15.5	15.8
2007/08	22.4	20.4	17.0	17.0
2009/10	25.0	21.7	18.0	18.0
2011/12	21.6	22.4	18.3	18.3

Grey Bruce Community Picture - 2014 Supplement

The Bluewater Nutrition Project (Galloway, 2006) studied children's growth and nutrition in Grey Bruce. In the study sample, rates of overweight and obesity were high, and there was a significant gender difference in obesity prevalence.

- 18% of children were classified as overweight
- 11% of children were classified as obese
- Boys and girls were equally at risk of being overweight. However, boys rates of obesity (15%) were significantly higher than girls (7%)

Results of the study suggested that there may be cultural forces at work in Grey Bruce that emphasize large body size in boys. Boys tended to express a desire to be large and anxiety about being considered underweight or small. The result appears to be a population in which large numbers of school-aged children are overweight and at risk for poor health (Galloway, 2006).

3.3.11 Personal Health Behaviours

Physical Activity: Moderately Active or Active

Physical activity directly benefits a person’s physical and mental health. People who are regularly physically active are less susceptible to a number of chronic health conditions. Evidence also suggests that regular physical activity can contribute to improved mental health (Ministry of Health and Long-Term Care & Public Health Division, 2012). Physical activity behaviours are often shaped by broad social and environmental factors including the location of housing, employment and other services, the design of transportation systems and the ease with which people can access places to be active (Labonte, Muhajarine, Winquist, & Quail, 2009).

The Grey Bruce rate of achieving a moderate or active physical activity level is 58%, or about 3 in 5 people (Table 14). The rate of physical *inactivity* is 42%, or just over 2 in 5. These rates are not significantly different from the Ontario, peer group and Canadian rates. Local rates have remained relatively stable since 2003. (Grey Bruce Health Unit, 2013m)

Table 14: Percentage of Population Who Are Moderately Active or Active

	GBHU	Peer Group	Ontario	Canada
2000/01	40.9	N/A	42.6	42.6
2003	52.5	N/A	51.4	51.8
2005	57.1	N/A	52.9	52.2
2007/08	52.5	50.6	49.8	50.5
2009/10	52.8	51.4	50.5	52.3
2011/12	58.1	53.1	53.8	53.8

Results of the *School Health Action, Planning and Evaluation System (SHAPES)* research show that although children in Grey Bruce understand the importance of being physically active, it is not reflected in their behavior.

- Fourteen percent (14%) of secondary school students in Grey Bruce report getting *no activity* either in school or outside of school.
- School opportunities for physical activity (physical education class, intramural activities, school sports) represent a significant amount of the activity that they do get.
- At least 1 in 4 students in Grey Bruce spend 3 or more hours daily in front of a television, computer screen or phone. (Manske, 2008)

Fruit and Vegetable Intake

Research has shown that diets containing substantial and varied fruit and vegetables are associated with healthy weights, reduced risk of cardiovascular disease and may prevent certain types of cancer. Children who lack adequate fruit and vegetable consumption are significantly more likely to be overweight or obese compared to those who consume fruit and vegetables more frequently. Fruit and vegetable consumption is influenced by many factors, including: physical access within a community, food affordability, knowledge of healthy food choices and food skills. (Ministry of Health and Long-Term Care & Public Health Division, 2009)

About 1 in 3, or 37% of people in Grey Bruce report consuming 5 or more servings of fruits and vegetables per day (Table 15). This rate is no different than the Canadian, Ontarian, and peer group rates. Nationally and provincially, the rate of daily consumption of 5 or more services of fruits and vegetables has decreased from 2009/10 to 2011/12. (Grey Bruce Health Unit, 2013g)

Table 15: Percentage of Population Consuming 5+ Servings of Fruits and Vegetables a Day

	GBHU	Peer Group	Ontario	Canada
2000/01	34.8	N/A	37.5	37.2
2003	47.0	N/A	41.9	41.4
2005	N/A	N/A	42.8	43.6
2007/08	44.7	44.0	41.3	43.8
2009/10	42.6	44.2	43.2	44.2
2011/12	37.1	40.5	38.9	40.5

A study of Grey Bruce students in Grades 5-12 revealed that only 25% typically consume sufficient fruits and vegetables and 40% eat junk foods 4 or more times per day. Also, less than 50% of children are having breakfast each morning before school (Manske, 2008).

As of January 2014, 100% of schools in the Bluewater District School Board and the Bruce Grey Catholic District School Board offer Ontario Student Nutrition Program (OSNP) funded programs through Grey Bruce Eat and Learn with over 12,000 students per day accessing nutritious breakfast, lunch and snack programs.

3.4 Determinants of Health and Health Inequities

The health of individuals and communities is significantly influenced by complex interactions between social and economic factors, the physical environment, and individual behaviours and living conditions. These factors are referred to as the determinants of health, and together they play a key role in determining the health status of the population as a whole. Determinants of health include the following:

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

(Ministry of Health and Long-Term Care & Public Health Division, 2009)

3.4.1 Income and Social Status

Higher social and economic status is associated with better health. High income determines living conditions such as safe housing and the ability to buy sufficient good food. The healthiest populations are those in societies which are prosperous and have an equitable distribution of wealth. (Public Health Agency of Canada, n.d.)

