

Northwest Territories Health Status Report



Executive Summary

Health Status Report

The NWT Health Status Report (2010) presents updated information on the health status of the NWT population. It is an important resource to help understand Territorial health trends, annual disease risks, and the effect of lifestyle choices on chronic disease and mortality. The Health Status Report is also widely referenced by researchers, decision makers, NGO's and the public.

Health indicators profiled in this report cover the topics of well-being, chronic and communicable diseases, mental health and addictions, child and infant health, health determinants and preventive services. Common demographic data include age, sex and community of residence. Overall, the health status of individuals tends to decline with age. Seniors are more likely to suffer from chronic conditions and reduced levels of well-being. NWT residents living in smaller communities may be more susceptible to communicable diseases, mental illnesses and socio-economic disparities. These findings relate to differences in living and working conditions, personal health practices and educational attainment.

There are also gender differences. On average women live approximately 3.3 years longer than men in the NWT (81.7 vs. 78.4 years)¹. Women rate their overall health and overall satisfaction with life higher, and men have higher rates of life stress.

Key Findings

- The NWT mortality rate is decreasing, and the mortality gap between men and women is closing.
- Currently 41% of the NWT population participates in enough physical activity to maintain or improve their health compared to 53% of other Canadians.
- 63% of NWT residents are overweight or obese compared to 51% of other Canadians.
- Prostate cancer is the most common cancer in men, and breast cancer is the most common cancer in women. The second leading cause of cancer for both genders is colorectal cancer. Colorectal cancer is the third most common cancer in Canada that affects both men and women.
- MRSA (Methicillin Resistant Staphylococcus Aureus) is an emerging health issue in the NWT and the rate of new infection has increased significantly in the past decade. The bacteria can be acquired in hospitals and in small communities characterized by substandard living conditions.
- The teen birth rate in the NWT is declining and incidences of teen births are the lowest we have seen in over 20 years.
- The proportion of residents with a high school diploma has increased in all community types.
- The NWT has the highest Pap smear test coverage rate (83.5%) in Canada.
- Between 2005 and 2007, the leading causes of death in the NWT were cancers and cardiovascular diseases followed by injuries and respiratory diseases.
- In 2009, 52% of NWT residents 12 years of age and older rated their health status as either excellent or very good.
- In the NWT, 70% of all deaths and more than 50% of the number of days spent in hospital were related to chronic conditions.

¹ Statistics Canada 2006

- Approximately 200 new cases of diabetes are diagnosed each year in the NWT.
- The incidence rate of TB in the NWT has remained relatively stable in the past decade, nonetheless, the TB rates of the NWT are considerably higher than the rest of Canada.
- In the NWT, 64% of the population rated their mental health as excellent or very good compared to 73% of other Canadians.
- Seventy seven per cent of babies born in the NWT have a healthy weight (between 2500 and 4000 g).

The population health framework adopted in this report highlights the important influence that demographics, socio-economic factors and education have on health status. There are complex interactions between the health indicators (diseases and mortality) and health determinants (education and employment). For example, individuals with lower education and income are more likely than those with higher income and education to smoke, be physically inactive and develop chronic diseases.

Message from the Minister



I am pleased to report on the health status of the people of the Northwest Territories.

The Health Status Report is intended to inform the public about the wellbeing of the population in general and report on some of the major determinants of health in the Northwest Territories. It is also a report on the performance of the health and social services system overall and represents a significant accountability and reporting mechanism.

The health indicators profiled in this report cover the topics of well-being, chronic and communicable diseases, mental health and addictions, child and infant health as well as health determinants and prevention services. Compared to the previous Health Status Report published in 2005, the population has experienced improvements in some areas, and reduced status in others.

Key findings of the report indicate that while there have been some improvements over time, NWT residents continue to make unhealthy lifestyle choices that can negatively impact our overall health status. Individuals, families and communities all have a role to play in improving overall health status. By making healthy food choices, exercising regularly and limiting activities such as smoking and overuse of alcohol, we can all contribute to improving the health status of the Northwest Territories.

A handwritten signature in black ink, reading "J.M. Miltenberger".

*Honourable J. Michael Miltenberger
Minister of Health and Social Services*

Message from the Chief Public Health Officer

It is my pleasure to submit this report on behalf of the Department of Health and Social Services.

It is a culmination of work that had many contributors' within the department, and the NWT Bureau of Statistics. This report is an opportunity to gauge the current health status of the NWT.

There are many successes that the NWT can applaud with areas requiring renewed effort. As health is not the sole responsibility of the Department of Health and Social Services, this report gives the people and the Department of Health and Social Services an indication as to where to focus our efforts and potentially with whom we need to partner in addressing these efforts.



*Dr. Lorne Clearsky
Chief Public Health Officer*

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Introduction

The NWT Health Status Report (2010) provides information about the state of health of the Northwest Territories population. The information contained within this report is intended for use by researchers, decision makers, NGO's and the public.

The concept of health is adapted from one proposed by the World Health Organization (WHO) which states health is a complete state of physical, mental, social and emotional well-being, and not merely the absence of disease or infirmity. This was further elaborated by the WHO in 1986's Ottawa Charter for Health Promotion. It furthered that health is not just a state but also a "resource for everyday life". Health is a positive concept emphasizing social and personal resources, as well as physical capacities.

In the NWT, we strive to achieve equity in health by providing opportunities and resources to enable people to achieve their optimum health potential. This includes encouraging individuals, and families to take responsibility of their own healthy lifestyle choices, but also involves a much broader range of factors related to the social determinants of health. This includes early childhood experiences and educational attainment. It also involves income levels or the ability to access affordable healthy food, safe housing, as well as health and social services.

The benefits of a healthier population extend beyond improved health status outcomes. A healthier population makes contributions that are more productive to overall societal development, requires less support in the form of health care and social benefits and is better able to support and sustain itself over the long term. Actions that result in good health also bring wider social, economic and environmental benefits for the population at large. These benefits include a sustainable and equitable health care system, strengthened social cohesion and citizen engagement, increased economic growth and productivity and improved quality of life.

Part 1: Population and Demographics

1: Demographics

1.1: Population

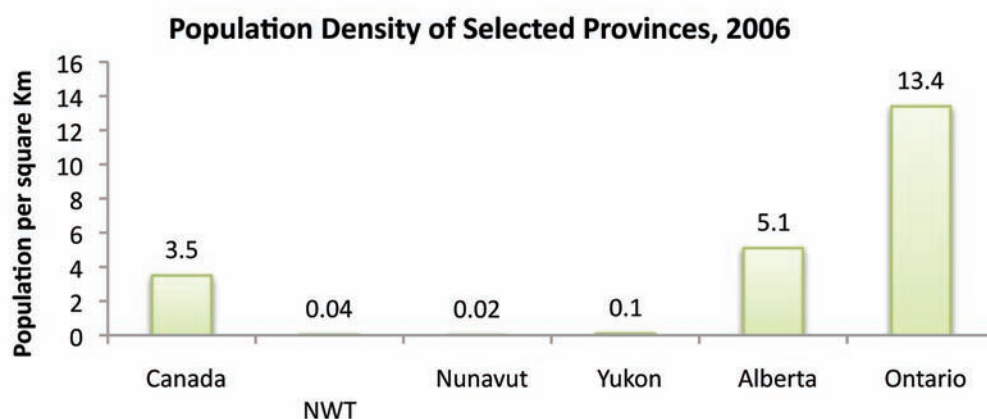
The Northwest Territories is a regionally diverse territory with more than 1.17 million square kilometres of land and a population of 43,759 in 2010. There are 33 small communities, spread over this large territory. With a population density of 0.04 people per square kilometre it is one of the most sparsely populated regions in Canada.

In terms of population distribution, half of all the NWT residents (46%) live in Yellowknife, 22% in regional centres (Inuvik, Hay River, and Fort Smith), and the remaining 32% in small communities. Typically, the smaller communities have a population less than 1,000 and the majority of residents are Aboriginal.

Just over half the population living in the Northwest Territories is of aboriginal origin (51%). This is the second largest percentage Aboriginal population of all provinces and territories reported in the 2006 Census. Of the Aboriginal people in the Northwest Territories, 57% reported North American Indian, 19% reported Métis and 21% reported Inuit as their Aboriginal identity. Overall, the Aboriginal population in the NWT represents 2% of the total Aboriginal population in Canada.

The NWT population is multicultural with people from all over the world living and working across the territory.

Figure 1: Population Density of Select Canadian Regions, 2006



Source: Statistics Canada

English is the most common language spoken in the NWT, with 77% of the population reporting English as their first language (mother tongue). Another 3% of the population reported that French is their first language. The proportion of people speaking English or French is higher in the regional centres than in the communities. The Official Languages recognised in the NWT include Chipewyan, Cree, Tłı́ch (Dogrib), English, French, Gwich'in, Inuinnaqtun, Inuktitut, Inuvialuktun, North Slavey and South Slavey.

The NWT population increased by 7.1% or from 40,844 or 43,759 between 2001 and 2010. This amounts to an average annual growth rate of 0.7%. However, growth has plateaued in more recent years, with the population only increasing by 1.3% or 0.3% per annum since 2006.

Table 1: Population by Community, NWT 2010

Community	Population	%
Aklavik	658	1.5%
Colville Lake	158	0.4%
Detah	260	0.6%
Enterprise	98	0.2%
Fort Liard	587	1.3%
Fort Simpson	1,270	2.9%
Hay River*	3,726	8.5%
Inuvik*	3,552	8.1%
Kakisa	55	0.1%
Nahanni Butte	120	0.3%
Paulatuk	336	0.8%
Trout Lake	100	0.2%
Tuktoyaktuk	916	2.1%
Ulukhatok	472	1.1%
Wrigley	113	0.3%
Yellowknife	19,927	45.5%

Community	Population	%
Behchoko	2,080	4.8%
Deline	567	1.3%
Fort Good Hope	592	1.4%
Fort McPherson	795	1.8%
Fort Resolution	494	1.1%
Fort Smith*	2,483	5.7%
Hay River Reserve	328	0.7%
Jean Marie River	71	0.2%
Lutselk'e	297	0.7%
Norman Wells	816	1.9%
Sachs Harbour	134	0.3%
Tsiigehtchic	123	0.3%
Tulita	564	1.3%
Wekweeti	141	0.3%
Whati	497	1.1%
Total NWT	43,759	100%

Source: NWT Bureau of Statistics.

*Regional Centres.

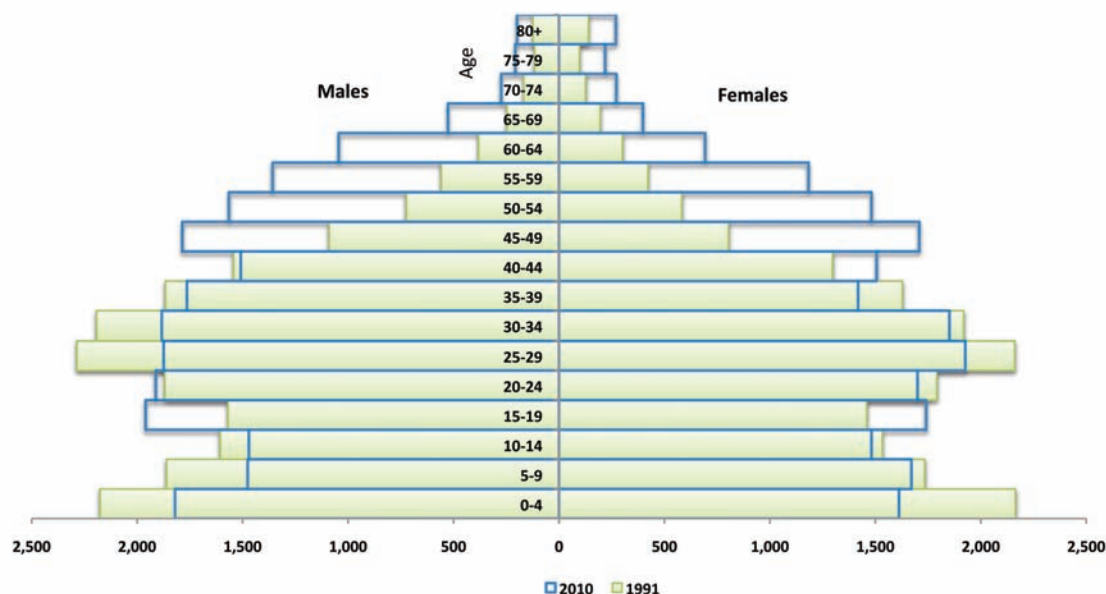
1.2: Population demographics, Age and Sex

In 1991, the population pyramid had a fairly broad base, a bulge of young adults and progressively narrowing top. This type of pyramid portrays a relatively youthful and steady growing population. By 2010, the pyramid shows more of an even age distribution, which is indicative of slower growth. The changing shape of the pyramids also reflects the general aging of the NWT population. This is evident in the shifting of the bulge from the younger ages into the older age groups over time.

Figure 2: Map of the Northwest Territories



Figure 3: Population Pyramid, Northwest Territories 1991 and 2010



Source: NWT Bureau of Statistics

Seniors are the fastest growing age demographic with approximately 4,102 seniors in the NWT over the age of 60 years. By 2020 the number of seniors is expected to increase to 6,988. The aging population will increase the demand and utilization of health services such as acute care, physician services, pharmaceuticals, extended health care, as well as long-term, home and community care.

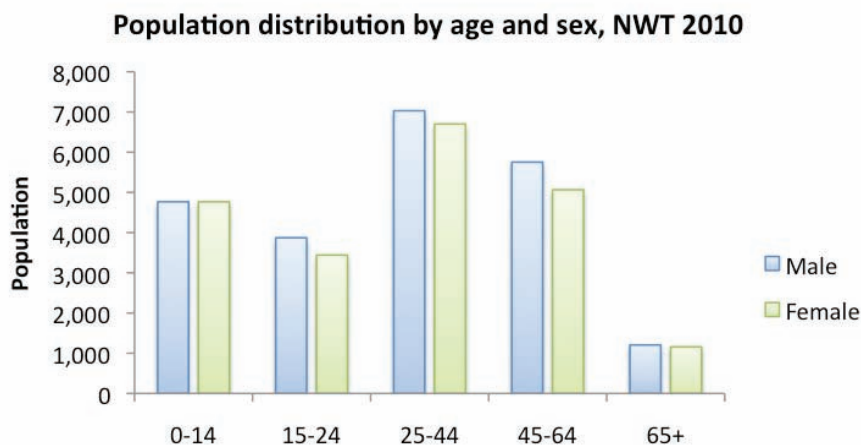
Seniors in Canada have the highest cost per capita for health care. The 2007 health care costs, estimated by CIHI (Canadian Institute for Health Information) were \$22,588 for people aged 60 and over. This represents almost 5 times the amount per person for people under age 60. In general, seniors² are also more likely to be hospitalized when compared to the non-senior population. Seniors in the NWT are even more likely to be hospitalized. In 2008/09, over 18 % of the NWT population, age 60 and over, were hospitalized at least once in the year, compared to 13 % nationally (2007/08).^[1]

Overall, the NWT population consists of approximately equal proportions of males (51.7%) and females (48.3%).

² NWT Seniors are defined as those aged 60 years and older.

^[1] Canadian Institute for Health Information and HSS *Discharge Abstract Database*.

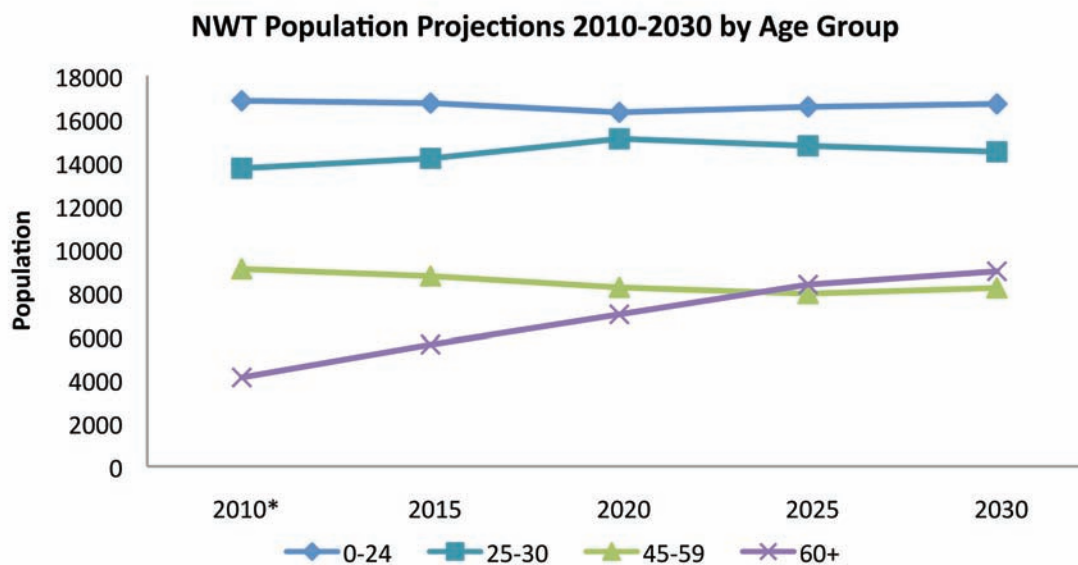
Figure 4: NWT population distribution by age and sex, 2010



Source: NWT Bureau of Statistics

The population projections for the age categories 0-24, 25-44, and 45-59 are expected to remain relatively stable over the next two decades. The proportion of seniors (60 years of age or older) however, is expected to increase steadily, exceeding the proportion of 45-59 year olds in 2024.

