



HEALTH BEHAVIOUR PROFILE





HEALTH BEHAVIOUR PROFILE

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

KEY FINDINGS

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

⁴Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.

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HEALTHY EATING

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

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

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

ANALYSIS

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

⁵Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.

Figure 43: Consumed Fewer than Five Daily Servings of Fruits and Vegetables, 12 Years and Older, Haldimand and Norfolk Counties Combines and Ontario, 2005, 2007, 2008



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

⁶Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.

MENTAL HEALTH

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

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

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

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

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

There is still much to learn about mental health in Haldimand County and Norfolk County. Even with the limitations outlined in the interpretation of this data, the issue of suicide is one of concern in Haldimand and Norfolk. Further investigation of this issue over a longer timeframe and with timeframes that are consistent between the various types of data presented, are needed. Moreover data from additional sources with larger population sizes is required to better understand what is happening in Haldimand County and Norfolk County with regard to mental health. Recent job losses in the counties may have increased rates of stress and related mental health illness. Service utilization rates among services for adults and the nature of potential waiting lists for services are not known. The Ministry of Health and Long Term Care has reported that Canadians with significant mental health issues die 15 to 20 years

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sooner than the general public (Ministry of Health and Long Term Care, 2009). Individuals with mental health illness often suffer from several co-morbid conditions including substance abuse and alcohol misuse, tobacco use and chronic diseases, which increases pressure on the health treatment system (Ministry of Health and Long Term Care, 2009). The rate of incidence of co-morbid conditions in Haldimand County and Norfolk County is not known.

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

ANALYSIS

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

⁷Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.

⁸Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.

Figure 44: Completed Suicides, Haldimand and Norfolk Counties Combined and Ontario, 2000-2005



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



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



Data Sources: (1) IntelliHealth, Vital Statistics. Data Notes: ICD-10-CA: X60999-X84999, Y 87.0. Includes Ontario residents with health card number. Data from 2000-2004 was extracted April 1, 2009. Data for 2005 was extracted January 4, 2010. (2) IntelliHealth, Population Estimates. Data Notes: Data was extracted April 1, 2009.

• Figure 46 shows that male residents of Haldimand and Norfolk counties combined also had a wide fluctuation in age standardized completed suicide rates while Ontario rates remained relatively stable between 2000 and 2005. Considered as an average age-standardized rate for the period, more male residents of Haldimand and Norfolk counties combined completed suicide (13.4 per 100,000 population) compared to Ontario males (11.8 per 100,000 population).



Figure 46: Completed Suicide by Males, Haldimand and Norfolk Counties Combined and Ontario, 2000-2005



Data Sources: (1) IntelliHealth, Vital Statistics. Data Notes: ICD-10-CA: X60999-X84999, Y 87.0. Includes Ontario residents with health card number. Data from 2000-2004 was extracted April 1, 2009. Data for 2005 was extracted January 4, 2010. (2) IntelliHealth, Population Estimates. Data Notes: Data was extracted April 1, 2009.

- The Canadian Community Health Survey (2007) asked respondents if they had seriously contemplated suicide or taking their own life in their lifetime. Due to small cell counts, confidence intervals (CI) are reported in Figure 47. These survey results showed:
 - About one in 10 (11.8% Cl ± 4.9) residents of Haldimand and Norfolk counties combined aged 15 years and older reported they had had suicidal thoughts in their lifetime. Fewer Ontario residents aged 15 years and older (7.5% Cl ± 0.5) reported having suicidal thoughts in their lifetime. Caution is urged when interpreting the data for Haldimand and Norfolk counties combined; there was high sampling variability with this data (Haldimand-Norfolk Health Unit, 2009).
 - Among males aged 15 years and older in Haldimand and Norfolk counties combined, a higher proportion (16.9% CI ± 9.1) reported having suicidal thoughts than females (6.3% CI ±3.9), while in Ontario more slightly more females (8.5% CI ± 0.8) than males (6.5 (CI ± 0.8) reported the same. Caution is urged when interpreting the data for Haldimand and Norfolk counties combined; there was there was high sampling variability with this data (Haldimand-Norfolk Health Unit, 2006).

⁹Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.

