

POPULATION & HEALTH PROFILE

JANUARY 2009



North Bay Parry Sound District
Health Unit

681 Commercial St.
North Bay, ON
P1B 4E7

17 Copeland St.
Burk's Falls, ON
P0A 1C0

70 Joseph St. Suite 302
Parry Sound, ON
P2A 2G5

SUMMARY

This report provides a summary of selected population, health system performance and health indicators for the area served by the North Bay Parry Sound District Health Unit (NBPSDHU). Where possible, comparisons have been made to data from previous years as well as between NBPSDHU, North East Local Health Integration Network (NE LHIN) and Ontario. A map of geographic areas has been provided in Appendix A.

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Data Sources & Interpretation

- The data used within this report was extracted from several sources. Data sources and relevant notes about the analysis or data have been presented below each table and figure within this report. Definitions for relevant terms have also been provided in the left hand column.
- When referring to the area of Nipissing District that is served by the NBPSDHU in this report the area has been identified as the ‘Adjusted Nipissing District’.
- The term “significant” is used to describe differences between health regions or time periods that are statistically meaningful. Without statistical significance you can not say with certainty that the differences are real, or simply due to chance.
- Sampling variability associated with each health status estimate is described using 95% confidence intervals (95% CI). These intervals give an indication of the precision of the estimate, and are used to determine if differences between values are significant.

Profile prepared by:

Louise Gagné, Epidemiologist
Resource Services, North Bay Parry Sound District Health Unit
louise.gagne@nbdhu.on.ca
www.healthunit.biz

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DATA NOTES

Calculating the population of the NBPSDHU Area^[1]:

The area served by the NBPSDHU includes all of Parry Sound District and most of Nipissing District. In the Nipissing District there are three census subdivisions that are not served by the NBPSDHU:

- South Algonquin Township
- Town of Temagami
- Bear Island First Nation

Further, there are two census subdivisions that are only partially served by the NBPSDHU:

- Nipissing, Unorganized, North Part (majority of area served)
- Nipissing, Unorganized, South Part (majority of area excluded)

Service boundaries versus Statistics Canada boundaries for NBPSDHU^[1]:

The NBPSDHU area as defined by Statistics Canada differs slightly from the geographic area actually served by the NBPSDHU; Statistics Canada includes all of Nipissing, Unorganized, North Part census subdivision and excludes all of Nipissing, Unorganized, South Part census subdivision. To remain consistent with the population information determined by Statistics Canada, this report will refer to the population of NBPSDHU according to the boundaries identified by Statistics Canada.

Adjusted Nipissing District:

When referring to the area of Nipissing District that is served by the NBPSDHU in this report the area has been identified as the 'Adjusted Nipissing District'.

1.0 POPULATION COUNTS

1.1 Census Population Changes, 2001-2006

- Ontario, and the NBPSDHU area had positive growth between 2001 and 2006 (see Table 1). The percentage change for the NBPSDHU area was less than half the growth of Ontario.
- Both Parry Sound and Adjusted Nipissing Districts had population increases (4.0% and 1.8%, respectively) from 2001 to 2006.
- For the NBPSDHU area, the City of North Bay had the largest population growth over this time period (1,195).

Table 1. National, provincial and local population changes, 2001-2006*

Area	Population		Change	
	2006	2001	2001-2006	Percent
Ontario	12,161,002	11,410,046	750,956	6.6%
NE LHIN	551,761	553,158	-1,397	-2.5%
NBPSDHU	123,383	120,353	3,030	2.5%

Data Source: NBPSDHU, 2006 Census Profile: North Bay Parry Sound District Health Unit Population Changes, 2001-2006. Second Updated Edition October 06, 2008.^[1]

***Data Note:** Census population counts for 2006 have been adjusted using the changes released by Statistics Canada in the 2006 Census Corrections and Updates.

1.2 NBPSDHU Age-Sex Population Distribution Changes, 2001-2006 (see data note page 2)

- Overall, in 2006 there were 62,735 females and 60,115 males. Both genders had overall increases from 2001, when there were 61,505 females and 58,875 males.
- Age-sex population distribution analysis indicates that while the overall population is increasing, there is an age disparity, with the younger population decreasing (age 0-19, and 25-39 years) and the older population increasing (age 45 years and older) in the NBPSDHU area (see Figure 1).
- Compared to Ontario, the NBPSDHU area has a larger proportion of the population aged 45 years and older, and a smaller proportion aged between 20 and 40 years (see Figure 2).
- According to the 2006 census the median age for NBPSDHU is 43.8, compared to 39.0 for Ontario.

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Figure 1. Age-Sex Population Distribution for NBPSDHU, 2001-2006.

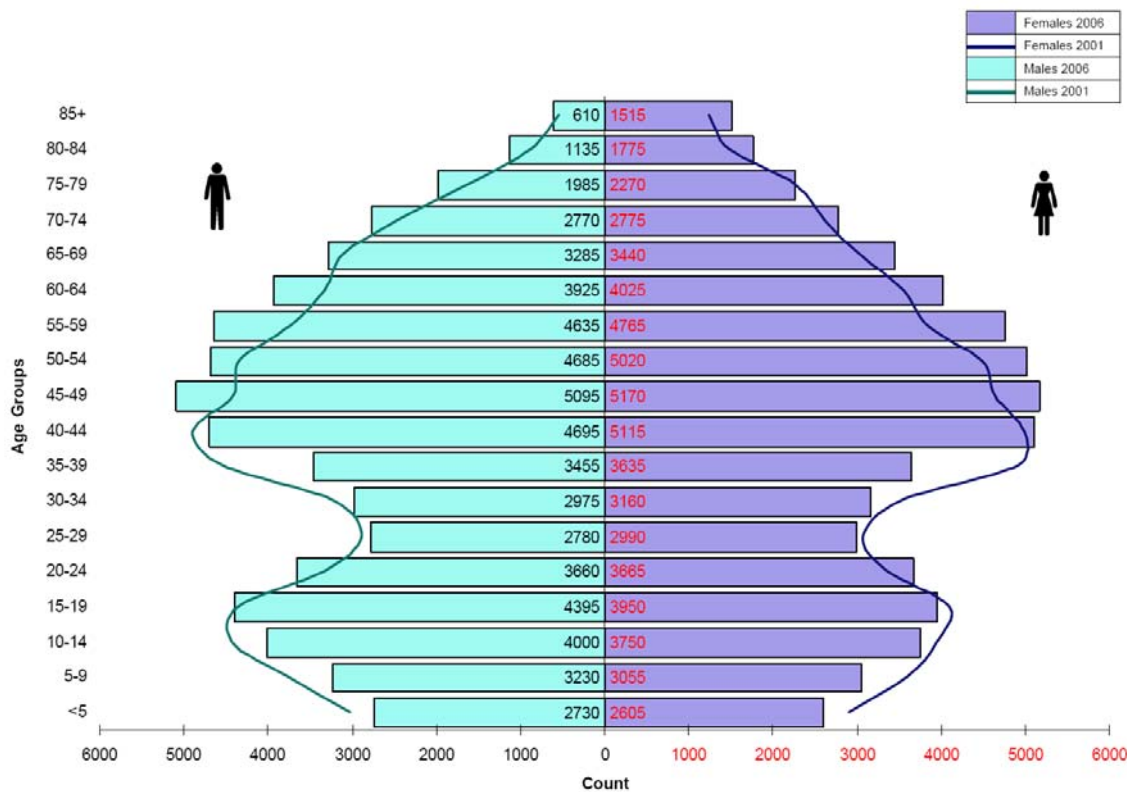
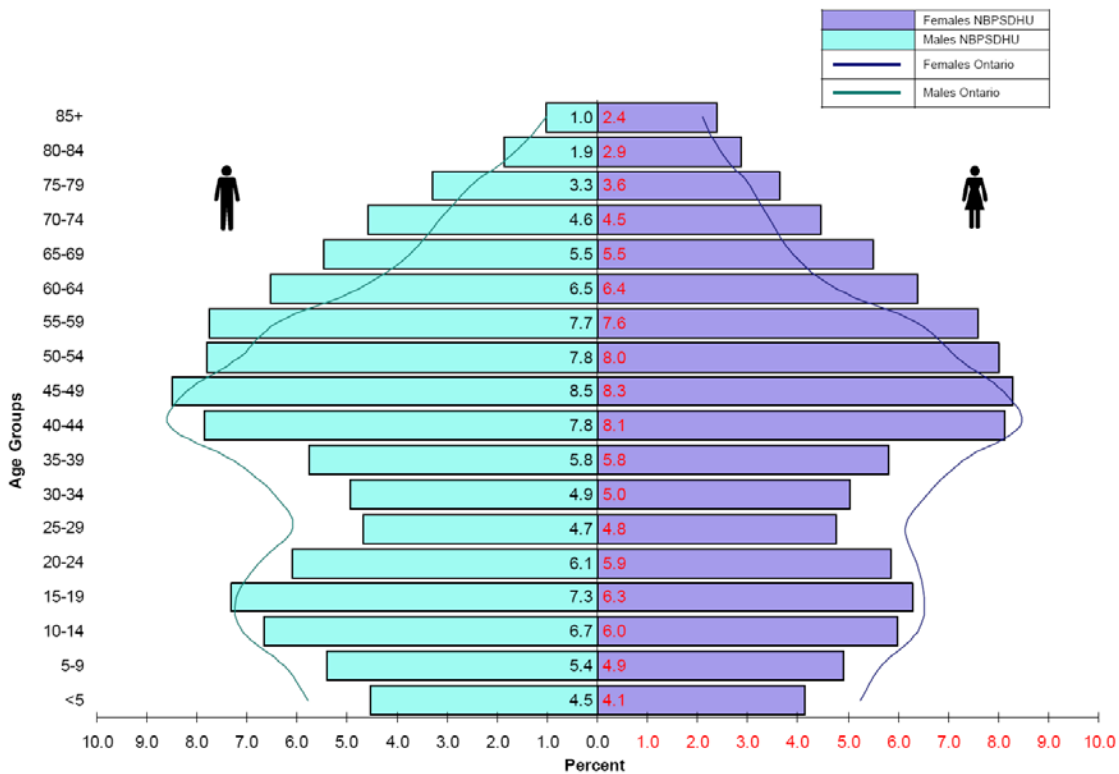


Figure 1
Data Source:
 NBPSDHU, 2006
 Census Profile: North Bay Parry Sound District Health Unit Population Changes, 2001-2006. Second Updated Edition October 06, 2008.^[1]

Figure 2
Data Source: Statistics Canada (2007). 2001 and 2006 Community Profiles. Extracted & created October, 2008 by NBPSDHU

Figure 2. Age-Sex Population Distribution for NBPSDHU & Ontario, 2006



Data Notes: Data in the age-sex population groups have been subjected to random rounding by Statistics Canada. In this process totals are rounded up or down to a multiple of 5, and in some cases 10. Values are rounded independently, thus totals may not add up to 100% of the population.^[2]

DEFINITIONS

Urban and Rural

Urban areas are those continuously built-up areas having a population concentration of 1,000 or more and a population density of 400 or more per square kilometre based on the previous census; rural areas have concentrations or densities below these thresholds.^[3]

Aboriginal Population

Those persons who reported identifying with at least one Aboriginal group and/or those who reported being a Treaty Indian, a Registered Indian, or members of an Indian Band or First Nation. Excludes institutional residents.^[3]

Visible Minority Population

Excludes institutional residents and Aboriginal persons.^[3]

Immigrant Population

Persons who are, or have ever been, landed immigrants in Canada. A landed immigrant is a person who has been granted the right to live in Canada permanently by immigration authorities.^[3]

Immigrants arrived from 1996 to 2006

Immigrants who came to Canada from 1996 to 2006 as a proportion of all immigrants.^[3]

2.0 POPULATION CHARACTERISTICS

2.1 Urban and Rural Populations

- Compared to the NE LHIN and Ontario, the NBPSDHU area has a greater proportion of the population residing in rural areas; 43.5% compared to 14.9% for all of Ontario (see Table 2).

