

# Canadian Community Health Survey, 2007/08 Grey Bruce Health Unit

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## Introduction

This report presents health indicators relating to health behaviours, health care utilization and health status. Here, you will find comparisons between the Grey Bruce Health Unit (GBHU), Ontario, Canada and our Peer Group (a group of health regions—of which we are a member—with social and economic characteristics similar to ours). Included also are comparisons to the 2005, 2003 and the 2000/01 CCHS results, where available.

For reference, the estimated population of Grey Bruce in 2008 is 163,069<sup>1</sup> (Statistics Canada, 2006).

### Legend

- N/A: Estimate not available
- E: Estimate to be interpreted with caution because of reduced reliability
- F: Suppressed because estimate is unreliable
- RR: Relative Risk
- 2000/01: The rate for 2000/01 (represents one year of data collection that spanned over the end of the calendar year)
- 2003: The rate for 2003
- 2005: The rate for 2005
- 2007/08: The combined two-year rate for 2007 and 2008

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<sup>1</sup> Source: Population Estimates 1986–2008, Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: August 3, 2010.

## About the Canadian Community Health Survey (CCHS)<sup>2</sup>

The Canadian Community Health Survey (CCHS) is a health-related survey of more than 65,000 Canadians that is conducted each year. Historically, data were collected over 12 months and released every two years; since 2007, they have been collected on a repeating two-month cycle and released on an annual basis. In the 2000/01, 2003 and 2005 releases, about 130,000 people across Canada were interviewed over the course of about a year. In 2007, when the survey methodology was redesigned, the sample was changed to about 65,000 people each year instead of twice that number every other year. There are now statistics available each year for 2007, 2008 and 2009. Because of the small population in Grey Bruce however, it is more reliable to analyse a larger sample size, when available.

Fortunately, the option to report two-year combined data remains available. In 2009, the 2007/08 combined data were released (combined sample size= about 130,000), and it is reported here because of its greater precision (larger sample sizes produce less variability in measurements) and for comparability to previous releases (i.e., 2000/01 through 2005).

### *Target Population*

The CCHS includes Canadian residents 12 years of age and older who live in private households. Residents of Indian reserves, health care institutions, some remote areas, and full-time members of the Canadian Forces are excluded from the sampling frame. The survey covers approximately 98% of all Canadians aged 12 and older. Unless noted otherwise, all indicators are calculated for people aged 12 and over.

### *Design*

The CCHS is a cross-sectional population health survey. It is meant to give a point-in-time picture of the health status and health behaviours of Canadian residents. Each year, a new, stratified cluster sample is derived from three sampling frames.

### *Sampling*

The CCHS uses three sampling frames to collect data: an area frame based on household information gathered from the Census, a list frame comprised of listed telephone numbers in the Canada Phone directory (an administrative directory updated every six months), and a random digit dialling frame. The design is a multistage stratified cluster design, which is to say that at various stages there are calculations made to determine a sample size that will adequately represent groups in that stratum. This stratified cluster design method takes into account household size, geographic location, composition, and selected socioeconomic characteristics that are collected from the long form census.<sup>3</sup> The final sampling unit is the household, meaning that no two people from the same household will ever be

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<sup>2</sup> Most of the information in this section is drawn from the Canadian Community Health Survey (CCHS) Annual component User Files, 2008 Microdata File, Statistics Canada, June 2009.

<sup>3</sup> The federal government has recently cancelled the long form census for 2011, replacing it with a voluntary long form questionnaire. If this decision is not reversed, it is likely to diminish the comparability of cycles of CCHS data beyond 2011 to existing CCHS data.

respondents to the same CCHS cycle. At the household level, household members are selected by age in order to ensure a representative sample.

The approximate proportions of the sample drawn from each frame are 49% from the area frame, 50% from the list frame, and 1% from the random digit dialling frame.

### ***Data Collection***

Data are collected using computer assisted interviewing. Approximately half of the interviews are conducted in person, while the other half are conducted over the phone using computer assisted telephone interviewing.

### ***Proxy Interviews***

If the selected respondent was unable to complete an interview for physical or mental health reasons, another knowledgeable household member supplied information about the selected respondent. More sensitive or personal questions beyond the scope of knowledge of the proxy respondent were not asked. Indicators for which proxy data were not collected will be noted in this report.

### ***Weighting***

The CCHS data are weighted to be representative of the covered population, adjusting for the sub-clusters used in sampling (and the differences between the actual sample and the sampling frame distribution), sex, age groups, and person and household nonresponses. The resulting weight corresponds to the number of people who are represented by each survey respondent, and it is used in analysis to produce estimates based on the survey results.

For more information about the CCHS methodology, consult the CCHS User Files available at [www.statcan.gc.ca](http://www.statcan.gc.ca).

### ***Peer Groups***

Peer groups are groups of health regions that have similar sociodemographic distributions. They are based on data collected from the short and long form census. Because they are based on census data, they are revised when there are new census data available, which is every five years.

In 2000/01, GBHU belonged to peer group I. In 2003 and 2005, GBHU belonged to peer group E. From 2007 to present, we belong to peer group D. In 2010, Statistics Canada released data for 2003 and 2005 that was calculated *for the current peer group geography—which, for us, is Peer Group D*. Therefore, the rates for peer groups presented in this report for comparison to local rates are peer group I for 2000/01 and peer group D for 2003, 2005 and 2007/08.

For more information on the methodology used to assign health region peer groups, you may visit <http://www.statcan.gc.ca/pub/82-221-x/2009001/regions/hrpg2007-eng.htm>.

## Confidence Intervals

### *What's a Population Parameter?*

A population parameter is a true value that in some way describes a population. For example, if you were to add up the ages of the entire population of Canada and then take the mean (divide the total by the number of people in the population) the result would be a population parameter. There is no doubt about a population parameter: if you know all the values present in the population, you can compute any true value for a population. Population parameters do not need confidence intervals. If you have calculated it, you know what it is and there is no doubt about the validity or the reliability of the number.

### *What's a Statistic?*

A statistic is an *estimate* of a value of a population parameter. Because it's neither cost-effective to talk to everyone in a population, nor is it time-effective, smaller samples are taken of a population in order to generalize to the larger population. The CCHS uses a sample of 130,000 people every two years to create statistics that are generalizable to the larger population (Canada). Unlike a population parameter, there is the possibility of error for a statistic. We can't be sure it equals the true population parameter.

To illustrate, consider the following. A population of 139,105 people aged 12 and over (the population in Grey Bruce upon which the 2007/08 CCHS is based) have indicated whether or not they are current smokers. Suppose, for the sake of the demonstration, that the actual number of current smokers in the population is 33,056, or 23.8% (example only—we don't actually know how many current smokers there are in Grey Bruce, but for the sake of the example, pretend that we do). These figures—33,056 and 23.5%—would be *population parameters*.

In the 2007 and 2008 CCHS cycles, Statistics Canada spoke to a sample of people in Grey Bruce. Based on their responses, they have calculated that an estimated 21.7% of the population are current smokers. This represents 30,058 people. These figures—30,058 and 21.7%—are *sample statistics*. They are estimates of the true population parameter.

The error of the statistic when compared to the hypothetical parameter is 2998 people, or 1.8 percentage points. The error is the amount by which the statistic (the estimated value) deviates from the parameter (the true value). We use samples to generate estimates for population parameters that we can't know. In order account for the potential error (which we cannot actually measure), we generate confidence intervals.

### *What Are Confidence Intervals?*

Confidence intervals are “windows” that we generate around a sample statistic that we estimate with a degree of certainty to contain the true population parameter. CCHS data are presented with 95% confidence intervals, which is to say that there is a 95% chance that the true population estimate falls within the upper and lower limits provided by CCHS.

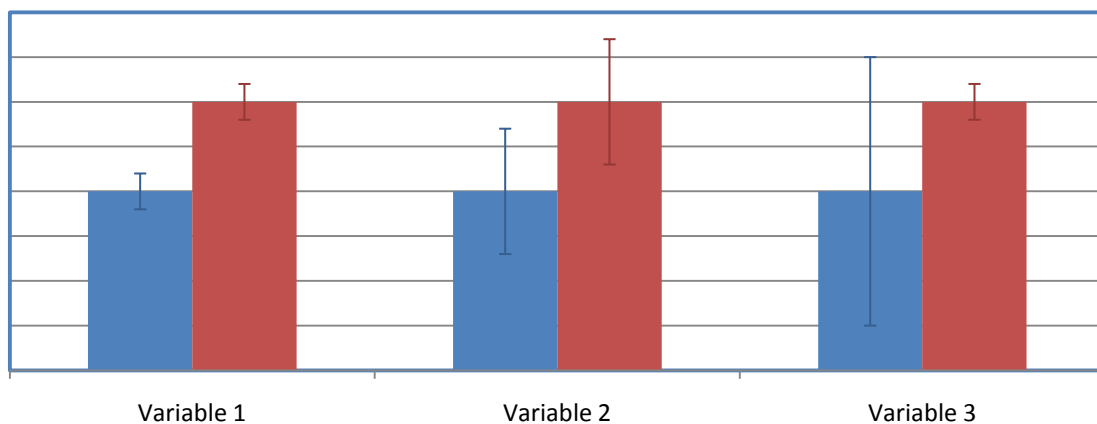
### *How Should I Interpret Confidence Intervals?*

Confidence intervals, when used to present rates with a common denominator (such as percentages—a *number per 100 persons*) are useful tools that can allow you to easily compare an estimate with one or more other estimates. They are used to find identify situations where population values are likely to be different from group to group.

If confidence intervals overlap, it is not possible to say with any degree of certainty that the real population values are different. The reason for this is because since there is overlap, it is possible that the true values for two different groups fall within that same overlap, which gives them a chance of having the same value. If there is a chance that they are equal (represented by overlapping confidence intervals), you cannot conclude that they aren't equal.

If confidence intervals DO NOT overlap, you can say with a reasonable degree of certainty that the two population values are likely to be different.

As an example, consider the figure below.



The bars represent estimates for two populations, for three separate variables. The I-shaped bars with upper and lower limits represent the 95% confidence intervals. This means that 95% of the time, we expect the true population value (the parameter) to be between the upper and lower limits of the confidence interval.

You can say with a reasonable degree of certainty that the population values for variable 1 are different, because these 95% confidence intervals do not overlap.

For variable 2, you can't say that the population values are different. They *might* actually be different or they might not, but we can't know either way because their error bars overlap. If the true population values of the blue and red group can fall within that overlap area, there's a chance that they could actually be equal.

For variable 3, as for variable 2, you can't say the population values are different, as the blue group's 95% confidence interval completely engulfs the red group's 95% confidence interval.



## Relative Risk

The relative risk or risk ratio is a measure of one group's probability of an event occurring divided by another group's probability of the same event occurring. It is a measure of *effect size*, which is simply the amount of 'effect' an independent variable has on an outcome. In this case, the independent variables are political geography—that is, health unit region, province, country or group of health unit regions (peer group)—and time (CCHS cycles).

Relative risk is important to present because knowing that something is significantly different in itself doesn't mean it's an important or large difference. For example, suppose that  $22.4\% \pm 2.9\%$  of Grey Bruce residents suffer from arthritis, compared to  $16.6\% \pm 0.5\%$  of Ontario residents. We can say that these estimates are significantly different with a good degree of certainty, because their confidence intervals do not overlap. But how likely are Grey Bruce residents to suffer from arthritis compared to Ontarians? The answer would be the relative risk:  $22.4\% \div 16.6\% = 135\%$ , and this is usually expressed not as a percentage but as a number to two decimal places (1.35). By comparison, 15.2% of Canadians suffer from arthritis. The relative risk for Grey Bruce is  $22.4\% \div 15.2\% = 1.47$ .

A relative risk above 1 means that people in Grey Bruce in 2007/08 are more likely to experience a certain condition or to participate in certain behaviour than the comparison geography or time frame. A relative risk below 1 conversely means that that behaviour or condition is less likely. A relative risk can be used to communicate how many times as likely Grey Bruce residents are to experience a condition or to participate in a behaviour. A relative risk of 2 would mean that we're twice as likely, a relative risk of 0.5 would mean that we're half as likely.

Relative to Ontario, Grey Bruce residents are 1.35 times as likely as Ontarians and 1.47 times as likely as Canadians to suffer from arthritis.

In this report, relative risk is based on the population estimates provided by CCHS, and is used as in the above example to tell us just how much more or less likely Grey Bruce is to experience a particular disease or to participate in a particular behaviour than other geographies. These are presented only for data with no confidence interval overlap—data that we can be relatively sure represent two rates that are truly different—and only with the most recent two-year rate for Grey Bruce as numerator. Grey Bruce will be compared to Ontario, Canada, the peer group, and previous two-year estimates for Grey Bruce.

Additionally, to reframe indicators that are positive rather than negative, the note "relative rate" will be added to tables to describe the relative risk. For example, it's less confusing to conceptualize the *relative rate* of having a non-smoking household (a positive indicator) than the *relative risk* of having a non-smoking household.

## General Health and Well-being

Respondents to the CCHS are asked to self-assess their health, mental health, and life satisfaction. While these are subjective indicators, they give a sense of how healthy the population is, in their own opinion.

### Self-rated Health<sup>4</sup>

*Perceived health is an indicator of overall health status. It can reflect aspects of health not captured in other measures, such as incipient disease, disease severity, physiological and psychological reserves and social and mental function. Perceived health refers to a person's health in general—not only the absence of disease or injury, but also physical, mental and social well being. (Statistics Canada, 2010a)*

Self-rated health is a person's perception of his or her own health. It is presented in terms of the percentage of people who rated their health as very good or excellent.

#### Question

- In general, would you say your health is: (excellent, very good, good, fair, or poor)? By health, we mean not only the absence of disease or injury but also physical, mental and social wellbeing.

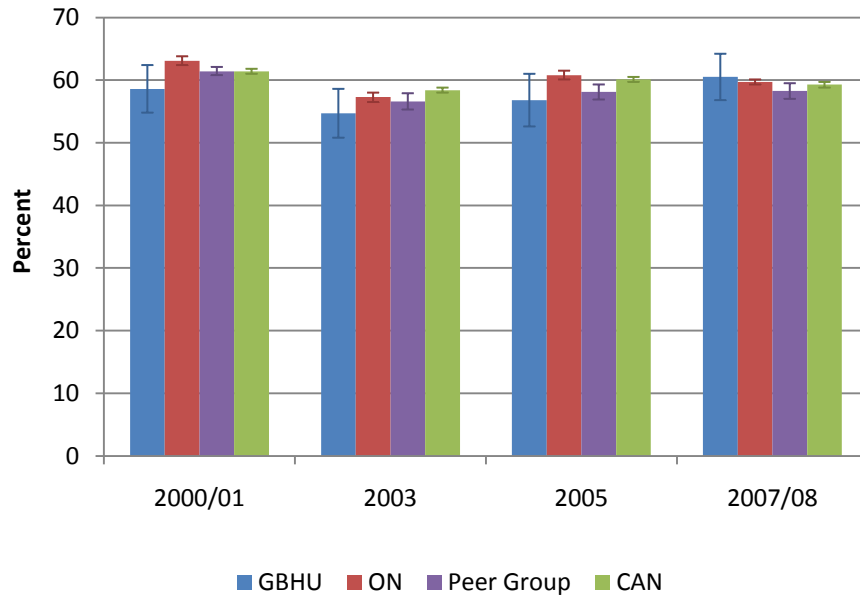
#### Estimates

**Table 1. Percentage of Population with Very Good or Excellent Self-rated Health**

	<b>2000/01</b>	<b>2003</b>	<b>2005</b>	<b>2007/08</b>
<b>GBHU</b>	58.6 ± 3.8	54.7 ± 3.9	56.8 ± 4.2	60.5 ± 3.7
<b>ON</b>	63.1 ± 0.7	57.3 + 0.7, - 0.8	60.8 ± 0.7	59.7 ± 0.4
<b>Peer Group</b>	61.4 + 0.7, - 0.6	56.6 ± 1.3	58.1 ± 1.2	58.3 + 1.2, - 1.3
<b>CAN</b>	61.4 ± 0.4	58.4 ± 0.4	60.1 ± 0.4	59.3 + 0.4, - 0.5

<sup>4</sup> Source: 2000/01: CANSIM table 105-0022; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

**Figure 1. Percentage of Population with Very Good or Excellent Self-rated Health**



### ***Description of Trends***

About three out of five Grey Bruce residents rate their 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.

## Self-rated Mental Health<sup>5</sup>

Self-rated mental health is another indicator or predictor of real health status. It is a person's own perception of his or her own mental health status, and represents not only the absence of mental illness, but also the ability to enjoy life. This topic was not discussed during proxy interviews. Self-rated mental health is presented in terms of the percentage of people who rated their health as very good or excellent. This question was not asked in 2000/01.