Figure 47: Suicidal Thoughts, Total and by Sex, 15 Years and Older, Haldimand and Norfolk Counties Combined and Ontario, 2007*



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

- The question of suicidal thoughts was also reported for adults aged 20 and older in the CCHS. Similar patterns emerged among those aged 20 years and older as those 15 years and older: slightly more residents in Haldimand and Norfolk counties combined (12.5% Cl ± 5.3) reported having suicidal thoughts in their life time than Ontario residents 20 years and older (7.6% Cl ± 0.6). Almost two out of 10 males aged 20 and older in Haldimand and Norfolk counties combined (18.5% Cl ± 9.8) reported having suicidal thoughts compared to 6.7% (Cl ± 0.8) of males in Ontario. It was not possible to report the rate for females 20 years and older due to small cell counts. Caution is urged when interpreting the data for Haldimand and Norfolk counties combined; there was high sampling variability with this data (Haldimand-Norfolk Health Unit, 2011).
- The CCHS also included data on self-reported life stress, work stress, and mental health. Considered by these variables, residents of Haldimand and Norfolk counties reported consistently lower levels of life and work stress and higher levels of good mental health as Ontario residents. However, confidence intervals overlapped for all of the reported data. The population samples for Haldimand and Norfolk counties combined were relatively small, resulting in a higher degree of uncertainty about the data. As such, the confidence interval around the self-reported levels of life and work stress and good mental health for Haldimand and Norfolk counties combined is wide, and overlaps with the confidence interval for Ontario's rates. This indicates a possibility that the estimate for Haldimand and Norfolk counties combined is not actually different from Ontario, but there is not a large enough sample in Haldimand and Norfolk counties combined to be certain. Caution is urged when interpreting the data for Haldimand and Norfolk counties combined; there was high sampling vari ability with this data (Haldimand-Norfolk Health Unit, 2009).

¹⁰Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.

PHYSICAL ACTIVITY

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

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

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

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

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

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

ANALYSIS

- Physical activity rates are reported for the years 2005, 2007 and 2008 in Figure 48, Figure 49 and Figure 50 for residents of Haldimand County and Norfolk counties combined 12 years and older who reported being active, moderately active or inactive in leisure activities (outside of work or school) during the past three months. The rates are compared to those reported by Ontario residents 12 years and older for the same time period. Confidence intervals are reported for each level of activity (active, moderate and inactive) because of the small sample sizes and high level of variability in the data.
- Figure 48 shows results for residents of Haldimand and Norfolk counties combined and Ontario residents 12 years and older who reported having an "active" level of physical activity in the CCHS. With little variation during the time period, rates of those 12 years and older who reported an "active" level of physical activity

were similar, about one-quarter, in both Haldimand and Norfolk counties combined and Ontario. Using confidence intervals, there is overlap between the rates reported in Haldimand and Norfolk counties combined (2005 - 26.8% CI ± 3.8 ; 2007 - 24.7% CI ± 6.3 ; 2008 - 27.3% CI ± 6.3) and Ontario (2005 - 27.6% CI ± 0.7 ; 2007 - 25.4% CI ± 0.9 ; 2008 - 25.0% CI ± 0.9) meaning that there is a higher degree of uncertainty about the data.



¹¹Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.

¹²Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.

Figure 48: Active Participation in Leisure Time Physical Activity, 12 Years and Older, Haldimand and Norfolk Counties Combined and Ontario, 2005, 2007, 2008



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

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

Figure 49: Moderately Active Participation in Leisure Time Physical Activity, 12 Years and older, Haldimand and Norfolk Counties Combined and Ontario, 2005, 2007, 2008



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

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

Figure 50: Inactive Level of Participation in Leisure Time Physical Activity, 12 Years and Older, Haldimand and Norfolk Counties Combined and Ontario, 2005, 2007, 2008



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

SUBSTANCE AND ALCOHOL MISUSE

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

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

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

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

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

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Figure 52 used CCHS data for 2005, 2007 and 2008 to compare the proportion of residents aged 20 and older in Haldimand and Norfolk counties combined and Ontario who reported "heavy drinking" in the prior 12 months. Heavy drinking is defined as five or more drinks on more than one occasion, 12 or more times a year in the prior 12 months. Between 2005 and 2008, four out of 10 residents of Haldimand and Norfolk counties combined reported heavy drinking (2005 - 41.2% CI ± 4.3; 2007 - 43.2% CI ± 6.2; 2008 - 43.7% CI ± 8.1,) while in Ontario, the rate decreased slightly from four out of 10 (36.0% CI ± 0.7) in 2005 to three out of 10 (33.9% CI ± 1.0) in 2008.