Figure 5: NWT Population Projections



Source: NWT Bureau of Statistics

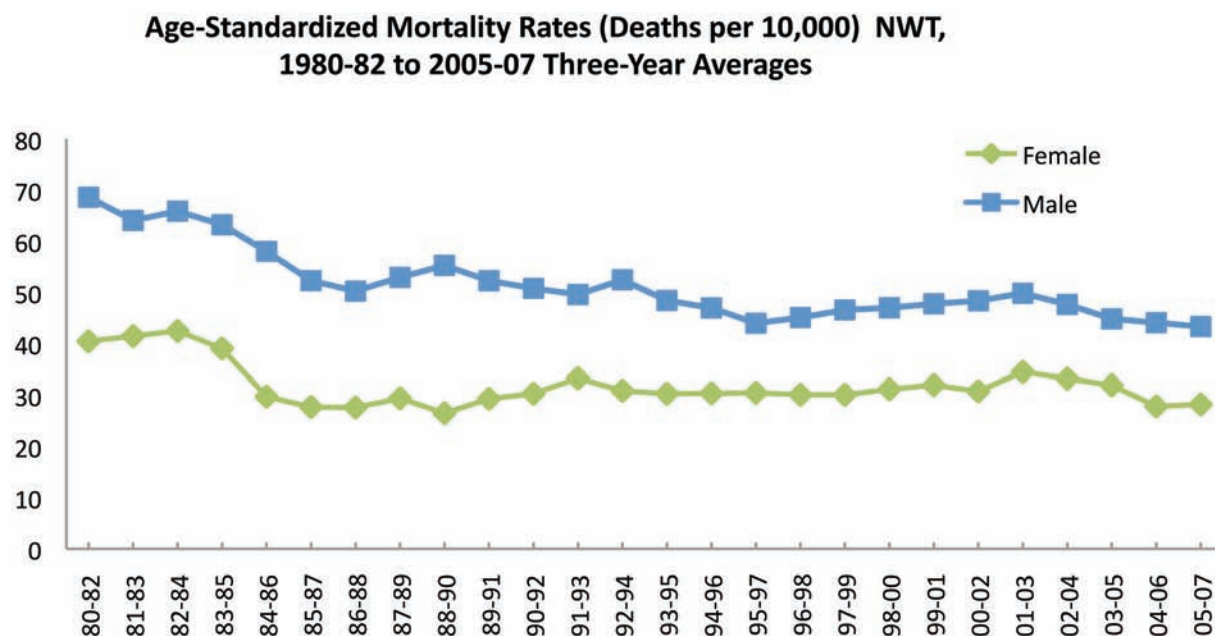
1.3: Mortality

The causes of death, especially premature death provides valuable information about major risks to health. The mortality rate represents the ratio of total deaths to total population in a specified community or area over a specified period of time.

1.3.1: Overall Mortality

In 2005-2007, the age standardized mortality rate for all causes² in the NWT was 35.8 deaths per 10,000 people, a decrease of 35.6% from 55.6 per 10,000 in 1980-1982. Although the mortality rate for men remains higher than that for women, the rate for both sexes has declined substantially between 1980-82 and 2005-07. For women, the rate dropped from 40.4 to 28.2 deaths per 10,000 people. For men, the rate dropped from 68.6 to 43.3 deaths per 10,000 people.

Figure 6: NWT Mortality Rates by Sex

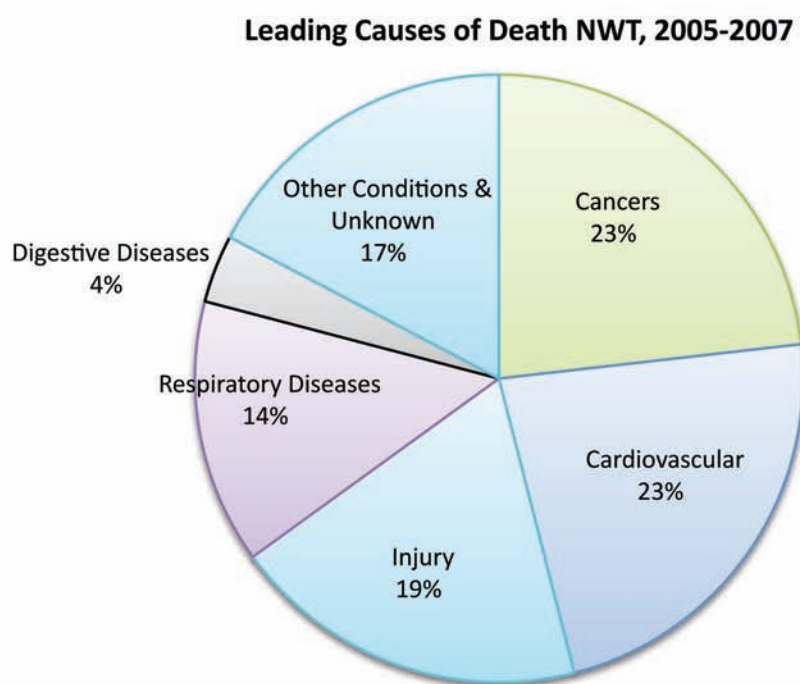


Sources: NWT Health and Social Services, NWT Bureau of Statistics and Statistics Canada.

1.3.2: Leading Causes of Mortality

Between 2005 and 2007, the leading causes of death in the NWT were cancers and cardiovascular diseases followed by injuries and respiratory diseases.

Figure 7: Leading Causes of Death in the NWT



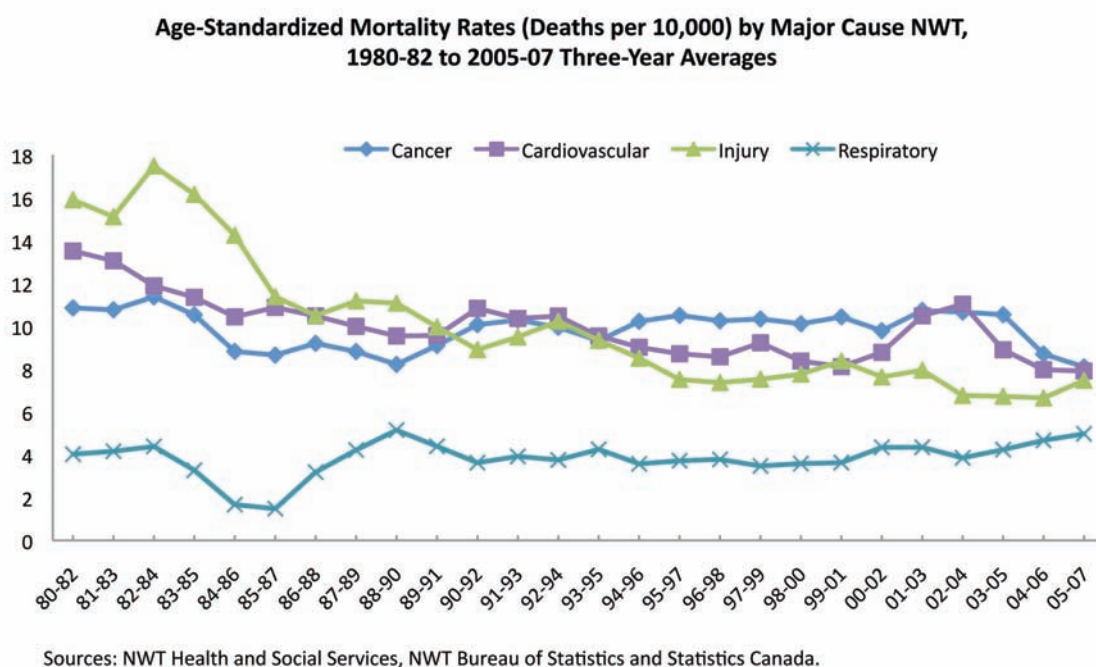
Sources: NWT Health and Social Services and Statistics Canada.

The four leading causes of death were the same for both females and males, but in a different rank order. For females, cancers (breast, colorectal, and lung) were the leading cause of death followed by cardiovascular diseases (heart disease and heart failure), respiratory diseases, and injuries (suicide, falls, ATV and motor vehicle collisions).

For males, injuries were the leading cause of deaths (24%), followed by cardiovascular diseases (heart disease and heart failure), cancers (lung and colorectal), and respiratory diseases (chronic obstructive lung disease and pneumonia).

Between 2005 and 2007, the first 4 leading causes of death across the NWT were cancers, cardiovascular diseases, respiratory diseases and injury. In Yellowknife, cancers and cardiovascular diseases each accounted for 26% of deaths among residents, followed by injuries and respiratory diseases. In the regional centres, cardiovascular diseases accounted for 25% of deaths, followed by cancers, injuries, and respiratory diseases. Injuries and cancers were each responsible for 21% of the deaths of residents living in the smaller

Figure 8: NWT Mortality Rate by Cause



communities, followed by cardiovascular and respiratory diseases at 20% each.

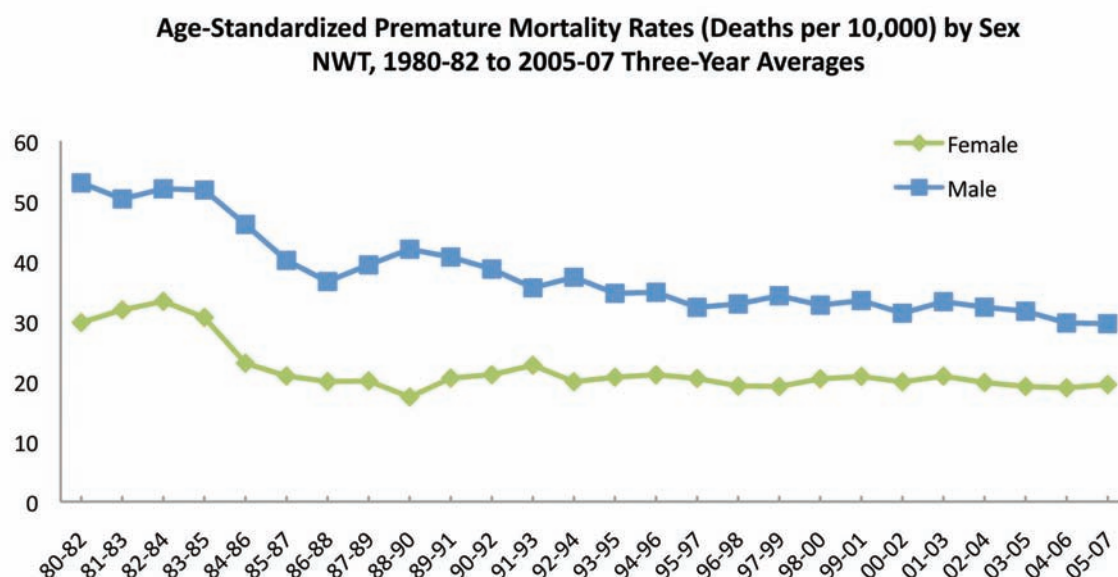
The four leading causes of death between 1980 and 2007 are shown in figure 7. There was a decrease in the cancer mortality rate from 10.9 to 8.1 deaths per 10,000. The cardiovascular disease-specific mortality rate decreased from 13.5 to 7.9 deaths per 10,000. There was a 53% decrease in injury-specific mortality rate from 15.9 to 7.5 deaths per 10,000. Most of the reduction in injury mortality came during the mid 1980s, where there was a decrease in number of deaths due to fires, off-road motor vehicle crashes, and unintentional poisonings.

Between 2003 and 2007, the injury-specific mortality rate in the smaller communities at 10.1 deaths per 10,000 was more than twice that of Yellowknife. During the same five-year period, the injury-specific mortality rate for the regional centres was 7.8 per 10,000. The age-standardized respiratory-specific mortality rate for small communities was 5.6 deaths per 10,000.

1.3.3: Premature Mortality

Premature mortality is a measure of unfulfilled life expectancy. Because deaths of younger people are often preventable, the premature mortality rate is a measure that gives more weight to the death of younger people than to older people. The premature mortality rate (PMR) is calculated from deaths occurring before the age of 75 years.

Figure 9: Premature Mortality Rates, NWT



Sources: NWT Health and Social Services, NWT Bureau of Statistics and Statistics Canada.

Regions with higher rates of premature death tend to have a higher burden of illness and lower rates of self-reported health.³

For 2005-07, the age-standardized NWT PMR was 25.1 deaths per 10,000 which was higher than the 2007 overall national PMR of 17.2 per 10,000.⁴ However, the PMRs for males and females in the NWT have been declining since 1980. As seen in Figure 8, the age-standardized PMR for females declined by 35% between 1980-82 and 2005-07, from 29.8 to 19.5 deaths per 10,000. Over the same period, the PMR for males declined by 44% from 53.0 to 29.6 deaths per 10,000. Most of the decline in PMRs, for both sexes, occurred in the 1980s.

Across the 25-year study period, there was a 55% decline in PMRs from injuries and a 39% decline due to cardiovascular diseases. This decline was tempered somewhat by a doubling of the PMR rate due to respiratory diseases.

Between 2005 and 2007, cancer accounted for 39% of all the premature deaths for females, followed by cardiovascular diseases (17%), injuries (13%) and respiratory diseases (11%). During the same time period, injury accounted for 33% of premature deaths for males, followed cardiovascular diseases (23%), cancers (15%), and respiratory diseases (11%).

³ Martens, P.J., et al, The Manitoba RHA Indicators Atlas: Population-Based Comparisons of Health and Health Care Use (Manitoba Centre for Health Policy, 2003).

⁴ Canadian figure has been age-standardized to the 2001 NWT population. Canadian PMR based on Statistics Canada mortality data (CANSIM Table 102 – 0504) and population estimates (provided by the NWT Bureau of Statistics).

Part 2: Population Health Status



2: *Well-being*

Well-being refers to positive and sustainable characteristics that enable individuals, families and communities to thrive and flourish.

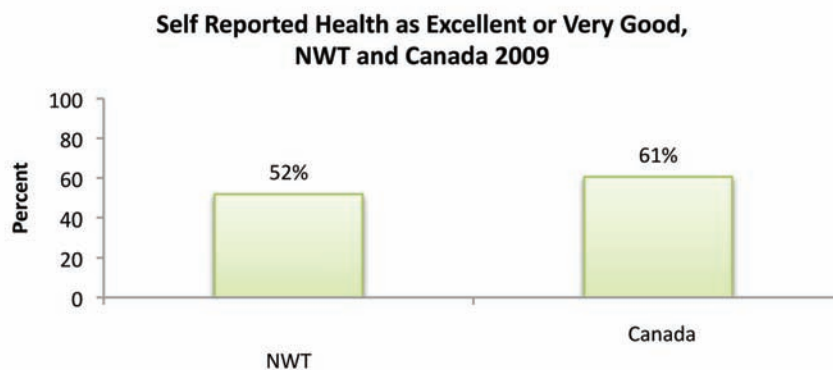
2.1: Self-reported Health

Self-reported health relates to how healthy a person feels and is an important predictor of future health-care use and mortality rates.

One drawback to self-reported health lies in the possible response bias from individuals affected by acute temporary symptoms such as the flu, or pain resulting from a minor injury. Similarly, particular demographic groups may assess their health differently causing variation between sexes, age groups and cultures.

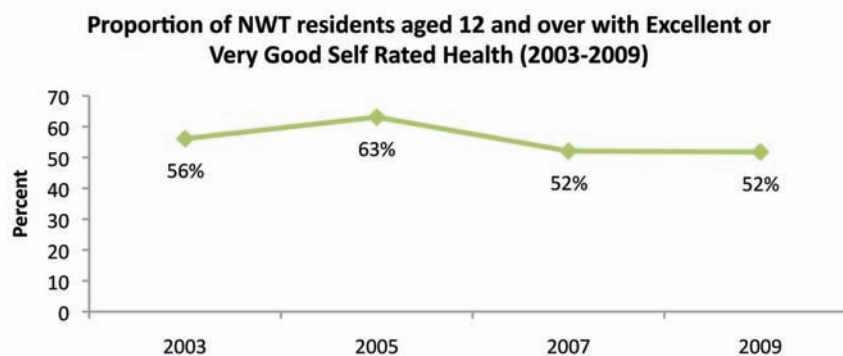
In 2009, 52% of NWT residents 12 years of age and older rated their health status as either excellent or very good, another 36% rated their health as good, and 12% indicated they felt their health was fair or poor.

Figure 10: National Comparison of Self-Reported Health



Source: CCHS Master File 2009

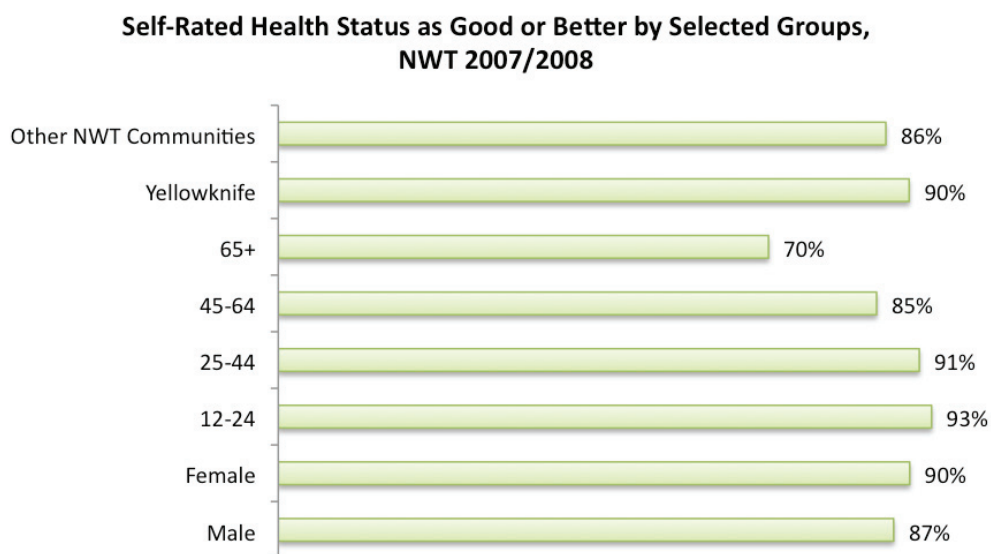
Figure 11: NWT Self Rated Health



Source: CCHS Master File

Figure 12 shows that the youngest age cohort has the highest proportion of reporting having good health as a whole, while the oldest cohort has the lowest proportion. However, the 70% of seniors that reported good health was a considerable increase from the 64% in 2003. The proportions between males and females are comparable.