### Question

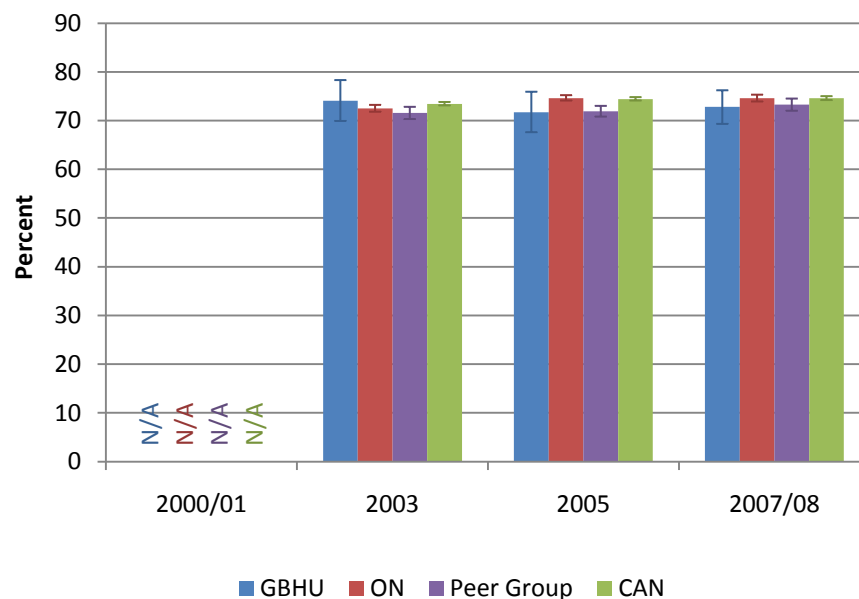
- In general, would you say your mental health is: (excellent, very good, good, fair, or poor)?

### Estimates

Table 2. Percentage of Population with Very Good or Excellent Self-rated Mental Health

	2000/01	2003	2005	2007/08
GBHU	N/A	74.1 ± 4.2	71.7 + 4.2, - 4.1	72.8 + 3.4, - 3.5
ON	N/A	72.5 ± 0.7	74.6 + 0.6, - 0.5	74.6 ± 0.7
Peer Group	N/A	71.6 + 1.2, - 1.3	71.9 ± 1.1	73.3 + 1.2, - 1.3
CAN	N/A	73.4 + 0.4, - 0.3	74.4 + 0.4, - 0.3	74.6 ± 0.4

Figure 2. Percentage of Population with Very Good or Excellent Self-rated Mental Health



### Description of Trends

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

<sup>5</sup> Source: 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

## Life Satisfaction<sup>6</sup>

“Life satisfaction is a personal subjective assessment of global well-being” (Statistics Canada, 2010b). This indicator presents the responses ranging from satisfied to very satisfied to the question presented below. This question was not asked in 2000/01.

### Question

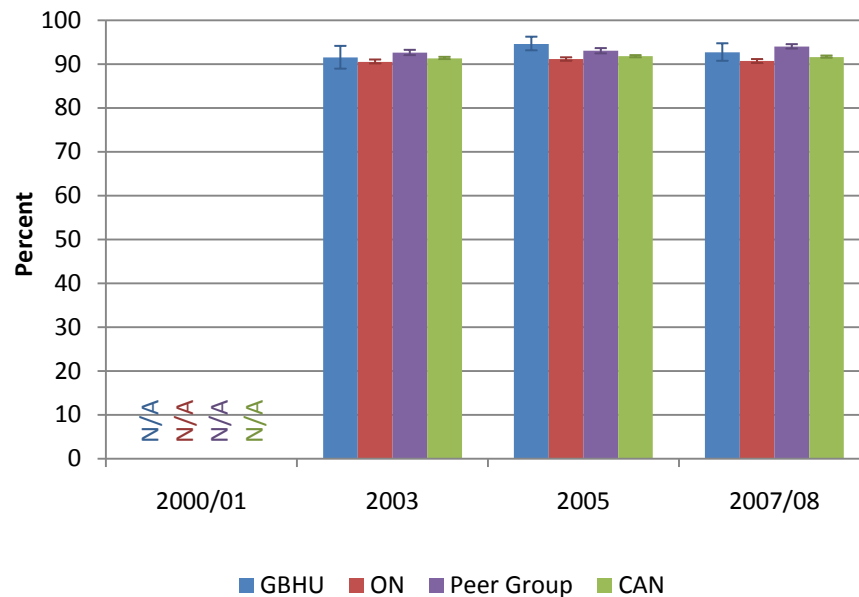
- Using a scale of 0 to 10, where 0 means "very dissatisfied" and 10 means "Very satisfied", how do you feel about life as a whole right now?

### Estimates

Table 3. Percentage of Population Who Are Satisfied with Life as a Whole

	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	91.5 ± 2.6	94.6 + 1.6, - 1.5	92.7 ± 2.0
<b>ON</b>	N/A	90.5 + 0.5, - 0.4	91.1 ± 0.4	90.7 + 0.4, - 0.5
<b>Peer Group</b>	N/A	92.6 ± 0.6	93.0 ± 0.6	94.0 ± 0.5
<b>CAN</b>	N/A	91.3 + 0.3, - 0.2	91.8 + 0.2, - 0.3	91.6 + 0.3, - 0.2

Figure 3. Percentage of Population Who Are Satisfied with Life as a Whole



### Description of Trends

Nine out of ten Grey Bruce residents feel satisfied or very satisfied with life as a whole. The rate is similar to that of the peer group, the province, and the country; and rates of life satisfaction in Grey Bruce have not significantly changed since 2003.

<sup>6</sup> Source: 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

## Social Cohesion<sup>7</sup>

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.

Questions for this module were not asked in proxy interviews. These were coded as not stated.

### Question

How would you describe your sense of belonging to your local community? Would you say it is: (very strong, somewhat strong, somewhat weak or very weak)?

### Estimates

**Table 4. Percentage of Population Who Feel a Somewhat or Very Strong Sense of Belonging to Local Community**

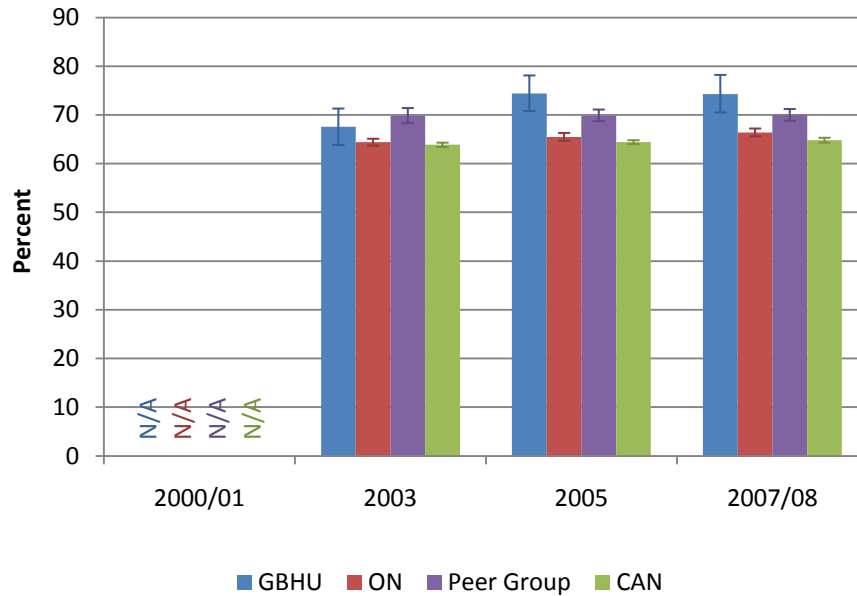
	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	67.6 + 3.7, - 3.8	74.4 + 3.7, - 3.6	74.3 + 3.9, - 3.8
<b>ON</b>	N/A	64.4 ± 0.7	65.5 ± 0.8	66.4 ± 0.8
<b>Peer Group</b>	N/A	69.9 + 1.5, - 1.6	69.9 ± 1.2	70.0 ± 1.2
<b>CAN</b>	N/A	63.0 + 0.9, - 1.0	62.5 + 0.9, - 1.0	64.8 ± 0.5

**Table 5. Relative Rate of Feeling a Somewhat or Very Strong Sense of Belonging to Local Community**

	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	No Difference	No Difference	
<b>ON</b>				1.12
<b>Peer Group</b>				No Difference
<b>CAN</b>				1.15

<sup>7</sup> Source: 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 4. Percentage of Population Who Feel a Somewhat or Very Strong Sense of Belonging to Local Community



### Description of Trends

About three quarters of the population in Grey Bruce (74%) feel a sense of belonging to the community. This percentage is higher than that of Canada (RR = 1.15) or Ontario (RR = 1.12). There is no significant difference between the current estimate and previous years' or peer group estimates. It is quite positive that, compared to Canada and Ontario, Grey Bruce residents report a greater sense of belonging.

### General Health and Well-being: Summary

Although a high proportion of people claim to be satisfied or very satisfied with their lives and feel a sense of belonging to the community, only three fifths of people experience very good or excellent self-rated health, and just under three quarters experience very good or excellent self-rated mental health. For most indicators, rates do not differ significantly from national, provincial or peer group rates, and have been relatively stable from cycle to cycle. For sense of belonging to the community, our local rate is higher than the rates for Ontario and Canada.

## Stress and Mood Disorders

### Mood Disorder<sup>8</sup>

*Mood disorders, such as depression and bipolar disorder, can greatly affect the lives of those who have them. The impact of depression on job performance has been estimated to be greater than that of chronic conditions such as arthritis, hypertension, back problems and diabetes. (Statistics Canada, 2010c)*

#### Question

- Remember, we are interested in conditions diagnosed by a health professional. Do you have a mood disorder such as depression, bipolar disorder, mania or dysthemia: (yes, no)? (Includes manic depression.)

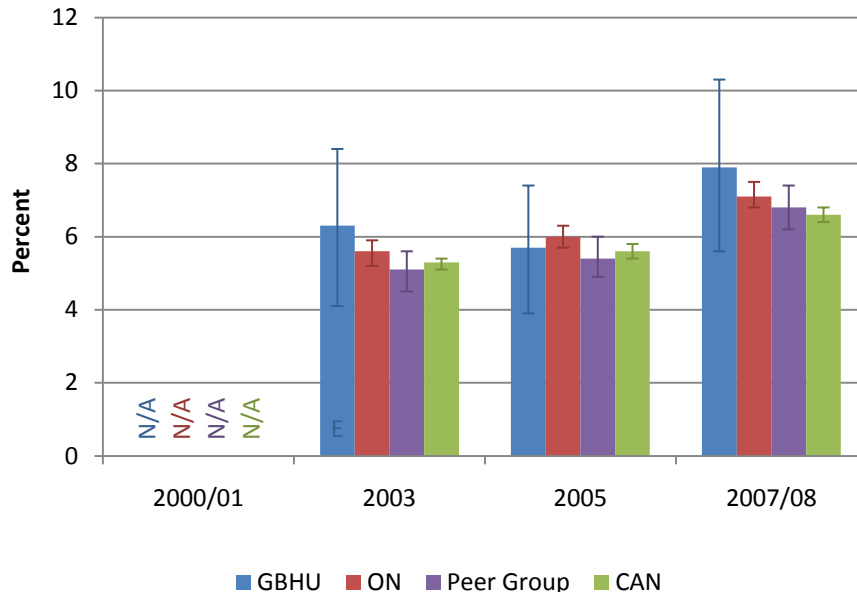
#### Estimates

**Table 6. Percentage of Population Who Have a Mood Disorder**

	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	6.3 + 2.1, - 2.2 E	5.7 + 1.7, - 1.8	7.9 + 2.4, - 2.3
<b>ON</b>	N/A	5.6 + 0.3, - 0.4	6.0 ± 0.3	7.1 + 0.4, - 0.3
<b>Peer Group</b>	N/A	5.1 + 0.5, - 0.6	5.4 + 0.6, - 0.5	6.8 ± 0.6
<b>CAN</b>	N/A	5.3 + 0.1, - 0.2	5.6 ± 0.2	6.6 ± 0.2

<sup>8</sup> Source: 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 5. Percentage of Population Who Have a Mood Disorder



**Description of Trends**

Nearly eight percent of Grey Bruce residents have a mood disorder. While GBHU rates of those reporting a mood disorder cannot be said to have significantly increased, it is clear that rates for Ontario and Canada have increased steadily, and the peer group rate also appears to have increased. It may be the case that mood disorders are on the rise locally as well, but our counts are simply too low to say that with certainty.

## Life Stress<sup>9</sup>

*Stress carries several negative health consequences, including heart disease, stroke, high blood pressure, as well as immune and circulatory complications. Exposure to stress can also contribute to behaviours such as smoking, over-consumption of alcohol, and less-healthy eating habits. (Statistics Canada, 2010d)*

Life stress can contribute to a variety of illnesses, such as coronary disease (Tennant, C., 1999), Alzheimer's (Solas, M. et al., 2010), irritable bowel syndrome (Santos, J. et al., 2008), and in fact many diseases that are related to inflammatory response (Irwin, M. R., 2008). Reducing life stress is important to maximizing population health outcomes.

### Question

- Thinking about the amount of stress in your life, would you say that most days are: (not at all stressful, not very stressful, a bit stressful, quite a bit stressful, or extremely stressful)?

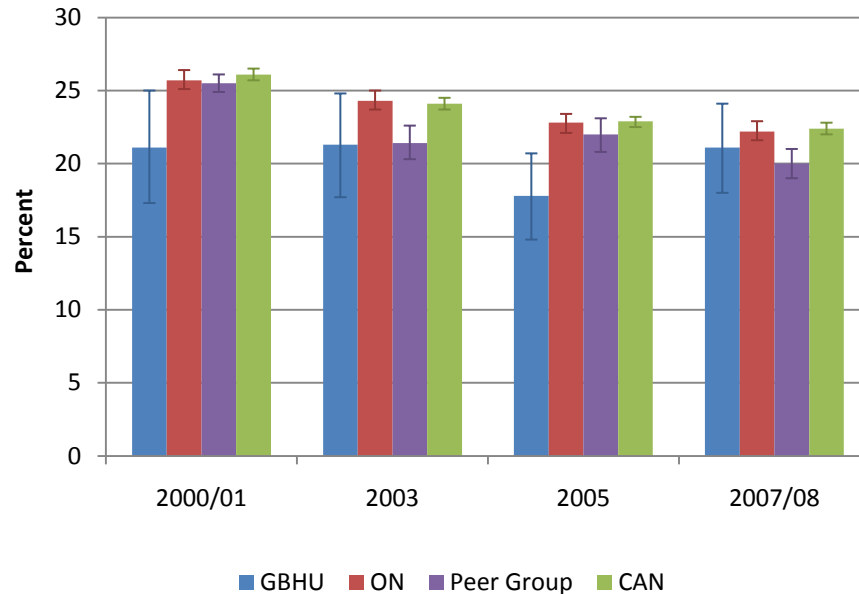
### Estimates

**Table 7. Percentage of Population Who Experience Quite a Lot of Life Stress**

	2000/01	2003	2005	2007/08
<b>GBHU</b>	21.1 + 3.9, - 3.8	21.3 + 3.5, - 3.6	17.8 + 2.9, - 3	21.1 + 3.0, - 3.1
<b>ON</b>	25.7 + 0.7, - 0.6	24.3 + 0.7, - 0.6	22.8 + 0.6, - 0.7	22.2 + 0.7, - 0.6
<b>Peer Group</b>	25.5 ± 0.6	21.4 + 1.2, - 1.1	22.0 + 1.1, - 1.2	20.0 ± 1.0
<b>CAN</b>	26.1 ± 0.4	24.1 ± 0.4	22.9 + 0.3, - 0.4	22.4 ± 0.4

<sup>9</sup> Source: 2000/01: CANSIM table 105-0038; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 6. Percentage of Population Who Experience Quite a Lot of Life Stress



### Description of Trends

About one fifth of people in Grey Bruce experience quite a lot of life stress. Rates of life stress nationally, provincially and at the peer group level appear to be falling over time. Within our catchment, there is no significant difference from year to year in rates of reported life stress, and there is no significant difference in rates of life stress for the most recent combined cycles of CCHS data. Interestingly, in previous years (2000/01 and 2005), Grey Bruce had significantly lower rates of life stress than Canada. The province, peer group and country's rates are lowering somewhat over time, becoming closer to Grey Bruce's rates.

### Stress and Mood Disorders: Summary

About 1 in 12 residents of Grey Bruce have a mood disorder. Although this is not evident at our geographic level, it may be the case that mood disorders locally are on the rise since provincial, peer group and national rates are all on the rise. Unfortunately, small counts and overlapping confidence intervals make this impossible to say with certainty.