This section provides a snapshot of income distribution across Grey Bruce. Information has been presented by municipality where available. Unfortunately, no information is available for Saugeen First Nation and Chippewas of Nawash First Nation due to insufficient data. However, local community leaders have identified that poverty is a significant concern within these two communities.

In 2005, the median income (after-tax) for families in Grey Bruce was \$53,306 which is well below the provincial average of \$59,377. Female led lone parent families in Grey Bruce are at the lowest income levels (\$31,132) (Statistics Canada, 2006).

There is considerable variation in median income among the different municipalities in Grey Bruce. In Bruce County, the median income (after-tax) for men range from \$38,097 in Saugeen Shores to \$24,525 in Arran Elderslie. In Grey County, the median income (after-tax) for men range from \$30,405 in Georgian Bluffs to \$24,414 in Chatsworth (Table 16).

Table 16: Median income (after-tax) for Males 15 years and over - Bruce County and Grey County by Municipality, 2005

Bruce County Municipality	Median Income after tax (\$)	Grey County Municipality	Median Income after-tax (\$)
Ontario	30,182	Ontario	30,182
Bruce County	28,891	Grey County	26,371
Saugeen Shores	38,097	Georgian Bluffs	30,405
Kincardine	37,308	Southgate	29,505
Brockton	28,483	Blue Mountains	28,300
Huron-Kinloss	27,293	Hanover	27,010
South Bruce	25,696	West Grey	26,232
South Bruce Peninsula	25,162	Meaford	25,575
Northern Bruce Peninsula	24,912	Owen Sound	24,996
Arran-Elderslie	24,525	Grey Highlands	24,758
		Chatsworth	24,414

Source: Statistics Canada, 2006 Census

In Bruce County, the median income (after-tax) for women ranges from \$18,756 in South Bruce to \$16,147 in Kincardine. In Grey County, the median income (after-tax) for women ranges from \$20,557 in Blue Mountains to \$16,684 in Southgate (Table 17).

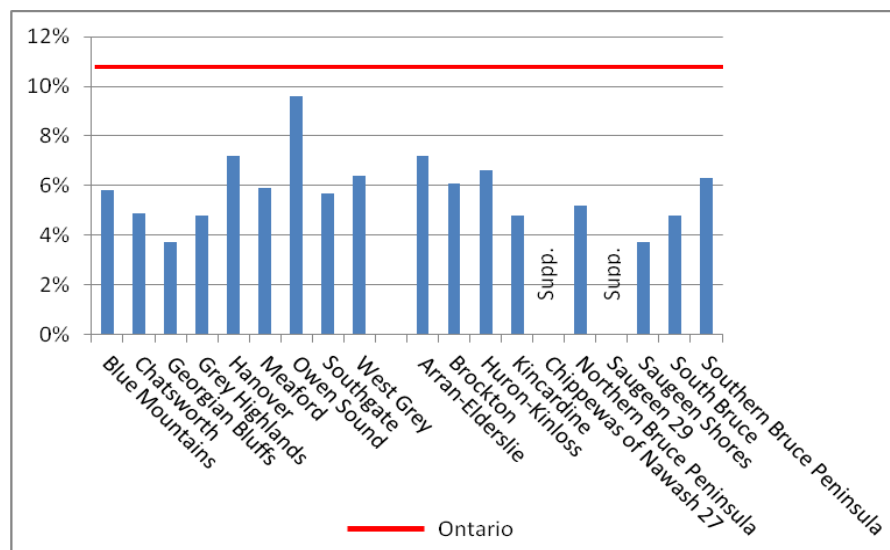
Table 17: Median income (after-tax) for Females 15 years and over - Bruce County and Grey County by Municipality, 2005

Bruce County Municipality	Median Income after-tax (\$)	Grey County Municipality	Median Income after-tax (\$)
Ontario	20,201	Ontario	20,201
Bruce County	17,282	Grey County	18,644
South Bruce	18,756	Blue Mountains	20,557
Brockton	18,130	Georgian Bluffs	20,239
Northern Bruce Peninsula	18,118	Grey Highlands	19,649
South Bruce Peninsula	17,705	Meaford	18,641
Saugeen Shores	17,407	West Grey	18,570
Huron-Kinloss	17,235	Owen Sound	18,332
Arran-Elderslie	16,660	Hanover	17,936
Kincardine	16,147	Chatsworth	17,747
		Southgate	16,684

Source: Statistics Canada, 2006 Census

About 9,200 people in Grey Bruce are living in poverty. Figure 5 illustrates the level of poverty (based on low income after-tax) in Grey Bruce by municipality (Statistics Canada, 2006).

Figure 5: Grey Bruce Percentage of Population Low Income (after-tax) by Municipality



Source: Statistics Canada, 2006 Census

Ontario offers income support programs for eligible residents which are delivered by Grey County and Bruce County. *Ontario Works* is an employment program intended to help people in temporary financial need find sustainable employment by providing financial assistance and employment services. In 2013, the average number of cases in Grey County was 1514 per month (Grey County Social Services, 2014); Bruce County was 566 per month (Bruce County Social Services, 2014). Although the 2013 caseload in Bruce County is down slightly from 2012, overall, the caseloads have been increasing since 2008 (Figure 6).