Figure 12: Self-Rated Health by Community, Sex and Age

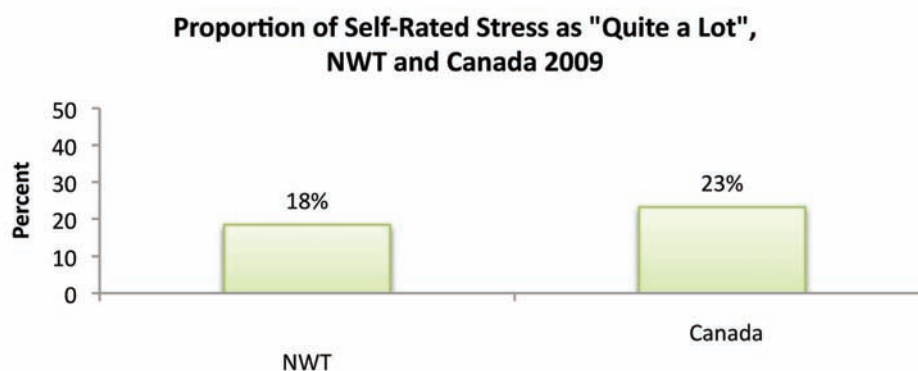


Source: CCHS Share File 2007/2008
Ages 12 and older

2.2: Self-Perceived Life Stress

Self-rated life stress is an indicator used in the Canadian Community Health Survey to measure perceived well-being. The proportion of NWT respondents (18%) who experience “quite a lot” of life related stress is lower than the rest of Canada (23%). The life stress levels of NWT residents were relatively stable measured from 2003 to 2009.

Figure 13: National Comparison of Self-Rated Stress



Source: CCHS Master File, 2009
Ages 15-75 Years

Figure 14: Self Rated Life Stress

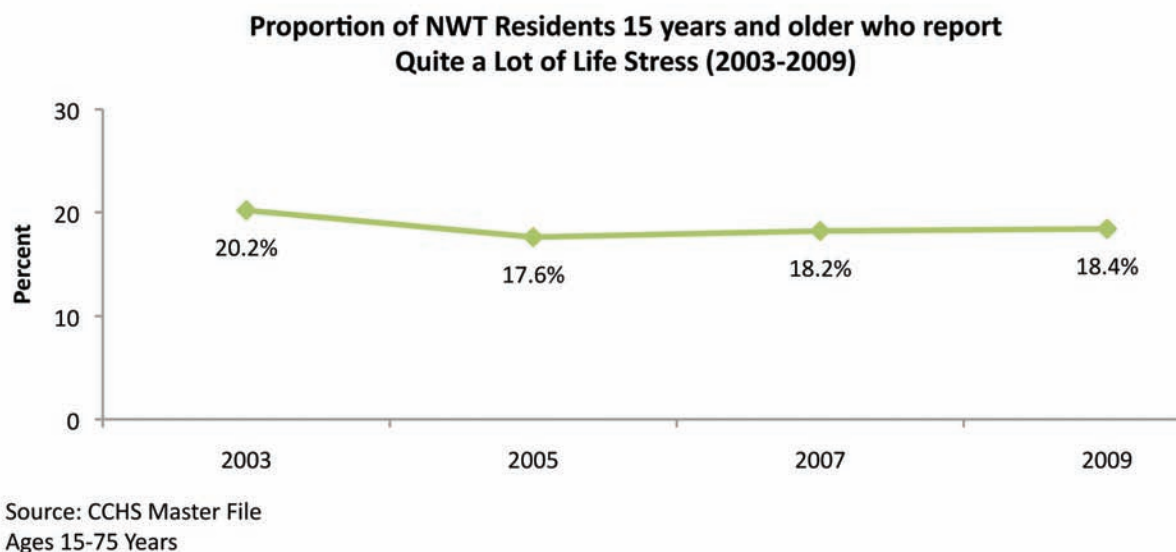
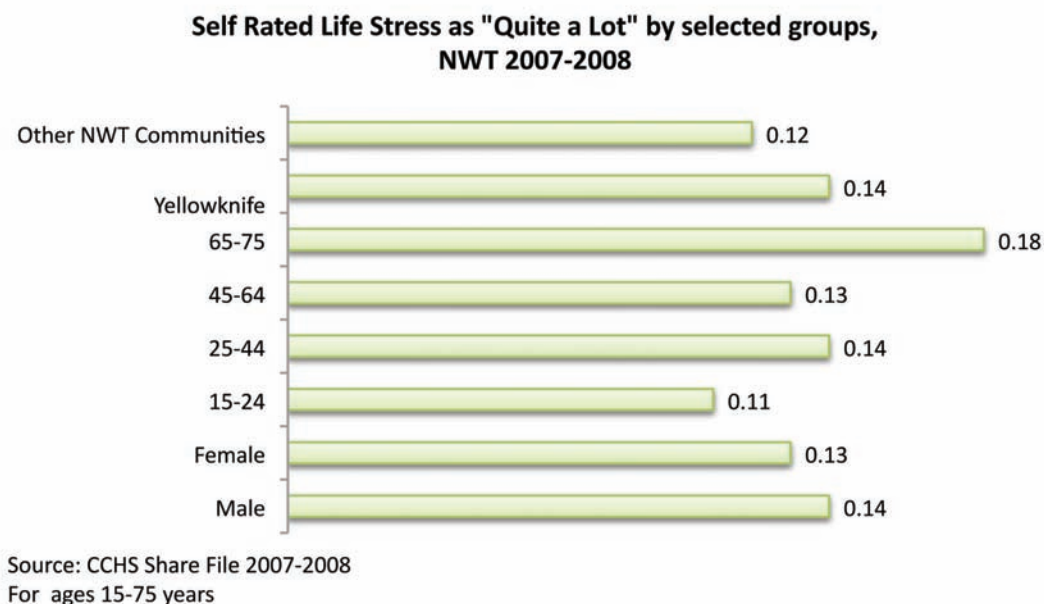


Figure 14 illustrates a breakdown of the self-rated life stress by community, sex, and age. The proportion of adults between 25-44 and 45-64 years, report similar levels of life stress, while the older population (65-75 years) has the highest proportion of life stress compared to other age groups. The levels of life stress for males and females are comparable.

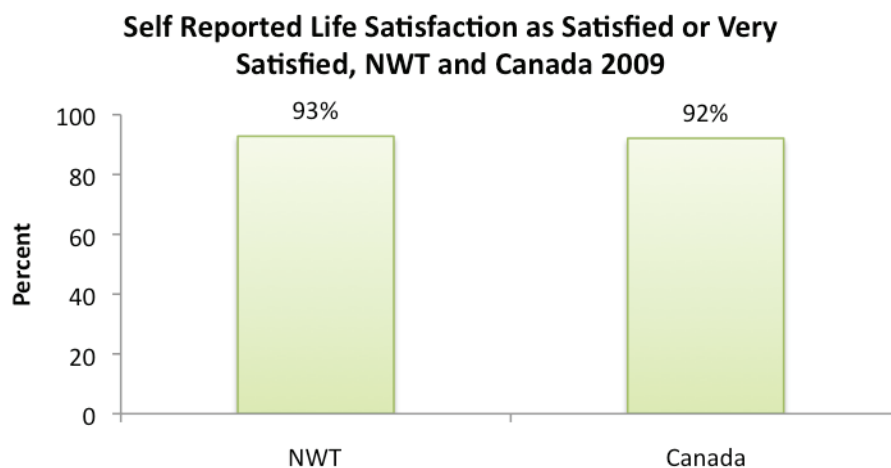
Figure 15: Self Rated Life Stress by Community Size, Sex, and Age



2.3: Overall Satisfaction with Life

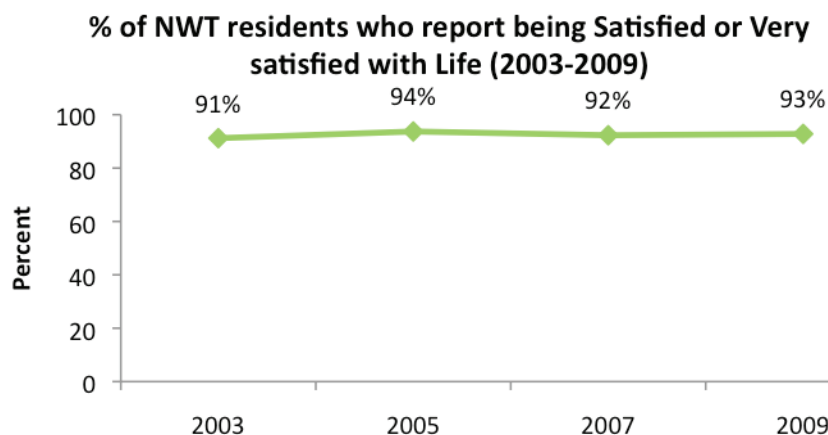
Satisfaction with life is a measure of an individual's perceived level of well being and is an important indicator of the overall health status. Residents of the NWT report similar life satisfaction to other Canadians overall. The time trend for overall life satisfaction is high in the NWT and has remained stable since 2003; with between 91% and 94% of the population reporting they are satisfied or very satisfied with their life.

Figure 16: National Comparison of Life Satisfaction



Source: CCHS Master File 2009

Figure 17: Self Rated Life Satisfaction



CCHS Master File, 2009
Ages 12 and older

Figure 18 shows the proportion of selected groups of people who reported being satisfied or very satisfied with their lives. In comparison with smaller communities, a higher proportion of people in Yellowknife reported being satisfied. The proportion of adults aged 25-65 years who reported being satisfied (92-95%) was higher than the proportion of those 12-25 years of age. The proportion of females (95%) reporting having life satisfaction is higher than males (91%).

Figure 18: Self Rated Life Satisfaction by Community Size, Sex and Age



Source: CCHS Share File 2007-2008
For Ages 12 years and older

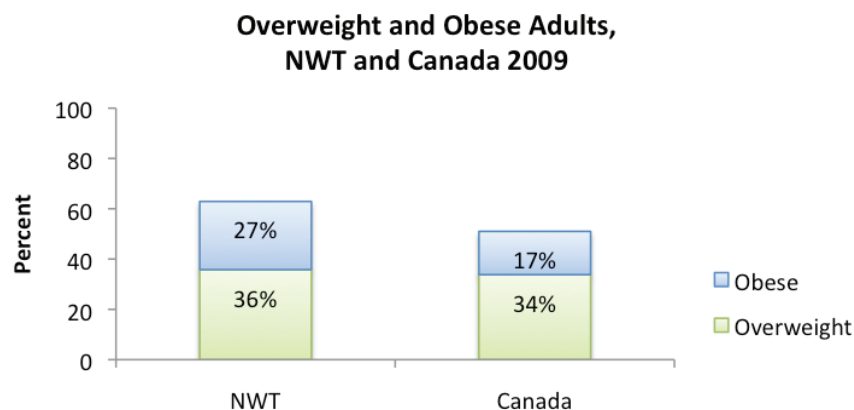
2.4: Healthy Weights

Body weight is affected by many factors such as genetics, nutrition, mental health and level of physical activity. Being overweight or obese is a risk factor for many health problems, particularly cardiovascular diseases and diabetes.

Body mass index (BMI) is a common measure to determine whether a person is over or under the desirable weight for their height. Adults (aged 18 and older)⁵ are considered overweight if they have a BMI greater than 25 and obese if they have a BMI of 30 or more.

In 2009, 63 per cent of residents surveyed in the NWT were overweight or obese (based on self-reported height and weight). The NWT rate of overweight and obesity was more than 10 % higher than the national prevalence at 51%.

Figure 19: National Comparison of BMIs

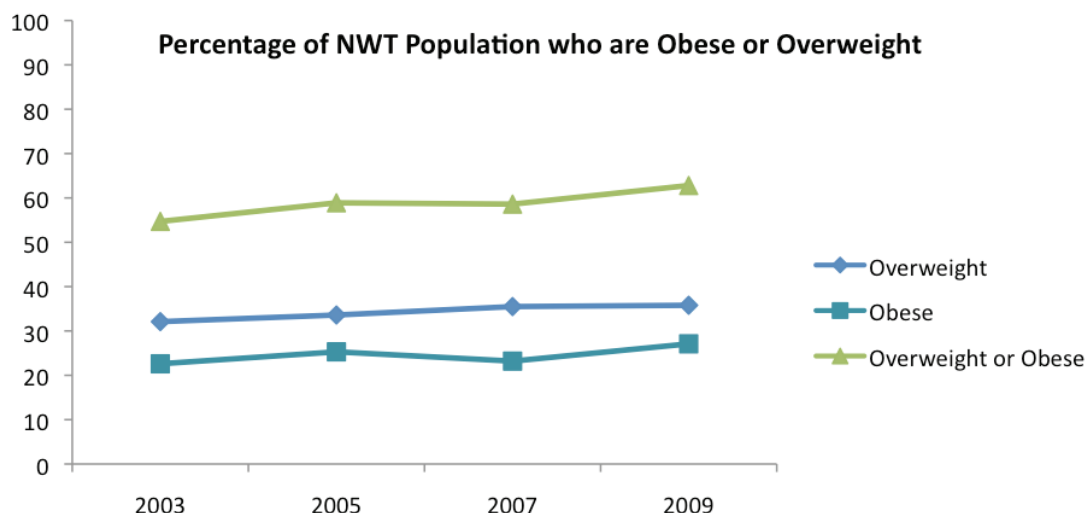


Source: CCHS Master File, 2009
Ages 18 years and older

⁵ Excluding pregnant women, persons less than 3 feet tall, and people greater than 6'11" tall.

Over time, the proportion of NWT residents being obese or overweight is increasing with well over half of the population 18 years and older being obese or overweight.

Figure 20: Percentage of Obese or Overweight residents in the NWT 2003-2009



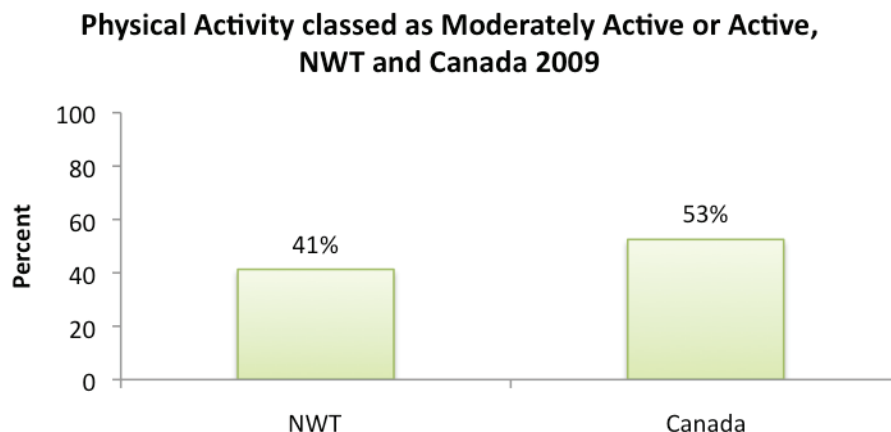
Source: CCHS Master File
Ages 12 years and older

2.5: Physical Activity and Healthy Eating

Regular physical activity relieves stress, builds muscle strength, reduces susceptibility to disease and injury, improves cardiovascular health, and helps maintain healthy body weight. The CCHS classifies respondents as active, moderately active or inactive based on an index of average daily physical activity over three months.

In 2009, 41% of respondents 12 years and older in the NWT reported being moderately active or active, compared with 53% in Canada.

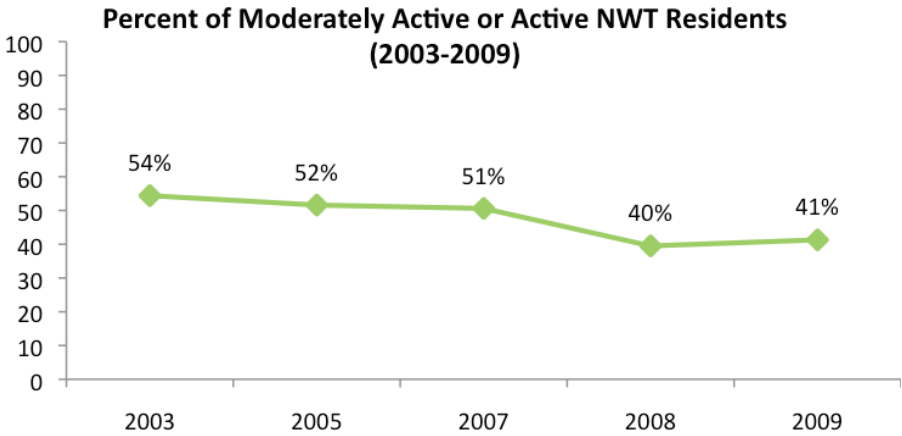
Figure 21: National Comparison of Physical Activity



Source: CCHS Master File, 2009
Ages 12 years and older

Proportions of NWT residents 12 years and older who reported moderate or higher physical activity decreased from 54% to 41% since 2003. Moderate to vigorous physical activity is recommended for all ages with 2.5 hours per week for adults, and at least 60 minutes daily for children and youth (aged 12-17 years). In 2009, only 41% of the NWT population participated in enough physical activity to maintain or improve their health.