Table 2. Urban and rural populations: proportion of total population, 2006

	NBPSDHU	NE LHIN	Ontario
Urban %	56.5	69.6	85.1
Rural %	43.5	30.4	14.9

Data Source: Statistics Canada (2007). 2006 Community Profiles, retrieved September 2008 by NBPSDHU.

2.2 Aboriginal, Visible Minority and Immigrant Populations

- According to the 2006 census, Aboriginal persons (residing off a reserve) comprise 7.6% of the NBPSDHU area population, compared to 2.0% for Ontario (see Table 3).
- The proportion of visible minority and immigrant populations residing in the NBPSDHU area and the NE LHIN is relatively small compared to Ontario (see Table 3).
- Almost 13% of the immigrant population in the NBPSDHU area arrived in Canada 10 years prior to the 2006 census.

Table 3. Aboriginal, visible minority and immigrant populations: proportion of total population, 2006

	NBPSDHU	NE LHIN	Ontario
Aboriginal population %	7.6	9.5	2.0
Visible minority population %	1.4	1.5	22.8
Total Immigrant population %	5.8	6.3	28.3
<i>Arrived from 1996 to 2006 %</i>	<i>12.8</i>	<i>8.8</i>	<i>31.0</i>

Data Source: Statistics Canada (2007). 2006 Community Profiles, retrieved September 2008 by NBPSDHU.

DEFINITIONS

Census Family:

Refers to a married couple (with or without children of either or both spouses), a couple living common-law (with or without children of either or both partners), or a lone parent of any marital status, with at least one child living in the same dwelling. A couple may be of opposite or same sex.^[3]

Unemployment Rate:

The number of persons unemployed divided by the number of persons in the labour force.^[3]

2.3 Family and Household Characteristics

- The number of census families in NBPSDHU has risen by 3.4% from 2001 to 2006.
- Lone parents comprise 14.9% of census families in the NBPSDHU, which is slightly lower compared to Ontario (see Table 4). A majority of lone-parents are female; however NBPSDHU has a greater proportion of male-lone parents than Ontario (22.1% versus 18.4%).
- Only 24.6% of private households in NBPSDHU contain a couple with children, compared to 31.2% in Ontario (see Table 4).

Table 4. Family and household characteristics, 2006

	Parry Sound District	Adjusted Nipissing District ¹	NBPSDHU	Ontario
Total Census Families	12,760	24,030	36,805	3,422,315
% Married-couple families	75.4	68.1	70.7	73.9
% Common-law-couple families	12.4	15.4	14.5	10.3
% Lone-parent families	11.8	16.4	14.9	15.8
% Female lone-parent	72.6	79.3	78.0	81.6
% Male lone-parent	25.7	20.8	22.1	18.4
% of private households containing a couple with children	22.7	25.3	24.6	31.2

Data Source: Statistics Canada (2007). 2006 Community Profiles, retrieved September 2008 by NBPSDHU.

1. Adjusted Nipissing District only includes Nipissing District CSDs served by the NBPSDHU.

2.4 Employment

- According the 2006 census, the NBPSDHU area has higher unemployment rates for individuals aged 15 years and over with children living at home, 5.8%, compared to Ontario, 4.7%. The same pattern exists when males and females are looked at individually.
- Unemployment rates are higher for females with children only under the age of six years compared to any other category for both the NBPSDHU area and Ontario (10.2% and 11.1%, respectively).

DEFINITIONS

Economic Family:

Refers to a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common-law or adoption. A couple may be of opposite or same sex. Foster children are included. By definition, all persons who are members of a census family are also members of an economic family.^[3]

2.5 Income

- According to the 2006 census, economic families in the NBPSDHU area have a lower reported income compared to Ontario. A higher percentage of families in NBPSDHU area earn less than \$40,000 after-tax (35.6%) than Ontario (25.1%), and a lower percentage earn \$80,000 and over after-tax (19.2% compared to 32.9% for Ontario).
- 9.1% of the population in private households in the NBPSDHU area are classified as low-income after-tax compared to 11.1% for Ontario (see Table 5). Almost 12% of the population aged less than 18 years of age in the NBPSDHU area are low-income after-tax.
- Employment income accounts for a lower percent of total family income for all economic families in NBPSDHU area compared to Ontario (68.5% compared to 79.5%, respectively), regardless of family structure.
- In 2005, total family income for male-lone parents in NBPSDHU area derived from employment income was 16.5% less than Ontario, and the percent from government transfer payments was 11.6% higher than Ontario. The percent of total family income derived from employment income for couple economic families was also less in the NBPSDHU area, 68.7% compared to 80.2% for Ontario.

Table 5. Income status before and after tax of persons in private households, 2005.

	Parry Sound District	Nipissing District ¹	NBPSDHU	Ontario
<i>All economic families, and persons 15 years and over not in an economic family.</i>				
% low income before tax	10.9	15.1	13.8	14.7
% low income after tax	6.5	10.3	9.1	11.1
<i>All persons less than 18 years of age</i>				
% low income before tax	14.5	18.1	17.2	18.0
% low income after tax	9.0	12.6	11.6	13.7

Source: Statistics Canada (2007). 2006 Community Profiles, retrieved September 2008 by NBPSDHU.

1. Nipissing District includes CSDs not served by the NBPSDHU.

2.6 Food Security

- The average weekly cost for a family of four to eat nutritiously is \$130.65 in the NBPSDHU area.^[4] This calculates to a monthly food cost of \$566.15. The average income for the same family living on Ontario Works with no other sources of income is \$1,266 (basic needs & shelter allowance).^[4] Therefore, to eat nutritiously, this family needs to spend 45% of its household income on food.

DEFINITIONS

Postsecondary qualification

Includes persons who have acquired a trades certificate, a college diploma or a university certificate or diploma.^[3]

Health Literacy:

The ability to access, understand, evaluate and communicate information as a way to promote, maintain and improve health in a variety of settings across the life course.^[5]

Literacy Levels:

(Defined by the Organization for Economic Co-operation and Development^[6])

Level 1: Very poor literacy skills (e.g. unable to determine from package label the correct amount of medicine to give a child).

Level 2: A capacity to deal only with simple, clear material involving uncomplicated tasks.

Level 3: Adequate to cope with the demands of everyday life and work in an advanced society.

Level 4 & 5: Strong skills (i.e. able to process information of a complex and demanding nature).

2.7 Education

- According to the 2006 census, 56.3% of the population aged between 25 and 64 in the NBPSDHU area have completed some form of postsecondary education (see Table 6). Of those, one quarter (25.1%) had completed a university degree or higher. In Ontario, the proportion with a post secondary education that had completed a university degree was higher at 42.3%.
- Overall more females than males in the NBPSDHU area have attained a university degree. In the 25 to 34 year age group 22% of females in the NBPSDHU have completed a university degree compared to 14.2% of males.
- Approximately 17% of the population aged between 25 and 64 in the NBPSDHU area had less than a high school education, almost 4% more than Ontario (see Table 6). In the 25 to 34 year age group 11.8% have less than a high school education in the NBPSDHU area compared to 8.7% for Ontario.

Table 6. Total population aged 25 to 64 by highest level of educational attainment for males (M), females (F) and total population (T), 2006 census

Education	NBPSDHU			Ontario		
	M	F	T	M	F	T
Less than high school	18.3	16.4	17.3	14.1	13.0	13.6
Postsecondary qualification	56.2	56.3	56.3	61.6	61.2	61.4
University Degree	13.0	15.2	14.1	25.9	26.0	26.0

Source: Statistics Canada (2007). 2006 Community Profiles, retrieved September 2008 by NBPSDHU.

2.8 Health Literacy

- Research indicates that adults with limited health literacy have less knowledge of disease management and of health-promoting behaviours.^[7] They also report having poorer health status, are less likely to use preventative services, and have a higher rate of hospitalization and use of emergency services^[7]
- In 2003, Canadian's with the lowest health literacy scores were 2.5 times as likely to see themselves as being in fair or poor health as those with skills at level 4 or 5.^[8]
- Health literacy scores decline with age. In Canada, it is estimated that only 12% of adults over age 65 years have adequate health literacy skills (level 3 and higher).^[9]
- In 2003, 72% of the population in the NBPSDHU area had a health literacy of level 2 and below, compared to 59.3% for Ontario.^[8]

DEFINITIONS

Crude Birth Rate

A summary rate based on the number of live births in a population over a given period.^[10] It must be noted that as the crude birth rate is compared to the population as a whole, it will be higher in populations where more of the women are in the childbearing ages (15-49).

Fertility

The ability to reproduce.

General Fertility Rate

Ratio of the number of live births during a given period to the female population aged 15-49 years^[11] It is a more refined measure of fertility than the crude birth rate.^[10]

Age-specific Fertility Rate

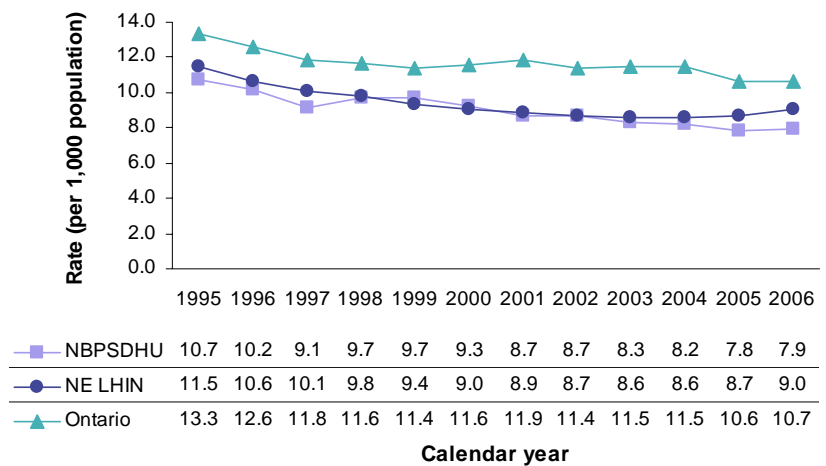
Ratio of the number of live births to women in a given age group relative to the number of women in that age group.^[11]

3.0 LIVE BIRTHS, FERTILITY AND PREGNANCIES

3.1 Live Births

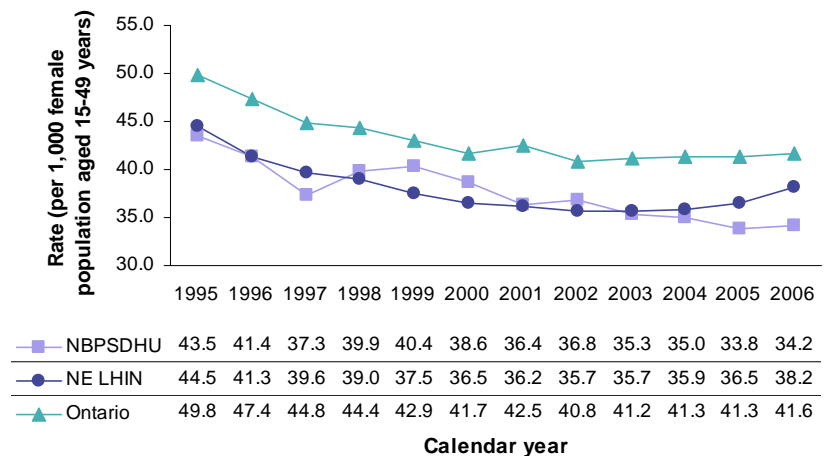
- The number of live births steadily decreased from 1995 through to 2005 for the NBPSDHU area and then rose slightly in 2006. In 1995, 1,347 live births occurred in NBPSDHU area compared to only 981 in 2005, and 990 in 2006. Figure 3 shows that NBPSDHU has a consistently lower crude birth rate compared to Ontario. This remains true even when the population is restricted to females aged 15-49 (see Figure 4).
- In terms of age-specific fertility rates, NBPSDHU has higher fertility rates in women aged 15-29 and lower fertility rates in women aged 30-39 compared to Ontario.