Figure 6: Average Monthly Ontario Works Caseloads, 2008-2013

	2008	2009	2010	2011	2012	2013
Grey	941	1229	1377	1453	1499	1514
Bruce	425	500	539	560	595	566

Ontario also offers the Ontario Disability Support Program (ODSP) which helps people with disabilities⁴ in financial need pay for living expenses, like food and housing. The average number of cases receiving from the ODSP in Grey Bruce in 2007 was 3,326 per month. This increased to 3,441 per month in 2008 (Ontario Ministry of Community and Social Services, 2010, as cited by Clarke & Barclay, 2010).⁵

The cost of food can be a barrier to health for many people on a limited income. The 2013 Nutritious Food Basket survey found that it costs \$179.07 per week (\$775.37 per month) to feed a family of four (two parents, two children) in Grey Bruce (Grey Bruce Health Unit, 2013o). This is a 3.7% increase from 2012. Unfortunately, income has not increased at the same rate. For

⁴ Person with a disability as defined under the Ontario Disability Support Program Act (see Glossary)

⁵ 2013 ODSP case numbers to be added when the information becomes available.

those on social assistance, this may mean that up to 38% of their monthly income is necessary for food alone (One-person household, Ontario Works). This is impossible after paying for rent, utilities and other necessary expenses. In comparison, the average family in Ontario would spend only 11% of their income to meet their food needs (Ministry of Health and Long-Term Care & Health Promotion Implementation Branch, 2013).

Housing

In 2006, over 80% of Grey Bruce dwellings were owned by their residents which is well above the provincial average of 71% (Statistics Canada, 2006). The cost of housing is a concern for a significant proportion of the Grey Bruce population with 23% of residents spending 30% or more of their total household income on shelter (Ministry of Health and Long-Term Care & Public Health Division, 2009).

Rent-Geared-to-Income (RGI) Housing assistance is designed to that a qualified household can pay rent based on their income. In Grey Bruce, the number of households who qualify for this type of assistance far exceed the number of RGI Housing Units that are available.

In 2013, there were 1391 Rent-Geared-to-Income (RGI) Housing Units, 80 Affordable Housing Units and 50 Rent Supplement Subsidies for individuals and families in Grey County (Grey County, 2014). In Bruce County, there were 740 RGI Housing Units, 53 Affordable Housing Units and 61 Rent Supplement Subsidies (County of Bruce, 2014).

An average of 873 individuals and families in Grey and Bruce Counties (Grey 653; Bruce 220) were on waiting lists for RGI Housing during the period of 2009-2013 (Table 18) (County of Bruce, 2014; Grey County, 2014).

Table 18: Average Number of Individuals/Families on Wait List for Rent Geared to Income Housing in Grey and Bruce Counties, 2009-2013

	2009	2010	2011	2012	2013
Grey	650	679	795	653	490
Bruce	140	180	203	311	264

The YMCA of Owen Sound Grey Bruce Housing Support Program assists youth (aged 16 to 24) and adults (aged 25 and over) with housing related issues including homelessness. The program is available throughout Grey and Bruce Counties and is designed to assist people to find or maintain safe and affordable housing to prevent homelessness. Services include: assistance with finding/accessing emergency shelter; one-to-one assistance to find and secure appropriate housing; landlord mediation and support; assistance with completing applications for housing and financial assistance, and referrals to other services and supports. In 2013, there were 3517 people, including 483 youth, who accessed the program (County of Bruce, 1276; County of Grey, 2241). (YMCA of Owen Sound Grey Bruce Housing Support Program, 2014)

3.4.2 Education & Literacy

Health status improves with level of education. Education is closely tied to socioeconomic status, and effective education for children and lifelong learning for adults are key contributors to health and prosperity for individuals and the community. It equips people with knowledge and skills for problem solving, and helps provide a sense of control and mastery over life circumstances. It increases opportunities for job satisfaction and improves people’s ability to access and understand information to keep them healthy. (Public Health Agency of Canada, n.d.)

Grey Bruce offers a strong preschool, primary and secondary education system. There are two major school boards overseeing education throughout Grey and Bruce Counties. The Bluewater District School Board has a total of 53 schools and the Bruce Grey Catholic District School Board has a total of 14 schools. Conseil Scolaire de District Des Ecoles Catholique du Sud-Ouest operates École Saint-Dominique-Savio in Owen Sound and offer both elementary and secondary Catholic French Language education to Grey Bruce.

The Owen Sound campus of Georgian College of Applied Arts and Technology offers a full schedule of part-time and full-time college level programs. A satellite campus operates in Walkerton to address the needs of companies and individuals in Grey Bruce.

In Grey Bruce, among the population aged 25 to 64 years, 53% have completed some sort of post-secondary education, compared to the Ontario average of 61% (Ministry of Health and Long-Term Care & Public Health Division, 2009). In other words, Grey Bruce has a significantly higher percentage of the population with less than high school education compared to Ontario for the 25 to 34 years and 35 to 64 years age groups (Table 19).