Figure 22: Percentage of Residents participating in physical activity during leisure time, NWT

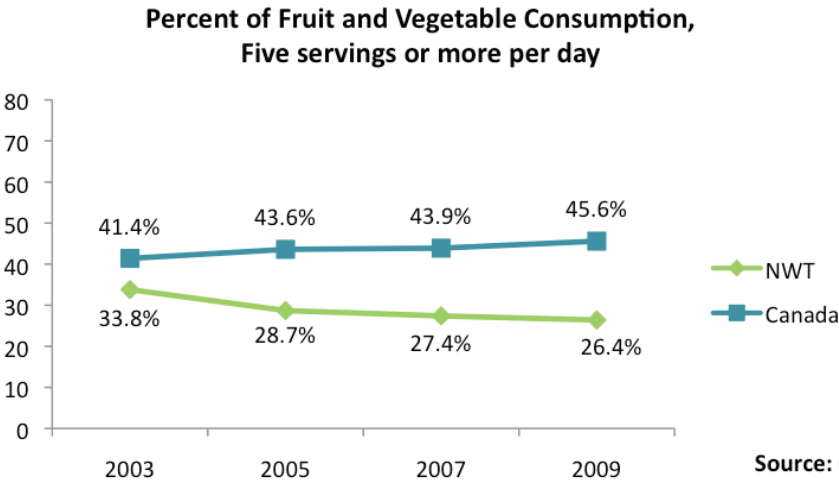


Source: CCHS Master File
Ages 12 years and older

Healthy eating, diet rich in nutrients and fibre with minimal cholesterol, fat and sugar contents, is important to all stages of life as it plays a critical role for physical growth in children and maintenance of physical health in adults. Healthy eating also helps reduce the risk of many chronic diseases such as diabetes, cardiovascular diseases and colorectal cancer. Canada’s food guide recommends a balanced diet with all essential nutritional components. One measure for healthy eating is the consumption of five or more servings of fruits and vegetables on a daily basis.

The prevalence rate which shows residents of the NWT consume five or more servings of fruits and vegetables per day is decreasing over time, and consistently less than other Canadians.

Figure 23: Consumption of fruits and vegetables per day



Source: CCHS Master File
Ages 12 years and older

3: Chronic Disease

Chronic health conditions develop and progress over a period of years. These conditions may severely limit a person's ability to work, pursue training/education, or take care of daily needs. It is possible to delay or prevent the onset of chronic diseases through healthy lifestyle choices. They can also be managed by strengthening people's ability to function in their daily lives through self-care and self-monitoring.

Chronic conditions affect nearly one in three Canadians and the number is expected to increase due to population aging and rising trends in risk factors such as obesity. These conditions give rise to significant health and economic challenges measured by indicators of quality of life, health care use, and health care costs.⁶

Disparities in determinants of health that contribute to many chronic health conditions are as follows:

- Income and Social Status
- Social Support networks
- Education and Literacy
- Employment and Housing
- Personal Health Practices (i.e. smoking, physical activity, diet etc.)
- Healthy Childhood Development
- Sex/ Gender
- Culture⁷

Improving inequities in these broad societal conditions is likely to have the most beneficial impact on health problems, both chronic and acute.⁸

Preventing and effectively managing chronic diseases are important priorities for our health care system. This will help reduce the amount and length of hospitalization stays, reduce days missed at work and positively impact individual quality of life.

3.1: Diabetes

Diabetes is a chronic disease that affects more than nine million Canadians.⁹ This number is rising each year. In NWT, approximately 200 new cases are diagnosed every year. Diabetes is a lifelong condition where the body does not produce enough insulin or cannot use the insulin it produces. If left untreated, diabetes can lead to blindness, limb amputations, kidney failure, stroke, heart attack and ultimately premature death. There are three main types of diabetes: Type 1, Type 2, and gestational.

Type 1 usually occurs before age 30 and affects about 10% of all diabetics. This type of diabetes requires insulin treatment throughout the remaining lifetime of the individual, and is associated with a high incidence of complications that reduce the quality of life and shorten lifespan.

⁶ www.healthcouncilcanada.ca

⁷ www.phac-aspc.gc.ca/ph-sp/determinants/index-eng.php

⁸ Health Council of Canada

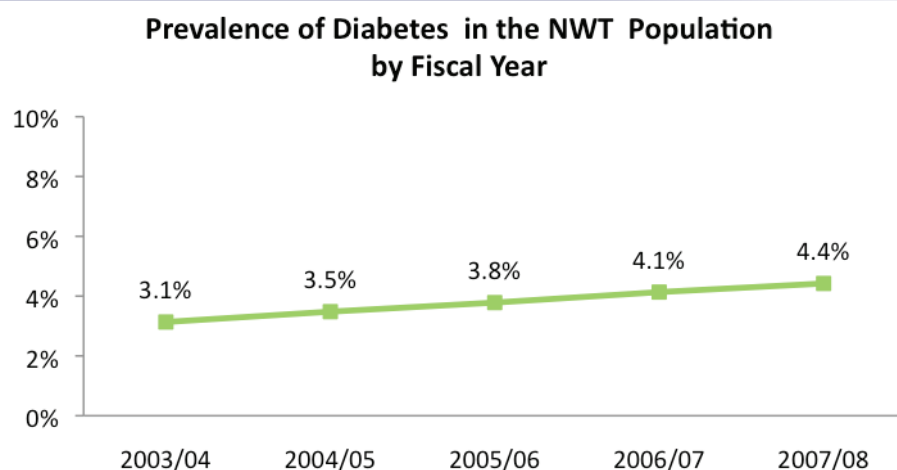
⁹ Source: Canadian Diabetes Association, <http://www.diabetes.ca/diabetes-and-you/>

Type 2 diabetes is most common in obese individuals over the age of 40 who lead sedentary lifestyles, although it is increasing steadily among younger age cohorts. People who have a family history of type 2 diabetes are more likely to get the disease. Type 2 diabetes accounts for approximately 90% of all cases. Type 2 diabetes can generally be controlled by weight loss, exercise and oral medication.

Gestational diabetes is diagnosed during first recognition of pregnancy when blood sugar is found to be higher than normal. Most mothers with gestational diabetes are able to control their blood sugar through diet and avoid harm to themselves and their baby. Gestational diabetes is associated with larger babies at birth, development of type 2 diabetes later in life, increased risk of stillbirth and low blood sugar in the newborn.

In the most recent report from the National Diabetes Surveillance System (NDSS), Diabetes in Canada 2009, the percentage of Canadians who had diabetes was 6.2% (2006/2007) which is higher than the NWT prevalence at 4.1%. Despite this, the proportion of the NWT population affected by diabetes has risen each year and is likely to continue to rise.

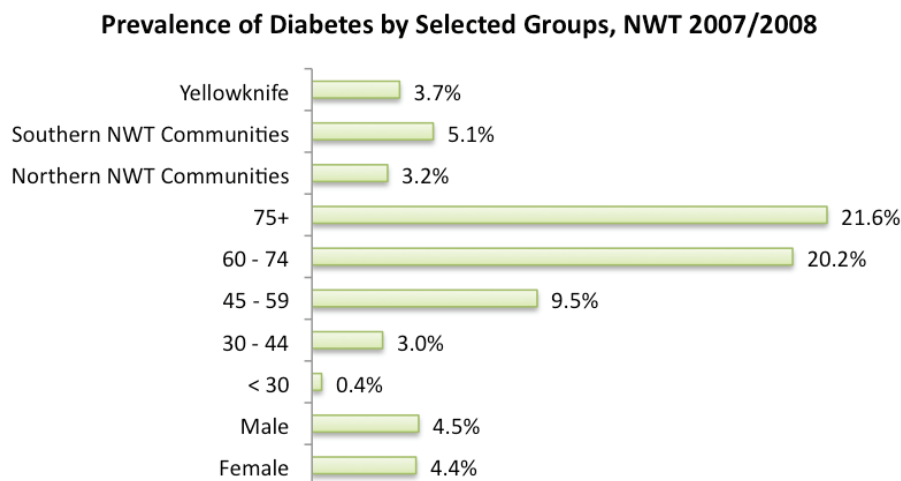
Figure 24: Prevalence of Diabetes by Fiscal Year in the NWT, 2003/2004 to 2007/2008



Source: Department of Health and Social Services, NWT

The prevalence of diabetes increases with age. Less than one per cent of the population 30 years of age and younger has diabetes, while approximately one in five of those aged 60 and above have diabetes.

Figure 25: Prevalence of Diabetes by Selected Groups. NWT 2007/ 2008



Source: Department of Health and Social Services, NWT

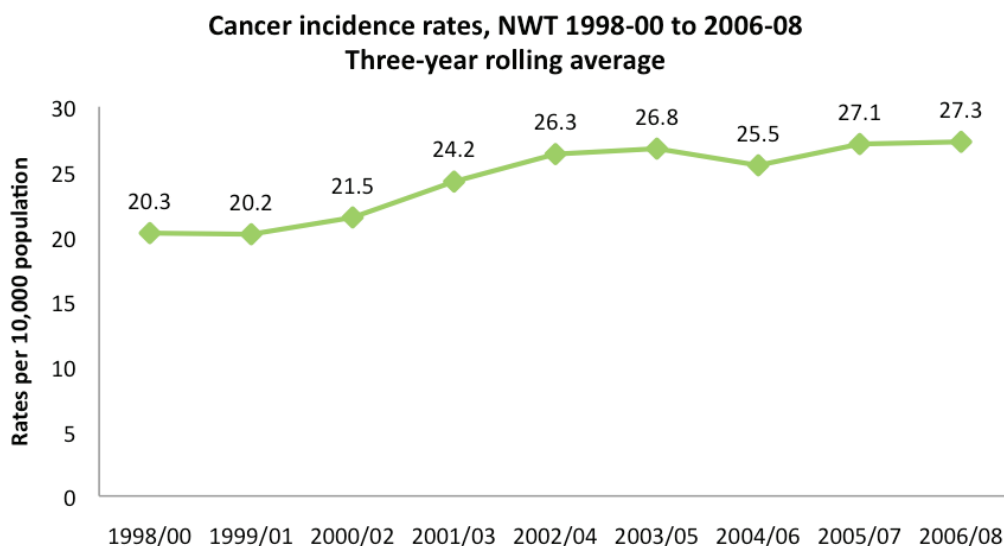
Note: Northern Communities include all in the Beaufort-Delta and Sahatu Regional Health Authorities; Southern Communities include all in other Health Authorities excluding the City of Yellowknife

With an aging population, it is likely that the overall prevalence of diabetes will continue to increase in the NWT in the near future. Thus adopting healthier lifestyle with regular exercise and healthy diet early in life will help combat this concerning rising trend.

3.2: Cancer

Cancer is one of the leading causes of death in the NWT. The incidence rate of cancer has increased from 20.3 (1998/10) to 27.3 (2006/08) per 10,000 population.

Figure 26: Cancer Incidence Rates

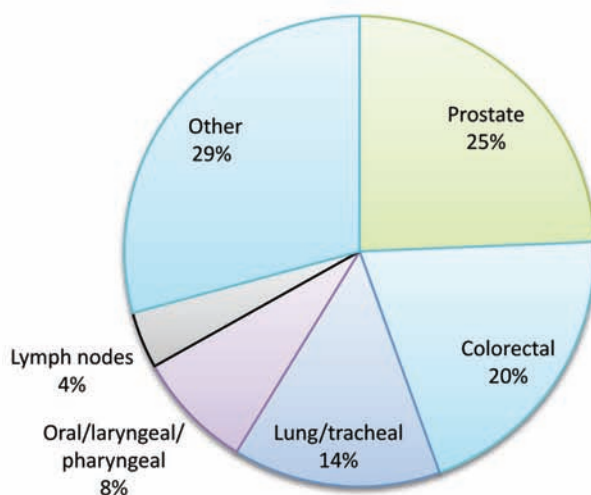


Source: Department of Health and Social Services, NWT

The most common types of cancer in the NWT (2004 - 2008) were colorectal, breast, prostate and lung. Colorectal cancer represented 20% of new cancer cases in men and 18% of cases in women. Breast cancer was the most common type of cancer in women (31%) and prostate cancer was the most common type in men (25%). Lung cancer accounted for 14% of cases in men and 13% in women.

Figure 27: Top Cancer Diagnoses, NWT Males

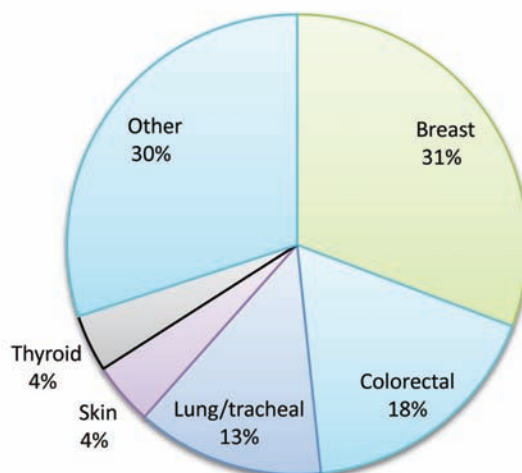
Top cancer diagnoses in males, NWT 2004-2008 (n=308)



Source: Department of Health and Social Services, NWT

Figure 28: Top Cancer Diagnoses, NWT Females

Top cancer diagnoses in females, NWT 2004-2008 (n=273)

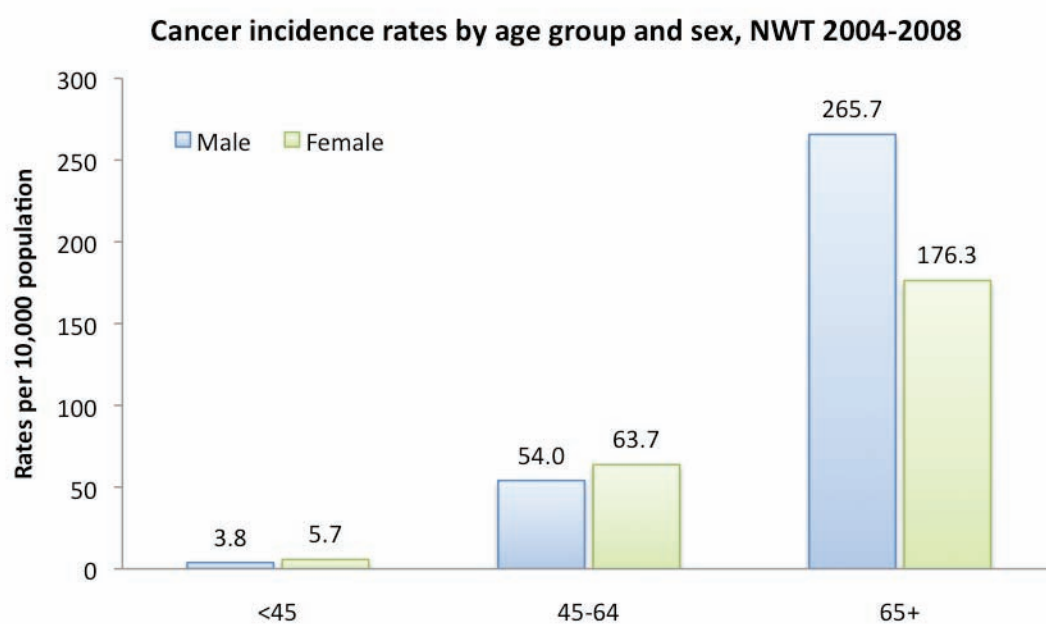


Source: Department of Health and Social Services, NWT

The majority of cases in the NWT occur in seniors 65 years of age or older. In this category, men are considerably more likely to be diagnosed with cancers than women. For the 45-64 year olds, women are somewhat more likely to be diagnosed with cancers than men. Younger residents less than 45 years of age are less likely to be diagnosed with cancers than older age groups.

A more detailed report on cancer will be provided in an updated “Cancer in the Northwest Territories descriptive report, (2001-2010)”.

Figure 29: Cancer Incidence Rates by Age and Sex



Source: NWT Health and Social Services

3.3: Chronic Renal Failure

Chronic renal failure (CRF) is the progressive loss of kidney function. When the kidneys fail, wastes and fluids accumulate in the body and must be removed through dialysis treatment. Unless an individual with CRF receives a kidney transplant, they will remain dependent on dialysis. There are two forms of dialysis: hemodialysis (most common) and peritoneal dialysis.

Hemodialysis is an invasive procedure that filters toxins out of the blood and usually takes four to five hours per treatment, three times per week. The duration of each session depends on how much kidney function the individual still has, and how long it has been since the last session (i.e. how much blood needs to be filtered). It requires attendance at an outpatient dialysis facility.

Peritoneal dialysis is another form of dialysis used to remove waste products and excess water. It works on the same principle as hemodialysis, but blood is cleaned while still inside your body rather than in a machine. It is less common but can be done at home.

The two most common causes of CRF are diabetes and high blood pressure and the majority of Canadian kidney failure patients were over the age of 65. In 2009 there were nearly 38,000 Canadians undergoing kidney replacement therapy (dialysis), and 72% of these patients were on a waiting list for a kidney transplant. Also in 2009, 1,207 kidney transplants were performed and 40% of those transplants were from living donors.¹⁰

Kidney failure is a pressing issue for the health system given the increasing prevalence of diabetes in the population. From 1994/95 to 2009/10, a total of 22 NWT patients were reported to have had 23 kidney transplants.

The following table includes any NWT resident receiving at least one session of dialysis for the years shown. These patients could have received the dialysis in the NWT or out of the NWT, as an inpatient or an outpatient.