About one fifth of people in Grey Bruce experience quite a lot of life stress, and this rate does not differ significantly from the provincial, peer group or national rates for the most recent two-year CCHS period. Rates of life stress nationally, provincially and at the peer group level appear to be falling over time; the provincial and national rates were previously higher than that of GBHU (2005).

## Chronic Diseases

Chronic diseases have a serious impact on the health of our population. Of note, they have adverse effects on the quality of life of those affected; create often catastrophic economic effects for families, communities and societies (Wang, G., Pratt, M., Macera, C. A., Zheng, Z.-J., & Heath, G., 2004); and cause premature death. Common and modifiable risk factors underlie the major chronic diseases, including unhealthy diet, physical inactivity, alcohol use and tobacco use (Patra, J. et al., 2007).

Numerous health improvements can be achieved by investing in chronic disease prevention. An effective prevention approach will minimize both the social as well as the economic burden to the health of our community.

### Arthritis<sup>10</sup>

The term ‘arthritis’ describes many conditions that affect joints, the tissue surrounding joints, and other connective tissue. The most common types are osteoarthritis and rheumatoid arthritis. The resulting pain, stiffness, swelling and/or deformity of the joints can substantially reduce quality of life. (*Statistics Canada, 2010e*)

This question is asked with the understanding that a ‘yes’ response means that the condition has been diagnosed by a health professional.

### Question

- Do you have arthritis, excluding fibromyalgia?<sup>11</sup>

### Estimates

Table 8. Percentage of Population with Arthritis

	2000/01	2003	2005	2007/08
<b>GBHU</b>	18.8 ± 2.8	23.5 + 3.5, - 3.6	23.4 ± 2.9	22.4 ± 2.9
<b>ON</b>	16.6 + 0.5, - 0.4	17.6 + 0.4, - 0.5	17.2 + 0.4, - 0.5	16.6 ± 0.5
<b>Peer Group</b>	17.4 + 0.4, - 0.5	19.4 ± 0.9	20.1 + 0.8, - 0.9	17.7 ± 0.8
<b>CAN</b>	15.2 + 0.3, - 0.2	16.8 ± 0.3	16.4 ± 0.3	15.2 + 0.2, - 0.3

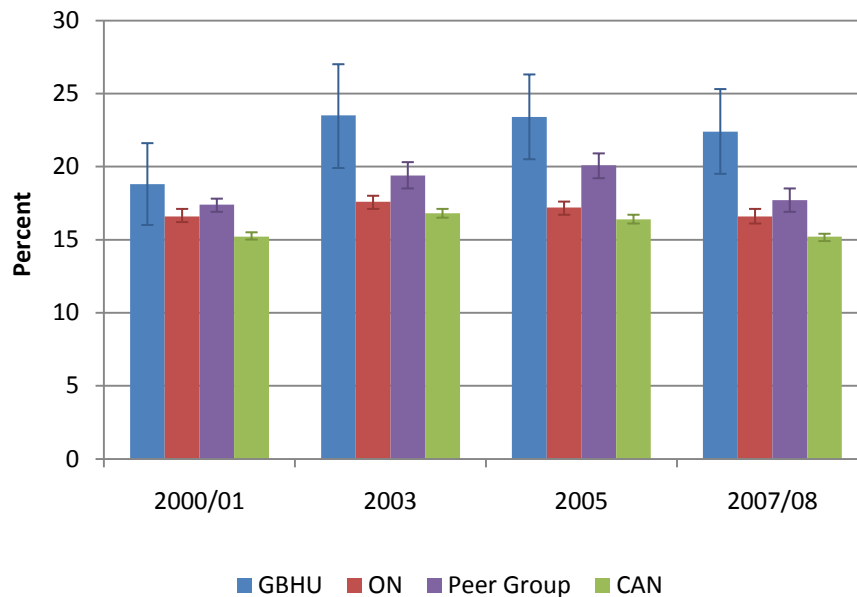
<sup>10</sup> Source: 2000/01: CANSIM table 105-0002; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

<sup>11</sup> Until 2007, the question was worded: “Do you have arthritis or rheumatism, excluding fibromyalgia?” In 2008, the word “rheumatism” was removed from the question.

Table 9. 2007/08 Relative Risk of Arthritis for Grey Bruce

	2000/01	2003	2005	2007/08
<b>GBHU</b>	Not Different	Not Different	Not Different	
<b>ON</b>				1.35
<b>Peer Group</b>				1.27
<b>CAN</b>				1.47

Figure 7. Percentage of Population with Arthritis



### Description of Trends

About two in nine people in Grey Bruce have arthritis. This rate has been stable over the years, and is significantly higher than the Ontario (RR = 1.35), peer group (RR = 1.27) and Canadian (RR = 1.47) rates.

Arthritis is generally more prevalent among older people. At Census in 2006, Grey Bruce Health Unit's proportion of senior population to total population was 18.6%. In Ontario, that figure is 13.6%, while in Canada it is 13.7%. 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.

## Diabetes<sup>12</sup>

*Diabetes occurs when the body does not produce enough insulin, or when the insulin produced is not used effectively. Diabetes may lead to reduced quality of life as well as complications such as heart disease, stroke and kidney disease. (Statistics Canada, 2010f)*

This question is asked with the understanding that a 'yes' response means that the condition has been diagnosed by a health professional.

### Question

- Do you have diabetes?

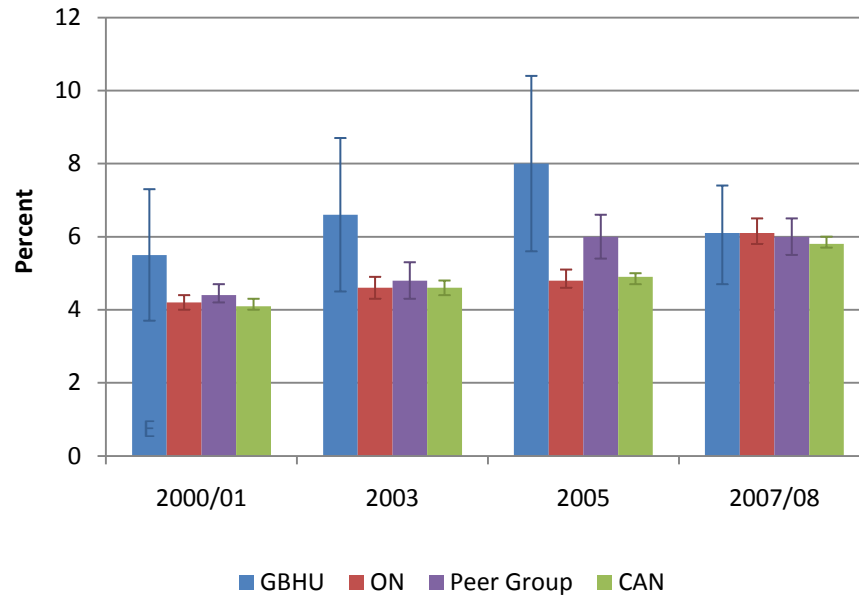
### Estimates

Table 10. Percentage of Population with Diabetes

	2000/01	2003	2005	2007/08
<b>GBHU</b>	5.5 ± 1.8 E	6.6 ± 2.1	8.0 ± 2.4	6.1 + 1.3, - 1.4
<b>ON</b>	4.2 ± 0.2	4.6 ± 0.3	4.8 + 0.3, - 0.2	6.1 + 0.4, - 0.3
<b>Peer Group</b>	4.4 + 0.3, - 0.2	4.8 ± 0.5	6.0 ± 0.6	6.0 ± 0.5
<b>CAN</b>	4.1 + 0.2, - 0.1	4.6 ± 0.2	4.9 + 0.1, - 0.2	5.8 + 0.2, - 0.1

<sup>12</sup> Source: 2000/01: CANSIM table 105-0011; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 8. Percentage of Population with Diabetes



### *Description of Trends*

While in 2005 the GBHU rate of diabetes was higher than that of Ontario or Canada; it is now almost identical to the rates of those three geographies at 6%, or about 1 in 16. The rates for the province, peer group and country have risen, which accounts for this phenomenon.

## Asthma<sup>13</sup>

*Asthma is a chronic inflammatory disorder of the airways that causes coughing, shortness of breath, chest tightness and wheezing. Quality of life can be affected not only by asthma attacks, but also by absences from work and limitations in other activities. (Statistics Canada, 2010g)*

This question is asked with the understanding that a 'yes' response means that the condition has been diagnosed by a health professional.

### Question

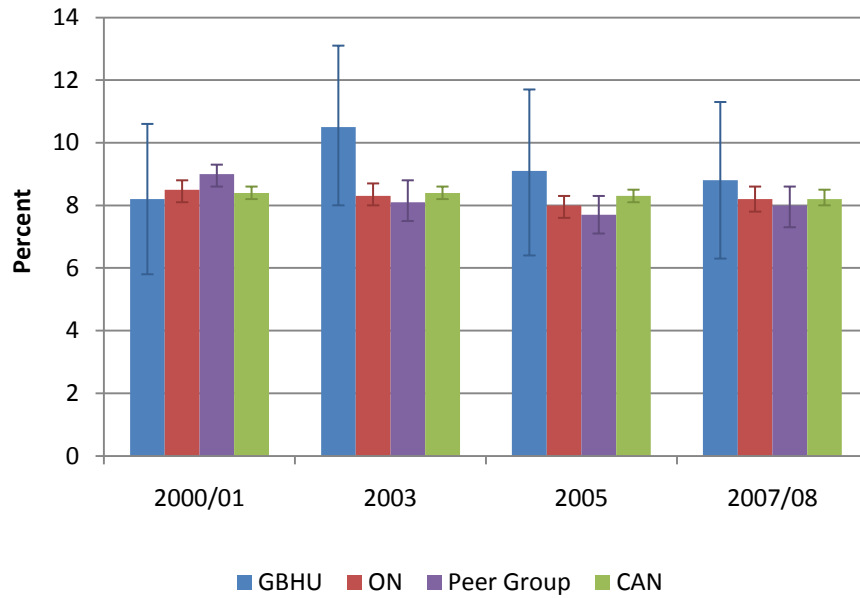
- (Do you have) asthma?

### Estimates

Table 11. Percentage of Population with Asthma

	2000/01	2003	2005	2007/08
<b>GBHU</b>	8.2 ± 2.4	10.5 + 2.6, - 2.5	9.1 + 2.6, - 2.7	8.8 ± 2.5
<b>ON</b>	8.5 + 0.3, - 0.4	8.3 + 0.4, - 0.3	8.0 + 0.3, - 0.4	8.2 ± 0.4
<b>Peer Group</b>	9.0 + 0.3, - 0.4	8.1 + 0.7, - 0.6	7.7 ± 0.6	8.0 + 0.6, - 0.7
<b>CAN</b>	8.4 ± 0.2	8.4 ± 0.2	8.3 ± 0.2	8.2 + 0.3, - 0.2

<sup>13</sup> Source: 2000/01: CANSIM table 105-0001; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

**Figure 9. Percentage of Population with Asthma*****Description of Trends***

At just under 9%, or about 1 in 11, the rate of asthma in Grey Bruce is similar to the provincial, peer group and national rates. The rate has not differed significantly over time.

## High Blood Pressure<sup>14</sup>

“High blood pressure, also known as hypertension, increases the risk of stroke, heart attack and kidney failure. It can narrow and block arteries as well as strain and weaken the body’s organs” (Statistics Canada, 2010h).

This question is asked with the understanding that a ‘yes’ response means that the condition has been diagnosed by a health professional.

### Question

- Do you have high blood pressure?

### Estimates

Table 12. Percentage of Population with High Blood Pressure

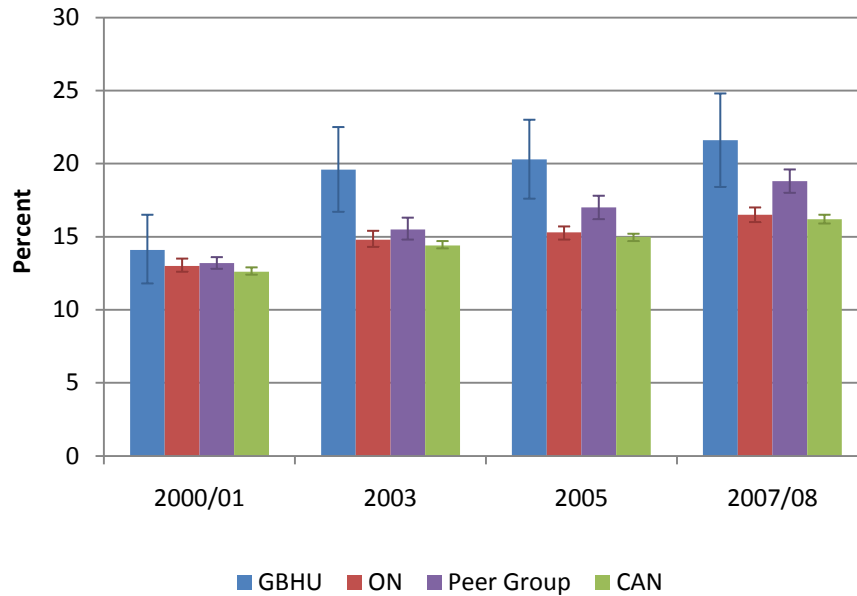
	2000/01	2003	2005	2007/08
<b>GBHU</b>	14.1 + 2.4, - 2.3	19.6 ± 2.9	20.3 ± 2.7	21.6 ± 3.2
<b>ON</b>	13.0 + 0.5, - 0.4	14.8 + 0.6, - 0.5	15.3 + 0.4, - 0.5	16.5 ± 0.5
<b>Peer Group</b>	13.2 ± 0.4	15.5 + 0.8, - 0.7	17.0 ± 0.8	18.8 ± 0.8
<b>CAN</b>	12.6 + 0.3, - 0.2	14.4 + 0.3, - 0.2	15.0 + 0.2, - 0.3	16.2 ± 0.3

Table 13. 2007/08 Relative Risk of High Blood Pressure for Grey Bruce

	2000/01	2003	2005	2007/08
<b>GBHU</b>	1.53	Not Different	Not Different	
<b>ON</b>				1.31
<b>Peer Group</b>				Not Different
<b>CAN</b>				1.33

<sup>14</sup> Source: 2000/01: CANSIM table 105-0010; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

**Figure 10. Percentage of Population with High Blood Pressure**



### **Description of Trends**

The rate of high blood pressure in Grey Bruce is 22%, a little more than 1 in 5 people. This rate is significantly higher than the rates for Ontario (RR = 1.31) and Canada (RR = 1.33), and the 2000/01 Grey Bruce rate (RR = 1.53).

### **Chronic Diseases: Summary**

The Grey Bruce population has significantly higher rates of arthritis and hypertension than the province and the country. More than 1 in 5 (22.4%) people in our region suffer from arthritis and a similar percentage (21.6%) suffer from hypertension. While our rate of arthritis is also significantly higher than that of our peer group, the rate of hypertension is similar to that of the peer group.

The proportions of people with asthma (about 9%) and diabetes (about 6%) have been relatively stable since 2000/01. Our current rate of hypertension is 1.5 times the 2001 rate, or 50% higher.

## Pain and Activity Limitation

Respondents were asked to share information on their experience of pain and their activity limitations that result from it. Three variables will be examined below: experience of moderate or severe pain, pain that prevents activities, and the experience of activity limitation sometimes or often.

### Moderate or Severe Pain<sup>15</sup>

The following question was asked of respondents who answered No, Don't Know or Refused to the question: Are you usually free of pain or discomfort?

#### Question

- How would you describe the usual intensity of your pain or discomfort: (mild, moderate or severe)?