Figure 3. Crude live birth rate per 1,000 population for NBPSDHU, NE LHIN, and Ontario, 1995-2006.



Data Sources: Vital Statistics, Live Births 1995-2006, & Population Estimates 1995-2006 Ontario Ministry of Health and Long-Term Care, Provincial Health Planning Database, extracted January, 2009 by NBPSDHU.

Figure 4. General fertility rate per 1,000 female population aged 15-49 for NBPSDHU, NE LHIN, and Ontario, 1995-2006.



Data Sources: Vital Statistics, Live Births 1995-2006, & Population Estimates 1995-2006 Ontario Ministry of Health and Long-Term Care, Provincial Health Planning Database, extracted January, 2009 by NBPSDHU.

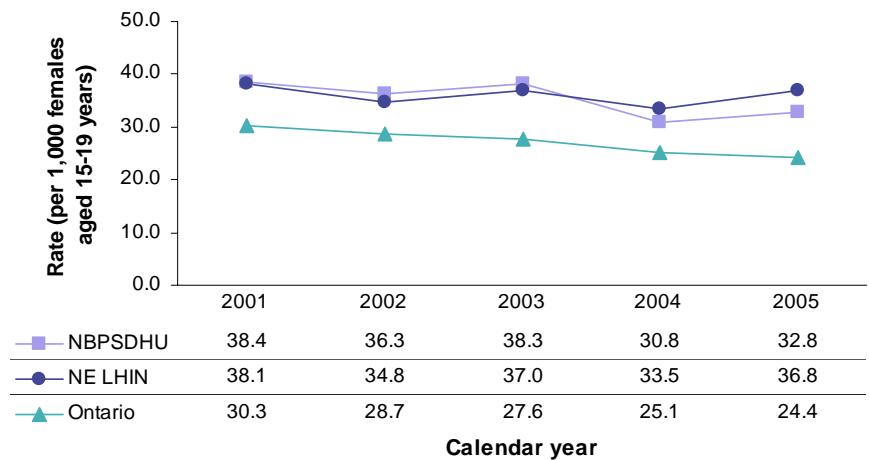
Estimated Teenage Pregnancy

The number of pregnancies (live births stillbirths and therapeutic abortions) which occur in females aged 15 to 19 years. Spontaneous abortions and ectopic pregnancies that are not treated within hospital are unaccounted for. Pregnancy rate estimates therefore underestimate true pregnancy rates.

3.2 Estimated Teenage Pregnancies

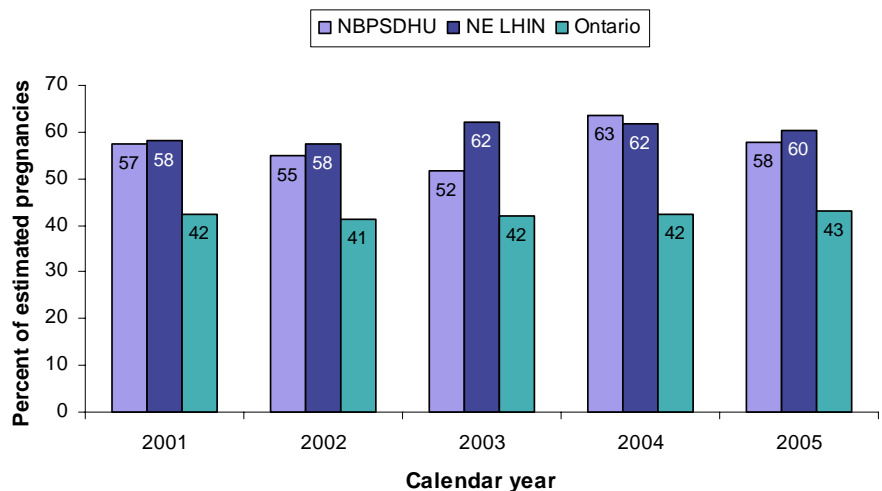
- Estimated teenage pregnancy rates in the NBPSDHU area are lower in 2005 than in 2001 (see Figure 5). Estimated rates for the NBPSDHU area and the NE LHIN are higher than the rate for Ontario.
- From 2001 to 2005 the percent of estimated teenage pregnancies that have ended in live birth is higher in the NBPSDHU area and the NE LHIN than for Ontario. In 2005, 58% of teenage pregnancies in the NBPSDHU area ended in live births, compared to 43% for Ontario (see Figure 6).

Figure 5. Estimated teenage pregnancy rates per 1,000 females aged 15-19 years, 2001-2005.



Data Sources: 1) Vital Statistics, Live Births 1995-2005 & Population Estimates 1995-2005, Ontario Ministry of Health and Long-Term Care, Provincial Health Planning Database, extracted January, 2009 by NBPSDHU.

Figure 6. Percent of estimated teenage pregnancies ending in live births, 2001-2005.



Data Source: Live Births, Still Births, and Therapeutic Abortions 2001-2005, Ontario Ministry of Health and Long-Term Care, Provincial Health Planning Database (PHPDB) Version 18.02, extracted January, 2009 by NBPSDHU.

DEFINITIONS

Influenza immunization:

Population aged 12 and over who reported the date of their last influenza immunization as being less than one year ago.^[12]

Has a regular medical doctor:

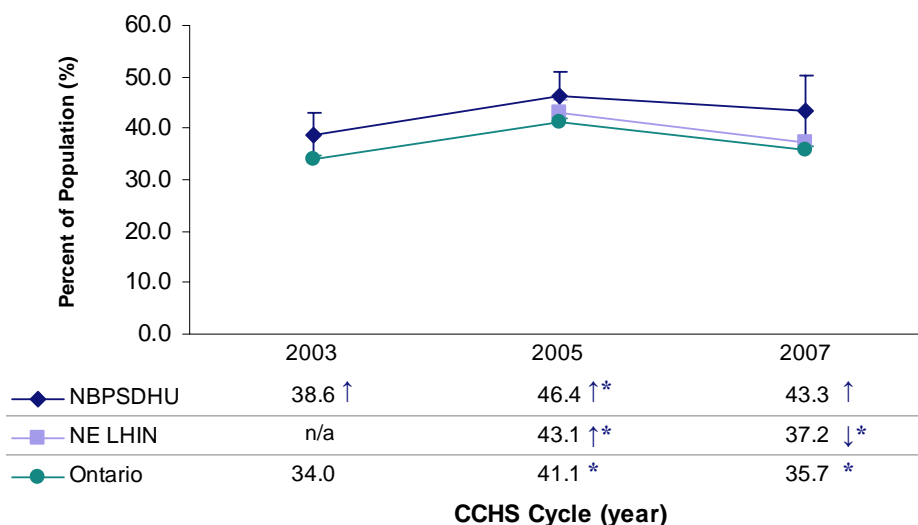
Population aged 12 and over who reported that they have a regular medical doctor. [12]

4.0 HEALTH SYSTEM PERFORMANCE

4.1 Influenza Immunization

- In the 2007 Canadian Community Health Survey, 43.3% of the NBPSDHU area population (aged 12 years and over) reported receiving influenza immunization less than one year ago (see Figure 7). This is significantly higher than the percentage for Ontario (35.7%). In Ontario, the percentage of the population immunized for influenza less than one year ago decreased significantly compared to 2005.
- In the NBPSDHU area, 74.4% of the population aged 65 years and over reported receiving influenza immunization less than one year ago. This percentage exceeds the Mandatory Health Programs and Services Guidelines (70%) established by the Ontario Ministry of Health in 1997 for annual influenza vaccinations for persons aged 65 years and over.^[13] It is also higher than that for Ontario (69.9%) and the NE LHIN (68.8%).

Figure 7. Percent of population (95% CI) aged 12 and over who reported the date of their last influenza immunization as being less than one year ago.



Data Source: Statistics Canada, Canadian Community Health Survey (CCHS 2.1, 3.1, 4.1), CANSIM table 105-0502. Extracted June, 2008 by NBPSDHU.

↑ Rate is significantly higher than Ontario

↓ Rate is significantly lower than Ontario

* Rate is significantly different from previous survey cycle.

n/a 2003 CCHS estimate not available for Local Health Integration Networks (LHINs).

4.2 Regular Medical Doctor

- 89.1% of the NBPSDHU area population (aged 12 years and over) in the 2007 Canadian Community Health Survey reported having a regular medical doctor. A similar statistic was reported for Ontario (90.4%).
- The percentage of the population with a regular medical doctor was significantly lower in the NE LHIN (85.0%) compared to Ontario.

NOTES

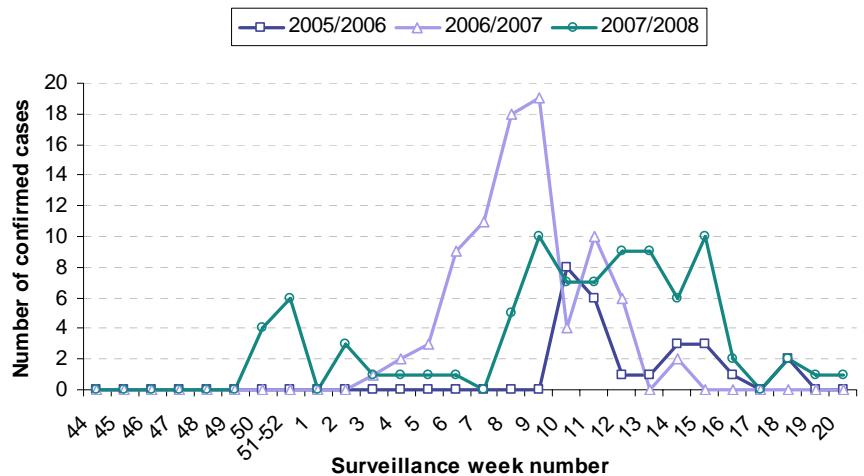
About Influenza

Within the Canadian population, influenza is a major cause of morbidity, mortality and loss of productivity.^[14] It occurs annually, mainly during the fall and winter months and is caused predominantly by influenza A viruses, as well as B viruses.^[14] The incidence of influenza is known to fluctuate from year to year due to the virulence of circulating strains and the susceptibility of the population.^[14] Factors such as vaccine coverage, vaccine match and antigenic changes to the virus effect the susceptibility of the population.^[14]

5.0 INFLUENZA

- The NBPSDHU area had a total of 86 confirmed influenza cases in the 2007/08 season; one more case than the 2006/2007 season.
- The NBPSDHU area had a total of 17 respiratory outbreaks; five of which were laboratory confirmed influenza, with influenza A being the causative organism in three and influenza B in two. All confirmed influenza outbreaks occurred in long-term care / retirement homes.
- Two deaths were attributed to influenza as a result of post-mortem findings during an influenza B outbreak at a long-term care home in the NBPSDHU area.
- The 2007/2008 influenza season in the NBPSDHU area was longer than the previous two seasons with the first cases observed in week 50 (December 9, 2007) and the last in week 20 (May 11, 2008).
- In contrast to the previous seasons, the number of cases in 2007/2008 season increased from weeks 8 to 9 and remained elevated for the next six weeks (see Figure 8).
- In the 2007/2008 season 62% of cases tested positive for influenza A and 38% for influenza B. In the 2006/2007 season all cases tested positive for influenza A.