Table 2: NWT Patients receiving Kidney Dialysis

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Number of Unique Clients	14	24	36	22	28	31
Number per 10,000 population	3.4	5.6	8.3	5.1	6.5	7.1

Note: These numbers are subject to future revisions and are not necessarily comparable to figures in past or future tabulations and reports.
Source: Department of Health and Social Services NWT, CIHI, NWT Bureau of Statistics

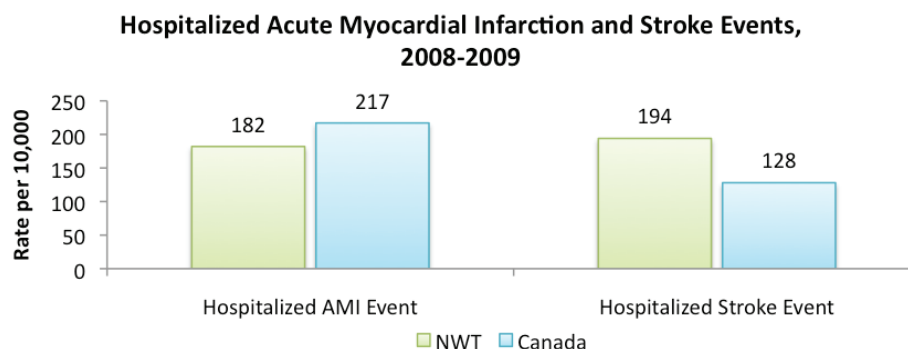
3.4: Cardiovascular Conditions

Cardiovascular disease is a term that refers to several diseases of the circulatory system including the heart and blood vessels. Cardiovascular diseases are the leading cause of death in adult Canadian men and women and the second leading cause of death in the NWT. Acute myocardial infarction (AMI) or heart attack refers to damage to an area of the heart muscle that is deprived of oxygen, usually due to blockage of a heart blood vessel. Cerebrovascular accident or stroke is caused by the interruption of the blood supply to the brain, usually because a blood vessel bursts or is blocked by a clot.

The NWT has a lower rate of hospitalized Acute Myocardial Infarction (AMI) when compared to the national rate, however the trend was reversed in strokes.

¹⁰ The Kidney Foundation of Canada: <http://www.kidney.ca/Document.Doc?id=1376>

Figure 30: Age Standardized AMI and Stroke for NWT and Canada



Source: Discharge Abstract Database, CIHI

Note: Data is age standardized

Ages 20 years and older

3.5: Injuries

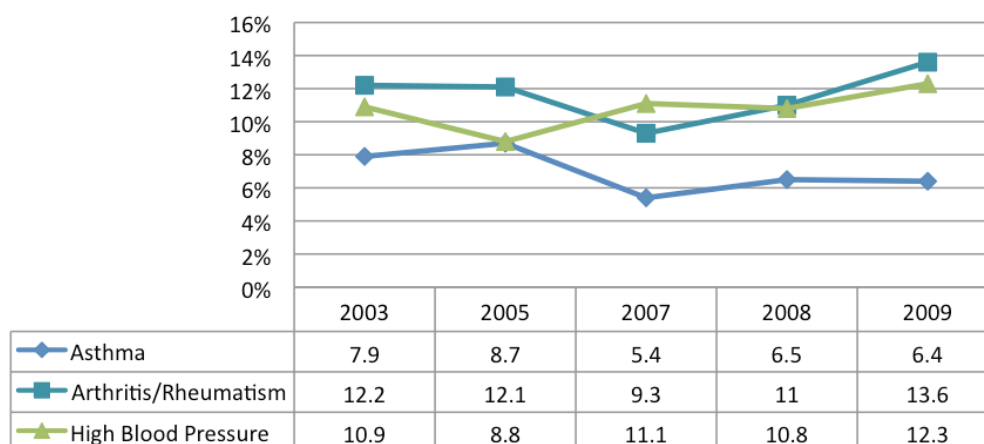
A detailed report on injuries will be provided in an updated “Injuries in the Northwest Territories descriptive report (2000-2009)”.

3.6: Other Chronic Conditions

Certain chronic conditions such as cardiovascular and pulmonary diseases are major causes of mortality and hospitalization in the NWT. Other chronic conditions such as arthritis, asthma and migraine headaches also affect a person’s functional health status and quality of life. In this section the prevalence of selected chronic conditions is estimated using results from the CCHS. The estimates are based on self-reporting where the respondents indicated that (1) the duration of the condition was at least six months and (2) where the condition was diagnosed by a health professional.

Figure 31: Prevalence of asthma, arthritis, and high blood pressure

Percentage of the population with Asthma, Arthritis, or High Blood Pressure, NWT

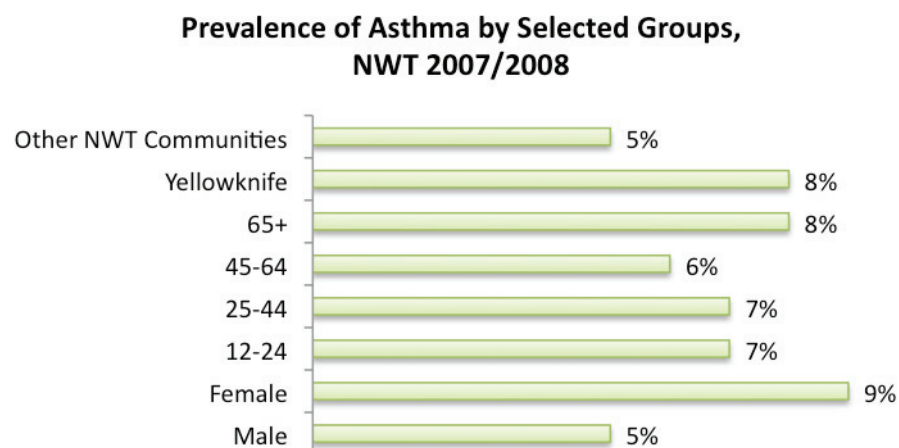


Source: CCHS Master File

Ages 12 years and older

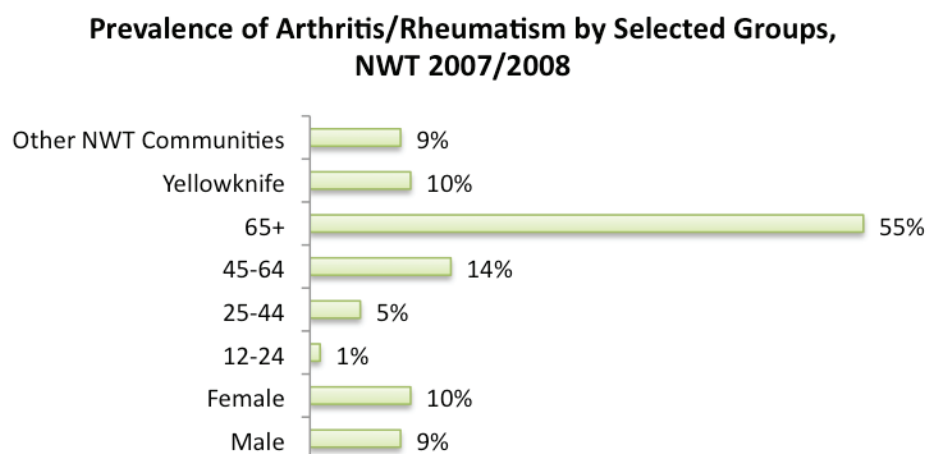
Time Trend data for Migraine Headaches not available

Figure 32: Prevalence of Asthma by Selected Groups



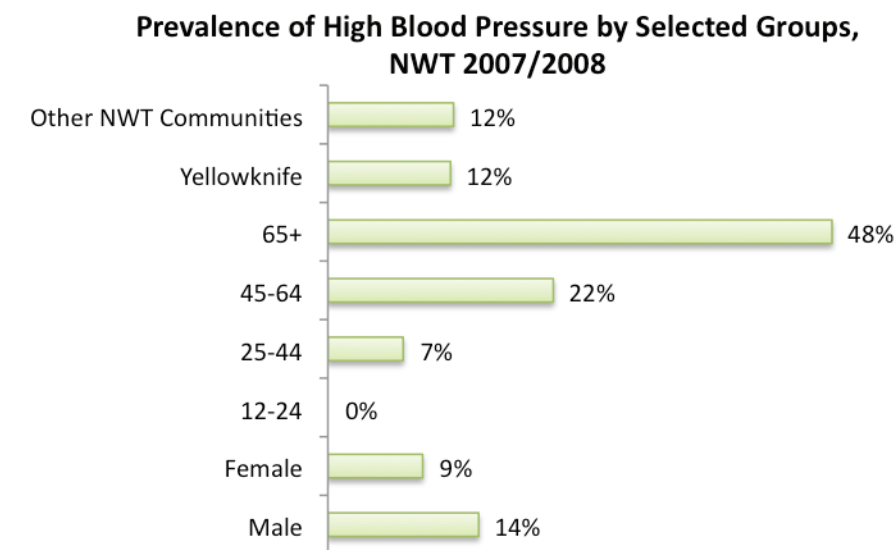
Source: CCHS Share File
Ages 12 and older

Figure 33: Prevalence of Arthritis/Rheumatism by communities, age, and sex



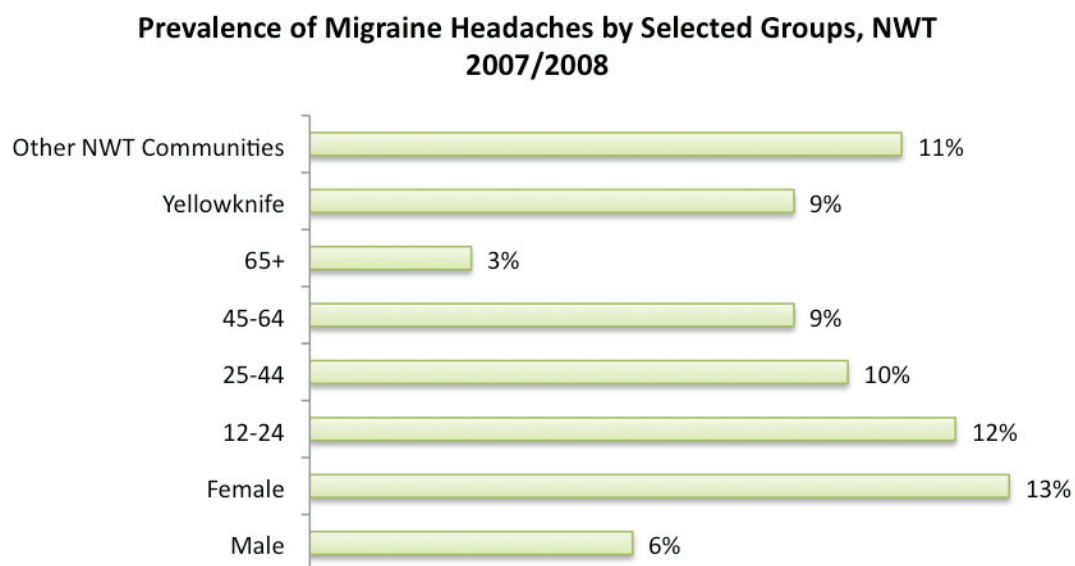
Source: CCHS Share File
Ages 12 and older

Figure 34: Prevalence of High Blood Pressure by communities, age, and sex



Source: CCHS Share File
Ages 12 and older

Figure 35: Prevalence of Migraine Headaches by communities, age, and sex



Source: CCHS Share File
Ages 12 and older

4: Communicable Disease

Communicable diseases are illnesses typically caused by microorganisms such as bacteria and viruses that are transmitted directly or indirectly from an infected person. Most communicable diseases are preventable and the rates of transmission within populations are reflective of the social, economic and environmental conditions under which people live.

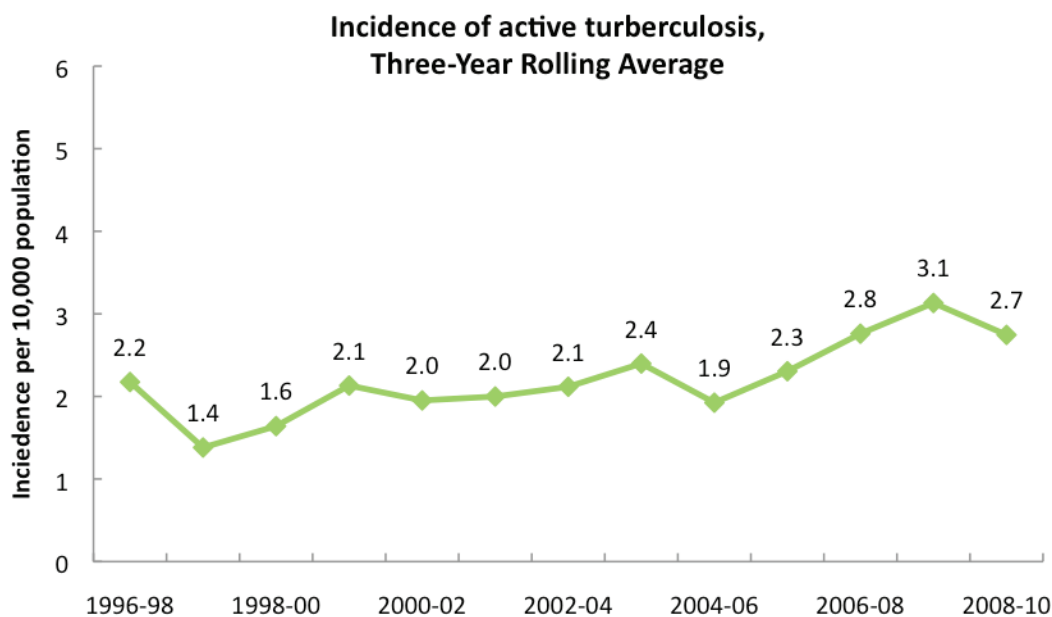
4.1: Tuberculosis

Tuberculosis (TB) is a disease caused by a germ called *Mycobacterium tuberculosis* that often attacks the lungs but can also spread to other parts of the body, including the brain, the lymph nodes and bones. *M. tuberculosis* is a slow-growing organism that also has the ability to remain in a dormant state within the body for many years.

An active TB infection is typically characterized by a persistent cough lasting longer than three weeks, pain in the chest, and coughing up blood or phlegm. Although TB can be treated with antibiotics, it remains a significant health problem and outbreaks still occur in the Northwest Territories.

The incidence of TB in the NWT has increased very little in the last 10 years. However, NWT still remains substantially higher than the national average. In 2008, the NWT rate of TB was more than six times higher than the Canadian rate of 0.48 per 10,000 population. The NWT TB Program actively operates from the Office of the Chief Public Health Officer (OCPHO), ensuring that all suspect and confirmed cases of tuberculosis are investigated and treated as outlined in the “NWT Tuberculosis Manual.”

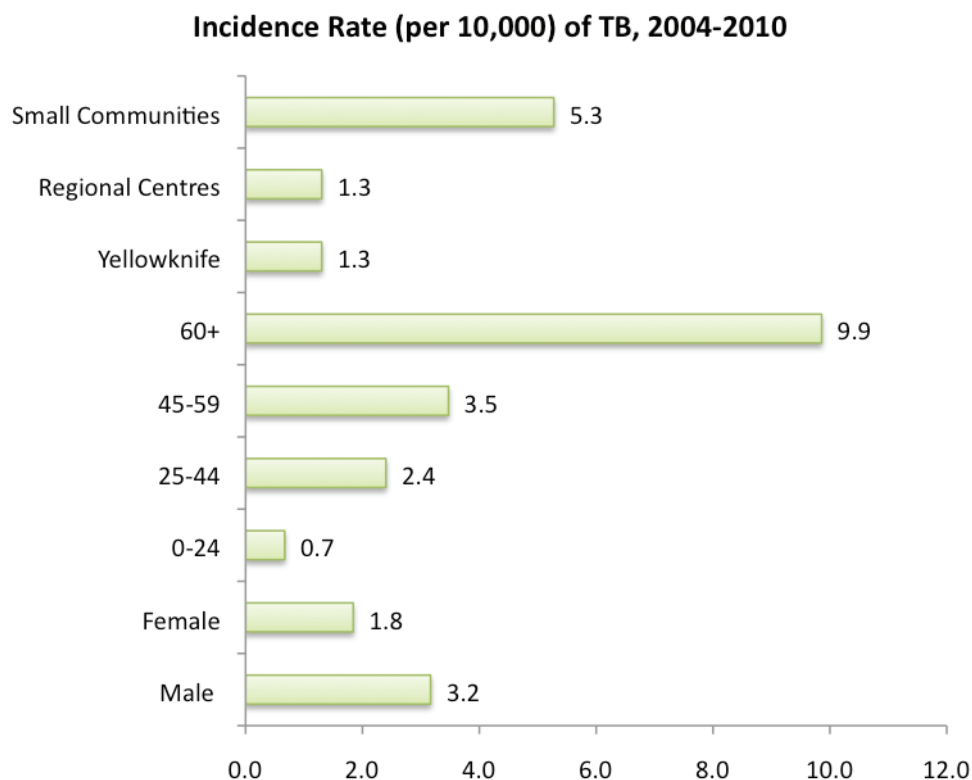
Figure 36: NWT Incidence rates of active TB 1996-2010- 3 Year rolling average



Source: Department of Health and Social Services, NWT

From 2004 to 2010, the cumulative incidence rate of TB increased by age in the NWT. Even though, active TB can be found in all age groups, the risk of developing the disease is significantly higher in seniors. Seniors aged 60 and above had the highest TB rate which was between 3 to 14 times that of other age groups (figure 37).

Figure 37: Incidence of TB by Selected Groups



Source: Department of Health and Social Services, NWT

People living in the smaller communities have historically had higher rates of TB infection than those living in Yellowknife or in the regional centres (Fort Smith, Hay River and Inuvik). Figure 37 shows TB incidence in smaller communities is more than four times the rate of Yellowknife and the regional centres.

The transmission and activation of TB is associated with risk factors such as over-crowded housing, homelessness, smoking, substance abuse, malnutrition and chronic disease. If these factors improve and if directly observed treatment for all latent TB infection occurs, the number of active TB cases with associated outbreaks would decrease dramatically.