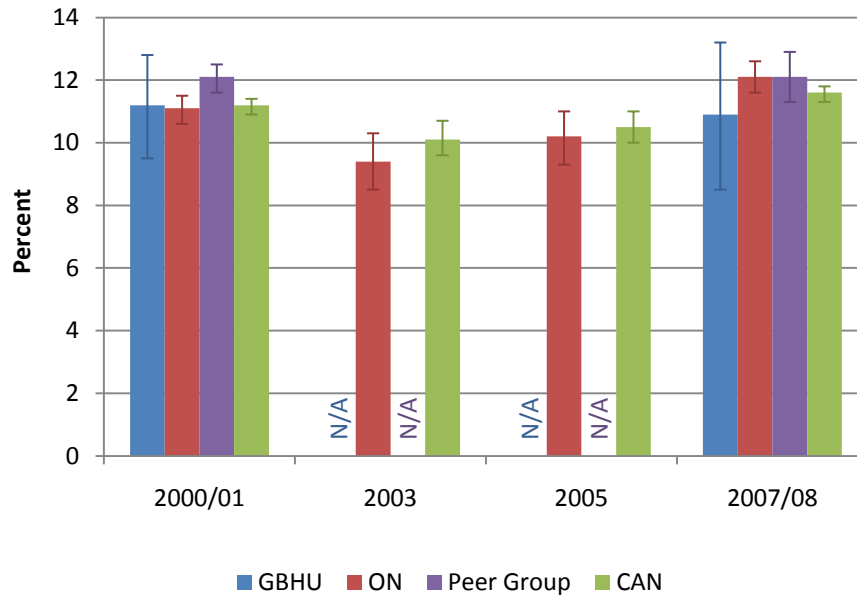
#### Estimates

Table 14. Percentage of Population with Moderate or Severe Pain

	2000/01	2003	2005	2007/08
<b>GBHU</b>	11.2 + 1.6, - 1.7	N/A	N/A	10.9 + 2.3, - 2.4
<b>ON</b>	11.1 + 0.4, - 0.5	9.4 ± 0.9	10.2 + 0.8, - 0.9	12.1 ± 0.5
<b>Peer Group</b>	12.1 + 0.4, - 0.5	N/A	N/A	12.1 ± 0.8
<b>CAN</b>	11.2 + 0.2, - 0.3	10.1 + 0.6, - 0.5	10.5 ± 0.5	11.6 + 0.2, - 0.3

<sup>15</sup> Source: 2000/01: CANSIM table 105-0004; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 11. Percentage of Population with Moderate or Severe Pain



### Description of Trends

Data for this indicator were unavailable for the peer group and health unit in 2003 and 2005. The current rate of about 11% (or 1 in 9 people) has not changed significantly since 2000/01, and is not significantly different from the rates for the province, peer group and country.

## Pain or Discomfort that Prevents Activities<sup>16</sup>

This indicator presents the percentage of people who report having any activities limited by pain or discomfort (a few, some or all).

### Question

- How many activities does your pain or discomfort prevent (none, a few, some, or most)?

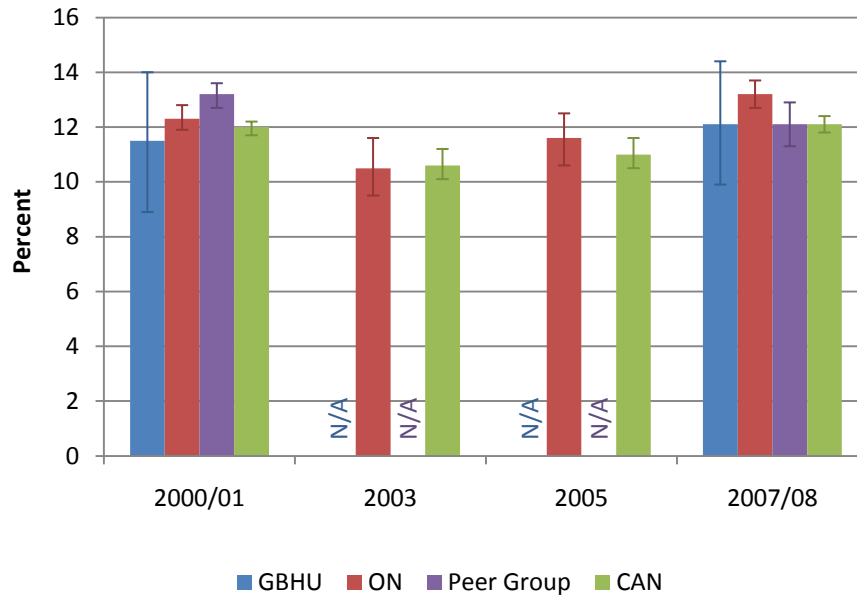
### Estimates

Table 15. Percentage of Population with Pain or Discomfort that Prevents Activities

	2000/01	2003	2005	2007/08
<b>GBHU</b>	11.5 + 2.5, - 2.6	N/A	N/A	12.1 + 2.3, - 2.2
<b>ON</b>	12.3 + 0.5, - 0.4	10.5 + 1.1, - 1.0	11.6 + 0.9, - 1.0	13.2 ± 0.5
<b>Peer Group</b>	13.2 + 0.4, - 0.5	N/A	N/A	12.1 ± 0.8
<b>CAN</b>	12.0 + 0.2, - 0.3	10.6 + 0.6, - 0.5	11.0 + 0.6, - 0.5	12.1 ± 0.3

<sup>16</sup> Source: 2000/01: CANSIM table 105-0003; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

**Figure 12. Percentage of Population with Pain or Discomfort that Prevents Activities**



### ***Description of Trends***

Similarly to the previous indicator, data for 2003 and 2005 were unavailable at the health unit and peer group levels. There was no significant difference between the Grey Bruce rate of about 12% (about 1 in 8 people) and the rates for the province, peer group and country. Nor was there any difference between rates for Grey Bruce in 2001 and 2007/08.

## Participation and Activity Limitation<sup>17</sup>

*This variable classifies respondents according to the frequency with which they experience activity limitations imposed on them by a condition(s) or by long-term physical and/or mental health problems that has lasted or is expected to last 6 months or more. (Statistics Canada, 2007)*

Participation and activity limitation is a derived variable that is based on answers to five questions. A person is considered to have responded yes if the answer to any of the five questions is sometimes or often. If any of the answers recorded is don't know, refused, or not stated, the person is considered a non-responder.

### Question

- Do you have any difficulty hearing, seeing, communicating, walking, climbing stairs, bending, learning or doing any similar activities: (sometimes, often, or never)?
- Does a long-term physical or mental condition or health problem reduce the amount or the kind of activity you can do
  - . . . at home: (sometimes, often, or never)?
  - . . . at school: (sometimes, often, or never)?
  - . . . at work: (sometimes, often or never)?
  - . . . in other activities, for example, transportation or leisure: (sometimes, often, or never)?

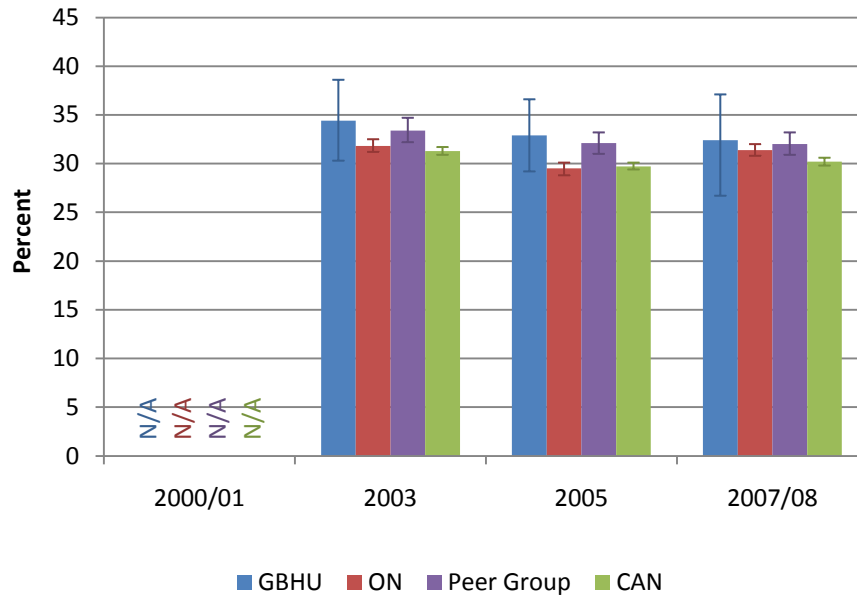
### Estimates

**Table 16. Percentage of Population Who Sometimes or Often Can't Participate in Selected Activities**

	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	34.4 + 4.2, - 4.1	32.9 ± 3.7	32.4 + 4.7, - 5.7
<b>ON</b>	N/A	31.8 + 0.7, - 0.6	29.5 + 0.6, - 0.7	31.4 ± 0.6
<b>Peer Group</b>	N/A	33.4 + 1.3, - 1.2	32.1 ± 1.1	32.0 + 1.2, - 1.1
<b>CAN</b>	N/A	31.3 ± 0.4	29.7 + 0.4, - 0.3	30.2 ± 0.4

<sup>17</sup> Source: 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

**Figure 13. Percentage of Population Who Sometimes or Often Can't Participate in Selected Activities**



### **Description of Trends**

The 2007/08 rate of 32% in Grey Bruce (about 1 in 3) is not significantly different from previous years' rates, nor is it different from the rates for the province, peer group and country.

### **Pain and Activity Limitation: Summary**

About 11% or 1 in 9 people in Grey Bruce experience moderate or severe pain. Close to the same percentage—12%, or about 1 in 8 people in Grey Bruce—experience pain or discomfort that prevents them from participating in certain activities. About one third of people in Grey Bruce (32% or 1 in 3 people) sometimes or often can't participate in selected activities because of a long-term physical or mental condition. None of these rates differ significantly from previous years or from the rates of the province, peer group or country.

## Smoking and Alcohol

The psychological and social consequences of alcohol consumption may be beneficial as well as detrimental. Alcohol is responsible for beneficial effects regarding perceived health, mood enhancement, stress reduction, sociability, social integration, and mental health. However, there are detrimental consequences concerning public disorder, workplace, education, family and social relations, violence and criminality. In terms of disease burden, the net health effects are most often detrimental. Approximately 6.2% (8,103) of deaths in Canada in 2002 were due to alcohol (Rehm, J., Giesbrecht, N., Popova, J., Patra, J., & Adlaf, E., 2006). The positive effects of alcohol relate to the cardioprotective effects of moderate consumption, mostly in older age.

Cigarette smoking is one of the most important risk factors for burden of disease. It “is a risk factor for lung cancer, heart disease, stroke, chronic respiratory disease, and other conditions” (Statistics Canada, 2010i). For Canada in 2002, 37,209 of all deaths aged 0 to 80+ years were attributable to smoking, which is 16% of all deaths (Bailunas, D. et al., 2007). Causes of smoking-attributable deaths are mainly cancer, cardiovascular diseases and respiratory diseases.

### Smoking Status: Current Smoker<sup>18</sup>

A current smoker is defined as someone aged 12 or older who reports smoking cigarettes daily or occasionally.

#### Question

- At the present time, do you smoke cigarettes: (daily, occasionally or not at all)?

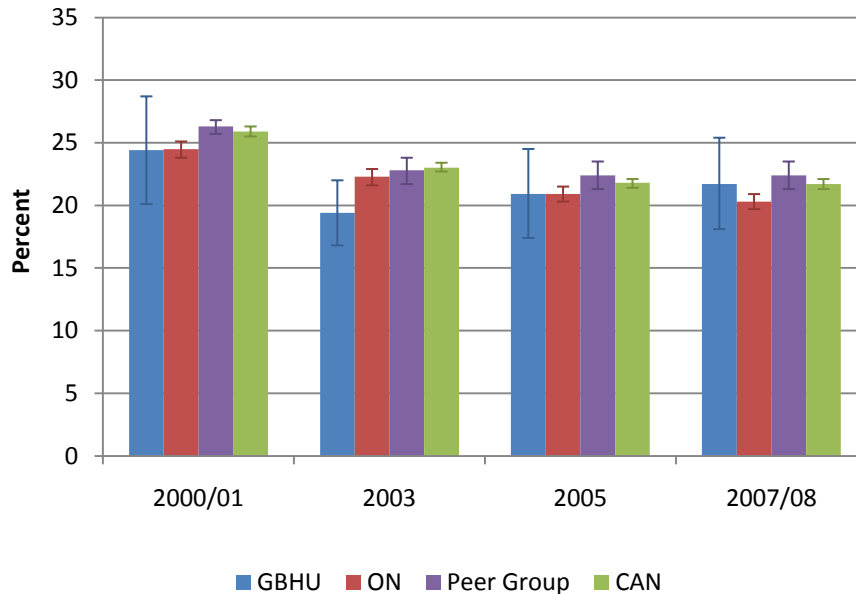
#### Estimates

Table 17. Percentage of Population Who Are Current Smokers

	2000/01	2003	2005	2007/08
<b>GBHU</b>	24.4 ± 4.3	19.4 ± 2.6	20.9 + 3.6, - 3.5	21.7 + 3.7, - 3.6
<b>ON</b>	24.5 + 0.6, - 0.7	22.3 + 0.6, - 0.7	20.9 ± 0.6	20.3 ± 0.6
<b>Peer Group</b>	26.3 + 0.5, - 0.6	22.8 + 1.0, - 1.1	22.4 ± 1.1	22.4 ± 1.1
<b>CAN</b>	25.9 ± 0.4	23.0 + 0.4, - 0.3	21.8 + 0.3, - 0.4	21.7 ± 0.4

<sup>18</sup> Source: 2000/01: CANSIM table 105-0027; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 14. Percentage of Population Who Are Current Smokers



### *Description of Trends*

About 22% (or just over 1 in 5 people) in Grey Bruce are current smokers. This rate is not significantly different than rates for previous years, or than the provincial, peer group and national rates for the current year. Nationally, provincially and at the peer group level, smoking rates are declining. The smoking rates in Grey Bruce may be declining as well, but it is impossible to say given the overlap in confidence intervals of rates for our region.

## Smoking Status: Daily Smoker<sup>19</sup>

A daily smoker is defined as someone aged 12 or older who reports smoking cigarettes daily.

### Question

- At the present time, do you smoke cigarettes: (daily, occasionally or not at all)?

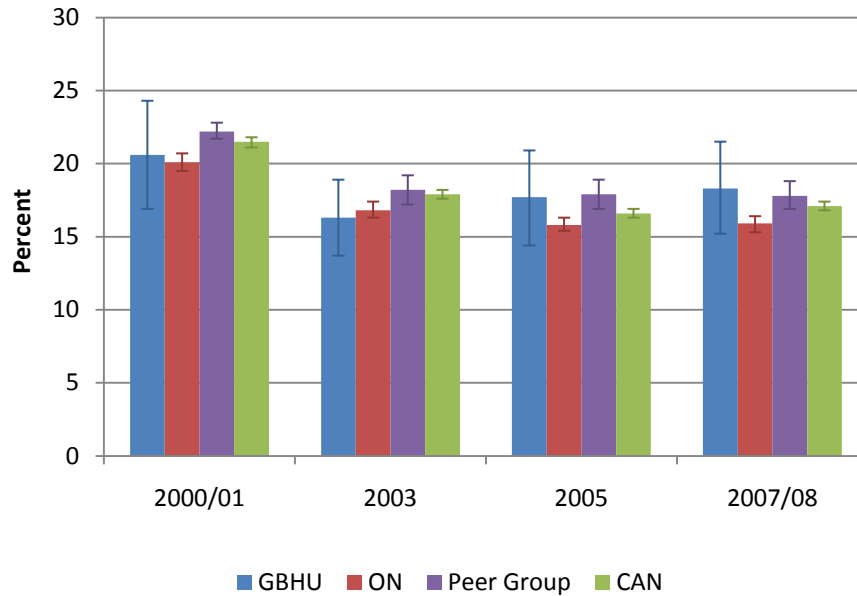
### Estimates

Table 18. Percentage of Population Who Are Daily Smokers

	2000/01	2003	2005	2007/08
<b>GBHU</b>	20.6 ± 3.7	16.3 ± 2.6	17.7 + 3.2, - 3.3	18.3 + 3.2, - 3.1
<b>ON</b>	20.1 ± 0.6	16.8 + 0.6, - 0.5	15.8 + 0.5, - 0.4	15.9 + 0.5, - 0.6
<b>Peer Group</b>	22.2 + 0.6, - 0.5	18.2 ± 1.0	17.9 ± 1.0	17.8 + 1.0, - 0.9
<b>CAN</b>	21.5 + 0.3, - 0.4	17.9 ± 0.3	16.6 ± 0.3	17.1 ± 0.3

<sup>19</sup> Source: 2000/01: CANSIM table 105-0027; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 15. Percentage of Population Who Are Daily Smokers



### *Description of Trends*

About 18% (or just over 1 in 6 people) in Grey Bruce are daily smokers. This rate does not differ significantly from previous years or from current rates for the province, peer group or country. It appears that daily smoking rates for the province, peer group and country are on the decline. As with the previous indicator, it may be that smoking rates locally are on the decline, but it is impossible to say given the overlapping confidence intervals of our region's rates over time.

## Heavy Drinking<sup>20</sup>

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 behaviour such as driving while intoxicated” (Statistics Canada, 2010j).

This indicator is derived from the following question. It was asked only asked of people who have had at least one drink in the last 12 months (or who responded don’t know or refused to that question), but the denominator is the population 12 years and over.

### Question

- How often in the past 12 months have you had 5 or more drinks on one occasion: (never, less than once a month, once a month, 2 to 3 times a month, once a week, more than once a week)?