Figure 51: Heavy Drinking in the Past 12 Months, Current and Non-Current Drinkers, 20 Years and Older, Haldimand and Norfolk Counties Combined and Ontario, 2005, 2007, 2008



Data Source: Canadian Community Health Survey 2005, 2007 and 2008. Statistics Canada, Share File, Knowledge Management and Reporting Branch, Ontario MOHLTC. Data Notes: Annual estimates were used because these estimates present the most up-to-date population health characteristics and are updated yearly. Derived Variable. High sampling variability, interpret with caution. High sampling variability data is not releasable. Percentages are rounded up. Not stated includes don't know, refuse, and not stated. Non-Applicable was excluded. Note: On average there is about a 2% difference between the estimated produced between the Ontario Share File and the Master File used by Statistics Canada. The Ontario Share File has fewer respondents than the Master File. In order to be included in the Share File, Ontario residents must consent to sharing their information. Adult Heavy Drinking is the proportion of people age 20 years and older who reported consuming five or more drinks on one occasion during the previous 12 months. Data is shown including confidence interval range, a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls.

 Considered only for 2007, Figure 52 illustrates that seven out of 10 (70.3% Cl ± 5.8) residents in Haldimand and Norfolk counties combined reported that they were a regular drinker in the prior 12 months in 2007. Among Ontario residents, six out of 10 (61.5% Cl ± 1.1) reported the same. Figure 52: Regular Drinker in the Past 12 Months, Age 20 and Older, Haldimand and Norfolk Counties Combined and Ontario, 2007



Data Source: Canadian Community Health Survey 2007, Statistics Canada, Share File, Knowledge Management and Reporting Branch, Ontario MOHLTC. Data Notes: Derived Variable. High sampling variability data is not releasable. NC: Not able to compute. This variable indicates the type of drinker the respondent is based on his/her drinking habits in the past 12 months. Not stated includes don't know, refuse, and not stated. Data is shown including confidence interval range, a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls.

- Among youth aged 12-18 in Haldimand and Norfolk counties combined, almost two-thirds (64.0% Cl ± 16.8) reported drinking in the past 12 months in 2007. This was substantially higher than that reported by youth aged 12-18 in Ontario. Only four out of 10 (41.4% Cl ± 3.1) reported drinking in the past 12 months (Haldimand-Norfolk Health Unit, 2009).
- According to the CCHS 2005:
 - Of the proportion of persons age 20 and older who reported drinking alcohol in the past 12 months, a significantly higher proportion of residents in Haldimand and Norfolk counties combined (53.2% CI ± 5.4%) reported binge drinking (having five or more standard drinks at one sitting in the past month) compared to their Ontario counterparts (45.2% CI ± 0.9%).
 - A significantly higher proportion of females in Haldimand and Norfolk counties combined (40.7% CI ± 6.9%) reported having at least one occasion of binge drinking in the past year compared to Ontario (32.6% CI ± 1.1%).
 - A significantly higher proportion of males in Haldimand and Norfolk counties combined (64.3% Cl ± 7.9%) than females in Haldimand and Norfolk counties combined reported binge drinking (40.7% Cl ± 6.9%) (Haldimand-Norfolk Health Unit, 2008).
- In 2003, a survey of students in Haldimand, Norfolk and Brant found that:
 - 38% of students in Grades 5 and 7 drank alcohol in the past 12 months.
 - 41% of students in Grades 9 and 11 drank alcohol in the past four weeks, of which nearly 29% drank on a weekly basis.
 - 40% of alcohol users in Grade 11 reported binge drinking during the past four weeks (i.e., drinking five or more drinks on one occasion) (Haldimand-Norfolk Health Unit, 2008).

TOBACCO USE AND EXPOSURE

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

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

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

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

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

¹³Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.

¹⁴Confidence intervals (CI) are a statistical confidence calculation that shows with 95% confidence the lower and upper range in which the true rate falls. It is calculated using the total number of individuals in the population compared to the total number of individuals reporting the type of behaviour in question.

Figure 53: Daily or Occasional Smoking, Youth 12-19, Haldimand and Norfolk Counties Combined and Ontario, 2005, 2007*



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



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