Table 19: Percentage of Population with Less than High School, Grey Bruce & Ontario

Age Category	Grey Bruce	Ontario
25 to 34	14.6%	8.7%
35 to 64	19.3%	15%

Although Grey Bruce has lower attainment levels in terms of college and university degrees, there is a higher proportion of apprenticeship or trades certificates, and of college and other non-university certificates obtained in Grey Bruce than in Ontario (Four County Labour Market Planning Board, 2010). This is reflected in the strong and continuing tradition of high skills levels in agriculture and construction.

3.4.3 Employment

People with secure employment and more control over their work circumstances are healthier and often live longer than those in more stressful or riskier work and activities. Paid work provides not only money, but also social connections and a sense of identity and purpose. Many Canadians (especially women) spend almost as many hours a day engaged in unpaid work, such as doing housework and caring for children or older relatives. When these two workloads are combined on an ongoing basis, and little or no support is offered, an individual's level of stress is bound to suffer. Unemployment, underemployment, and stressful or unsafe work are also associated with poorer health. (Public Health Agency of Canada, n.d.)

Industries in Grey Bruce with the largest labour force (aged 15 years and older) are: agriculture and other resource-based industries; manufacturing; business services; retail trade; and health care and social services (Statistics Canada, 2006). The energy sector in Bruce County is a major source of employment as well as rock quarries.

Youth report that Grey Bruce lacks employment opportunities for their age group. Currently, the retail sector is the largest employer of teenagers while the accommodation and food service sector is the next biggest. Of note is that there is not enough opportunity within either sector to provide for all youth looking for part-time employment in Grey Bruce. (GBHU et al, 2007, as cited by Clarke & Barclay, 2010)

Unemployment

In 2006, the unemployment rate in Grey Bruce (5.3%) was well below the provincial rate of 6.4% (Statistics Canada, 2006). However, the downturn in the world-wide economy in 2008 and 2009 has affected the residents of Grey Bruce. Over the year, December 2007 to December 2008, the number of Grey Bruce residents receiving regular employment insurance as a result of unemployment rose by between 40-54% (Grey Bruce Children's Alliance, 2010).

The YMCA of Owen Sound Grey Bruce provides free employment related services to job seekers looking for work. There are three Employment Resource Centres (ERC) (Owen Sound, Hanover, Durham) and satellite locations in Dundalk, Flesherton, Markdale, Meaford and Thornbury (YMCA of Owen Sound Grey Bruce, n.d.). In 2012/13 there was a total of 16,823 visits to the Owen Sound and Hanover ERCs, this is an increase from 2009/10 when there was 14,778 visits (YMCA of Owen Sound Grey Bruce Community & Employment Services, 2014).

Agriculture

Although by no means the top industry or the top occupation in terms of employment figures, agriculture is an important industry in Grey Bruce. More than half (58%, or 2360 km²) of the total land area of Bruce County is farmland, and nearly half (44%, 1986 km²) of the total land area of Grey County is farmland (Statistics Canada, 2012a).

Grey and Bruce Counties are the top two producers of alfalfa (hay) in Ontario (Statistics Canada, 2012a). Grey County is the top producer of apples, sheep and rabbits in Ontario, while Bruce County is the top producer of cattle and goats in Ontario (Statistics Canada, 2012a). The head count of cattle in Bruce County alone is nearly equivalent to the human population of the Grey Bruce region (158,710 cattle in 2011). As pollination is important to alfalfa and apple production, it is not surprising that across Grey and Bruce there are nearly 6000 bee colonies kept by farmers, pollinating crops and producing local honey (Statistics Canada, 2012a).

3.4.4 Social Networks and Environments

Support from families, friends and communities is associated with better health. The caring and respect that occurs in social support networks, and the resulting sense of satisfaction and well-being, seem to act as a buffer against health problems. Some experts have concluded that the health effect of social relationships may be as important as established risk factors such as smoking, physical activity, obesity and high blood pressure. The importance of social support also extends to the broader community. Cohesive communities provide a supportive society that reduces or avoids many potential risks to good health. (Public Health Agency of Canada, n.d.)

Social Cohesion

Social cohesion is a term used to describe bringing and keeping people together. Sense of belonging to the community can describe a certain degree of social cohesion in that community.

In Grey Bruce, 69% of the population feels a sense of belonging to the community (Grey Bruce Health Unit, 2013h). The rate used to be higher than those of Ontario and Canada, but is now similar to rates seen at those levels. This *may* be indicative of a decline in community cohesion at the local level, although the difference of 5 percentage points from the last point in time is not statistically significant. (Grey Bruce Health Unit, 2013h)

Table 20: Percentage of Population Who Feel a Somewhat or Very Strong Sense of Belonging to Local Community

	GBHU	Peer Group	Ontario	Canada
2000/01	N/A	N/A	N/A	N/A
2003	71.4	N/A	64.4	63.9
2005	74.4	N/A	65.5	64.4
2007/08	74.3	70.0	66.4	64.8
2009/10	74.8	70.6	67.4	65.4
2011/12	69.8	71.2	67.5	65.4

3.4.5 Physical Environment

The physical environment is an important determinant of health. The quality of our air, water, food and soil; and factors related to housing and the design of communities and transportation systems can significantly influence our physical and psychological well-being. (Public Health Agency of Canada, n.d.)