4.2: Respiratory Syncytial Virus

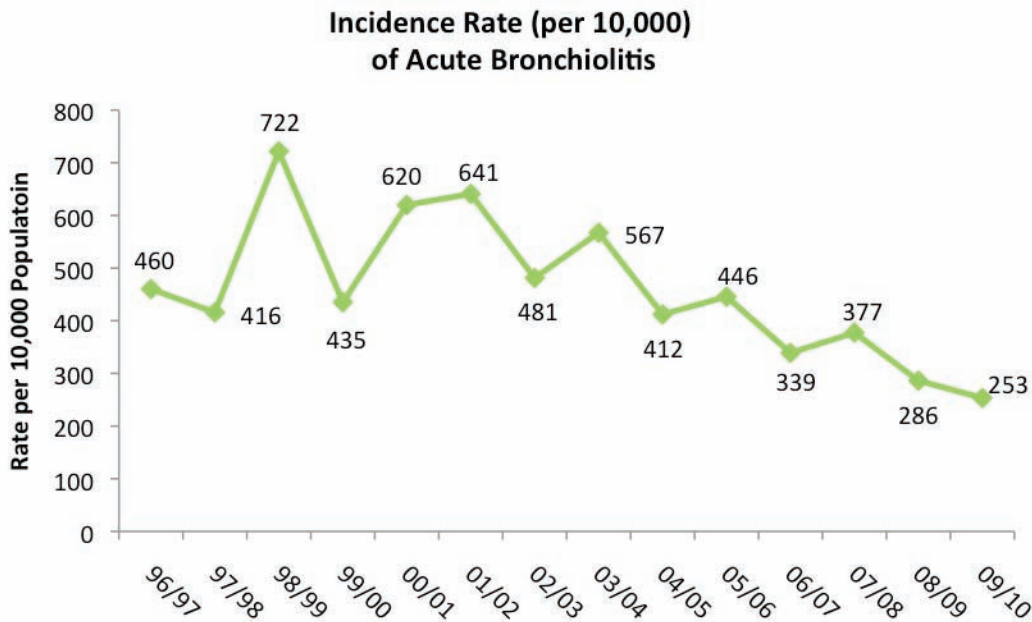
Respiratory syncytial virus (RSV) is a very common virus that leads to mild, cold-like symptoms in adults and older healthy children. It can be more serious in young children less than two years of age especially to those in certain high-risk groups.

RSV is the most common germ that causes lung and airway infections in infants and young children. Most infants have had this infection by age 2 years. Outbreaks of RSV infections most often begin in the fall and run into the spring. In NWT, outbreaks typically occur during October to April months but infections can occur throughout the year.

RSV is primarily introduced by contact of the virus with the mucous membranes of the eyes, mouth or nose but can be spread by direct contact with any contaminated object. It can also spread from a cough or sneeze. RSV can live for a half an hour or more on hands. The virus can also live for up to 5 hours on countertops and for several hours on used tissues. RSV often spreads very rapidly in crowded households and day care centers.

Severe cases of RSV can lead to life threatening infections like pneumonia or bronchiolitis (swelling of the bronchioles, which are the smallest air passages of the lungs). RSV is the principal cause of bronchiolitis in children less than two years of age (figure 38). Hospitalizations for bronchiolitis not only represent the most severe forms of RSV infection but are also markers of community outbreaks.

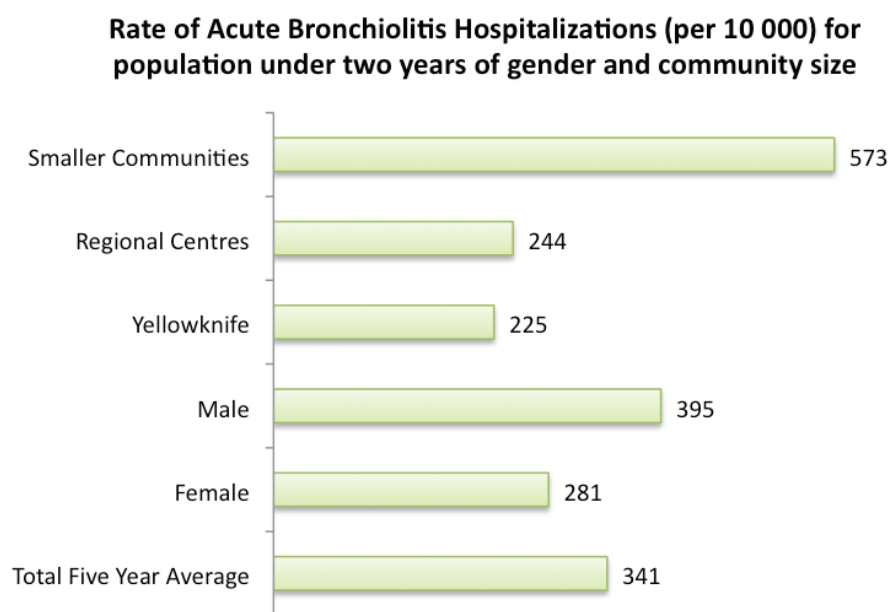
Figure 38: Annual No. Hospitalizations from Acute Bronchiolitis, Age less than 2 Years 1996-2010



Source: Department of Health and Social Services, NWT

Over the five-year period of 2006-2010, the average annual hospitalization rate for male children under 2 years old was 1.4 times as that of the female counterparts (395 vs. 281 per 10,000 population respectively).¹¹ The rate was about 2.5 times as much for the children living in smaller communities compared to those living in Yellowknife and regional centres. Children with bronchiolitis living in smaller communities are more likely to be admitted to hospital than those residing in close proximity to a hospital (such as residents of Yellowknife and Inuvik) due to the travel required for treatment.

Figure 39: Rate of Bronchiolitis Hospitalizations for population under two years of age (per 10,000)



Source: NWT Health and Social Services

4.3: Methicillin Resistant *Staphylococcus Aureus* (MRSA)

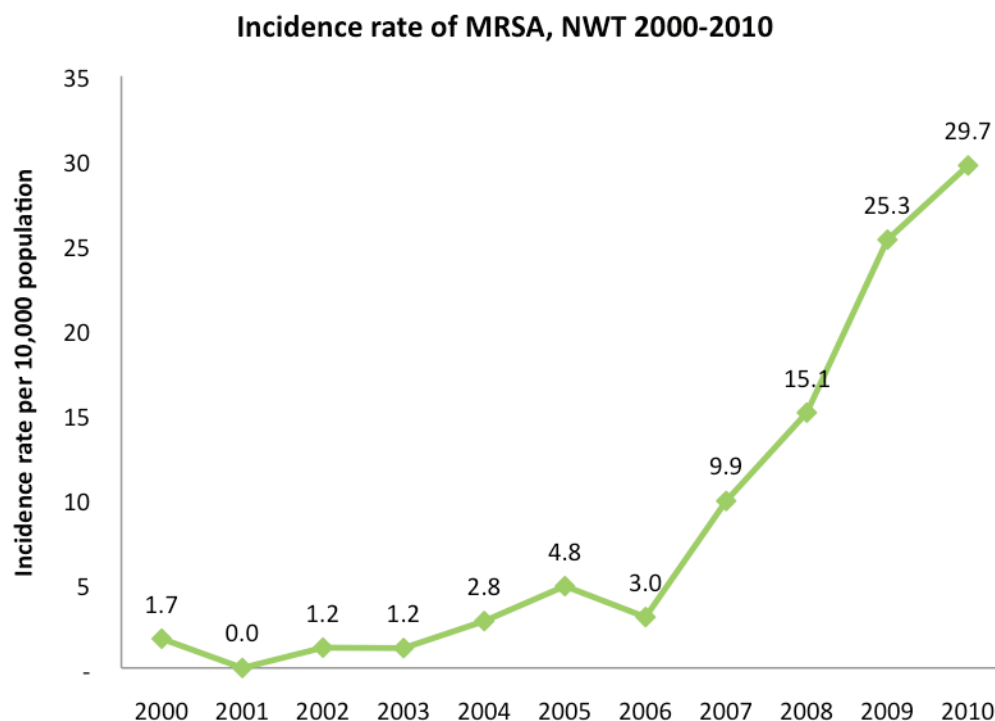
MRSA is a type of drug-resistant bacteria or super bug. Typically, MRSA can lead to infections of the skin or soft tissue. Occasionally, it can develop into life threatening infections of the bloodstream, bones, or lungs. People with weakened immune systems and chronic conditions are more susceptible to these infections. Outbreaks historically occurred in hospitals but recently community-acquired outbreaks have become an increased health concern.

Community acquired MRSA infections can be spread by suboptimal hygiene, overcrowding and the sharing of personal items that may have become contaminated, such as towels or sports equipment.

MRSA is primarily spread by skin to skin contact or by contact with items contaminated by the bacteria. The best way to protect against MRSA infections is by practicing good personal hygiene: frequent hand washing, and making sure that cuts and scrapes are kept clean and covered until healed.

MRSA infection is an emerging issue in the NWT. The incidence of MRSA has increased significantly from zero in 2001 to 28.3 new cases per 10 000 population. The majority of infections were found on the skin surface (single lesions or in multiple sites) or as abscesses.

Figure 40: Incidence of MRSA



Source: NWT Health and Social Services

4.4: Food and Water Borne Illness

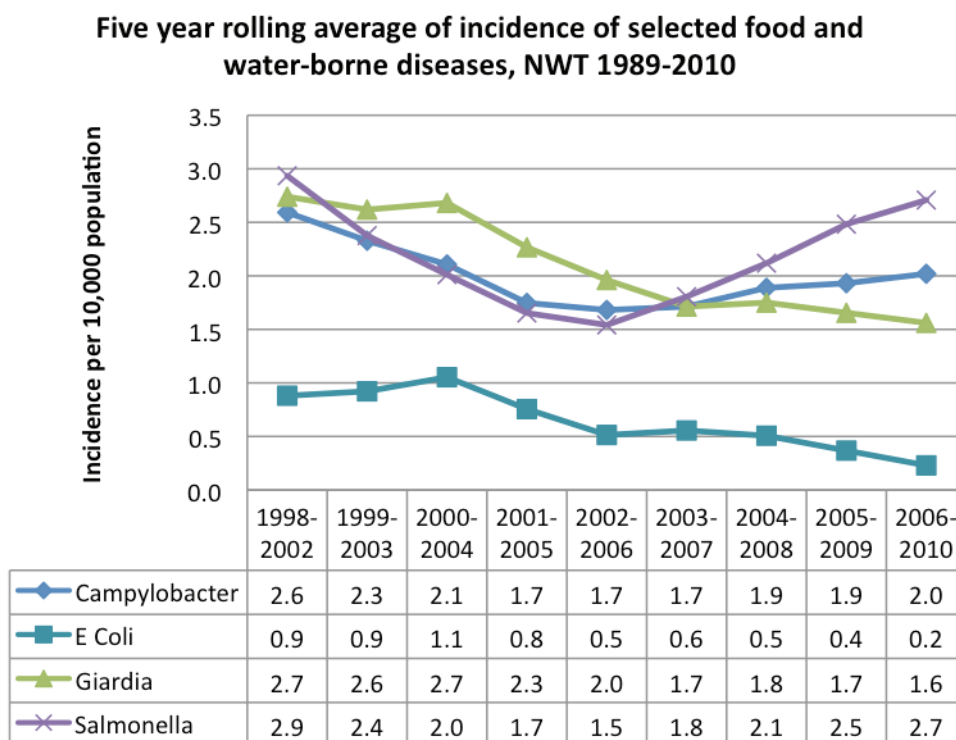
Food and waterborne illness refer to infections acquired through eating or drinking. They are often known as food poisoning and may include symptoms such as stomach cramps, nausea, vomiting, diarrhea, and high fever. In NWT, all food and waterborne outbreaks are investigated by Environmental Health Officers appointed by the Chief Public Health Officer. The most commonly reported infections in the NWT are *Campylobacter*, *E-coli*, *Giardia*, and *Salmonella*.

Campylobacter, *Salmonella*, and *E-coli* bacteria are naturally found in the intestines of animals. They are most commonly ingested through cross contamination during the food preparation process, unsafe food handling, or inadequate hygiene. Like many other harmful bacteria that could be in food, these bacteria are destroyed when food is cooked to adequate internal temperatures.

Giardiasis is an intestinal infection caused by a parasite known as *Giardia lamblia*. *Giardia* outbreaks occur when water supplies become contaminated with raw sewage. The bacteria can spread directly from person to person.

Since the annual number of cases in the Northwest Territories is relatively low for these diseases, the data is presented in five year averages.

Figure 41: Food and Water Borne Diseases, NWT 1989-2010



Source: Department of Health and Social Services, NWT

4.5: Vaccine Preventable Diseases

Immunization is safe, cost-effective and is the best protection against preventable disease. Vaccines work by improving immunity, and reducing the spread of preventable disease. For more information on specific vaccines, please see section 7.1.

Routine vaccinations in the NWT are administered in public health units, or through local health centres according to the NWT Immunization Schedule. This schedule provides recommended vaccines for various stages of childhood and for diseases that require ongoing immunization throughout adult years. Additional vaccines are also provided for travellers, high risk clients and for children and adults who were not previously immunized or partially immunized.

Due to successful vaccination programs, measles, mumps, rubella, diphtheria, tetanus and polio have not been reported during the last decade in the NWT. Continuation of our high immunization rates in the NWT will serve to prevent future disease outbreaks, and minimize associated health care costs.

Despite this, cases of other vaccine preventable diseases such as chicken pox, pertussis and hemophilus influenza type b still occasionally occur in the population, often when an insufficient proportion of the population has been vaccinated.

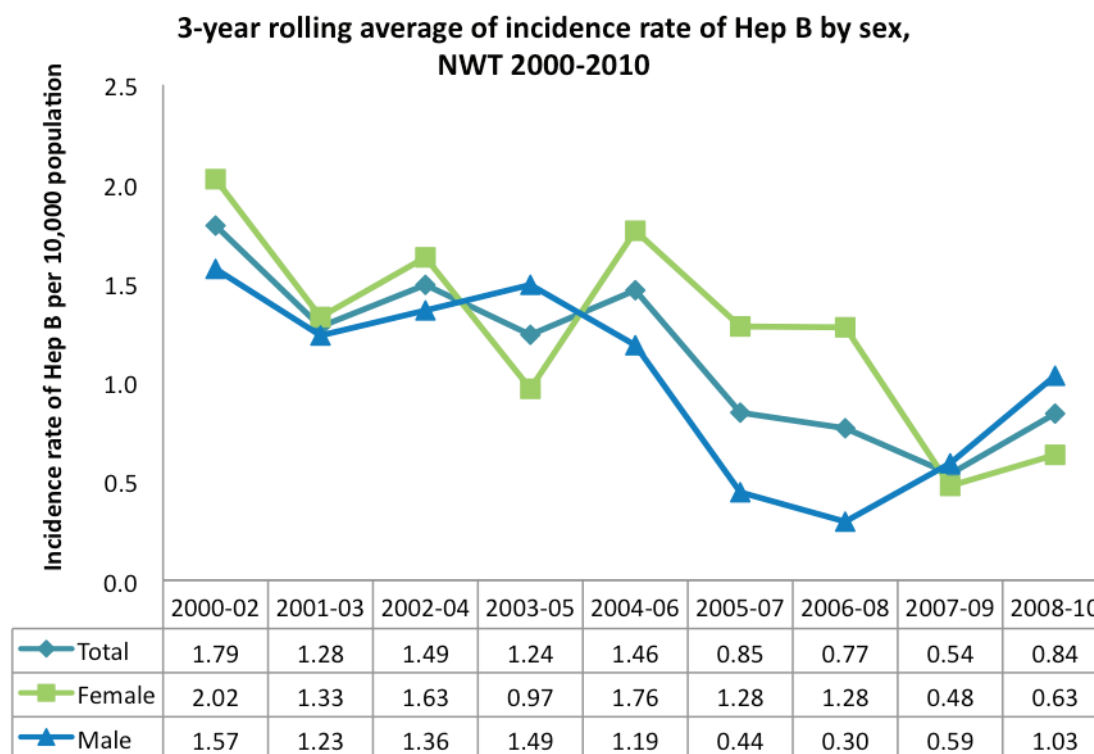
4.5.1: Invasive Haemophilus Influenzae Type B (Hib Disease)

Haemophilus influenzae type b disease, also called Hib disease, is an illness that can cause a potentially fatal brain infection (bacterial meningitis) in young children. Until recently, Hib disease was an important cause of serious, often deadly, infections in children under age 5. However, universal immunization against Hib has led to significant reduction in the incidence of invasive Hib disease in Canada and no cases have been reported to date in fully immunized, healthy adolescents.¹² Between 1989 and 2002 there were 10 cases of invasive Hib infection among children in the NWT. Since 1992, when a vaccine program targeting infants was introduced, there has been a dramatic decline in the number of bacterial meningitis cases due to Hib. In the past ten years, there were three reported cases of invasive Hib in the NWT: one each in 2006, 2007 and 2010.

4.5.2: Hepatitis B

Hepatitis B is a virus that infects the liver, and can be prevented by a vaccine. Hepatitis B can lead to cirrhosis (scarring of the liver), and liver cancer. Approximately 90% of infected adults will clear the virus on their own and will require no treatment. The remaining 10% will carry the virus as a chronic carrier, providing an ongoing risk for transmission to other people through sharing needles, sexual contact or during childbirth. Carriers can be treated with medications to help protect against liver damage. The risk of becoming a chronic carrier is highest in newborns infected by their mothers at birth. The Hepatitis B Vaccine was introduced in the NWT in 1995. Since 2003 there have been no new cases of acute Hepatitis B.