Figure 8. Laboratory confirmed influenza cases* per week for NBPSDHU area, 2005/2006 -2007/2008 season.



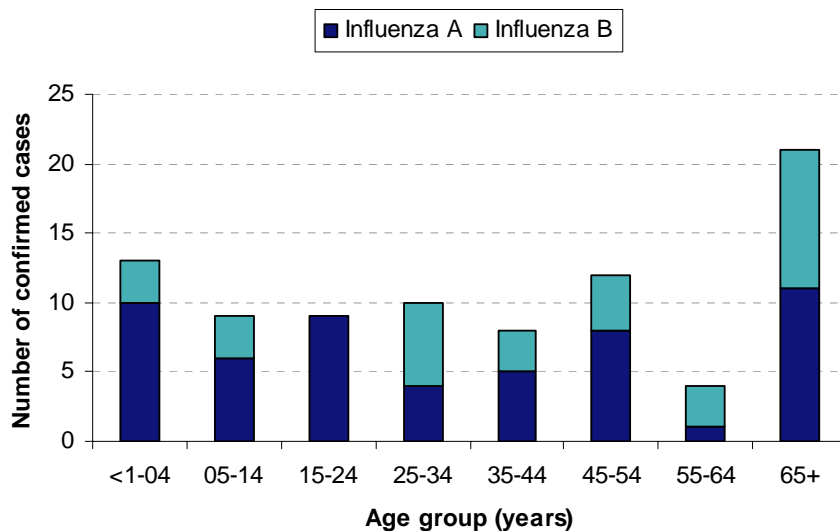
Data Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted October 06, 2008 by NBPSDHU.
 *Number of cases by the episode accurate date per surveillance week.

Continued over page...

Influenza continued...

- The largest number of influenza cases was in the 65 years and over age group. Almost 50% of cases in this age group tested positive for influenza B (see Figure 9).
- The NBPSDHU Communicable Disease Control program was able to contact 75 of the 86 persons (87.2%) with lab-confirmed influenza to determine their immunization status. Of those 75 cases, 59% reported that they had not received the influenza vaccine. Only 30% of influenza A cases reporting being vaccinated, compared to 55% of influenza B cases. The higher percentage of vaccinated influenza B cases is likely due to the poor match between the influenza B circulating strain and the strain contained in the 2007-2008 influenza vaccine.

Figure 9. Laboratory confirmed influenza cases by age-group for NBPSDHU area, 2007/2008 season



Data Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted October 06, 2008 by NBPSDHU.

DEFINITIONS

Amplification vector

An arthropod (in this case, a specific species of mosquito) that is involved in the main transmission of West Nile virus between bird species.^[15]

Birds

Refers to all suitable specimens for WNV testing. Those specimens suitable for testing include crows, ravens and blue jays.^[15]

Bridge vector

An arthropod (in this case, a specific species of mosquito) that serves as the main transmitter of a virus between the reservoir (birds) and the dead end host (humans).^[15]

Mosquito Pools

A pool is a group of female mosquitoes belonging to the same species. The number of mosquitoes in a pool can be anywhere between 1 and 50.^[16]

Passive Surveillance

Not physically participating in surveillance activities however, actively tracking all cases reported to the health unit.^[15]

6.0 VECTOR BORNE DISEASES

6.1 West Nile Virus

- In 2008, 26% (2483 of 10333) of all adult female mosquitoes collected in the NBPSDHU area were bridge vectors, and 5% (523 of 10333) of those collected were amplification vectors.
- One hundred and six bird sightings were reported to the NBPSDHU and 22 of the reported birds were suitable for submission to the Canadian Cooperative Wildlife Health Centre for testing; 36% (8) of those birds submitted tested positive for WNV.^a
- There have been no positive mosquito pools in the NBPSDHU area compared to 62 in all of Ontario.^b
- In Ontario, there have been 801 birds submitted for testing with 19% (150) of those birds testing positive.
- One horse has tested positive for WNV in the NBPSDHU area. It is one of six horses to test positive in all of Canada.
- No human cases have been reported in the NBPSDHU area; 4 cases in Ontario and 36 cases in all of Canada. There have been no reported deaths from WNV infection as of surveillance week 42.^c

Data Sources: a) Canadian Cooperative Wildlife Health Centre, National West Nile Virus Database. Date extracted 2008-09-19; b) Ministry of Health and Long Term Care, West Nile virus 2008, Mosquito Surveillance http://www.health.gov.on.ca/english/providers/program/pubhealth/westnile/wnv_08/wnv_mosquitoe_s.html Date extracted 2008-09-19; c) Public Health Agency of Canada, West Nile Virus National Surveillance Reports. <http://www.phac-aspc.gc.ca/wnv-vwn/index-eng.php> Date extracted 2008-09-19

6.2 Lyme Disease (LD)

- Passive surveillance for ticks was conducted in 2008 for LD in all of Ontario.
- In the NBPSDHU area, 28 ticks were submitted for testing in 2008. One tick, which was removed from a dog (species of concern – *Ixodes scapularis*), tested positive for the presence of the bacteria *Borrelia burgdorferi*, a bacteria which causes LD. This case occurred in the Parry Sound area.
- There have been 4 *Ixodes scapularis* submitted in the NBPSDHU area.

Data Sources: Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report: September 07, 2001 / 50(35);761-4

DEFINITIONS

Perceived health:

Population aged 12 and over who reported perceiving their own health status as being either very good or excellent. It is an indicator of overall health status and can reflect aspects of health not captured in other measures.^[12]

Perceived mental health:

Population aged 12 and over who reported perceiving their own mental health status as being either very good or excellent.^[12]

Perceived life stress:

Population aged 15 and over who reported perceiving that most days in their life were quite a bit or extremely stressful. It refers to the amount of stress in the person's life, on most days, as perceived by the person or, in case of proxy response, by the person responding.^[12]

7.0 WELL-BEING

7.1 Perceived Health

- In the 2007 Canadian Community Health Survey, 58.7% of the population (aged 12 years and over) in the NBPSDHU area reported perceiving their own health status as very good or excellent; which was similar to that of Ontario (60%). For the NE LHIN, 55.3% reported perceiving their own health status as very good or excellent. This is significantly less than the rate for Ontario.
- For the population aged 65 years and over, 39.6% in the NBPSDHU area reported perceiving their own health status as very good or excellent. This was again similar to that of Ontario (38.2%).

7.2 Perceived Mental Health

- 77.2% of the population (aged 12 years and over) in the NBPSDHU area reported perceiving their own mental health as very good or excellent in the 2007 Canadian Community Health Survey. This is significantly higher than in 2005 (69.3%).
- The rate is also higher than the percentage for Ontario (72.6%) and the NE LHIN, but the difference is not statistically significant.

7.3 Perceived Life Stress

- For the population aged 15 years and over, 18.8% in the NBPSDHU area perceived that most days in their life were quite a bit or extremely stressful. This is lower than the percentage for Ontario, but the difference is not statistically significant.
- Age groups 20-34 and 35-44 years reported the highest percentage of perceived life stress in NBPSDHU area in the 2007 Canadian Community Health Survey.

DEFINITIONS

What is PYLL?

The potential years of life lost (PYLL) is an indicator of premature mortality. It represents the number of years of life lost for each person who died prior to age 75.^[17]

What is the PYLL rate?

To compare the PYLL across regions and time, the age structure and population size of each region needs to be taken into account and adjusted using the standard population for Canada (1991).

How is the PYLL used?

The PYLL is a useful measure for health planners and policy makers in identifying program priorities for the prevention of premature death.^[17]

What are ICD-10 Chapters?

ICD-10 refers to the International Classification of Diseases, 10th revision. ICD-10 Chapters are broad classifications of diseases and other health problems.

METHODOLOGY

Population estimates and mortality data were extracted from the Vital Statistics and Population Estimates tables in the Provincial Health Planning Database (PHPDB).

PYLL rates were calculated based on average of three years of mortality data (2002-2004) for residents of each relevant area aged 0 to 74. Rates were generated using population estimates for ages 0 to 74 from the middle year (2003) of the three years. Rates were age standardized using the Direct Method and standard 1991 Canadian population.

8.0 MEASURES OF HEALTH

8.1 TOP 10 CAUSES OF PREMATURE DEATH IN THE NBPSDHU AREA (as measured by Potential Years of Life Lost (PYLL))

- The rate of premature death (death prior to 75 year of age) for all-causes combined for the NBPSDHU area is lower than the NE LHIN but higher than Ontario (see Table 7).
- Neoplasms (commonly known as tumors or cancers) are the number one cause of premature death in the NBPSDHU area and Ontario; contributing more years of potential life lost than any other condition.
- In the NBPSDHU and Ontario external causes (i.e. from transport accidents and other injuries), and circulatory diseases respectively are the next highest contributors to premature death.
- In the NE LHIN, external causes are the number one cause of premature death; at double the rate of Ontario. In the NBPSDHU area the rate is less than the NE LHIN, but approximately 1.5 times higher than Ontario.

Table 7: Average* age standardized PYLL rates per 100,000 population aged 0 to 74 years (95% CI) for the top 10 causes of premature death in the NBPSDHU area compared to the NE LHIN and Ontario.

TOP CAUSES OF PREMATURE DEATH IN NBPSDHU AREA (ICD-10 CHAPTER)	NBPSDHU	NE LHIN	Ontario
ALL CAUSES	5,786 (5777, 5795)	6,826 (6816, 6836)	4,631 (4616, 4646)
1. Neoplasms (II)	1,645 (1640, 1650)	1,708 (1703, 1713)	1,412 (1408, 1417)
2. External causes of morbidity & mortality (i.e. transport accidents, accidental or intentional injury) (XX)	1,329 (1,325, 1,334)	1,765 (1,760, 1,770)	853 (849, 856)
3. Circulatory system diseases (IX)	947 (944, 951)	1,079 (1075, 1083)	738 (735, 741)
4. Perinatal conditions (XVI)	336 (334, 338)	435 (433, 438)	363 (361, 366)
5. Symptoms not elsewhere classified (XVIII)	282 (280, 284)	397 (395, 400)	217 (215, 219)
6. Congenital abnormalities (XVII)	253 (251, 253)	280 (278, 282)	187 (185, 188)
7. Nervous system diseases (VI)	229 (227, 231)	193 (191, 195)	136 (135, 137)
8. Endocrine/nutritional disorders (IV)	210 (208, 212)	269 (267, 270)	173 (171, 175)
9. Respiratory system diseases (X)	169 (168, 171)	194 (192, 195)	139 (138, 141)
10. Digestive system diseases (XI)	121 (120, 122)	209 (207, 211)	172 (171, 174)

* Average calculated using 2002 to 2004 mortality data and 2003 population estimates
- Data suppressed due to small numbers.