### Estimates

Table 19. Percentage of Population Who are Heavy Drinkers

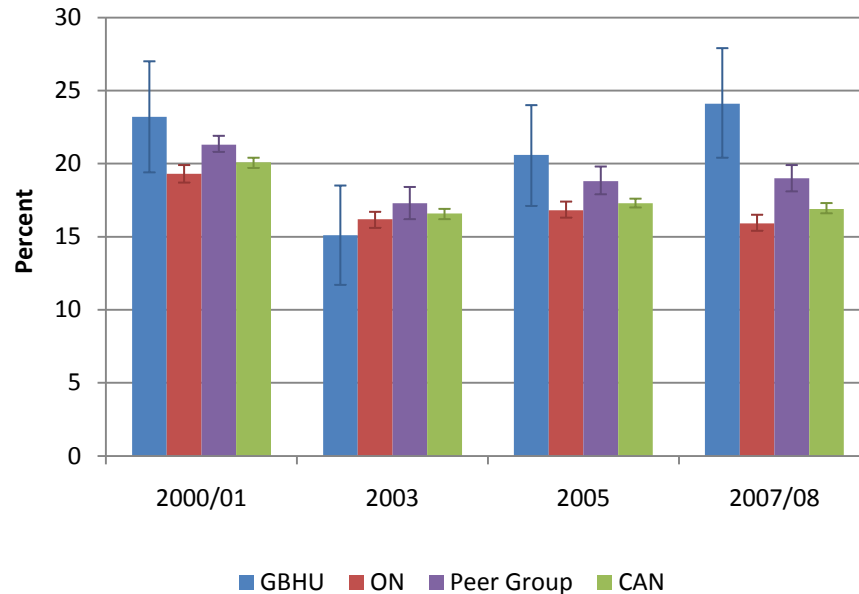
	2000/01	2003	2005	2007/08
<b>GBHU</b>	23.2 ± 3.8	15.1 ± 3.4	20.6 + 3.4, - 3.5	24.1 + 3.8, - 3.7
<b>ON</b>	19.3 ± 0.6	16.2 + 0.5, - 0.6	16.8 + 0.6, - 0.5	15.9 + 0.6, - 0.5
<b>Peer Group</b>	21.3 + 0.6, - 0.5	17.3 ± 1.1	18.8 + 1.0, - 0.9	19.0 ± 0.9
<b>CAN</b>	20.1 + 0.3, - 0.4	16.6 + 0.3, - 0.4	17.3 ± 0.3	16.9 + 0.4, - 0.3

Table 20. 2007/08 Relative Risk of Heavy Drinking for Grey Bruce

	2000/01	2003	2005	2007/08
<b>GBHU</b>	No Difference	1.60	No Difference	
<b>ON</b>				1.52
<b>Peer Group</b>				1.27
<b>CAN</b>				1.43

<sup>20</sup> Source: 2000/01: CANSIM table 105-0031; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 16. Percentage of Population Who Are Regular Heavy Drinkers



### Description of Trends

About 24% of people (or nearly 1 in 4) in Grey Bruce are heavy drinkers. This rate is significantly higher than the rates for Ontario (RR = 1.52), the peer group (RR = 1.27), and Canada (RR = 1.43).

Interestingly, the heavy drinking rate in Grey Bruce (and in Ontario, the peer group and Canada) dropped sharply from 2000/01 to 2003. In Grey Bruce, the heavy drinking rate rose after 2003, while it remained relatively stable in Ontario, the peer group and Canada.

### Smoking and Alcohol: Summary

The proportions of people in Grey Bruce who smoke (22%) and who smoke daily (18%) are relatively unchanged since 2000/01, and are not statistically different from those of the country, province, or peer group.

By contrast, about 24% of people in Grey Bruce are heavy drinkers, a rate that is about one and a half times those of the province and the country, and about one and a quarter times that of the peer group.

## Exposure to Environmental Tobacco Smoke

### Exposure to Second-hand Smoke: At Home<sup>21</sup>

“Passive Smoking, or exposure to second-hand smoke [SHS], has negative respiratory health effects. Two of the most common associated diseases are lung cancer in adults and asthma among children” (Statistics Canada, 2010k).

The following question was asked only of people who indicated that they were non-smokers.

#### Question

- Including both household members and regular visitors, does anyone smoke inside your home, every day or almost every day: (yes, no)?

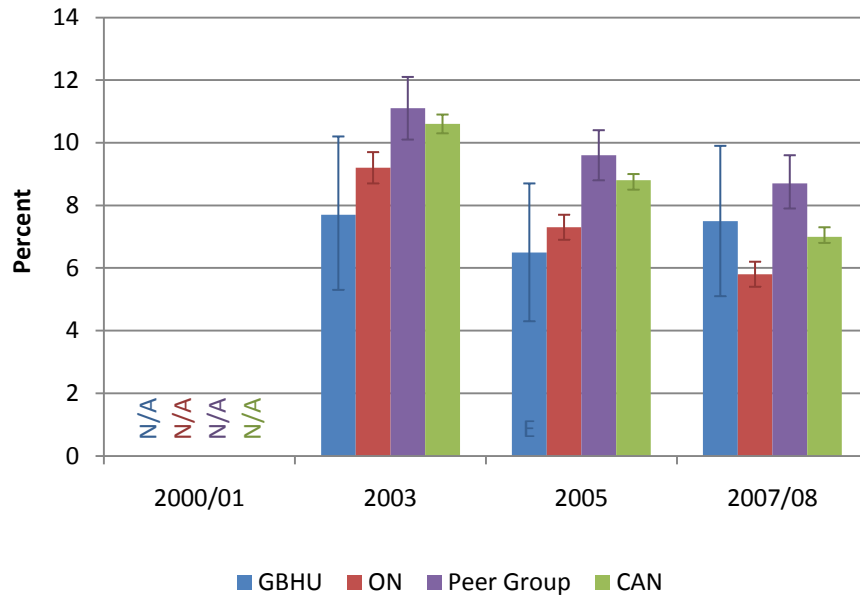
#### Estimates

Table 21. Percentage of Population Who Are Exposed to Second-hand Smoke at Home

	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	7.7 + 2.5, - 2.4	6.5 ± 2.2 E	7.5 ± 2.4
<b>ON</b>	N/A	9.2 ± 0.5	7.3 ± 0.4	5.8 ± 0.4
<b>Peer Group</b>	N/A	11.1 ± 1.0	9.6 ± 0.8	8.7 + 0.9, - 0.8
<b>CAN</b>	N/A	10.6 ± 0.3	8.8 + 0.2, - 0.3	7.0 + 0.3, - 0.2

<sup>21</sup> Source: 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 17. Percentage of Population Who Are Exposed to Second-hand Smoke at Home



### *Description of Trends*

The rate of exposure to SHS in Grey Bruce is about 7%, or about 1 in 14 people. The rate is not significantly different from rates for the peer group, province and country, or from previous rates. While rates in the province and country have been on the decline, Grey Bruce's rate remains relatively stable.

## No Smoking in House<sup>22</sup>

This question was asked only of those people who reported that there are restrictions against smoking cigarettes in their home, for all people who live with at least one other person or who indicated that they are non-smokers.

### Question

- How restricted is smoking in your home?—Smokers are asked to refrain from smoking in the house: (yes, no)?

### Estimates

**Table 22. Percentage of Population Who Ask Smokers Not to Smoke in the Home**

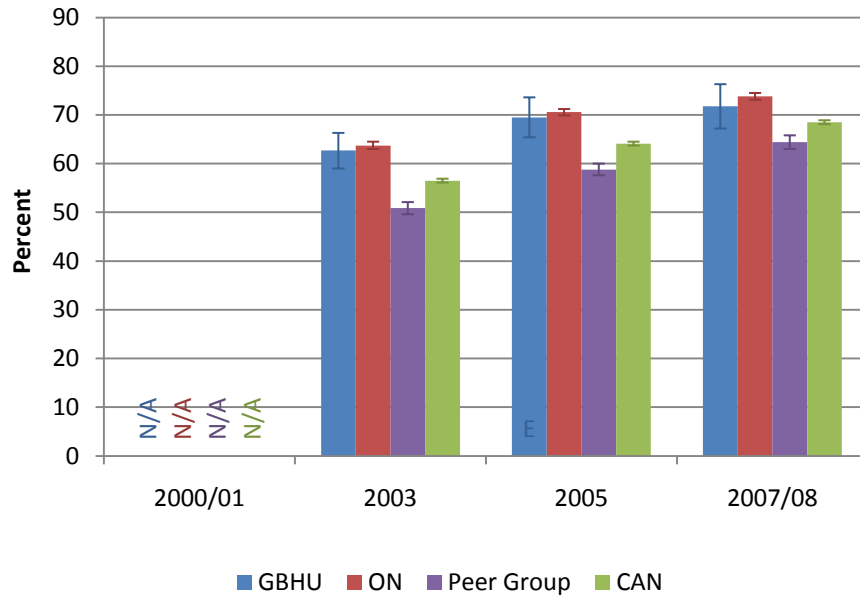
	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	62.7 + 3.6, - 3.7	69.5 ± 4.1	71.8 + 4.5, - 4.6
<b>ON</b>	N/A	63.7 + 0.8, - 0.7	70.6 + 0.6, - 0.7	73.8 ± 0.7
<b>Peer Group</b>	N/A	50.9 + 1.2, - 1.3	58.8 ± 1.2	64.4 ± 1.4
<b>CAN</b>	N/A	56.5 ± 0.4	64.1 ± 0.4	68.5 ± 0.4

**Table 23. 2007/08 Relative Risk (Relative Rate) of Smoke-Free Homes for Grey Bruce**

	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	1.15	No Difference	
<b>ON</b>	N/A			No Difference
<b>Peer Group</b>	N/A			1.11
<b>CAN</b>	N/A			No Difference

<sup>22</sup> Source: 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 18. Percentage of Population Who Ask Smokers Not to Smoke in the Home



### Description of Trends

About 72% of people in Grey Bruce (7 in 10 people) ask smokers to refrain from smoking in the home. This rate is significantly higher than that of the peer group (RR = 1.11), but not significantly different from the Ontario or Canada rates. This rate is on the rise compared to 2003 (RR = 1.15), when only 63% of Grey Bruce residents asked smokers not to smoke in the home.

## Exposure to Second-hand Smoke: In Vehicles<sup>23</sup>

This question is asked only of non-smokers.

### Question

- In the past month, were you exposed to second-hand smoke, every day or almost every day, in a car or other private vehicle: (yes, no)?

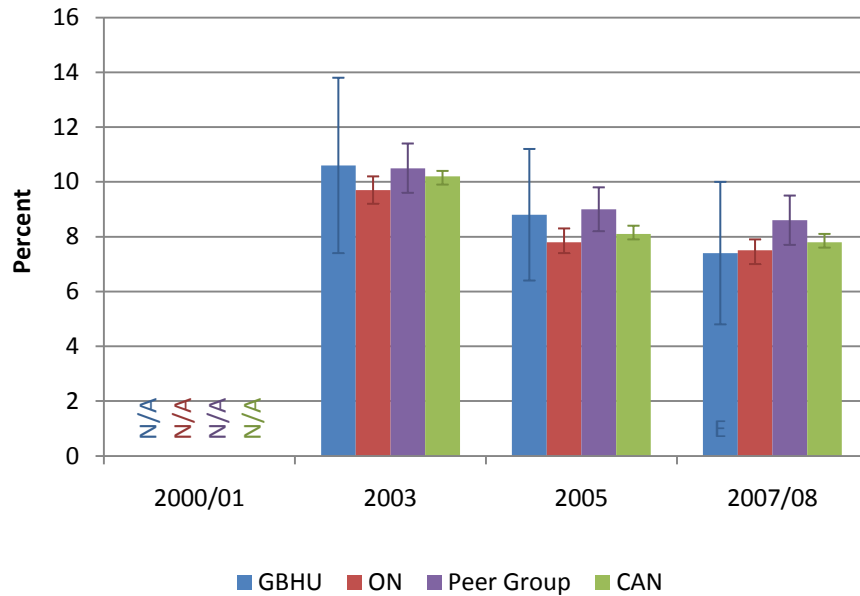
### Estimates

Table 24. Percentage of Population Who Are Exposed to Second-hand Smoke in Vehicles

	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	10.6 ± 3.2	8.8 ± 2.4	7.4 ± 2.6 E
<b>ON</b>	N/A	9.7 ± 0.5	7.8 + 0.5, - 0.4	7.5 + 0.4, - 0.5
<b>Peer Group</b>	N/A	10.5 ± 0.9	9.0 ± 0.8	8.6 ± 0.9
<b>CAN</b>	N/A	10.2 + 0.2, - 0.3	8.1 + 0.3, - 0.2	7.8 + 0.3, - 0.2

<sup>23</sup> Source: 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 19. Percentage of Population Who Are Exposed to Second-hand Smoke in Vehicles



### Description of Trends

In Grey Bruce, 7% (or 1 in 14 people) are exposed to SHS in vehicles. This rate is not significantly different from the rates for the province, peer group and the country, nor is it significantly different from previous years' estimates. Rates for the province and country appear to be moving downward, and it may be the case that the Grey Bruce rate is following suit, though it is impossible to say given the overlap of confidence intervals of the rates.

## Exposure to Second-hand Smoke: In Public Places<sup>24</sup>

This question is asked only of non-smokers.

### Question

- (In the past month,) were you exposed to second-hand smoke, every day or almost every day, in public places (such as bars, restaurants, shopping malls, arenas, bingo halls, bowling alleys): (yes, no)?

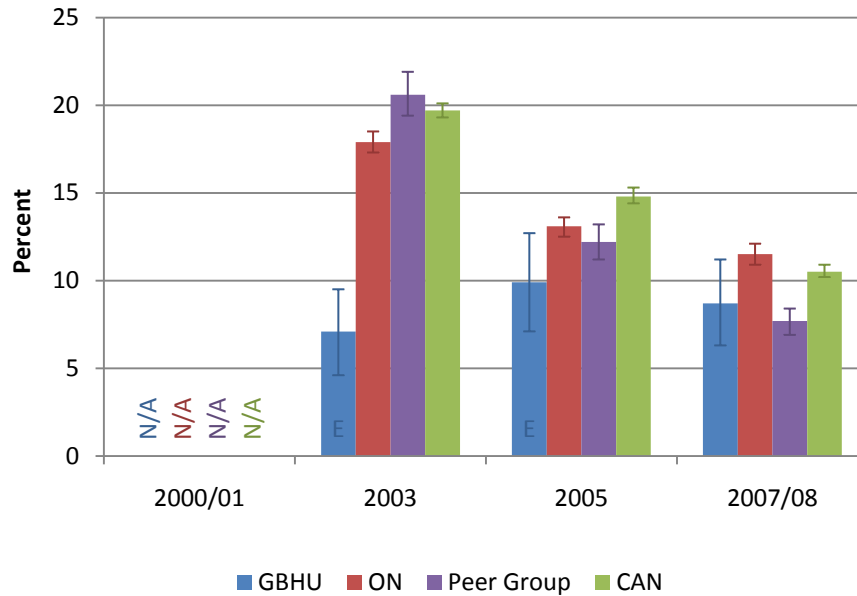
### Estimates

Table 25. Percentage of Population Who Are Exposed to Second-hand Smoke in Public Places

	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	7.1 + 2.4, - 2.5 E	9.9 ± 2.8 E	8.7 + 2.5, - 2.4
<b>ON</b>	N/A	17.9 ± 0.6	13.1 + 0.5, - 0.6	11.5 ± 0.6
<b>Peer Group</b>	N/A	20.6 + 1.3, - 1.2	12.2 ± 1.0	7.7 + 0.7, - 0.8
<b>CAN</b>	N/A	19.7 ± 0.4	14.8 + 0.5, - 0.4	10.5 + 0.4, - 0.3

<sup>24</sup> Source: 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 20. Percentage of Population Who Are Exposed to Second-hand Smoke in Public Places



### Description of Trends

In Grey Bruce, about 9% (or 1 in 11 people) are exposed to SHS in public places. This rate is not significantly different from the province, peer group or country, or previous years' estimates. Notably, the rate in Ontario, the peer group and Canada were previously significantly higher than the rate in Grey Bruce, and have since lowered to meet ours. This may indicate that Grey Bruce's leadership in smoke-free bylaws (September 3, 2002) before the Smoke-free Ontario Act was enacted (May 31, 2006) was successful in keeping our rates of SHS exposure in public places low.

## Exposure to Second-hand Smoke: In Vehicles or Public Places<sup>25</sup>

This variable is derived from two questions asked of all respondents who are non-smokers.