Figure 42: New Cases of Hep B (Chronic) in the NWT (2000-2010)



Source: Department of Health and Social Services, NWT

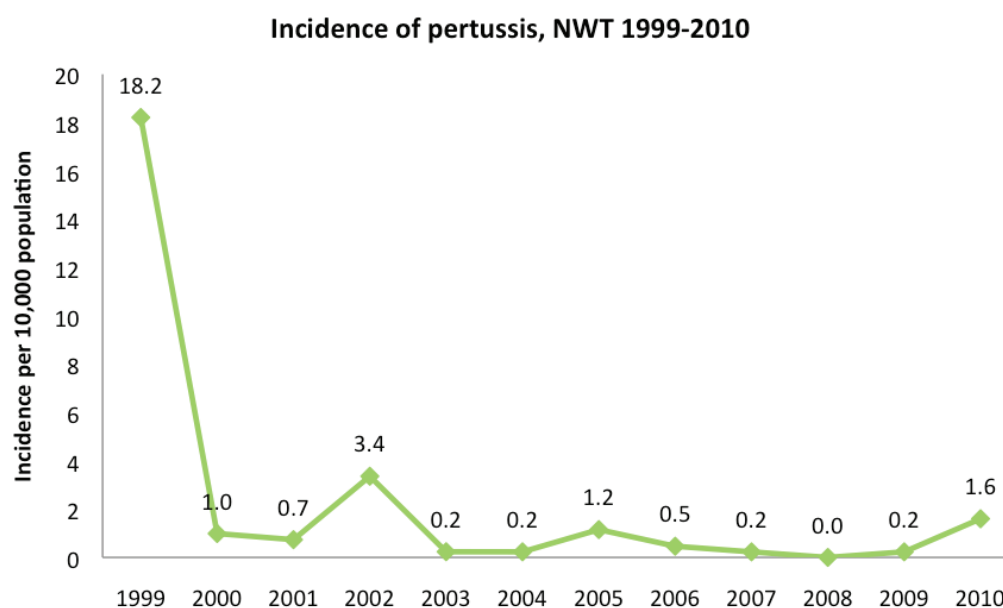
¹³ Source, Health Canada: <http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/diseases-maladies/cough-toux-eng.php>

4.5.3: Pertussis

Pertussis, or whooping cough, is a highly contagious disease of the respiratory tract. It is the most frequently reported vaccine-preventable disease in Canada.¹³ The NWT has a vaccination program for infants starting at the age of two months. Since the introduction of an adolescent/adult pertussis vaccination program in 2000, there has been a sharp decline in the number of pertussis cases in the NWT.

The bacteria, *Bordetella Pertussis*, that causes whooping cough are spread through droplets in the air when an infected person coughs or sneezes. The symptoms of whooping cough include common cold-like symptoms that generally turn into coughing spasms or severe coughing spells that can continue for a duration of six to 12 weeks. The incidence rate of pertussis was generally low in recent years, however, there was an outbreak with 7 cases in 2010.

Figure 43: Incidence of pertussis in the NWT 1999-2010



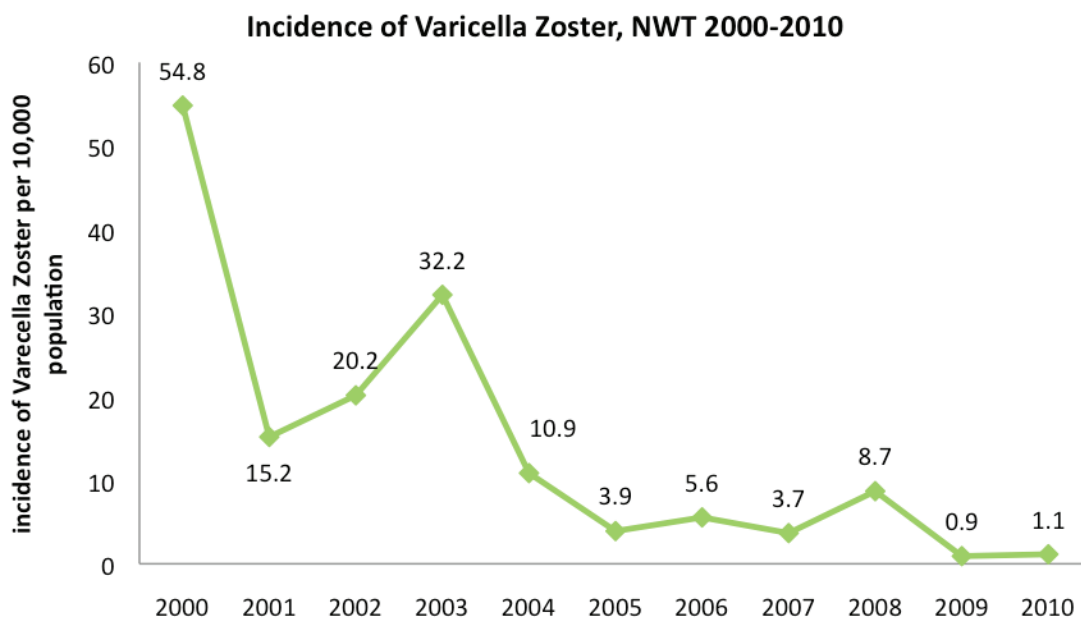
Source: Department of Health and Social Services, NWT

4.5.4: Chickenpox

Chickenpox, an infection caused by the Varicella Zoster virus, is characterized by itchy lesions, a red rash that evolves to fluid-containing vesicles on red bases, and a mild fever. The virus is extremely contagious and is easily spread through direct contact with the lesions or contact with respiratory droplets from the nose and throat of the infected person.

Health Canada estimates that 90% of children who are not vaccinated will catch chickenpox by the age of 12. Most children who have chickenpox recover completely. However, newborns, adults and those with weakened immune systems can suffer serious complications from the virus (such as bacterial infections of the skin, pneumonia or encephalitis which is an inflammation of the brain).

Figure 44: Incidence of Chickenpox per 10,000 population



Source: Department of Health and Social Services, NWT

4.6: Sexually Transmitted Infections and Blood-borne infections

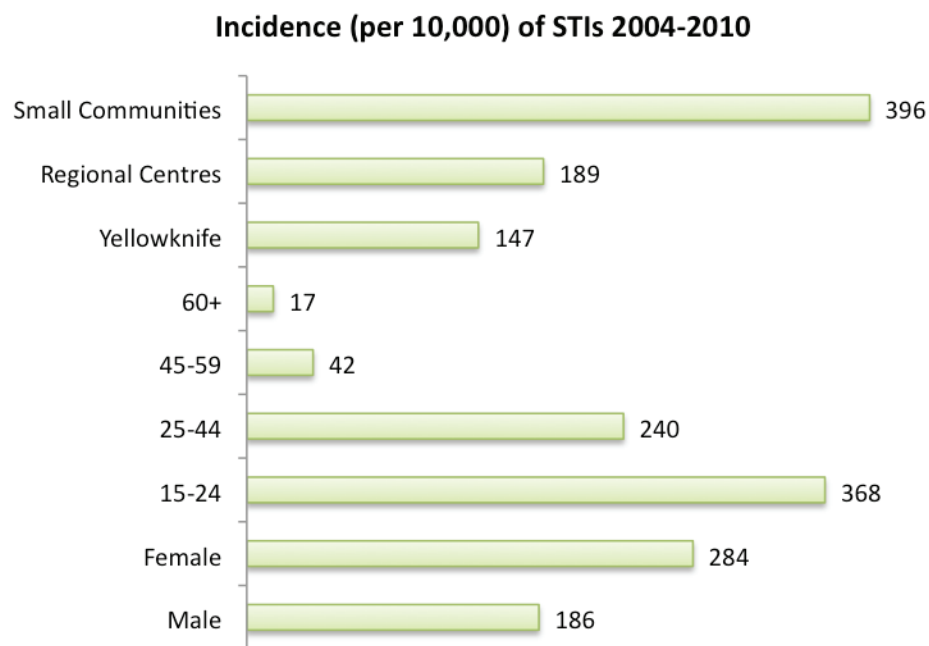
Sexually transmitted infections (STIs)¹⁴ and blood borne infections (hepatitis B, C, HIV) can have a negative impact on the general health, well-being and reproductive capacity of the population. These infections can be transmitted through sexual contact with an infected individual or from mother to child during childbirth or through injection drug use. Several factors increase the risk of contracting an STI or blood-borne infection such as unprotected sexual activity, having multiple partners and injection drug use.

The rate of STIs in the NWT is approximately twelve times higher than the national average especially with youth and young adults, age 15 to 24 who have the highest incidence rates.

Women are being diagnosed for STIs 65% more frequently than men. Anatomical differences place women at greater risk than men of contracting sexually transmitted infections. Age-related physiological changes in the cervix make risk of infection even higher for adolescent women. The presence of an STI can increase a woman's risk of contracting HIV. Thus improved prevention strategies and comprehensive education programs on sexual health are important.

The regional centres and Yellowknife have almost comparable rates of STI's but the smaller NWT communities have double the incidence of Yellowknife.

Figure 45: Incidence of STIs by Sex, Age, and Community Type (per 10,000 Population)



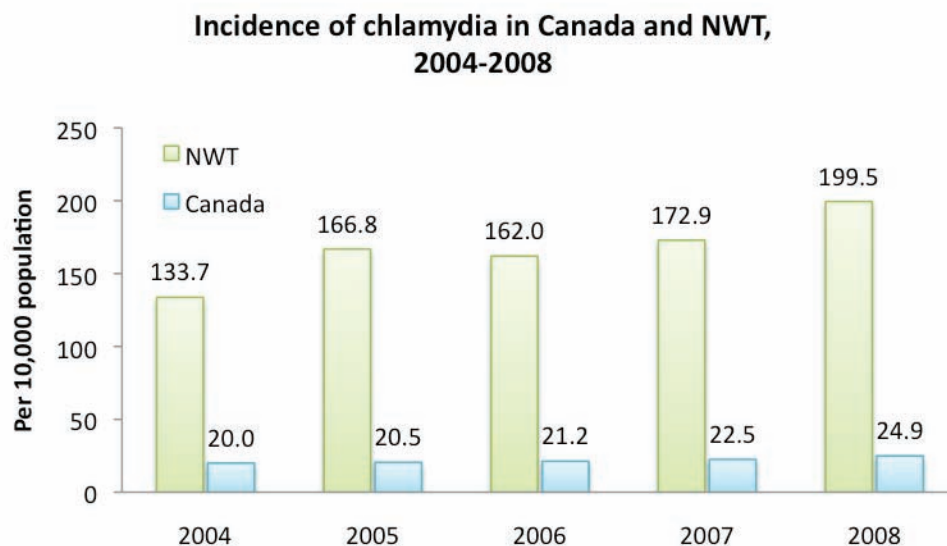
Source: Department of Health and Social Services, NWT

4.6.1: Chlamydia, Gonorrhea and Syphilis

Chlamydia is the most common treatable sexually transmitted infection (STI) in Canada and in the NWT. When left untreated, chlamydia can cause infertility and chronic pelvic pain. People infected with chlamydia are often unaware of their infection and therefore do not seek testing.

In NWT, the incidence of Chlamydia has increased. In 2008 the number of new cases was 200 per 10,000.

Figure 46: Incidence of Chlamydia

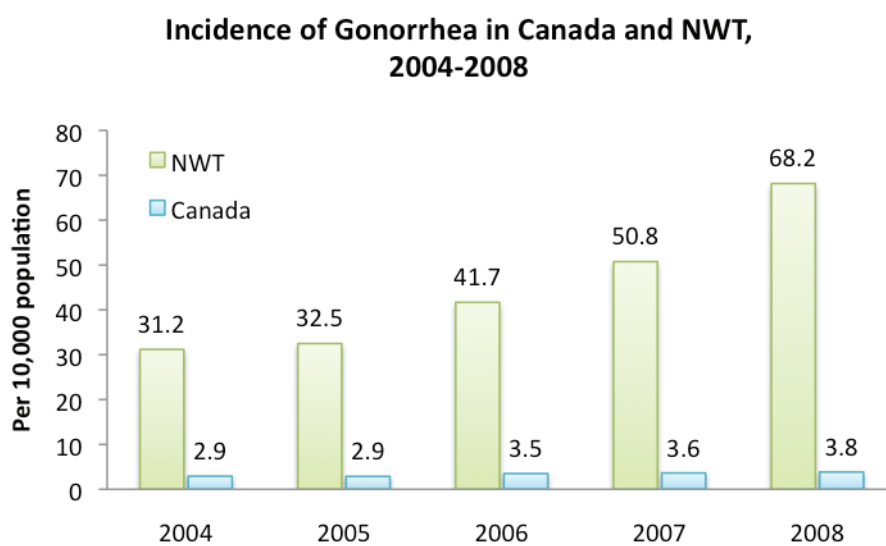


Source: Public Health Agency of Canada

Gonorrhea is another common sexually transmitted infection that can cause infertility, ectopic pregnancy (pregnancy outside the womb), and chronic pelvic pain and is entirely preventable.

In the NWT, the incidence of gonorrhea doubled between 2004 and 2008.

Figure 47: Incidence of Gonorrhea



Source: Public Health Agency of Canada

Syphilis is less common than chlamydia or gonorrhea. The primary means of syphilis transmission is through direct contact with sores found on the external genitals, vagina, anus, or in the rectum. The syphilis bacteria (*Treponema pallidum*) are fragile, so the disease cannot be transmitted through contact with common sources, such as toilet seats, doorknobs, or eating utensils. Syphilis transmission can also occur between an infected pregnant woman and her unborn child.

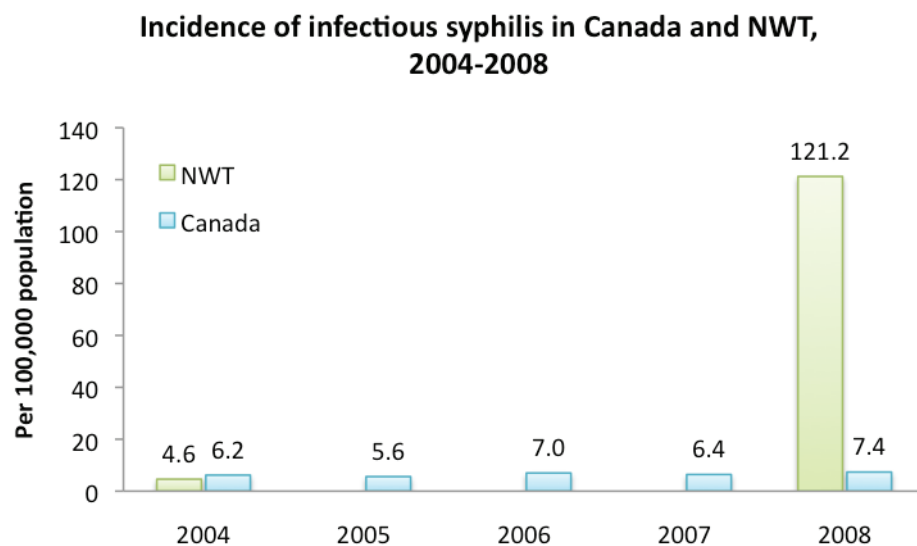
The primary symptom of syphilis is a painless open sore or ulcer that appears at the site where the bacteria first entered the body. Individuals with genital ulcers from syphilis are three to five times more likely to contract HIV.¹⁵ Furthermore, people who are HIV positive and also have syphilis are at greater risk of transmitting the infection to others.

Of particular concern is congenital syphilis that occurs when the infection is transmitted from a pregnant woman to her unborn child. Congenital syphilis can lead to long-term mental and physical health problems and sometimes death.

In 2008, the NWT experienced an outbreak of syphilis in smaller NWT communities and among a high-risk transient population in Yellowknife. Prior to 2008, the incidence of syphilis was less than the national average (figure 48). Since 2008, the incidence has declined from 121.2 to 1.8 cases per 10,000 population.

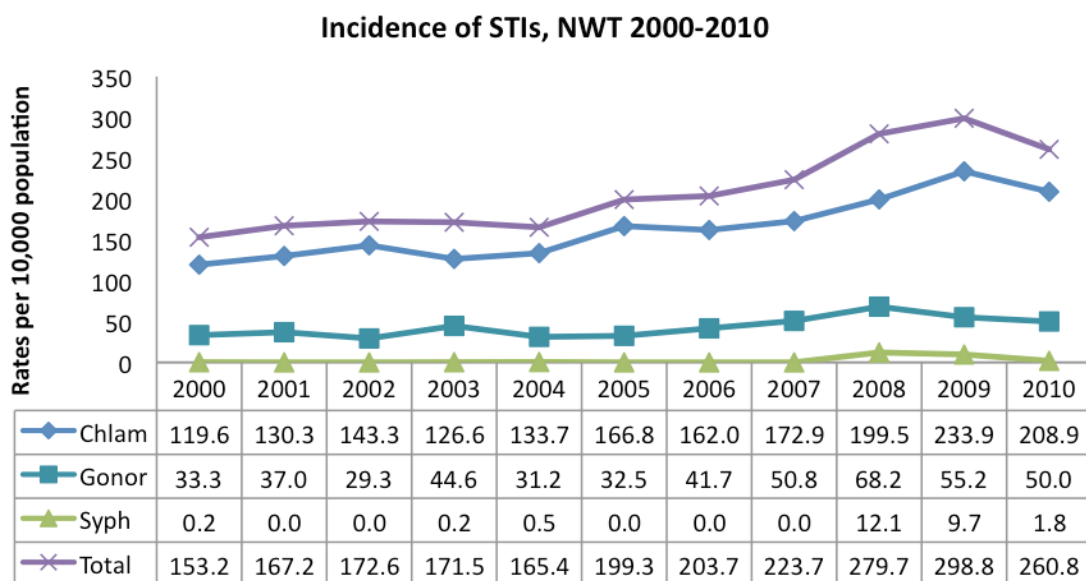
¹⁵ Source: Health Canada, <http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/diseases-maladies/syphilis-eng.php>

Figure 48: Incidence of Syphilis



Source: Public Health Agency of Canada

Figure 49: Incidence of STI's Combined



Source: Public Health Agency of Canada

4.6.2: Human Immunodeficiency Virus (HIV)/ Acquired Immunodeficiency Syndrome (AIDS)

The Human Immunodeficiency Virus (HIV) is the virus that causes Acquired Immunodeficiency Syndrome (AIDS). HIV attacks the immune system, resulting in increased vulnerability to other infections and cancers. The median time for HIV to develop into AIDS now exceeds 10 years because of advancements in therapy. Although medication can slow the course of the disease, there is no known cure for HIV/AIDS so prevention is the key to controlling HIV and AIDS.