Recreation

All 17 lower-tier municipalities support recreation facilities and programs in some way depending on their levels of staffing and financial support. The PLAY in Bruce Grey physical activity strategy has engaged municipalities in providing or supporting a wider variety of affordable and accessible recreation activities. In 2014, this initiative was profiled by Parks and Recreation Ontario as a leading practice in the province. The Longest Day of PLAY and Family Day of PLAY challenge communities to accumulate the greatest number of physical activity hours. Additionally, the promotion of tourism within Grey Bruce has added to both summer and winter recreation opportunities surrounding our unique geographic features. Residents and visitors alike can access extensive trail networks, waterways, beaches, and forests for activities such as hiking, cycling, swimming, skiing and snowshoeing.

For a mapping report of healthy eating and physical activity opportunities in Grey Bruce visit: http://www.healthycommunitiesconference.com/Grey-Bruce_Report_Final.pdf

Transportation

Transportation systems can significantly influence our physical and psychological well-being. Grey and Bruce counties are relatively isolated geographically which makes transportation challenging. As such, motorized vehicles are essential in Grey Bruce due to the large geographic area. Within Grey Bruce, the city of Owen Sound is the only community with a public transportation system. This has created an auto-oriented culture where motorized vehicles are perceived as the principle mode of transportation to get to and from work and school, to access retail and social services, and to recreate. Eighty-eight percent of the Grey Bruce labour force drives to work either by car, truck, van or as a passenger (Statistics Canada, 2006) and the majority of children in Grey Bruce are driven to school by either bus or car (Manske, 2008). Our dependence on motorized vehicles will only continue to rise unless alternative means of transportation are developed and supported locally. Increasing and supporting opportunities for public and alternative transportation may decrease the number of motor vehicle crashes and increase people's physical activity levels (Grey Bruce Health Unit, 2009).

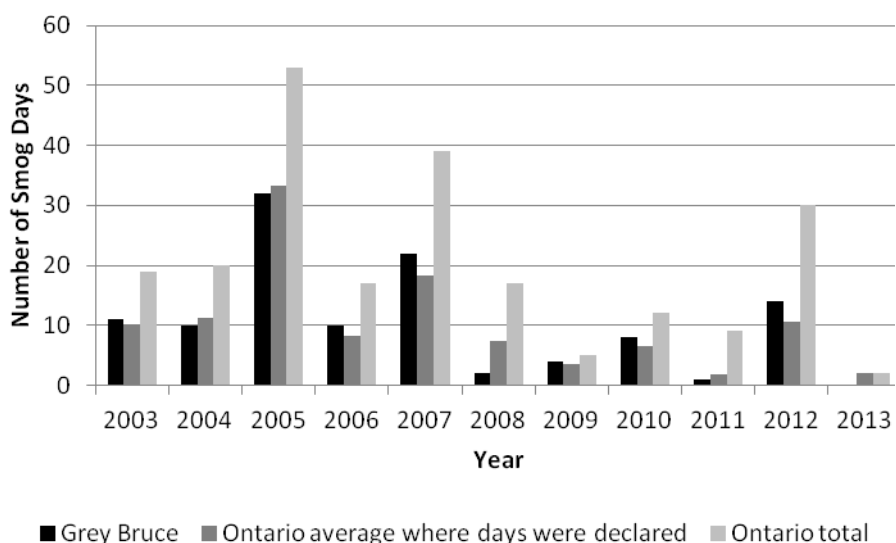
Not all Grey Bruce residents have access to a vehicle. Those with the financial means to own and operate a personal vehicle are only able to drive temporarily on the basis of age and financial, physical and cognitive ability (Grey Bruce Health Unit, 2009). Soaring fuel costs and other related motor vehicle expenses make it difficult for some to afford independent transportation. With few other transportation options, the expense of operating a motor vehicle may force people with lower incomes to spend large proportions of their budget on transportation leaving little left over for healthy food choices, educational opportunities, and other essentials of daily living. For other families, it may mean limited, or no, access to a vehicle. These individuals may become isolated and have limited access to social services and programs that they need (Grey Bruce Health Unit, 2009).

Both the City of Owen Sound and the County of Grey have taken steps to develop Transportation Master Plans which include language that supports active and alternative transportation options. *Spruce the Bruce* is a downtown improvement program created by the County of Bruce with its goal to enact positive change to support livable, economically viable communities. Specifically, local groups are working to ensure that new developments consider walkability and bikability, including street connectivity, appropriate densities and land use mix, and; existing developments are retrofitted with safe and aesthetically pleasing sidewalk environments to promote active modes of travel.

Air Quality

Grey Bruce residents enjoy relatively good air quality. Since 2003, Ontario in general has experienced some better years for smog and some worse years (Figure 7). Typically, in years where more smog days are declared across Ontario, more smog days are also declared at the local level. 2013 was a particularly good year, and Grey Bruce had zero smog days for the first time since these statistics have been collected (Ministry of the Environment, n.d.).

Figure 7. Number of Smog Days by Year, Grey Bruce, Ontario Average and Ontario Total



There are significant negative health impacts associated with smog. The Ontario Medical Association's Illness Cost of Air Pollution Model calculates the number of premature smog deaths that occur in a census area. In 2008, 161 premature smog related deaths were identified in Grey Bruce (Ontario Medical Association, n.d.).