### Questions

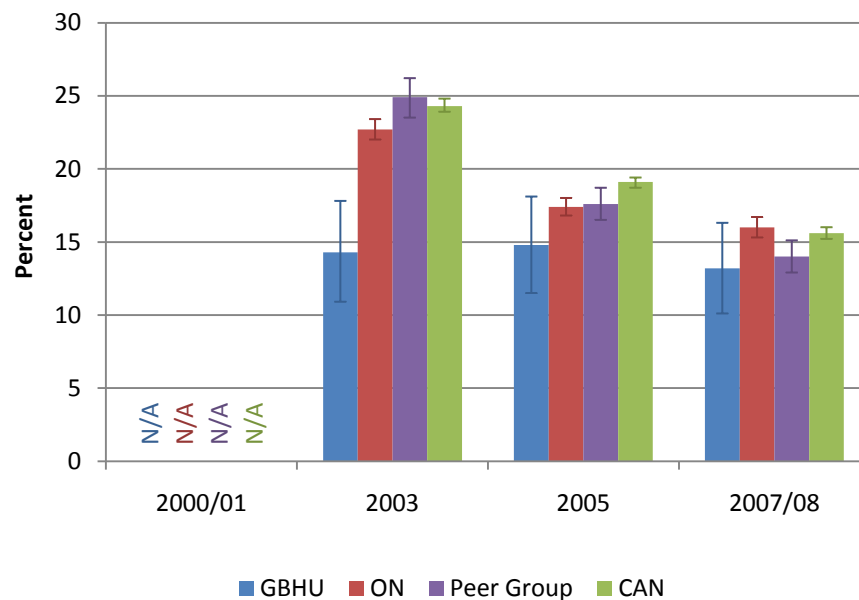
- In the past month, were you exposed to second-hand smoke, every day or almost every day, in a car or other private vehicle: (yes, no)?
- (In the past month,) were you exposed to second-hand smoke, every day or almost every day, in public places (such as bars, restaurants, shopping malls, arenas, bingo halls, bowling alleys): (yes, no)?

### Estimates

Table 26. Percentage of Population Who Are Exposed to Second-hand Smoke in Vehicles or Public Places

	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	14.3 + 3.5, - 3.4	14.8 ± 3.3	13.2 ± 3.1
<b>ON</b>	N/A	22.7 ± 0.7	17.4 ± 0.6	16.0 ± 0.7
<b>Peer Group</b>	N/A	24.9 + 1.3, - 1.4	17.6 ± 1.1	14.0 ± 1.1
<b>CAN</b>	N/A	24.3 + 0.5, - 0.4	19.1 + 0.3, - 0.4	15.6 ± 0.4

Figure 21. Percentage of Population Who Are Exposed to Second-hand Smoke in Vehicles or Public Places



<sup>25</sup> Source: 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

### ***Description of Trends***

In Grey Bruce, 13% of people (about 1 in 8) are exposed to SHS in vehicles or public places. This rate has been stable since 2003, and is not significantly different from rates for the province, the peer group, or the country. Although rates of second hand smoke exposure in vehicles have declined significantly for Ontario, Canada and the peer group, the Grey Bruce rates have been lower and have remained stable. This may be caused in part by Grey Bruce's leadership in early adoption of smoke-free bylaws (September 3, 2002) prior to the Smoke-free Ontario Act (May 31, 2006).

### **Exposure to Environmental Tobacco Smoke: Summary**

The rate of exposure to SHS in the home in Grey Bruce is about 7%, or about 1 in 14 people. About 72% of Grey Bruce (7 in 10 people) ask smokers to refrain from smoking in the home. This rate has risen from 2003, when only 63% of Grey Bruce residents would have asked smokers not to smoke in the home.

In Grey Bruce, 13% of people (about 1 in 8) are exposed to SHS in vehicles or public places; 7% (or 1 in 14 people) are exposed to SHS in vehicles; and 9% (or 1 in 11 people) are exposed to SHS in public places. The rate of people exposed to SHS in vehicles or public places has been on the decline for the province and the country since 2003, when they were significantly higher than the Grey Bruce rate. The reason for Grey Bruce's lower rate of exposure to SHS in public places may be because of its leadership in early adoption of smoke-free bylaws (September 3, 2002) prior to the Smoke-free Ontario Act (May 31, 2006).

With respect to the rate of exposure to SHS in vehicles, the provincial and national rates are falling over time, and the rate in Grey Bruce may be doing so as well. Because of large confidence intervals, however, it is not possible to say whether this is the case.

## Breastfeeding Behaviours

### Breastfeeding Initiation<sup>26</sup>

Child health outcomes are affected by breastfeeding initiation (Wambach, K. et al., 2005). “The World Health Organization (WHO), Health Canada and the Canadian Pediatric Society recommend breastfeeding as the best method of feeding infants because it provides optimal nutritional, immunological and emotional benefits for growth and development” (Statistics Canada, 2010). Thus, breastfeeding initiation can be an important indicator of future child health.

This module was asked with reference to the last live born child for women who had given birth in the last five years before the interview. Questions for this module were not asked in proxy interviews, which were coded as not stated.

#### Question

- (For your last baby,) did you breastfeed or try to breastfeed your baby, even if only for a short time: (yes, no)?

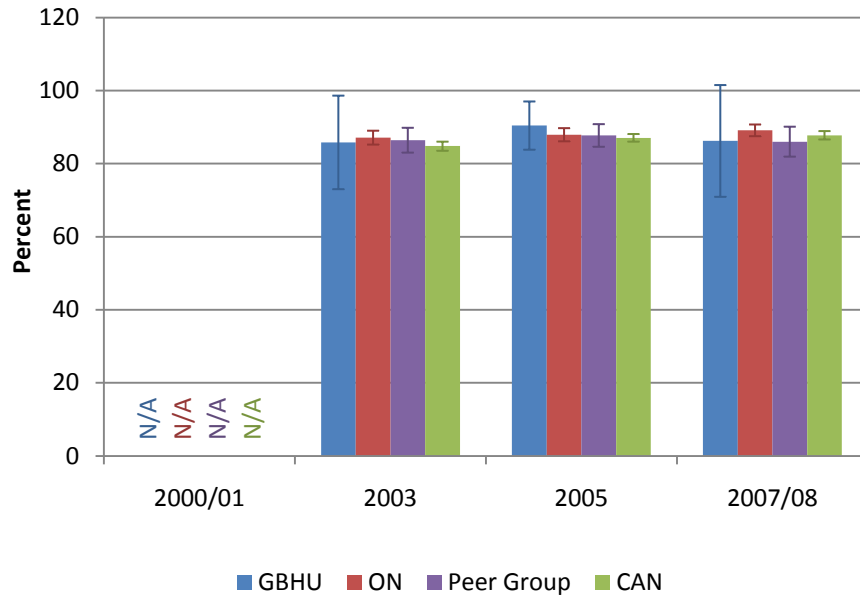
#### Estimates

Table 27. Percentage of Mothers Who Initiate Breastfeeding

	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	85.8 ± 12.8	90.4 ± 6.6	86.2 ± 15.3
<b>ON</b>	N/A	87.1 ± 1.9	87.9 ± 1.8	89.1 ± 1.6
<b>Peer Group</b>	N/A	86.4 ± 3.4	87.7 ± 3.1	86.0 ± 4.1
<b>CAN</b>	N/A	84.8 + 1.2, - 1.3	87.0 + 1.1, - 1.0	87.7 + 1.2, - 1.1

<sup>26</sup> Source: 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

**Figure 22. Percentage of Mothers Who Initiate Breastfeeding**



### ***Description of Trends***

In Grey Bruce, more than 4 out of 5 new mothers initiate breastfeeding with their infants. This rate is not significantly different from rates for Canada, Ontario, the peer group or the previous years' estimates.

### Exclusive Breastfeeding for at Least 6 Months<sup>27</sup>

As with the previous indicator, this module was asked with reference to the last child for women who had given birth to in the last five years before the interview (not including stillbirths). Questions for this module were not asked in proxy interviews, which were coded as not stated.

“The Canadian Paediatric Society recommends exclusive breastfeeding for the first six months of life for healthy, term infants. Breast milk is the optimal food for infants, and breastfeeding may continue for up to two years and beyond” (Boland, 2005).

Exclusive breastfeeding for at least 6 months was derived from the responses to the following two questions:

#### Question

- How long did you breastfeed (your last baby)?
- How old was your (last) baby when you first added any other liquids (e.g., milk, formula, water, teas, herbal mixtures) or solid foods to the baby’s feeds?

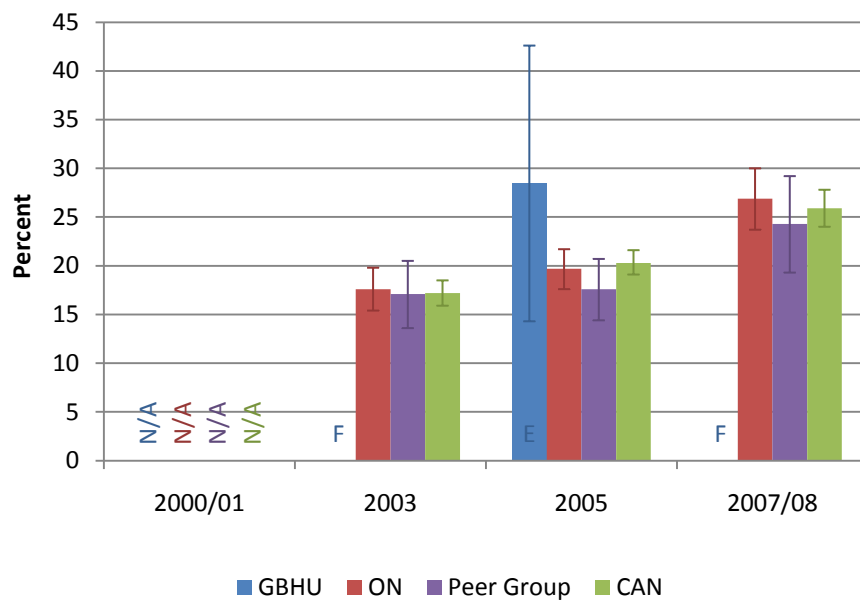
#### Estimates

Table 28. Percentage of Mothers Who Exclusively Breastfed Their Children for at Least 6 Months

	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	F	28.5 + 14.1, - 14.2 E	F
<b>ON</b>	N/A	17.6 ± 2.2	19.7 + 2.0, - 2.1	26.9 + 3.1, - 3.2
<b>Peer Group</b>	N/A	17.1 + 3.4, - 3.5	17.6 + 3.1, - 3.2	24.3 + 4.9, - 5.0
<b>CAN</b>	N/A	17.2 ± 1.3	20.3 + 1.3, - 1.2	25.9 ± 1.9

<sup>27</sup> Source: 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

**Figure 23. Percentage of Mothers Who Exclusively Breastfed Their Children for at Least 6 Months**



### **Description of Trends**

Unfortunately, the rate of exclusive breastfeeding for 6 months is too unreliable to be released for Grey Bruce. The previous two-year rate is not significantly different from the province, peer group and country, and those rates are about 20%.

### **Breastfeeding Behaviours: Summary**

In Grey Bruce, more than 4 out of 5 new mothers initiate breastfeeding with their infants, which is in keeping with rates for Canada, Ontario, and the peer group. Unfortunately, the rate of exclusive breastfeeding for 6 months is unavailable for the current year because of unreliability. It may be safe to assume that the rate is similar to those of Ontario and Canada, which are both about 25% in 2007/08.

Although breastfeeding initiation rates are high at about 80%, rates of breastfeeding for the minimum recommended duration are quite low, at about 25%. This is a potential area of focus where breastfeeding promotion could have a significant effect on population health outcomes.

## Obesity

Over the past 25 years, the level of obesity in Canada has risen substantially among people of all ages (Patra, J. et al., 2007; Tennant, C., 1999). The estimated economic burdens—both direct and indirect—for physical inactivity and obesity in 1999 in Canada were \$300 and \$343, respectively, per capita (Patra, J. et al., 2007). Further, “Obesity has been linked with many chronic diseases, including hypertension, Type 2 diabetes, cardiovascular disease, osteoarthritis and certain types of cancer” (Statistics Canada, 2010m). This makes obesity a particularly good indicator of population health status.

BMI is calculated using reported weight and height.

$$\text{BMI} = \frac{\text{weight (kg)}}{(\text{height (m)})^2}$$

The weight and height upon which the BMI calculations are based are self-reported by the individual. It is well established that the use of self-reported height and weight data results in lower estimates of the prevalence of obesity, compared with measured data (Shields, M., Connor Gorber, S., & Tremblay, M. S., 2008); therefore, these estimates should be interpreted with this in mind.

For the following three indicators, BMI is calculated for adults 18 and over, and excludes female respondents 18 to 49 who were pregnant or did not answer the pregnancy question. It is also calculated only for people between 3' and 6'11" tall, as detailed height data are not collected for ranges below or above these limits. For cycle 1.1 of the CCHS BMI was only calculated for respondents aged 20-64, and it is therefore not possible to compare with newer estimates.

## Overweight<sup>28</sup>

This indicator is based on BMI, as is the previous indicator, and presents the estimate of the population who have a BMI of 25 to less than 30.

BMI is derived from the following two questions.

### Question

- Height (self-reported, converted to cm).
- Weight (self-reported, converted to kg).

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<sup>28</sup> Source: 2000/01: CANSIM table 105-0007; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

## Estimates

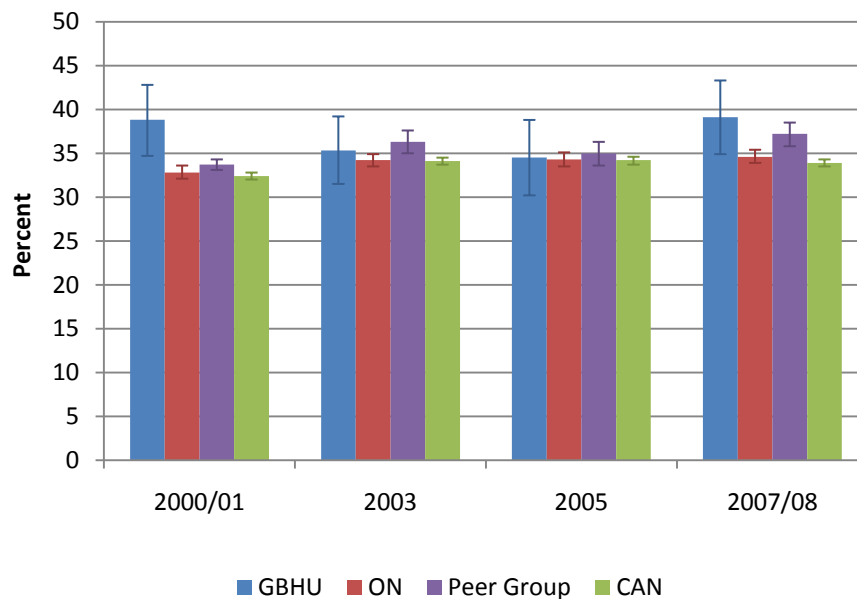
Table 29. Percentage of Population Who Are Overweight

	2000/01	2003	2005	2007/08
<b>GBHU</b>	38.8 + 4.0, - 4.1	35.3 + 3.9, - 3.8	34.5 ± 4.3	39.1 ± 4.2
<b>ON</b>	32.8 + 0.8, - 0.7	34.2 ± 0.7	34.3 ± 0.8	34.6 + 0.8, - 0.7
<b>Peer Group</b>	33.7 ± 0.6	36.3 ± 1.3	35 + 1.3, - 1.4	37.2 + 1.3, - 1.4
<b>CAN</b>	32.4 ± 0.4	34.1 ± 0.4	34.2 + 0.4, - 0.5	33.9 ± 0.4

Table 30. 2007/08 Relative Risk of Overweight for Grey Bruce

	2000/01	2003	2005	2007/08
<b>GBHU</b>	No Difference	No Difference	No Difference	
<b>ON</b>				No Difference
<b>Peer Group</b>				No Difference
<b>CAN</b>				1.15

Figure 24. Percentage of Population Who Are Overweight



## Description of Trends

The rate of overweight in Grey Bruce (39%, or nearly 2 in 5) is significantly higher than that of Canada (RR = 1.15). It is not different from that of Ontario or that of the peer group, nor is it different from previous years' estimates.

## Obesity<sup>29</sup>

This indicator is based on BMI, as is the previous indicator, and presents the estimate of the population who have a BMI of 30 or higher.

BMI is derived from the following two questions.

### Question

- Height (self-reported, converted to cm).
- Weight (self-reported, converted to kg).