Data Sources: 1) Vital Statistics, 2002-2004, Ontario MOHLTC, Provincial Health Planning Database Version 18.00, extracted April 2008; 2) Population Estimates, 2003, Ontario MOHLTC, Provincial Health Planning Database, extracted April 2008.

DEFINITIONS

What are ICD-10 Chapters?

ICD-10 refers to the International Classification of Diseases, 10th revision. ICD-10 Chapters are broad classifications of diseases and other health problems.

8.2 TOP 10 CAUSES OF DEATH IN THE NBPSDHU AREA

- The all-cause mortality (death) rate for the NBPSDHU area is higher than Ontario, but lower than that for the NE LHIN (see Table 8).
- Diseases of the circulatory system (see definitions) are the leading cause of death for the NBPSDHU area, followed by neoplasms. Diseases of the circulatory system include ischaemic and pulmonary heart diseases, cerebrovascular disease, and hypertensive diseases.
- The mortality rate for circulatory system diseases in the NBPSDHU area is similar to the rate for the NE LHIN, but 1.2 times higher than that for Ontario.

Table 8: Average* age standardized mortality rates per 100,000 population (95% CI) for the top 10 causes of death in the NBPSDHU area compared to the NE LHIN and Ontario.

TOP CAUSES OF DEATH IN NBPSDHU AREA (ICD-10 CHAPTER)	NBPSDHU	NE LHIN	Ontario
ALL CAUSES	678.0 (674.9, 681.0)	710.4 (707.3, 713.5)	571.3 (568.5, 574.0)
1. Circulatory system diseases (IX)	225.9 (224.1, 227.6)	233.4 (231.6, 235.1)	186.3 (184.7, 187.9)
2. Neoplasms (II)	199.8 (198.2, 201.5)	205.2 (203.5, 206.9)	175.6 (174.0, 177.1)
3. Respiratory system diseases (X)	52.7 (51.8, 53.5)	54.6 (53.7, 55.4)	43.3 (42.6, 44.1)
4. External causes of morbidity & mortality (i.e. transport accidents, accidental or intentional injury) (XX)	50.2 (49.4, 51.1)	55.7 (54.8, 56.6)	33.5 (32.8, 34.2)
5. Endocrine/nutritional disorders (IV)	35.4 (34.7, 36.1)	34.3 (33.6, 35.0)	27.4 (26.8, 28.0)
6. Nervous system diseases (VI)	28.4 (27.8, 29.1)	26.9 (26.3, 27.5)	23.5 (22.9, 24.0)
7. Digestive system diseases (XI)	23.1 (22.5, 23.6)	27.3 (26.7, 28.0)	22.5 (21.9, 23.0)
8. Mental & behavioural disorders (V)	17.1 (16.7, 17.6)	18.1 (18.3, 19.3)	14.3 (13.8, 14.7)
9. Symptoms not elsewhere classified (XVIII)	12.8 (12.3, 13.2)	16.2 (15.8, 16.7)	9.8 (9.5, 10.2)
10. Genitourinary diseases (XIV)	8.7 (8.4, 9.0)	12.7 (12.3, 13.2)	11.5 (11.1, 11.9)

* Average calculated using 2002 to 2004 mortality data and 2003 population estimates
- Data suppressed due to small numbers.

Data Sources: **1)** Vital Statistics, 2002-2004, Ontario MOHLTC, Provincial Health Planning Database Version 18.00, extracted December 2008; **2)** Population Estimates, 2003, Ontario MOHLTC, Provincial Health Planning Database, extracted April 2008.

BACKGROUND

Hospitalization Data

- Reflects the middle range of the disease severity continuum.
- Number of discharges is the most commonly used measure of the utilization of hospital services.
- Represents the number of discharges from a health care facility. Discharge data is used instead of admission data, as hospital abstracts for inpatient care are based on information gathered at the time of discharge.
- Causes of hospitalization are based on the most responsible diagnosis (diagnosis associated with the longest duration of treatment) during a given hospital stay.
- Hospitalization data presented within this report excludes hospital discharge data for healthy newborns and for those individuals with an unknown age.

8.3 TOP 10 CAUSES OF HOSPITALIZATIONS IN THE NBPSDHU AREA

- The all-cause hospitalization rate for the NBPSDHU area is higher than that for the NE LHIN and 1.4 times higher than the rate for Ontario (see Table 9).
- In the NBPSDHU area circulatory system diseases are the leading cause of hospitalization, followed by maternal conditions, digestive system diseases, and injury and poisonings.
- The hospitalization rate for circulatory system diseases in the NBPSDHU area is almost double the rate for Ontario.
- Hospitalization due to injury and poisoning in the NBPSDHU area is higher compared to the NE LHIN, and 1.7 times higher than Ontario.

Table 9: Average* age standardized hospitalization rates per 100,000 population (95% CI) , for the top 10 causes of hospitalization in the NBPSDHU area compared to NE LHIN and Ontario.

TOP 10 CAUSES OF HOSPITALIZATION IN NBPSDHU AREA (ICD-10 CHAPTER)	NBPSDHU	NE LHIN	Ontario
ALL CAUSES	10,191 (10,179, 10,202)	10,049 (10,037, 10,061)	7,131 (7121, 7141)
1. Circulatory system diseases (IX)	1,377.2 (1378.8, 1381.5)	1,421.4 (1417.0, 1425.8)	950.9 (947.3, 954.5)
2. Maternal conditions (XV)	1,310.5 (1306.3, 1314.7)	1,266.6 (1262.4, 1270.7)	1,374.2 (1369.9, 1378.6)
3. Digestive system diseases (XI)	1,160.9 (1156.9, 1164.9)	1,141.3 (1137.4, 1145.3)	794.9 (791.7, 798.2)
4. Injury & Poisoning (XIX)	1,002.6 (998.9, 1006.3)	900.2 (896.7, 903.7)	587.1 (584.2, 589.9)
5. Symptoms not elsewhere classified (XVIII)	889.7 (886.2, 893.2)	970.2 (966.6, 973.9)	439.3 (436.9, 441.8)
6. Respiratory system diseases (X)	885.4 (881.9, 888.8)	873.2 (869.7, 876.6)	589.9 (587.1, 592.8)
7. Neoplasms (II)	655.2 (652.2, 658.1)	607.1 (604.3, 610.0)	536.4 (533.6, 539.1)
8. Musculoskeletal diseases (XIII)	644.7 (641.8, 647.7)	578.9 (576.1, 581.7)	412.8 (410.4, 415.2)
9. Genitourinary diseases (XIV)	632.3 (629.3, 635.2)	615.7 (612.8, 618.6)	419.0 (416.6, 421.3)
10. Mental & behavioural disorders (V)	561.6 (558.9, 564.4)	624.9 (621.9, 627.8)	285.8 (283.8, 287.8)

* Average calculated using 2005 to 2007 in-patient discharge hospitalization data and 2006 population estimates

Data Sources: 1) Ambulatory Visits, 2005-2007, Ontario MOHLTC, Provincial Health Planning Database Version 18.00, extracted December 2008; 2) Population Estimates, 2006, Ontario MOHLTC, Provincial Health Planning Database, extracted December 2008.

High blood pressure:

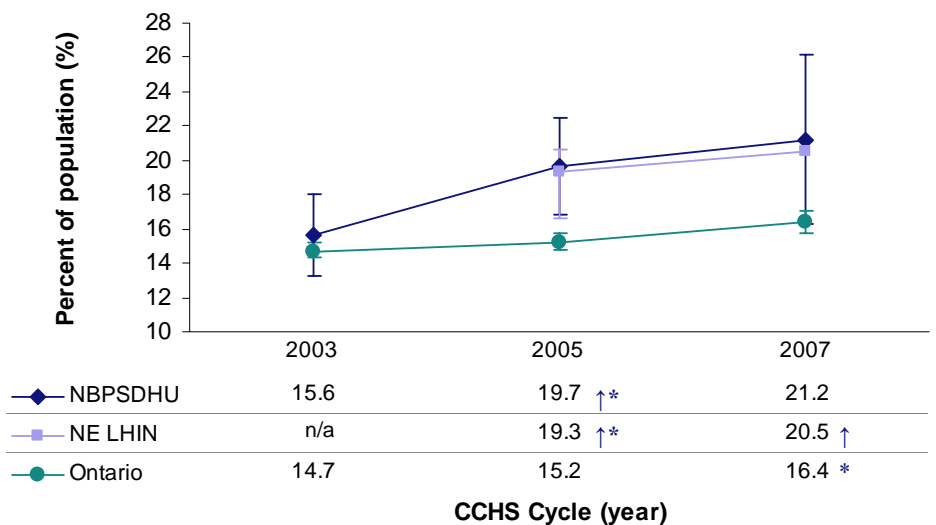
Population aged 12 and over who reported that they have been diagnosed by a health professional as having high blood pressure.^[12]

9.0 CHRONIC DISEASE RELATED HEALTH CONDITIONS

9.1 High Blood Pressure

- In the 2007 Canadian Community Health Survey, 21.2% of the population aged 12 years and over in the NBPSDHU area reported that they had been diagnosed as having high blood pressure (see Figure 10). The rate is higher compared to the rate for 2005 (19.7%), but not significant.
- The 2007 rate for the NBPSDHU area is higher compared to Ontario (16.4%) but the difference is not statistically significant.
- The percentage for the NE LHIN, at 20.5% is significantly higher than Ontario.
- In Ontario, the percentage of the population diagnosed with high blood pressure has increased significantly since 2005.

Figure 10. Percent of population (95% CI) aged 12 and over who reported that they had been diagnosed by a health professional as having high blood pressure.



Data Source: Statistics Canada, Canadian Community Health Survey (CCHS 2.1, 3.1, 4.1), CANSIM table 105-0502, retrieved June, 2008 by NBPSDHU.

↑ Rate is significantly higher than Ontario

↓ Rate is significantly lower than Ontario

* Rate is significantly different from previous survey cycle.

n/a 2003 CCHS estimate not available for Local Health Integration Networks (LHINs).