Water Quality

Safe drinking water is a major concern throughout Ontario. In Grey Bruce, residents obtain their drinking water from either private wells or municipal drinking water systems. Private wells are tested by their property owners and drinking water systems are monitored by the Grey Bruce Health Unit. If monitoring indicates a quality problem, it is referred to as an adverse water quality incident and residents are advised to boil their water before drinking/using it. In 2012, the count of small drinking water systems in the Grey Bruce region was 586 (Ministry of Health and Long-Term Care & Public Health Division, 2012).

3.4.6 Personal Health Practices and Coping Skills

Personal Health Practices and Coping Skills refers to those actions by which individuals can prevent diseases and promote self-care, cope with challenges, and develop self-resilience, solve problems and make choices that enhance health. This includes not only individual choices, but also the influence of social, economic, and environmental factors on the decisions people make about their health. Personal life choices are greatly influenced by the environments in which people live, learn, work and play. (Public Health Agency of Canada, n.d.)

Chronic Disease Self-Management

Grey Bruce has been a leader in developing a strategy to support self-management of chronic diseases. Community partners have worked together to build the capacity within their organization and the community to ensure access to self-management focused programming. However, partners also recognize that a supportive environment is essential for behaviour change.

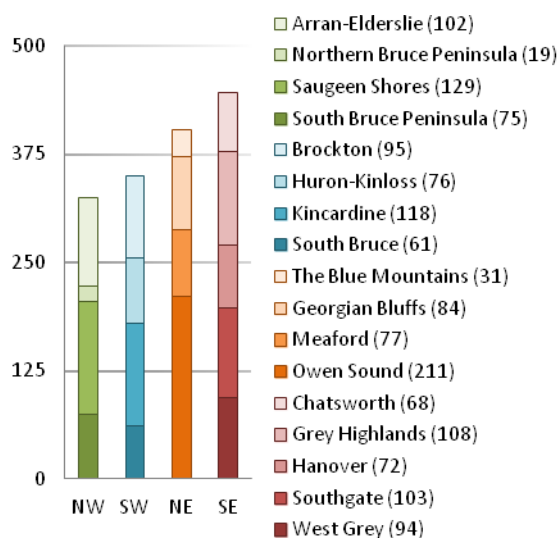
3.4.7 Healthy Child Development

Experiences from conception to age six have the most important influence of any time in the life cycle on brain development. Early child development is largely affected by the other determinants of health. For example, a child’s development is greatly affected by his or her housing and neighbourhood, family income and level of parents’ education, access to nutritious foods, etc. A low weight at birth links with problems not just during childhood, but also in adulthood. Research shows a strong relationship between income level of the mother and the baby’s birth weight. Factors such as coping skills and sense of control over life circumstances also come into play. (Public Health Agency of Canada, n.d.)

Birth Counts and Birth Rate

In 2011, there were a total of 1537 live births to Grey Bruce mothers: 639 to Bruce County mothers and 848 to Grey County mothers (Figure 8) (Grey Bruce Health Unit, 2013p).

Figure 8: 2011 Live Birth Counts by Municipality



The general fertility rate is the number of live births born to women of reproductive age (women aged 15–49 years) divided by the total population of women in that age group. This is typically expressed as births per thousand women. In 2011, the general fertility rate in Grey Bruce was 46.8 per 1000.

Teen Fertility Rate

High fertility rates in adolescents are associated with low birth weight, preterm birth, and increased infant morbidity and mortality. The teen fertility rate (women aged 15-19 years) in Grey Bruce has declined since 2001. In general, teen fertility rates in Grey Bruce tend to approximate the Ontario rate. In 2011, the teen fertility rate in Grey Bruce was 14.5 live births per 1000 women aged 15-19 (Grey Bruce Health Unit, 2013p).

Low Birth Weight

Birth weight is considered to be 'low' when the newborn weighs less than 2500 grams. The low birth weight rate is the number of low birth weight live births divided by the total number of live births, and is expressed as a percentage. Low birth weight is a main determinant of infant morbidity and mortality and the negative effects of low birth weight may be lifelong. Low birth weights for Grey Bruce and Ontario have remained relatively stable over the last 11 years. In 2011, the low birth weight rate was 6.5% in Grey Bruce (Grey Bruce Health Unit, 2013p).

High Birth Weight

Singleton high birth weight (HBW) infants are defined as singleton live births weighing over 4500 grams at the time of birth, and the rate is expressed as a percentage of singleton live births. Both short and long-term health outcomes are associated with HBW infants. Some of the risk factors associated with HBW infants are genetic factors such as maternal height, ethnicity and infant sex. There are many environmental factors associated with HBW babies, including maternal socioeconomic status, maternal education, maternal diabetes status and maternal age. Two environmental risk factors that are the most easily modifiable include maternal pre-pregnancy body mass index and gestational weight gain. Long-term health outcomes for HBW babies can include diabetes, certain types of cancer and an increased risk of childhood and adult obesity. In 2011, the singleton high birth weight rate in Grey Bruce was 2.2%, similar to the Ontario rate of 1.7% (Grey Bruce Health Unit, 2013p).