### Estimates

Table 31. Percentage of Population Who Are Obese

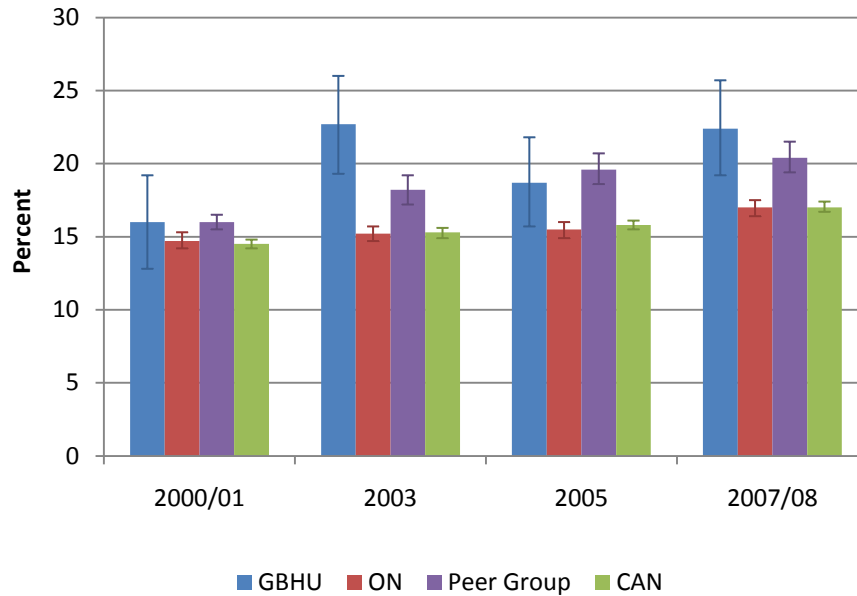
	2000/01	2003	2005	2007/08
<b>GBHU</b>	16.0 ± 3.2	22.7 + 3.3, - 3.4	18.7 + 3.1, - 3.0	22.4 + 3.3, - 3.2
<b>ON</b>	14.7 + 0.6, - 0.5	15.2 ± 0.5	15.5 + 0.5, - 0.6	17.0 + 0.5, - 0.6
<b>Peer Group</b>	16.0 ± 0.5	18.2 ± 1.0	19.6 + 1.1, - 1.0	20.4 + 1.1, - 1.0
<b>CAN</b>	14.5 ± 0.3	15.3 + 0.3, - 0.4	15.8 ± 0.3	17.0 + 0.4, - 0.3

Table 32. 2007/08 Relative Risk of Obesity in Grey Bruce

	2000/01	2003	2005	2007/08
<b>GBHU</b>	No Difference	No Difference	No Difference	
<b>ON</b>				1.32
<b>Peer Group</b>				No Difference
<b>CAN</b>				1.32

<sup>29</sup> Source: 2000/01: CANSIM table 105-0007; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 25. Percentage of Population Who Are Obese



### *Description of Trends*

In the GBHU area, there is a higher percentage of obesity (22% or over 1 in 5) when compared with Canada (RR = 1.32) and Ontario (RR = 1.32), but not when compared with people of regions of similar demographics (peer group). As well, the rate does not differ significantly from rates for previous years, but rates are on the rise for Ontario, Canada and the peer group.

## Overweight and Obesity<sup>30</sup>

A person with a BMI of 30.0 or greater is considered obese, while a person with a BMI of 25.0 to 29.9 is considered overweight.

BMI is derived from the following two questions.

### Question

- Height (self-reported, converted to cm).
- Weight (self-reported, converted to kg).

### Estimates

Table 33. Percentage of Population Who Are Overweight or Obese

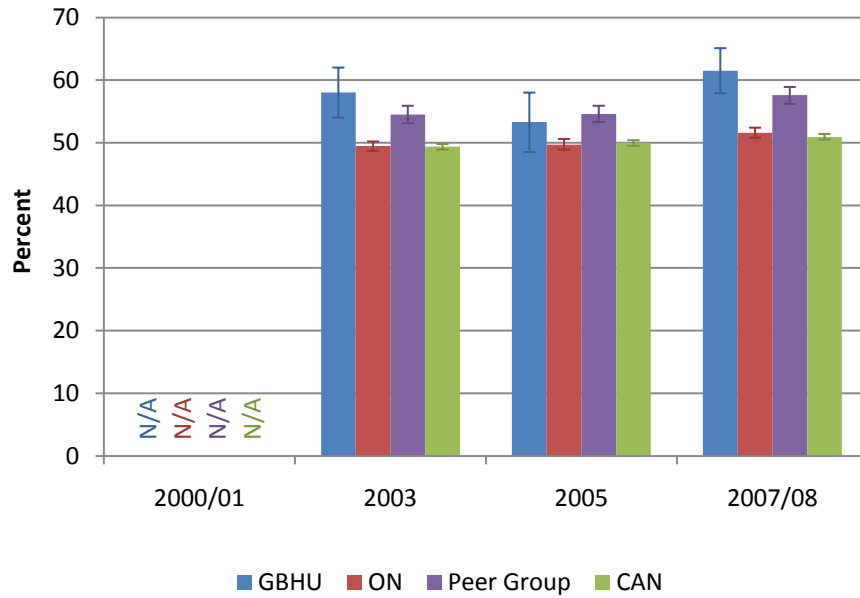
	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	58.0 ± 4.0	53.3 + 4.7, - 4.8	61.5 ± 3.6
<b>ON</b>	N/A	49.5 + 0.7, - 0.8	49.7 + 0.9, - 0.8	51.6 ± 0.8
<b>Peer Group</b>	N/A	54.5 ± 1.4	54.6 ± 1.3	57.6 + 1.3, - 1.4
<b>CAN</b>	N/A	49.4 + 0.4, - 0.5	50.0 + 0.4, - 0.5	50.9 + 0.5, - 0.4

Table 34. 2007/08 Relative Risk of Overweight or Obesity in Grey Bruce

	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	No Difference	No Difference	
<b>ON</b>				1.19
<b>Peer Group</b>				No Difference
<b>CAN</b>				1.21

<sup>30</sup> Source: 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

**Figure 26. Percentage of Population Who Are Overweight or Obese**



### ***Description of Trends***

The rate of overweight and obesity in Grey Bruce is 61.5%, or about 3 in 5. This rate is significantly higher than that for Ontario (RR = 1.19) and Canada (RR = 1.21). It is not different from previous years' or peer group estimates.

## Adolescent Overweight and Obesity<sup>31</sup>

This indicator is calculated based on BMI, as with the previous three indicators. The only difference is that it is only calculated for adolescents aged 12 to 17 years.

### Question

- Height (self-reported, converted to cm).
- Weight (self-reported, converted to kg).

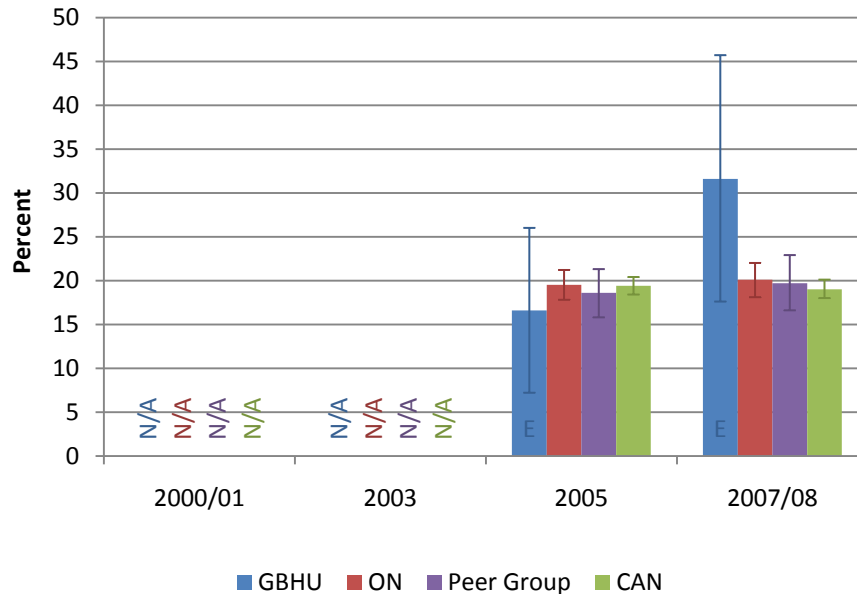
### Estimates

Table 35. Percentage of Adolescents Who Are Overweight or Obese

	2000/01	2003	2005	2007/08
<b>GBHU</b>	N/A	N/A	16.6 ± 9.4 E	31.6 + 14.1, - 14.0 E
<b>ON</b>	N/A	N/A	19.5 ± 1.7	20.1 + 1.9, - 2.0
<b>Peer Group</b>	N/A	N/A	18.6 + 2.7, - 2.8	19.7 + 3.2, - 3.1
<b>CAN</b>	N/A	N/A	19.4 ± 1.0	19.0 + 1.1, - 1.0

<sup>31</sup> Source: 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 27. Percentage of Adolescents Who Are Overweight or Obese



### Description of Trends

There is no discernable difference between the Grey Bruce rate of adolescent overweight or obesity and the Ontario, peer group or Canada rates because of the unreliability of the Grey Bruce rate and its large 95% confidence interval. For this reason, it is also not possible to detect differences from the previous reference period's estimate.

### Obesity: Summary

The rate of overweight and obesity in Grey Bruce is 61.5%, or about 3 in 5, is significantly higher than that for Ontario and Canada. The rate of overweight in Grey Bruce (39%) is significantly higher than that in Canada (RR = 1.15), and the rate of obesity (22%) is significantly higher than that in Canada (RR = 1.32) or Ontario (RR = 1.32).

Unfortunately, because of large confidence intervals, it isn't possible to discern whether or not there is a difference for rates of adolescent overweight and obesity between Grey Bruce and larger geographies.

## Personal Health Behaviours

It has been speculated that there is a positive correlation between people spending many hours participating in sedentary behaviours (such as television watching and using the computer) and obesity. Understanding the causes of the ever-increasing obesity trend will be critical for establishing effective population-level interventions.

### Physical Activity: Moderately Active or Active<sup>32</sup>

The Physical Activity Index (PAI) is a measure that takes the energy expenditure values (number of kcal/kg/day of energy expenditure) estimated from participants' leisure activities and categorizes them into three categories: 'active' (3.0+ kcal/kg/day of energy expenditure, the approximate amount of exercise required for cardiovascular health benefit), 'moderate' (1.5 – 2.9 kcal/kg/day, and might experience some health benefits but little cardiovascular benefit), and 'inactive' (those with an energy expenditure below 1.5kcal/kg/day) (Statistics Canada, 2007).

This indicator considers those who are moderately active or active—that is, expend 1.5 or more kcal/kg/day (Statistics Canada, 2007).

The energy expenditure calculated was based on the amount of time spent doing the following activities:

#### Question

- Walking for exercise
- Gardening or yard work
- Swimming
- Bicycling
- Popular or social dance
- Home exercises
- Ice hockey
- Ice skating
- In-line skating or rollerblading
- Jogging or running
- Golfing
- Exercise class or aerobics
- Downhill Skiing or Snowboarding
- Bowling
- Baseball or softball
- Tennis
- Weight training
- Fishing
- Volleyball
- Basketball
- Soccer (added in 2003)
- Other

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<sup>32</sup> Source: 2000/01: CANSIM table 105-0033; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

## Estimates

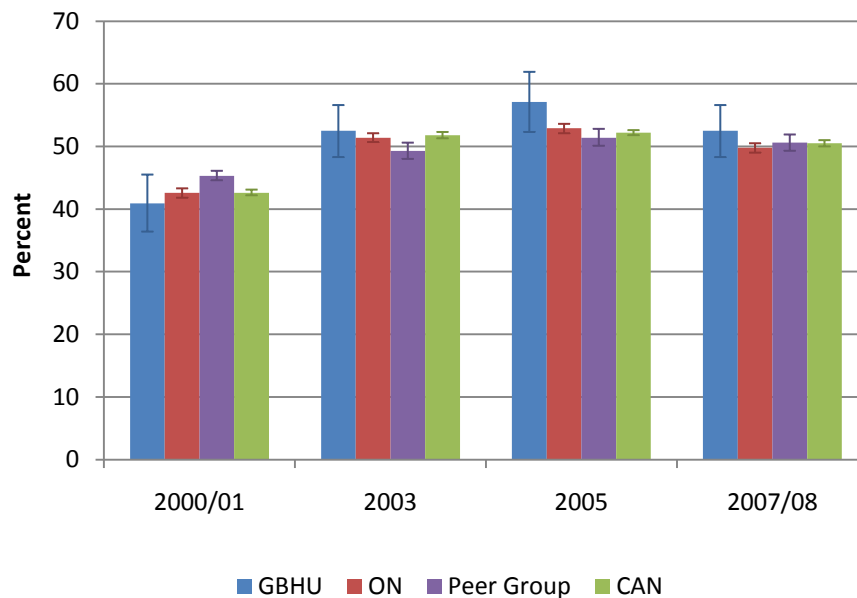
Table 36. Percentage of Population Who Are Moderately Physically Active or Physically Active

	2000/01	2003	2005	2007/08
<b>GBHU</b>	40.9 + 4.6, - 4.5	52.5 + 4.1, - 4.2	57.1 ± 4.8	52.5 + 4.1, - 4.2
<b>ON</b>	42.6 + 0.7, - 0.8	51.4 ± 0.7	52.9 + 0.7, - 0.8	49.8 + 0.7, - 0.8
<b>Peer Group</b>	45.3 + 0.8, - 0.7	49.3 ± 1.3	51.4 + 1.4, - 1.3	50.6 ± 1.3
<b>CAN</b>	42.6 + 0.5, - 0.4	51.8 ± 0.5	52.2 ± 0.4	50.5 ± 0.5

Table 37. 2007/08 Relative Risk (Relative Rate) of Moderate or Active Physical Activity in Grey Bruce

	2000/01	2003	2005	2007/08
<b>GBHU</b>	1.28	No Difference	No Difference	
<b>ON</b>				No Difference
<b>Peer Group</b>				No Difference
<b>CAN</b>				No Difference

Figure 28. Percentage of Population Who Are Moderately Physically Active or Physically Active



## Description of Trends

The Grey Bruce rate of active or moderately active physical activity (52%, or about half of people) is not significantly different from the Ontario, peer group and Canada rates, although it is higher than the 2000/01 rate (RR = 1.28). Rates for Ontario and Canada also show an increase in physical activity levels.

### Physical Activity: Inactive<sup>33</sup>

This indicator considers physically inactive people—those who expend less than 1.5kcal/kg/day (Statistics Canada, 2007).

#### Question

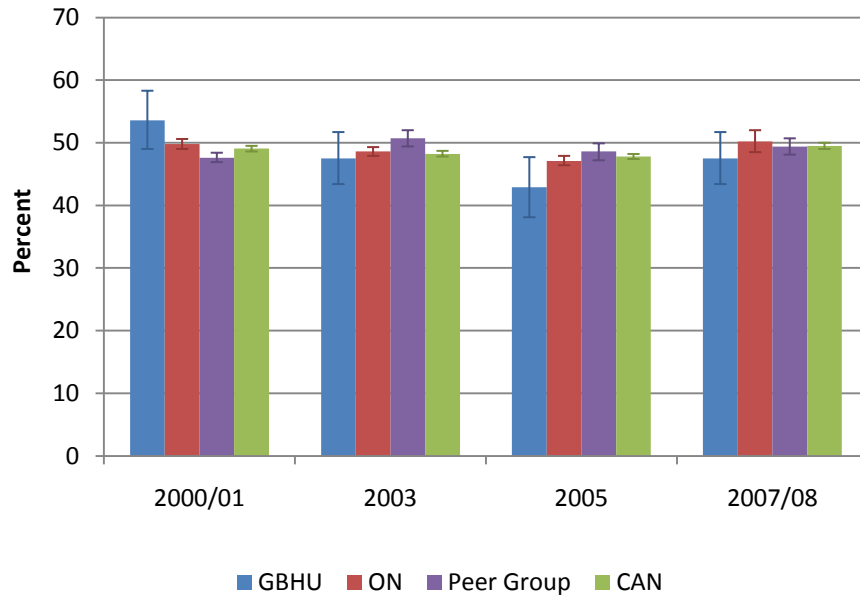
See previous indicator for a list of exercises used in the calculation of PAI values.

#### Estimates

Table 38. Percentage of Population Who Are Physically Inactive

	2000/01	2003	2005	2007/08
<b>GBHU</b>	53.6 + 4.7, - 4.6	47.5 + 4.2, - 4.1	42.9 ± 4.8	47.5 + 4.2, - 4.1
<b>ON</b>	49.8 ± 0.8	48.6 ± 0.7	47.1 + 0.8, - 0.7	50.2 + 1.8, - 1.7
<b>Peer Group</b>	47.6 + 0.8, - 0.7	50.7 ± 1.3	48.6 + 1.3, - 1.4	49.4 ± 1.3
<b>CAN</b>	49.1 + 0.4, - 0.5	48.2 + 0.5, - 0.4	47.8 ± 0.4	49.5 ± 0.5

<sup>33</sup> Source: 2000/01: CANSIM table 105-0033; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

**Figure 29. Percentage of Population Who Are Physically Inactive*****Description of Trends***

The rate of physical inactivity in Grey Bruce is 48%, or nearly half of people. This rate is not significantly different from that of Ontario, the peer group, or Canada; nor is it significantly different from previous years' estimates.