DEFINITIONS

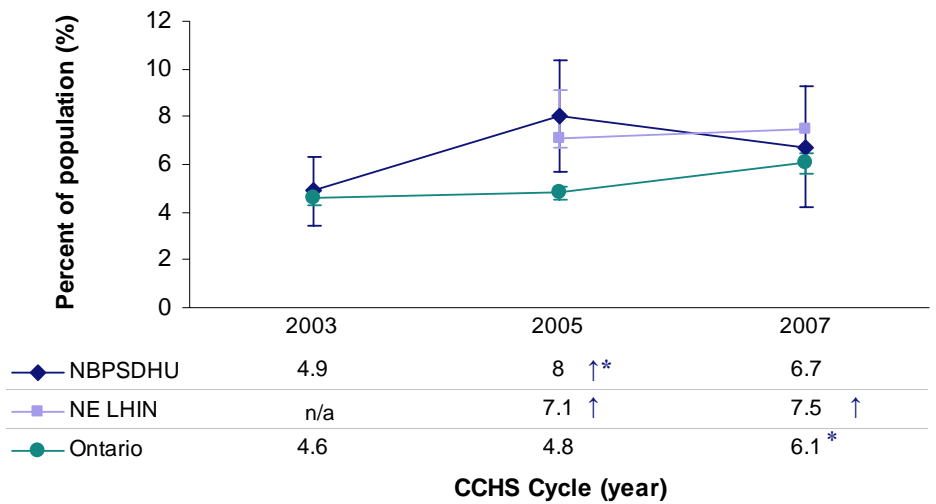
Diabetes:

Population aged 12 and over who reported that they have been diagnosed by a health professional as having diabetes (either type I or type II). Also includes females 15 and over who reported that they have been diagnosed with gestational diabetes.^[12]

9.2 Diabetes

- 6.7% of the population aged 12 years and over in the NBPSDHU area reported in the 2007 Canadian Community Health Survey that they had been diagnosed as having diabetes (see Figure 11). The percent of the population diagnosed with diabetes is lower than it was in 2005, but the difference is not statistically significant. The rate also does not differ from Ontario.
- The percent of the NE LHIN population with diabetes is significantly higher (7.5%) than Ontario (6.1%).
- In Ontario, the percentage of the population diagnosed with diabetes has significantly increased from 4.8% in 2005 to 6.1% in 2007.

Figure 11. Percent of population (95% CI) aged 12 and over who reported that they had been diagnosed by a health professional as having diabetes.



Data Source: Statistics Canada, Canadian Community Health Survey (CCHS 2.1, 3.1, 4.1), CANSIM table 105-0502, retrieved June, 2008 by NBPSDHU.

↑ Rate is significantly higher than Ontario

↓ Rate is significantly lower than Ontario

* Rate is significantly different from previous survey cycle.

n/a 2003 CCHS estimate not available for Local Health Integration Networks (LHINs).

DEFINITIONS

Adult overweight or obese:

Population aged 18 years or older who have a calculated body mass index of 25 or more. Body mass index is calculated by dividing the respondent's body weight (in kilograms) by their height (in metres) squared.^[12]

Adult overweight:

Population aged 18 years or older who have a calculated body mass index of between 25 and 29. Body mass index is calculated by dividing the respondent's body weight (in kilograms) by their height (in metres) squared.^[12]

Adult obese:

Population aged 18 years or older who have a calculated body mass index of 30 or more. Body mass index is calculated by dividing the respondent's body weight (in kilograms) by their height (in metres) squared.^[12]

Interesting Fact:

Research^[18, 19] has shown that the use of self-reported height and weight data results in lower estimates of the prevalence of obesity, compared with measured values of height and weight.

In a recent study by Shields^[19], the prevalence of obesity was 9 % points higher among men, and 6 % points higher among females when using measured values of height and weight versus self-report data.

9.3 Overweight and Obesity

- In 2007, more than half (52.5%) of the adult population (aged 18 years and over) of the NBPSDHU area was categorized as either overweight or obese based on self-reported measures of height and weight in the Canadian Community Health Survey (see Table 10). This rate although higher, is not significantly different from Ontario.

Table 10. Percent of adult population (95% CI) aged 18 years and over in NBPSDHU area categorized as overweight or obese.

Body Mass Index (BMI) Category	2003	2005	2007
Overweight or Obese (combined)	55.2 (50.9, 59.4)	57.4 (53.0, 61.9)	52.5 (46.5, 58.5)
Overweight	36 (31.7, 40.3)	36.1 (31.9, 40.3)	32.6 (27.2, 38.0)
Obese	19.2 ↑ (15.7, 22.7)	21.3 ↑ (17.1, 25.5)	19.9 (15.1, 24.7)

Data Source: Statistics Canada, Canadian Community Health Survey (CCHS 2.1, 3.1, 4.1), CANSIM table 105-0502, retrieved June, 2008 by NBPSDHU.

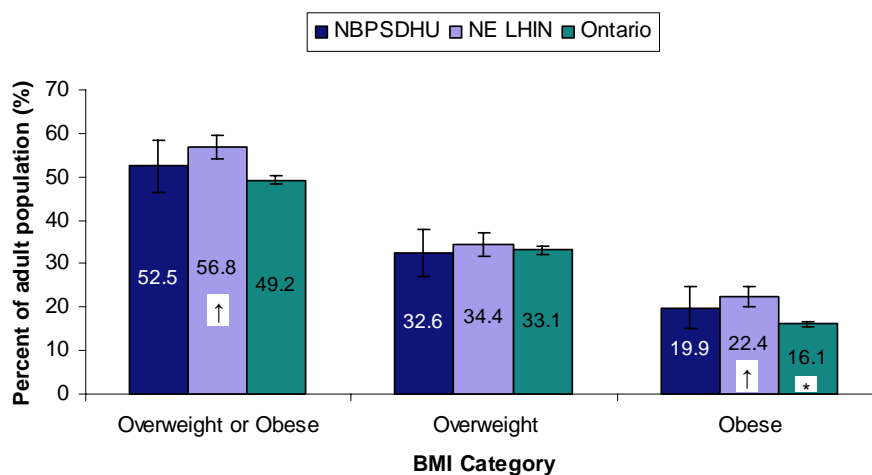
↑ Rate is significantly higher than Ontario

↓ Rate is significantly lower than Ontario

* Rate is significantly different from previous survey cycle.

- Almost 20% of the NBPSDHU adult population in 2007 was categorized as obese.
- Within the NE LHIN, the percentage of the adult population overweight or obese combined is significantly higher than Ontario, and this is likely due to a significantly higher rate of obesity (see Figure 12).
- For Ontario as a whole, the percentage of the population categorized as obese increased significantly from 15.1% in 2005 to 16.1% in 2007.

Figure 12. Percent of adult population (95% CI) aged 18 years and over categorized as overweight or obese, 2007.



Data Source: Statistics Canada, Canadian Community Health Survey (CCHS 2.1, 3.1, 4.1), CANSIM table 105-0502, retrieved June, 2008 by NBPSDHU.

↑ Rate is significantly higher than Ontario

↓ Rate is significantly lower than Ontario

* Rate is significantly different from previous survey cycle

DEFINITIONS

Oral Health

Defined by the Canadian Dental Association "...as a state of the oral and related tissues and structures that contribute positively to physical, mental and social well-being and to the enjoyment of life's possibilities, by allowing the individual to speak, eat and socialize unhindered by pain, discomfort or embarrassment".^[20]

Urgent Care:

The child is age/grade and dentally eligible for the Child In Need of Treatment (CINOT) program however financial eligibility remains to be determined.^[21]

Children In Need of Treatment (CINOT) program:

The CINOT program aims provide a specified level of basic dental care to children who have identified dental conditions requiring urgent care.^[22]

Children are eligible if they have no dental insurance and a signed declaration from a parent/guardian indicating that the cost of the necessary dental treatment would result in financial hardship.^[22]

According to the Ontario Public Health Standards the board of health is required to provide the CINOT program and refer eligible children to oral health care providers and monitor the action taken.^[23]

Interesting Note:

Many oral diseases are preventable and reversible if detected and treated early in their onset. The risk factors for most oral diseases are diet (i.e. consumption of sugars), tobacco use, alcohol consumption, stress, and risky behaviours causing injuries and infections.^[24, 25] These modifiable lifestyle-related risk factors are common to other non-communicable diseases such as cardiovascular disease, diabetes, and cancer.^[25]

9.4 Oral Health of NBPSDHU Youth

- In the 2007/2008 school year the NBPSDHU Dental Program conducted screenings on 6,848 kindergarten and elementary school students in 69 schools throughout the NBPSDHU area. This represents 92.7% of all students targeted to be screened for the 2007/2008 school year.
- Oral health screenings were conducted on junior kindergarten (JK), senior kindergarten (SK) and grade four students in all consenting schools throughout the region.
- Additional grades were also screened in 45 schools where the percentage of JK and SK students in the previous year with two or more open and obvious areas of decay exceeded 9.5%. Based on this criterion, students in grades two and eight were screened in 45 schools and grade 6 students in 27 schools.
- For the purposes of this report, only data on grades where all schools were screened (i.e. JK, SK and grade 4) has been summarized (see Table 11).

Table 11. Summary of oral health indicators for JK, SK, and grade 4 students in the NBPSDHU area, 2007/2008 school year.

	JK & SK	Grade 4
Number screened (% of total to be screened)	2,046 (94.0%)	1,192 (92.0%)
% with open and obvious areas of decay	20.9%	19.9%
<i>% eligible for urgent care</i>	<i>49.9%</i>	<i>43.9%</i>
	<i>(10.4% overall)</i>	<i>(8.7% overall)</i>
% eligible for topical fluoride	13.0%	23.0%
% eligible for sealants	1.8%	2.6%

Data Source: NBPSDHU Dental Program Oral Health Screening Database extracted January 22, 2009.

DEFINITIONS

External Causes of Injury

Refers to injuries resulting from the transfer of energy. This indicator contributes to an understanding of the adequacy and effectiveness of injury prevention efforts, including public education, community and road design, and prevention and treatment resources.^[26]

Hip Fracture Hospitalizations

The hospitalization rate may over-estimate the actual incidence of hip fractures, as it is based on the number of cases admitted to hospital. It may include cases that are readmitted for additional treatments or being transferred from one medical setting to another.^[26]

Hip fractures in seniors cause disability, loss of independence and quality of life, and in some cases death. In Canada, approximately 7% of seniors hospitalized with hip fractures in 2005-2006 died within 30 days of being in hospital.^[27]

Hip fractures occur for various reasons including environmental hazards, the prescription of potentially inappropriate psychotropic medications to the ambulatory elderly, and safety issues in long-term care facilities.^[26]

10.0 INJURY HOSPITALIZATIONS

10.1 INJURIES CAUSED BY EXTERNAL CAUSES

- Age-standardized hospitalization rates for externally caused injuries (e.g. motor vehicle accidents) are significantly higher in the NBPSDHU area compared to the NE LHIN and Ontario (see Table 12).
- Males in the NBPSDHU area, NE LHIN and Ontario have higher injury hospitalization rates than females. In 2006 the rate in the NBPSDHU area was 877 (per 100,000 population) for males compared to 596 (per 100,000 population) for females.

Table 12. Age-standardized injury hospitalization rates per 100, 000 population by health region, 2003-2006.

Health Region	2003	2004	2005	2006
NBPSDHU	753 ↑ (706, 800)	790 ↑↑ (742, 839)	697↑ (651, 743)	739 ↑↑ (691, 787)
NE LHIN	698 ↑ (677, 720)	704 ↑ (682, 725)	692 ↑ (670, 713)	652 ↑ (631, 673)
Ontario	475 (471, 478)	472 (468, 476)	450 ↑ (446, 454)	434 (430, 437)

Data Source: National Trauma Registry, Canadian Institute for Health Information (CIHI), Health Indicator Reports, retrieved September 24, 2008.