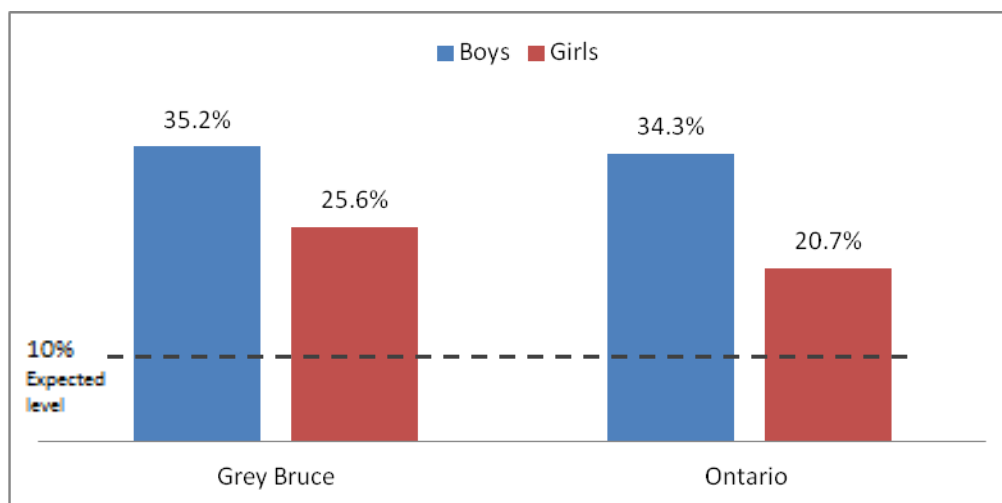
The Grey Bruce Canada Prenatal Nutrition Program "Healthy Beginnings" established in 1996 along with the *Healthy Babies Healthy Children* program, and *Let's Grow* (an integrated services network) have a long-standing history of working together. These programs and initiatives support the most vulnerable families within Grey Bruce to have the opportunity to make choices that will allow them to live a long and healthy life.

Vulnerability in School Readiness

School readiness is a good indicator of early childhood growth and development, and a predictor of outcomes in later years. It is assessed using the Early Development Instrument (EDI), an internationally recognized tool completed by a child's teacher upon school entry that identifies vulnerabilities in readiness to learn in five domains: physical health and wellbeing, communication skills and general knowledge, emotional maturity, social competence, and language and cognitive development (Offord, 2007).

In Grey Bruce, 30.5% of children (Boys: 35.2%, Girls: 25.6%) entering school have vulnerabilities in one or more domains of school readiness, as compared to 27.6% in Ontario (Boys: 34.3%, Girls: 20.7%) (Figure 9). It has been suggested that vulnerability levels above 10% are avoidable (Kershaw, Anderson, Warburton, & Hertzman, 2009).

Figure 9: Percent of children with vulnerabilities⁶ in school readiness using the Early Development Instrument by sex, 2009-2012 (combined)



3.4.8 Biology and Genetic Endowment

Genetic endowment appears to predispose certain individuals to particular diseases or health problems. However, it is also important to consider how socioeconomic and environmental factors impact overall health.

3.4.9 Gender

Gender refers to the array of society-determined roles, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis. Many health issues are a function of gender-based social status or roles (Public Health Agency of Canada, n.d.).

⁶ Scoring below the 10th percentile in one or more domains of the Early Development Instrument

3.4.10 Health Services

Health services, particularly those designed to maintain and promote health, to prevent disease, and to restore health and function contribute to population health. The health services continuum of care includes treatment and secondary prevention. (Public Health Agency of Canada, n.d.)

The South West Local Health Integration Network (SW LHIN) is responsible for the planning, integration and funding of health service providers in Grey Bruce including hospitals, long-term care homes, mental health and addictions agencies, community support services, community health centres, and the South West Community Care Access Centre (CCAC).

There are three hospital corporations in Grey Bruce (Grey Bruce Health Services, South Bruce Grey Health Centre and Hanover & District Hospital) with a combined 11 sites across the two Counties.

There are also seven Family Health Teams servicing Grey Bruce (Brockton and Area, Hanover, Kincardine, North Huron, Owen Sound, Peninsula, and Sauble) and a Community Health Centre (South East Grey) that provide a wide array of services to clients including health promotion and prevention services.

Five mental health teams (Bruce Shoreline, Central Grey Bruce, North Bruce, North Grey, and South Grey) are set up across Grey Bruce under the partnership of HOPE Mental Health & Addiction Services, Grey Bruce Canadian Mental Health Association, and Grey Bruce Health Services. About 40 pharmacies exist with Grey Bruce, pharmacists are playing an increasingly important role in influenza immunization, substance misuse prevention, harm reduction, and tobacco cessation.

The distance to obtain services is an issue for many areas within Grey Bruce as each hospital offers different services with the main hospital sites in Owen Sound, Walkerton, and Hanover. For more intensive treatment, patients are often required to travel to London. Home and Community Support Services offers several services across the region including: Movin'GB Medical Transportation, Volunteer transportation, Meals on Wheels, and the Day Away program for adults with Alzheimer's disease.