## Fruit and Vegetable Intake<sup>34</sup>

Fruit and Vegetable Intake is defined as percentage consuming five or more servings of fruits and vegetables per day. This variable is based on six questions asked in the CCHS.

These questions are not asked of proxy respondents, and are instead coded as not stated.

### Question

- Daily consumption—fruit juice (times per day)
- Daily consumption—fruit (times per day)
- Daily consumption—green salad (times per day)
- Daily consumption—potatoes (times per day)
- Daily consumption—carrots (times per day)
- Daily consumption—other vegetables (times per day)

### Estimates

Table 39. Percentage of Population Who Consume 5+ Servings of Fruits and Vegetables a Day

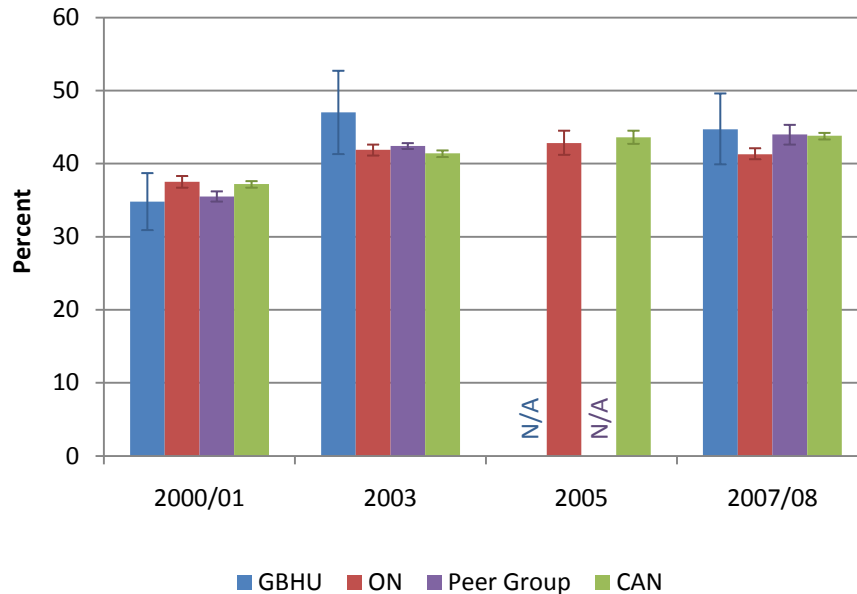
	2000/01	2003	2005	2007/08
<b>GBHU</b>	34.8 ± 3.9	47.0 ± 5.7	N/A	44.7 + 4.9, - 4.8
<b>ON</b>	37.5 ± 0.8	41.9 + 0.7, - 0.8	42.8 + 1.7, - 1.6	41.3 + 0.8, - 0.7
<b>Peer Group</b>	35.5 ± 0.7	42.4 ± 0.4	N/A	44.0 + 1.3, - 1.4
<b>CAN</b>	37.2 + 0.4, - 0.5	41.4 + 0.4, - 0.5	43.6 ± 0.9	43.8 + 0.4, - 0.5

Table 40. 2007/08 Relative Risk (Relative Rate) of Consuming 5+ Servings of Fruits and Vegetables a Day for Grey Bruce

	2000/01	2003	2005	2007/08
<b>GBHU</b>	1.28	No Difference	N/A	
<b>ON</b>				No Difference
<b>Peer Group</b>				No Difference
<b>CAN</b>				No Difference

<sup>34</sup> Source: 2000/01: CANSIM table 105-0100; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

**Figure 30. Percentage of Population Who Consume 5+ Servings of Fruits and Vegetables a Day**



### **Description of Trends**

The rate of adequate fruit and vegetable intake in Grey Bruce (45%, or about 4 in 9) is not significantly different from the rates for Ontario, the peer group or Canada, but is significantly higher than the rate for Grey Bruce in 2000/01 (RR = 1.28). Similarly, the rates for Canada and Ontario have increased since 2000/01, which may indicate an overall amelioration of nutrition practices in Canada since that time. Rates are unavailable for 2005 at the health unit and peer group level, as the fruit and vegetable consumption module was optional and asked only of about half the sample.

### **Personal Health Behaviours: Summary**

The rate of physical inactivity in Grey Bruce is 48%, or nearly half of people, and the rate of moderate or active physical activity in Grey Bruce is 52%, also about half of people. These rates are not significantly different from the Ontario, peer group and Canada rates, although the moderately active or active physical activity rate is higher than the 2000/01 rate (RR = 1.28).

The rate of adequate fruit and vegetable intake in Grey Bruce (45%, or about 4 in 9) is not significantly different from the rates for Ontario, the peer group or Canada, but is significantly higher than the rate for Grey Bruce in 2000/01 (RR = 1.28).

The rates of moderate to active physical activity and adequate fruit and vegetable intake have increased for Grey Bruce, Ontario and Canada, which may indicate an overall improvement of nutrition and physical activity practices for these groups.

## Health Services Utilization

### Regular Doctor<sup>35</sup>

Having a regular medical doctor and available medical doctors in the region is important for patients dealing with chronic diseases. There are ongoing prescription needs and possibly adjustments that should be made at routine intervals that necessitate a doctor for the provision of adequate health care.

#### Question

- Do you have a regular medical doctor: (yes, no)?

#### Estimates

Table 41. Percentage of Population Who Have a Regular Medical Doctor

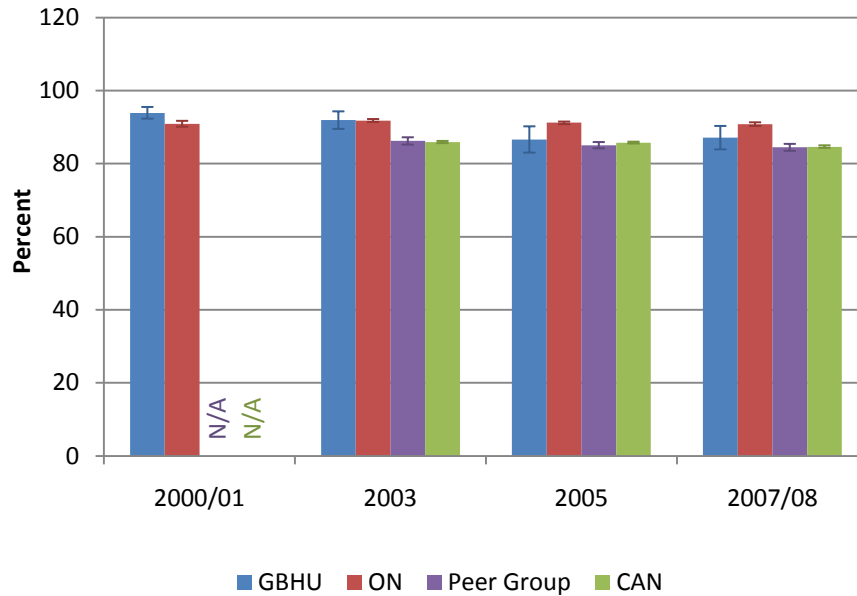
	2000/01	2003	2005	2007/08
<b>GBHU</b>	93.9 ± 1.6	91.9 ± 2.4	86.6 ± 3.6	87.1 ± 3.2
<b>ON</b>	90.9 ± 0.8	91.8 ± 0.4	91.2 + 0.3, - 0.4	90.8 ± 0.5
<b>Peer Group</b>	N/A	86.2 ± 1.0	85 + 0.9, - 0.8	84.5 + 0.9, - 1
<b>CAN</b>	N/A	85.9 ± 0.3	85.7 + 0.3, - 0.2	84.6 + 0.4, - 0.3

Table 42. 2007/08 Relative Risk (Relative Rate) of Having a Medical Doctor for Grey Bruce

	2000/01	2003	2005	2007/08
<b>GBHU</b>	0.93	No Difference	No Difference	
<b>ON</b>				No Difference
<b>Peer Group</b>				No Difference
<b>CAN</b>				No Difference

<sup>35</sup> Source: 2000/01: (Southwest Region Health Status Working Group, 2004); 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 31. Percentage of Population Who Have a Regular Medical Doctor



### Description of Trends

The percentage of people in Grey Bruce who reported having a regular medical doctor (87%, or nearly 9 in 10 people) was not significantly different from that of Ontario, the peer group or Canada. It was significantly lower, however than the rate in 2001 (RR = 0.93).

The rates for Canada and the peer group were unavailable from Statistics Canada in 2000/01, and the rates for Ontario and Grey Bruce Health Unit were taken from the analysis done for the Health Behaviours and Lifestyle Practices in Southwestern Ontario report of August 2004.

## Contact with Doctors<sup>36</sup>

Having access to doctors is important for the early detection and treatment of disease. Whether or not a person has seen a medical doctor or specialist in the last year may be an indicator of the accessibility of medical doctors in the area, which would have a definite impact on health in the area.

This variable is derived from responses to two questions.

### Question

- In the past 12 months, have you seen or talked to any of the following health professionals about your physical, emotional or mental health:
  - A family doctor (pediatrician) or general practitioner)?
  - Any other medical doctor or specialist such as a surgeon, allergist, orthopaedist, [gynaecologist/urologist] or psychiatrist?

### Estimates

**Table 43. Percentage of Population Who Have Seen a Medical Doctor in the Last 12 Months**

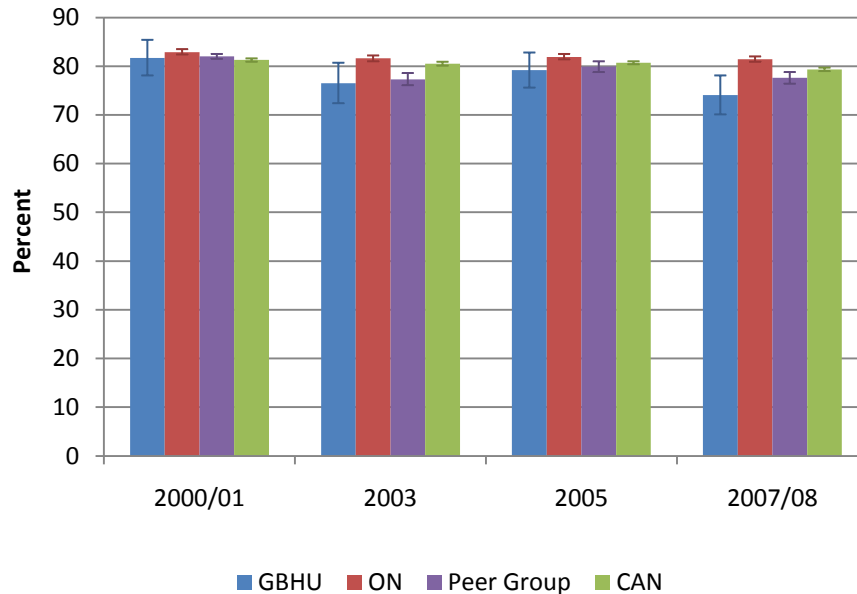
	2000/01	2003	2005	2007/08
<b>GBHU</b>	81.7 + 3.7, - 3.6	76.5 + 4.2, - 4.1	79.2 ± 3.6	74.1 ± 4.0
<b>ON</b>	82.9 + 0.6, - 0.5	81.6 ± 0.6	81.9 + 0.6, - 0.5	81.4 + 0.6, - 0.5
<b>Peer Group</b>	82.0 ± 0.5	77.3 + 1.3, - 1.2	79.9 ± 1.1	77.6 ± 1.2
<b>CAN</b>	81.3 + 0.3, - 0.4	80.5 ± 0.4	80.7 ± 0.3	79.3 + 0.4, - 0.3

**Table 44. 2007/08 Relative Risk (Relative Rate) of Having Seen a Medical Doctor in the Last 12 Months for Grey Bruce**

	2000/01	2003	2005	2007/08
<b>GBHU</b>	No Difference	No Difference	No Difference	
<b>ON</b>				0.91
<b>Peer Group</b>				No Difference
<b>CAN</b>				0.93

<sup>36</sup> Source: 2000/01: CANSIM table 105-0061; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 32. Percentage of Population Who Have Seen a Medical Doctor in the Last 12 Months



### Description of Trends

The rate of having had contact with a MD in the past 12 months in Grey Bruce (74.1%, or about 3 in 4) was lower than the Ontario (RR = 0.91) and Canada (RR = 0.93) rates. This may indicate that this area is underserved, at least insofar as compared to the provincial average. There was no difference when compared to previous Grey Bruce rates.

### Health Services Utilization: Summary

Nearly 9 in 10 people in Grey Bruce (87%) reported having a regular medical doctor, which was not significantly different from Ontario, the peer group or Canada, nor was it significantly different from previous years' rates. However, only 74% of people in Grey Bruce (or 3 in 4) had contact with a MD in the past 12 months, which was lower than the Ontario (RR = 0.91) and Canada (RR = 0.93) rates.

Given that the same proportion of people reported having seen a regular medical doctor, it may be that people are less inclined to see their physicians regularly. It may also be the case that there are fewer specialists accessible in the area and that care that those outside of this region may normally have access to are less accessible here.

## Vaccination<sup>37</sup>

Influenza vaccination is a proven method of reducing the risk of contracting influenza, and of stopping its spread.

### Question

- When did you have your last flu shot: (less than 1 year ago, 1 year to less than 2 years ago, or two years ago or more)?

### Estimates

Table 45. Percentage of Population Who Were Immunized Against Influenza in the Last 12 Months

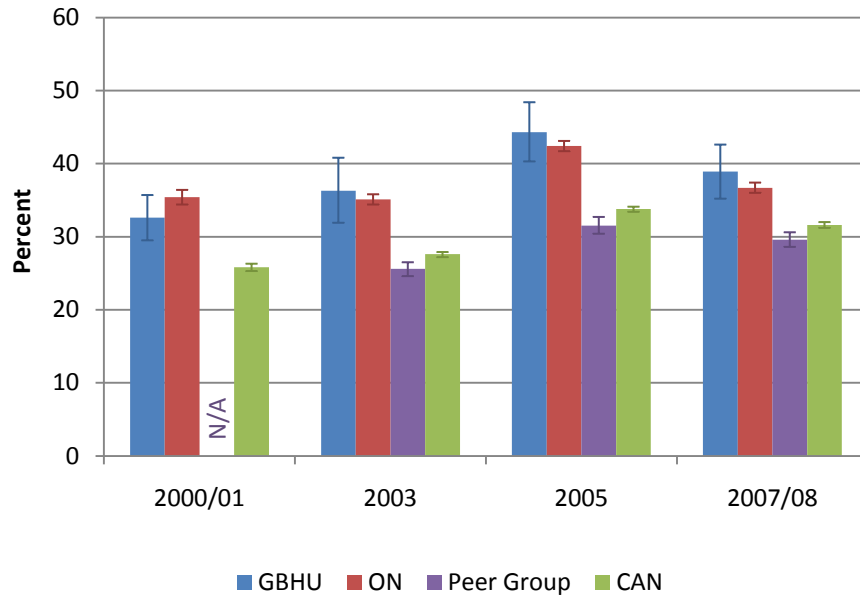
	2000/01	2003	2005	2007/08
<b>GBHU</b>	32.6 ± 3.1	36.3 + 4.5, - 4.4	44.3 + 4.1, - 4.0	38.9 ± 3.7
<b>ON</b>	35.4 ± 1.0	35.1 ± 0.7	42.4 ± 0.7	36.7 ± 0.7
<b>Peer Group</b>	N/A	25.6 + 0.9, - 1.0	31.5 + 1.2, - 1.1	29.6 ± 1.0
<b>CAN</b>	25.8 ± 0.5	27.6 + 0.3, - 0.4	33.8 + 0.3, - 0.4	31.6 ± 0.4

Table 46. 2007/08 Relative Risk (Relative Rate) of Immunization Against Influenza for Grey Bruce

	2000/01	2003	2005	2007/08
<b>GBHU</b>	No Difference	No Difference	No Difference	
<b>ON</b>				No Difference
<b>Peer Group</b>				1.31
<b>CAN</b>				1.23

<sup>37</sup> Source: 2000/01: CANSIM table 105-0100; 2003, 2005: CANSIM table 105-0501; 2007/08: 105-0502

Figure 33. Percentage of Population Who Were Immunized Against Influenza in the Last 12 Months



### Vaccination: Summary

The rate of influenza vaccination in Grey Bruce (38.9%) is higher than that of Canada (RR = 1.23) and that of the region's Peer Group (RR = 1.31). This is a positive finding, though the rate indicates that only two out of five 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.



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