↑ Rate is significantly higher than Ontario

↑↑ Rate is significantly higher than NE LHIN and Ontario

10.2 HIP FRACTURE HOSPITALIZATIONS IN SENIORS (65 YEARS & OVER)

- In Ontario, the age-standardized hip fracture hospitalization rate for seniors has been steadily declining and in 2006 the rate was 15% lower than in 1999 (601 down to 508 per 100,000). For the NBPSDHU area data is only available from 2003, however the rate has fluctuated each year and in 2006 was 3% higher than in 2003 (565 up to 583 per 100,000). *Note: over the same time period the Ontario rate decreased by 11%.*
- The age-standardized hip fracture hospitalization rate in the NBPSDHU area, NE LHIN and Ontario is consistently higher for female seniors than male. From 2003 to 2006, rates for female seniors were on average 1.7 times higher than males in the NBPSDHU area (see Table 13).

Continued over page...

Hip fracture hospitalizations in seniors (65 years & over) continued...

▪ Although not significant, the age-standardized hospitalization rate for males increased 1.5 times from 2005 to 2006 in the NBPSDHU area (354 to 534 per 100,000). As a result of this increase, rates for males in 2006 were 60% higher compared to 2003.

Table 13. Age-standardized hip fracture hospitalization rates per 100, 000 population age 65 years and over by health region, 2003-2006.

Health Region	Sex	2003	2004	2005	2006
NBPSDHU	F	677 (536, 818)	769 (617, 920)	573 (445, 700)	647 (509, 785)
	M	380 (240, 520)	380 (249, 512)	354 (219, 490)	534 (370, 697)
NE LHIN	F	776 (701, 850)	752 (680, 825)	637 (571, 703)	712 (644, 781)
	M	394 (324, 463)	402 (335, 469)	362 (298, 426)	415 (348, 482)
Ontario	F	685 (669, 687)	666 (650, 681)	621 (607, 636)	608 (594, 622)
	M	377 (362, 393)	367 (352, 381)	361 (347, 376)	352 (338, 366)

Data Source: Discharge Abstract Database, Canadian Institute for Health Information (CIHI), Health Indicator Reports, retrieved September 24, 2008.

↑ Rate is significantly higher than Ontario

↑↑ Rate is significantly higher than NE LHIN and Ontario

DEFINITIONS

Current smoker:

Population aged 12 and over who reported being a current smoker either daily or occasional.^[12]

11.0 HEALTH BEHAVIOURS

11.1 Smoking

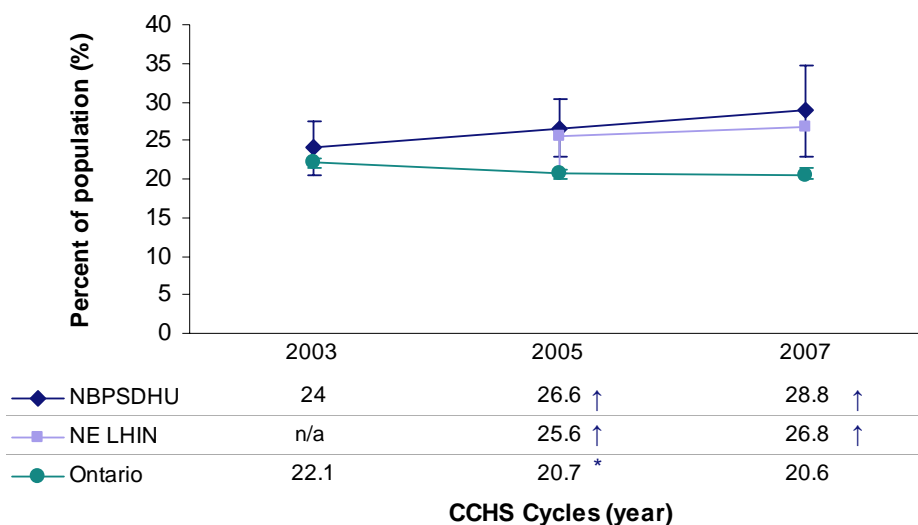
Youth (12-19 years of age):

- In the NE LHIN, 16.8% of youth (12-19 years of age) reported being a current smoker (daily or occasional) in 2007; a rate significantly higher than that for Ontario (10.2%).
- *Note: The percent of current youth smokers for the NBPSDHU area in 2007 was not published by Statistics Canada as the survey sample was too small to produce reliable information.*

All Ages (12 years of age and over):

- In 2007, 28.8% of the population within the NBPSDHU area reported being a current smoker (daily or occasional); a rate significantly higher than that for Ontario (20.6%).
- The percentage of current smokers in the NBPSDHU area was higher than in 2005, but the difference was not statistically significant (see Figure 13).
- In the NE LHIN the percentage of current smokers (26.8%) was significantly higher than Ontario.

Figure 13. Percent of population (95% CI) aged 12 years and over who reported being a current smoker (daily or occasional).



Data Source: Statistics Canada, Canadian Community Health Survey (CCHS 2.1, 3.1, 4.1), CANSIM table 105-0502. Extracted June, 2008 by NBPSDHU

↑ Rate is significantly higher than Ontario

↓ Rate is significantly lower than Ontario

* Rate is significantly different from previous survey cycle

n/a 2003 CCHS estimate not available for Local Health Integration Networks (LHINs).

DEFINITIONS

Consumption of fruit and vegetables five times or more per day:

Indicates the population aged 12 and over who reported usually eating fruit, fruit juice, green salad, potatoes (excluding French fries and potato chips) carrots, and other vegetables five or more times per day. This measure does not take into account the amount consumed.^[12]

Active or moderately physically active during leisure-time:

Population aged 12 or over who were classified as active or moderately active based on an index of average daily physical activity over the past 3 months. The index is calculated as the sum of the average daily energy expenditures of all leisure-time activities.^[12]

- **Active** = Using 3.0 kcal/kg/day or more; for example, walking 60 minutes per day or jogging 20 minutes per day.
- **Moderately Active** = Using 1.5 to 2.9 kcal/kg/day; for example, walking 30-60 minutes per day or attending a 1 hour-long exercise class 3 times per week.
- **Inactive** = Using less than 1.5 kcal/kg/day; for example, walking less than 30 minutes per day.

11.2 Fruit and Vegetables Consumption

- Within the NBPSDHU area, 41.9% of the population reported eating fruit and vegetables more than five times per day. This rate is slightly higher than that for Ontario (39.9%), but not statistically different.
- **Note:** *Care should be taken when interpreting this indicator however, as it does not take into account the quantity of fruit and vegetables that are usually consumed. It only measures the number of times that fruit and vegetables are usually eaten in day.*

11.3 Physical Activity

Youth (12-19 years of age)

- Almost 60% of youth in 2007 within the NBPSDHU area were categorized as being active or moderately active, based on the nature, frequency and duration of their reported leisure-time activity over the previous 3 months. This rate is lower than that for Ontario (67.6%) and the NE LHIN (66%), but not statistically different.

All Ages (12 years of age and over):

- In 2007, 50.3% of the population aged 12 years and over were categorized as being active or moderately active, indicating that approximately half of the population (49.7%) were categorized as being inactive. The rate for NBPSDHU area did not differ significantly from Ontario (see Table 14).
- For Ontario, the percentage of the population categorized as being active or moderately physically active decreased significantly from 2005 (51.3%) to 2007 (48.8%).
- The NE LHIN was similar to NBPSDHU area with 50.1% categorized as being active or moderately physically active.

Table 14. Percent of population (95% CI) aged 12 years and over categorized as being active or moderately physically active.

Health Region	2003	2005	2007
NBPSDHU	50.2 (46.0, 54.4)	50.0 (45.8, 54.2)	50.3 (43.0, 57.6)
NE LHIN	n/a	52.6 (50.9, 54.4)	50.1 (43.0, 57.6)
Ontario	50.0 (49.3, 50.7)	51.3 (50.6, 52.0)	48.8 * (47.7, 49.8)

Data Source: Statistics Canada, Canadian Community Health Survey (CCHS 2.1, 3.1, 4.1), CANSIM table 105-0502. Extracted June, 2008 by NBPSDHU.

↑ Rate is significantly higher than Ontario

↓ Rate is significantly lower than Ontario

* Rate is significantly different from previous survey cycle

n/a 2003 CCHS estimate not available for Local Health Integration Networks (LHINs).

DEFINITIONS

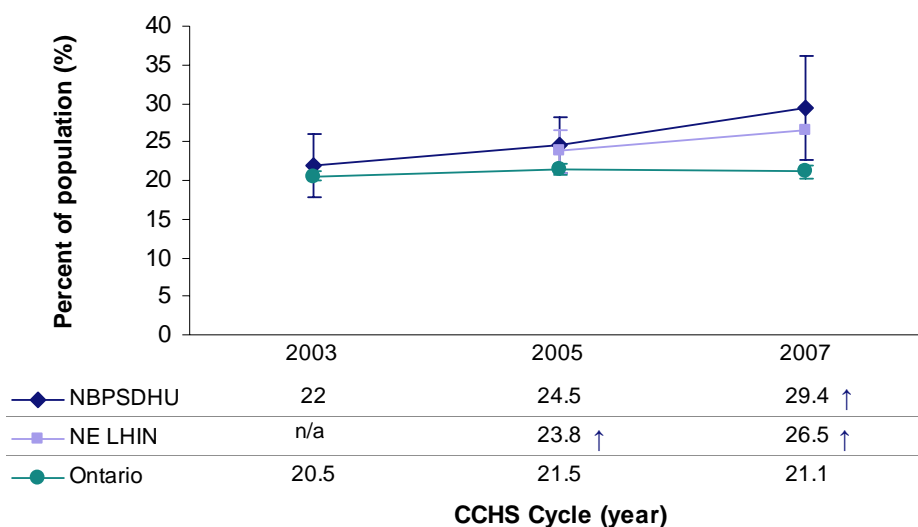
Heavy drinking:

Population aged 12 years or older who reported being a current drinker and drinking 5 or more drinks on one occasion, at least once a month in the past year.^[12]

11.4 Heavy Drinking

- In 2007, a significantly higher percentage of the NBPSDHU area population aged 12 years and over reported being a heavy drinker compared to Ontario (see Figure 14); 29.4% versus 21.1%, respectively.
- Although the 2005 and 2007 rates for the NBPSDHU area do not differ statistically, the rate for 2007 is almost 5% higher than in 2005.
- In the NE LHIN, self-reported heavy drinking rates were significantly higher than Ontario in both 2005 and 2007.

Figure 14. Percent of population (95% CI) aged 12 years and over who reported drinking 5 or more drinks on one occasion, at least once a month in the past year.



Data Source: Statistics Canada, Canadian Community Health Survey (CCHS 2.1, 3.1, 4.1), CANSIM table 105-0502. Extracted June, 2008 by NBPSDHU.

↑ Rate is significantly higher than Ontario

↓ Rate is significantly lower than Ontario

* Rate is significantly different from previous survey cycle

n/a 2003 CCHS estimate not available for Local Health Integration Networks (LHINs).