Health Service Utilization

Nearly 9 in 10, or 92% of people in Grey Bruce report having a regular medical doctor. This rate is higher than the Canadian and peer group rates, but is not significantly different from Ontario. In 2009/10, only 78% of people in Grey Bruce (or 4 in 5) had contact with a medical doctor in the past 12 months, which was lower than the Ontario rate. (Grey Bruce Health Unit, 2013i)

Most Grey Bruce residents have a medical doctor, but they may be less inclined to see their physicians regularly than the Ontario or Canada average. Also, because there are fewer specialists accessible in the area, local residents have ready access to fewer types of care than people who live in other regions. This may result in fewer visits to medical doctors since it might not be feasible to drive long distances for specialized care as frequently as you might see a specialist if they were more closely located.

3.4.11 Culture and Language

Some persons or groups may face additional health risks due to a socio-economic environment, which is largely determined by dominant cultural values. This contributes to the perpetuation of conditions such as marginalization, stigmatization, loss or devaluation of language and culture and lack of access to culturally appropriate health care and services. (Public Health Agency of Canada, n.d.)

There are several Mennonite and Amish communities within Grey Bruce. There are also two First Nations Reserves located in Bruce County and over 100 families within the Métis Nation of Ontario who reside in Grey Bruce. Overall within Canada, First Nations, Inuit and Métis families disproportionately experience social and economic circumstances that threaten their health and well-being (Public Health Agency of Canada, n.d.). Furthermore, the rural nature of Grey Bruce adds to the experience of isolation for culturally diverse families (Grey Bruce Children's Alliance, 2010).

Almost all residents speak English at home and less than 1% of the population speaks French as their mother tongue (Statistics Canada, 2006). In Bruce County, Ojibway is the third most prevalent mother tongue language spoken other than English and French (Ontario Trillium Foundation, 2008).

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Section 5: Glossary of Terms

Built Environment: The built environment consists of the arrangement of activities and/or land use within community settings, and the nature of physical connections between the places where we live, work and play. The built environment encompasses all buildings, spaces and products that are created or modified by people.

Community: A specific group of people, often living in a defined geographical area, who share a common culture, values and norms, and are arranged in a social structure according to relationships which the community has developed over a period of time. (World Health Organization)

Determinants of Health: The range of personal, social, economic and environmental factors which determine the *health status* of individuals or populations.

Disability: (as defined by Statistics Canada Census) – Refers to difficulties with daily activities and the reduction in the amount or kind of activities due to physical or mental conditions or health problems.

Health: A state of complete physical, social and mental well-being, and not merely the absence of disease or infirmity. Within the context of health promotion, health has been considered less as an abstract state and more as a means to an end which can be expressed in functional terms as a resource which permits people to lead an individually, socially and economically productive life. Health is a resource for everyday life, not the object of living. It is a positive concept emphasizing social and personal resources as well as physical capabilities. (World Health Organization).

Health Indicator: A characteristic of an individual, population, or environment which is subject to measurement (directly or indirectly) and can be used to describe one or more aspects of the health of an individual or population.

Health Status: A description and/or measurement of the health of an individual or population at a particular point in time against identifiable standards, usually by reference to health indicators.

Healthy Public Policy: Characterized by an explicit concern for health and equity in all areas of policy, and by an accountability for health impact. The main aim of healthy public policy is to create supportive environments to enable people to lead healthy lives. Such policies make healthy choices possible or easier for citizens. It makes social and physical environments health enhancing.

Median Income (after-tax): Median income is that amount which divides the income distribution in two halves, i.e., the incomes of the first half of individuals are below the median, while those of the second half are above the median. After-tax income refers to total income from all sources minus federal, provincial and territorial taxes paid by persons 15 years and over. Sources of income include: wages and salaries (total), net farm income, net non-farm income from unincorporated business and/or professional practice, child benefits, Old Age Security pension, Guaranteed Income Supplement, Pension Plan benefits, Employment Insurance benefits, other income from government sources, dividends, interest, annuities, including those from RRSPs and RRIFs, and other money income (Statistics Canada).

Natural Environment: All living and non-living things occurring naturally on earth, including air, water, vegetation, soil, rocks and atmosphere, etc.

Peer Group: Groups of health regions that have similar socio-demographic distributions. They are based on data collected from the short and long form census of Statistics Canada. The variables measured cover demographic structure, social and economic status, ethnicity, Aboriginal status, housing, urbanization, income inequality and labour market conditions, etc. Because they are based on census data, they are revised when new census data is available. For more information on the methodology used to assign health region peer groups visit <http://www.statcan.gc.ca/pub/82-221-x/2009001/regions/hrpg2007-eng.htm>

Person with a Disability : To qualify in accordance with the *Ontario Disability Support Program Act* a person with a disability has a substantial physical or mental impairment that is continuous or recurrent and is expected to last one year or more; and the direct and cumulative effect of the impairment on the person's ability to attend to his or her personal care, function in the community and function in a workplace, results in a substantial restriction in one or more of these activities of daily living; and the impairment and its likely duration and the restriction in the person's activities of daily living have been verified by a person with the prescribed qualifications (*Ontario Disability Support Program Act, 1997*).

Statistically Significant: A statistically significant result is one that is considered unlikely to have occurred by chance. A statistically significant difference between results indicates that there is meaningful statistical evidence to claim that the difference is not due to random chance.