DEFINITIONS

Exposure to second-hand smoke at home: Non-smoking population aged 12 and over who reported that at least one person smoked inside their home everyday or almost every day.^[12]

12.0 ENVIRONMENTAL FACTORS

12.1 Exposure to second-hand smoke at home

Youth (12-19 years of age)

- In the NE LHIN, 23.4% of youth reported being exposed to second-hand smoke at home; a rate significantly higher than that for Ontario (15.6%).
- *Note: The percent of youth exposed to second-hand smoke at home for the NBPSDHU area in 2007 was not published by Statistics Canada as the survey sample was too small to produce reliable information.*

All Ages (12 years of age and over):

- Approximately 7% of the population in the NBPSDHU area in 2007 reported being exposed to second-hand smoke at home (see Table 15).
- The rate of exposure to second-hand smoke at home in the NBPSDHU area has declined compared to previous CCHS cycles, and in 2007 was not statistically different from Ontario.
- The rate of exposure to second-hand smoke at home for Ontario has decreased significantly the past two CCHS cycles (2005 and 2007).
- The Rate for the NE LHIN remains significantly higher than that for Ontario; 9.6% versus 5.7%, respectively.

Table 15. Percent of population (95% CI) aged 12 years and over exposed to second-hand smoke at home.

Health Region	2003	2005	2007
NBPSDHU	12.3 ↑ (9.4, 15.1)	11.9 ↑ (9.0, 14.7)	7.7 E (4.1, 11.4)
NE LHIN	n/a	11.9 ↑ (10.4, 13.3)	9.6 ↑ (7.7, 11.6)
Ontario	9.1 (8.7, 9.6)	7.3 * (6.9, 7.7)	5.7 * (5.2, 6.2)

Data Source: Statistics Canada, Canadian Community Health Survey (CCHS 2.1, 3.1, 4.1), CANSIM table 105-0502. Extracted June, 2008 by NBPSDHU

↑ Rate is significantly higher than Ontario

↓ Rate is significantly lower than Ontario

* Rate is significantly different from previous survey cycle

E use with caution. Estimate has high variability due to small sample size

n/a 2003 CCHS estimate not available for Local Health Integration Networks (LHINs).

DEFINITIONS

Exposure to second-hand smoke in vehicles and public places:

Non-smoking population aged 12 and over who reported being exposed to second-hand smoke in private vehicles and/or public places everyday or almost everyday during the past month.^[12]

12.2 Exposure to second-hand smoke in vehicles & public places

Youth (12-19 years of age)

- In 2007, approximately 46% of youth in the NBPSDHU area reported being exposed to second-hand smoke either in vehicles and/or in public places in the previous month.
- This rate is 15% higher than the rate reported for Ontario (30.9%) and 8% higher than for the NE LHIN (37.4%), but the differences are not statistically significant.

All Ages (12 years of age and older):

- 20% of the population in the NBPSDHU area in 2007 reported being exposed to second-hand smoke either in vehicles and/or in public places in the previous month. This is similar to the NE LHIN (20.3%) and Ontario (16.4%).
- In looking at exposure to second-hand smoke within public places alone, the rates for both Ontario and NE LHIN decreased significantly from 2003 to 2005 and from 2005 to 2007. The rate for NBPSDHU area decreased by approximately 5% from 2005 to 2007, but this decrease is not statistically significant (see Table 16).
- 8% of the population in Ontario reported being exposed to second-hand smoke within a vehicle in 2007, compared to 13.2% in the NE LHIN and 12.6% in the NBPSDHU area. The rate for NE LHIN is significantly different from the rate for Ontario.

Table 16. Percent of population (95% CI) aged 12 years and over exposed to second-hand smoke within public places.

Health Region	2003	2005	2007
NBPSDHU	22.7 ↑ (18.5, 27.0)	14.5 * (11.0, 18.1)	9.6 E (5.2, 13.9)
NE LHIN	n/a	13.3 * (11.7, 14.9)	10.5 * (8.3, 12.7)
Ontario	17.7 (17.1, 18.3)	13.0 * (12.4, 13.6)	11.5 * (10.7, 12.4)

Data Source: Statistics Canada, Canadian Community Health Survey (CCHS 2.1, 3.1, 4.1), CANSIM table 105-0502. Extracted June, 2008 by NBPSDHU.

↑ Rate is significantly higher than Ontario

↓ Rate is significantly lower than Ontario

* Rate is significantly different from previous survey cycle

E use with caution. Estimate has high variability due to small sample size

n/a 2003 CCHS estimate not available for Local Health Integration Networks (LHINs).

DEFINITIONS

Air Quality Index (AQI):

An indicator of outdoor air quality. The lower the AQI, the cleaner the air quality.^[28] The following six air pollutants are monitored to determine the AQI: Sulphur dioxide; Ozone; Nitrogen dioxide; Total reduced sulphur compounds; carbon monoxide; and, Fine particulate matter.^[28]

The AQI scale ranges from 0-100 and is broken down into the following air quality categories:

0-15: Very good
16 to 31: Good
32 to 49: Moderate
50 to 99: Poor
100: Very poor

How is the AQI calculated?

The Ministry of the Environment takes real-time air quality data from 40 air monitoring stations located across Ontario.^[28] At the end of each hour, the concentration of each pollutant is converted into a number ranging from zero upwards. The pollutant with the highest number becomes the AQI reading.^[28]

Smog Advisory

A Smog advisory is issued by the Ministry of the Environment when the AQI is expected to get higher than 50 in the next 24 hours

Ground Level Ozone:

Ground-level ozone is created when gases such as nitrogen oxides react with volatile organic compounds (VOCs) when they are combined with sunlight and heat.^[28] Nitrogen oxides are produced by burning fossil fuels such as coal, oil, gas, and diesel in motor vehicles, industries, power plants and homes.^[28] VOCs include carbon-containing gases that are created when gasoline and solvents are burned.^[28]

12.3 Air Quality

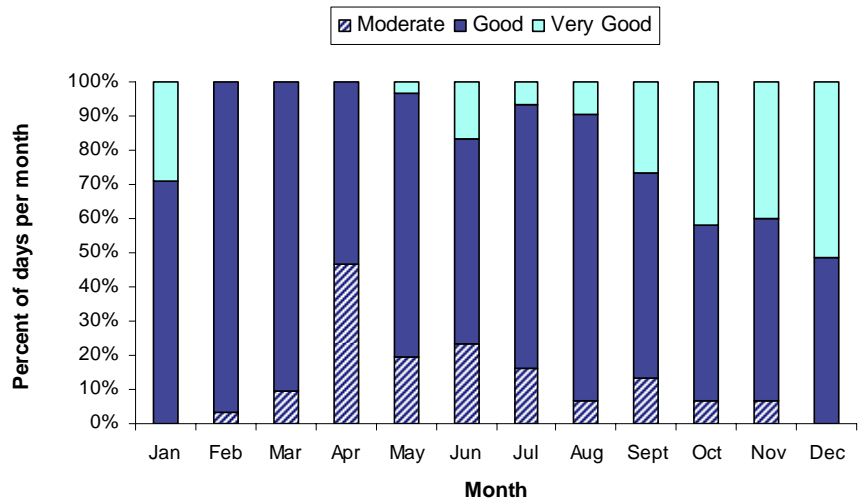
North Bay

- In 2008, 87% of the days had good or very good air quality and 13% had moderate. The month of April had the highest number of moderate air quality days compared to any other month (see Figure 15).
- Ozone (ground-level) was the cause of air pollution for 97% of the days in 2008.
- No smog advisories were issued by the Ministry of the Environment in 2008 for the North Bay West Nipissing region.

Parry Sound

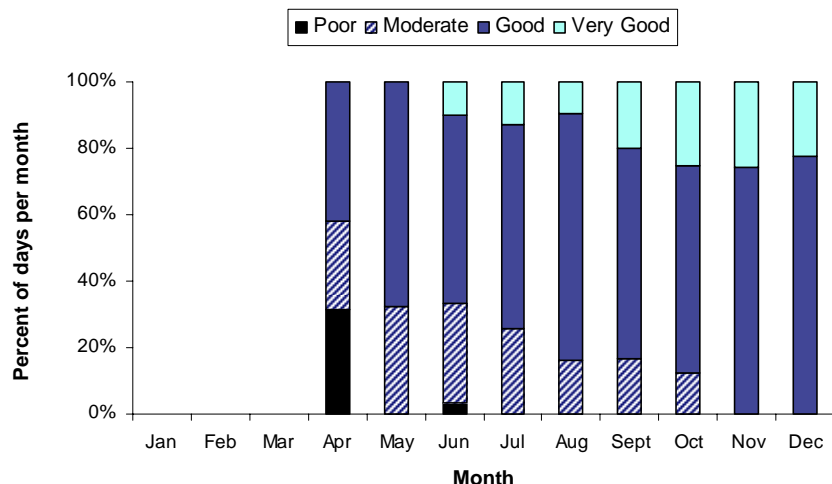
- In 2008, the air quality in Parry Sound was monitored from April 18th to Dec 31st. Of those days monitored, 80% had good or very good air quality, 19% had moderate and 2% had poor air quality. Poor air quality days occurred in April and June (see Figure 16).
- Ozone (ground-level) was the cause of air pollution for 99% of the days monitored in 2008.
- Two smog advisories were issued by the Ministry of the Environment in 2008 for the Parry Sound Muskoka Huntsville region; one in April (3 days) and one in June (2 days).

Figure 15. Monthly air quality readings by AQI categories for North Bay



Data Source: Ministry of the Environment, Air Quality for North Bay: 2008 History. Extracted Jan, 2009 by NBPSDHU.

Figure 16. Monthly air quality readings by AQI categories for Parry Sound



Data Source: Ministry of the Environment, Air Quality for Parry Sound: 2008 History. Extracted Jan, 2009 by NBPSDHU.

12.4 Municipal Residential Drinking Water Quality

- The Ministry of the environment is required by law to perform regular annual inspections of municipal residential drinking water systems.^[29]
- In 2006-2007, 92% of Ontario drinking water systems achieved an inspection rating of more than 90%, and 40% received a rating of 100%. More than 99% of systems met Ontario’s drinking water quality standards.^[29]
- Within the NBPSDHU area, a majority of the systems achieved an inspection rating of more than 95% and met the Ontario’s drinking water quality standards (see Table 17).^[29]

Table 17. 2006-2007 municipal residential drinking water inspection results for systems in the NBPSDHU area.

Location of Drinking Water System	Drinking Water System Name	Inspection Rating (5% bands)	Water Quality (% of tests meeting standards)
North Bay	North Bay Water Treatment Plant	>90% to 95%	100.00
Parry Sound	Parry Sound (Tony Agnello) Water Treatment Plant	>80% to 85%	100.00
Burk’s Falls	Burk’s Falls Well Supply	>95% to 100%	99.80
Callender	Callender Water Treatment Plant	>95% to 100%	100.00
Mattawa	Mattawa Well Supply	>80% to 85%	100.00
McDougall	Nobel Water Treatment Plant	>95% to 100%	99.65
Powassan	Powassan Well Supply	>95% to 100%	100.00
South River	South River Water Treatment Plant	>95% to 100%	100.00
West Nipissing	Sturgeon Falls Water Treatment Plant	>95% to 100%	99.44
West Nipissing	Verner Water Treatment Plant	>95% to 100%	100.00

Data Source: Ministry of the Environment (June 2008). Annual Report 2006-2007: Chief Drinking Water Inspector (Pub.#: 6592e). Available from: <http://www.ene.gov.on.ca/en/publications/water/index.php#8b>

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APPENDIX A