HIV is transmitted by unprotected sexual intercourse, injection drug use, exposure to contaminated blood products and during pregnancy, childbirth or breast-feeding. Between 1987 and 2009, there were 38 cases of HIV reported in the NWT. Of these, 76% occurred among males, and 87% were reported among those aged 20-49 years.

In the NWT 68% (26 of the 38) cases were transmitted via unprotected sexual intercourse, followed by injection drug 18% (7 of 38). High incidence of STIs are often associated with high incidence of HIV.

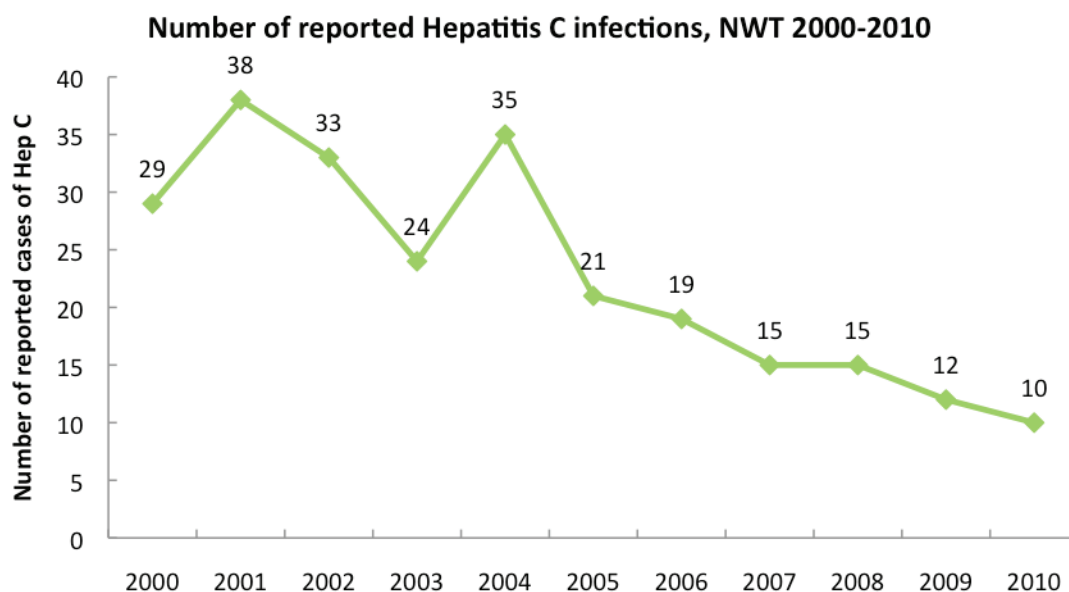
4.6.3: Hepatitis C

Hepatitis C is an infection of the liver caused by the hepatitis C virus (HCV). The virus is spread by direct exposure to blood infected with HCV. Exposure to the HCV virus typically occurs from sharing needles (drug use, tattoos) or by having unprotected sex with an infected partner. Prior to 1990 transmission occurred from contaminated blood transfusions and organ transplants. Hepatitis C is not spread by hugging, kissing or shaking hands; It is not found in food or water.

Approximately 85% of people with HCV carry the virus for the rest of their lives. People with acute HCV usually show no evidence of having the disease. Those with a chronic infection may also remain free of symptoms for many years. Close to a quarter million Canadians are infected with chronic HCV. Two out of five of these individuals do not know they are infected and remain undiagnosed.¹⁶ There is no vaccine for HCV. Early diagnosis is important so that medical treatment can be initiated to avoid serious liver damage and further spread of the virus.

The number of new cases of HCV in the NWT has declined in the past ten years (figure 50).

Figure 50: Incidence of Hepatitis C, NWT 2000-2010



Source: NWT Department of Health and Social Services

¹⁶ <http://www.phac-aspc.gc.ca/hepc/index-eng.php#wn>

5: Mental Health and Addictions

Mental health is a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community (WHO). Studies indicate that approximately one in three Canadians will experience a mental health problem in their lifetime and more than half will never seek treatment. People living with mental illness can face stigma and experience marginalization in their communities and at times, receive inadequate care and follow-up in the health care system.

Mental health and addictions are intertwined and it is often impossible to identify which is the cause of the other. People with mental disorders often self-medicate and those with substance abuse issues often have underlying mental health issues. Individuals with long-term mental health and addictions are more susceptible to acute and chronic diseases.

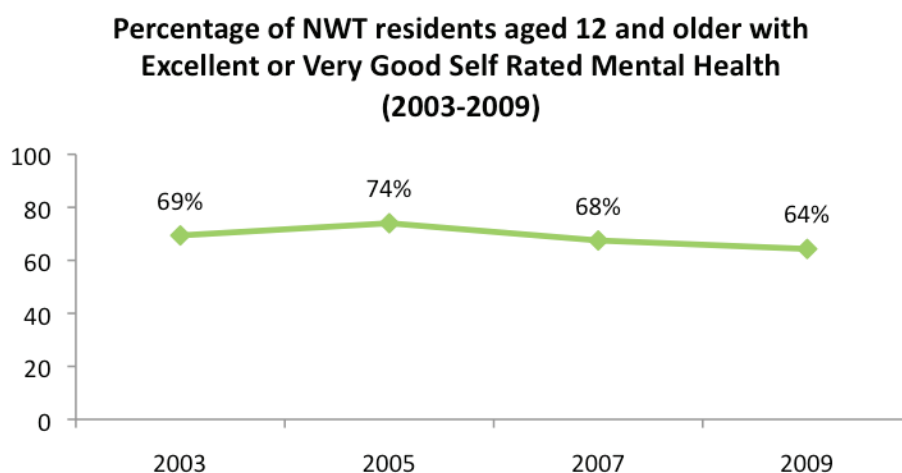
High incidence of mental health and addictions continue to be a problem in the NWT. Rates of substance abuse, suicide and injuries are higher in the NWT than national averages. There are also a significant number of individuals who suffer with mental health issues but go undiagnosed.

Social issues such as poverty, homelessness, loss of traditional lifestyle and culture are contributing factors resulting in a high incidence of mental health and addiction issues. Individuals suffering with chronic mental health and addictions are more likely to experience related health conditions requiring costly medical treatment and care. Conversely, individuals with appropriate supports and well managed mental health and addictions issues can present with fewer medical and care needs and are ultimately more productive members of their families and communities.

5.1: Self-Rated Mental Health

According to the Canadian Community Health Survey, in the NWT, 64% of the population rated their mental health as excellent or very good, a lower proportion than the Canadian average of 73%.

Figure 51: Self Rated Mental Health Time Trend



The proportion of people in Yellowknife who reported excellent or very good mental health was higher (70%) than that in small communities (62%). People 65 years and older had the lowest rating of excellent or very good and people between the ages of 25-44 had the highest rating.

Figure 52: Self Rated Mental Health by Community Size, Sex and Age



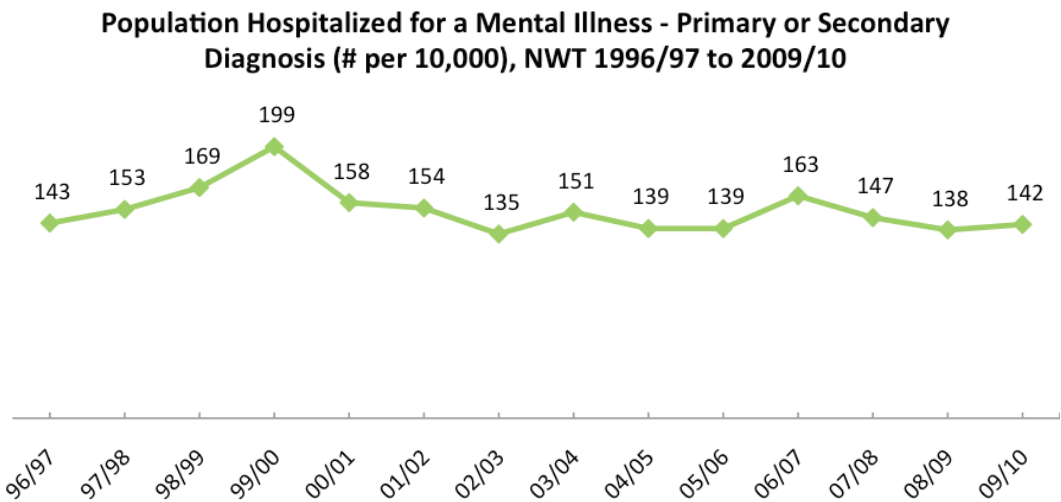
Source: CCHS Share File
For ages 12 and older

5.2: Mental Illness Hospitalizations

Most people with mental illness are treated in the community as outpatients. Hospitalized cases represent the most severe cases that cannot be managed in the community.

The proportion of NWT residents hospitalized for a mental illness per year between 1996/97 and 2009/10 remained stable with only a temporary increase in the late 1990s. In 2009/10 approximately 620 people or 1.4% of the population were hospitalized for a mental illness.

Figure 53: Population Hospitalized due to Mental Illness



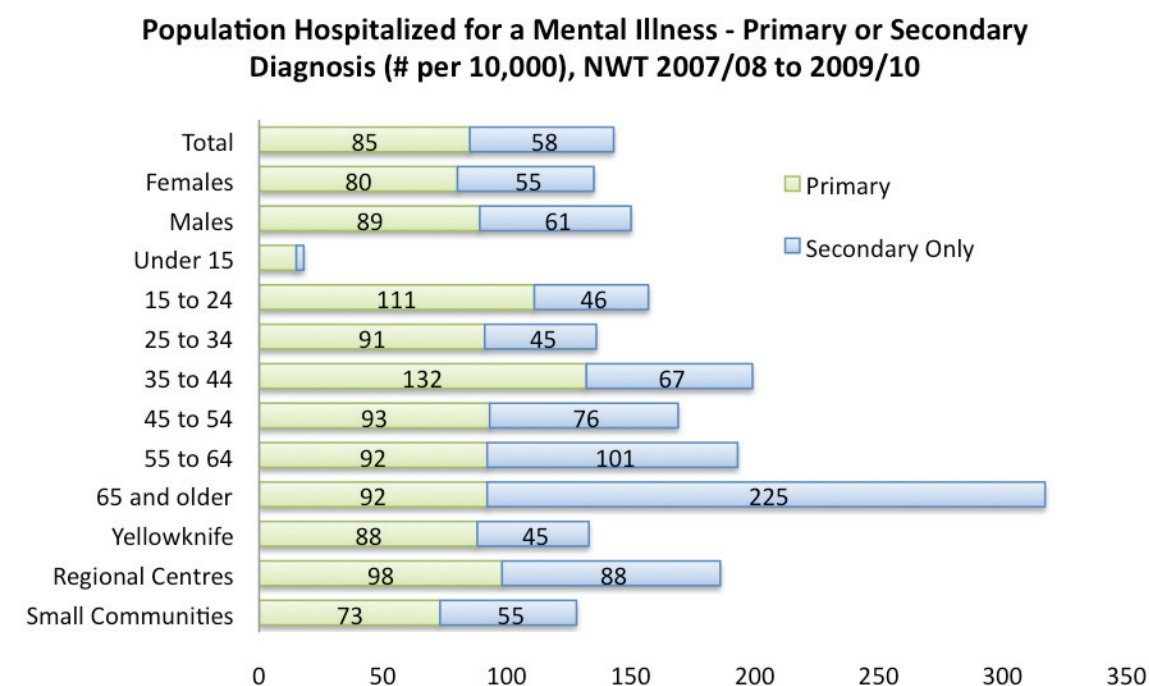
Source: CIHI, Department of Health and Social Services NWT, Discharge Abstract Database

A three-year average, 2007/08 to 2009/10, is used to allow for greater detail in analysis. The rates have been further broken out by whether the mental health issue was the main reason for admission or a secondary diagnosis.

Men are slightly more likely to be hospitalized than women are. Seniors are the highest rate at 317 per 10,000 and those under 15 years old the lowest at 19 per 10,000. When only the primary diagnosis is counted, the rate of seniors hospitalized for a mental illness drops to 92 per 10,000 – similar to the average of 85 per 10,000 for the entire population.

When analysed by community size, Yellowknife residents were hospitalized for mental health issues at rate of 132 per 10,000 per year on average between 2007 and 2010, compared to 186 for residents of regional centres and 128 for residents of smaller communities.

Figure 54: Population Hospitalized due to Mental Illness by Sex, Age, and Community Size



Sources: CIHI, Department of Health and Social Services, NWT, and Discharge Abstract

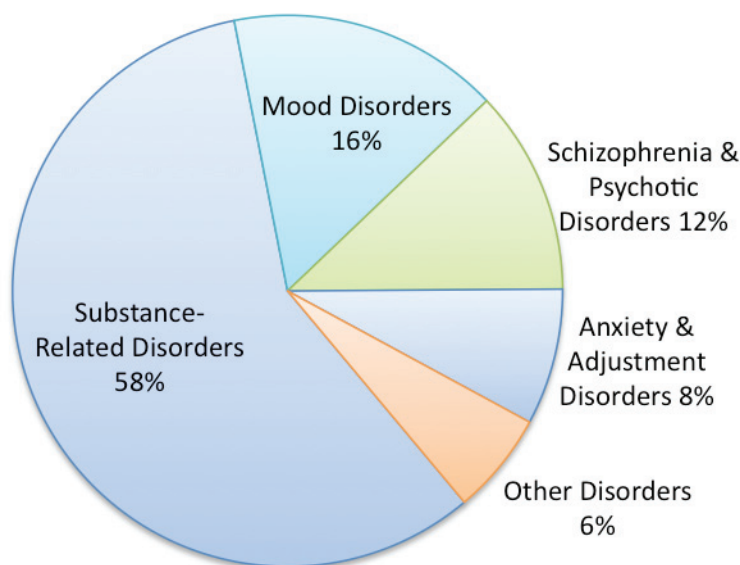
This section investigates the number of mental health hospitalizations by primary diagnosis only.¹⁷ These hospitalizations include people who have been hospitalized more than once in a year, as well as transfers between NWT and out of territory hospitals.

Approximately 58% of mental illness hospitalizations between 2007/08 and 2009/10 were for substance abuse – primarily alcohol-related. Mood disorders, including conditions such as depression and bipolar disorders represented 16% of all hospitalizations. Schizophrenia (12%) followed by anxiety and adjustment disorders (8%) were the next most common diagnoses. The remaining 6% of mental health hospitalizations were due to issues related to personality disorders and dementia.

¹⁷ Mental health issues have been categorized according to the International Classification of Diseases – Tenth Revision (ICD10) and an adjusted version of sub-categories (i.e. mental illness type) created by the Canadian Institute for Health Information, *Hospital Mental Health Services in Canada, 2005-2006*.

Figure 55: Type of Mental Illness Hospitalizations

Mental Illness Hospitalizations by Type, NWT 2007/08 to 2009/10



Source: CIHI, Department of Health and Social Services NWT, Discharge Abstract Database

Substance-related disorders, primarily the abuse of alcohol or withdrawal from alcohol were the main reasons for most mental health hospitalizations for both women and men estimated at 48% and 65%, respectively. For women, mood disorders (primarily depression) made up the second largest group of hospitalizations at 24%, in contrast to schizophrenia for men at 14%.

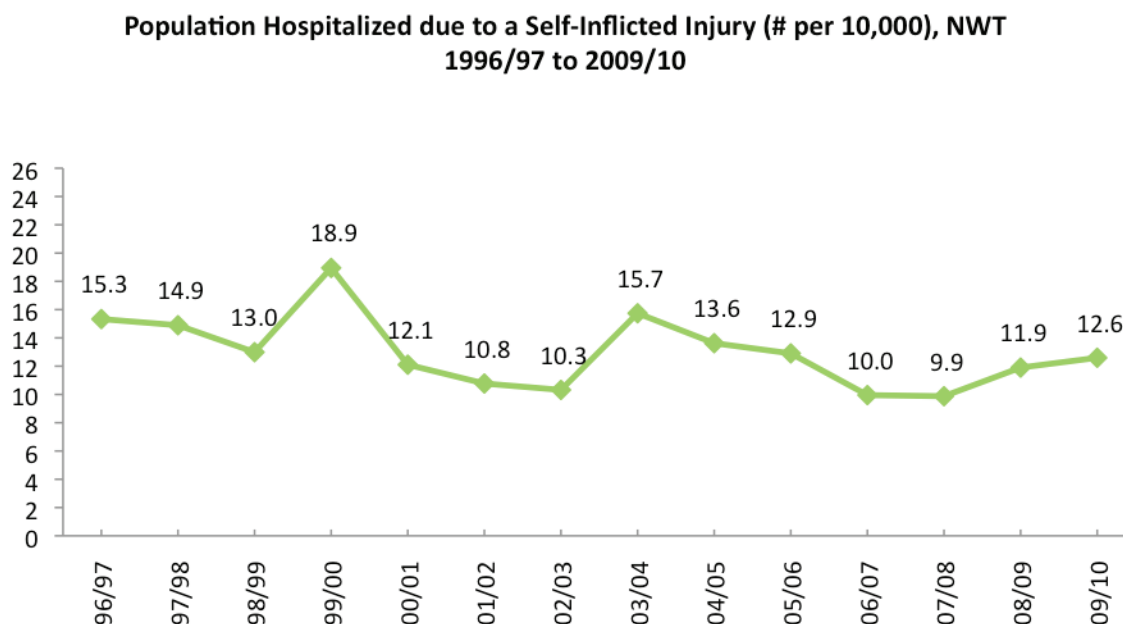
Substance-related issues were also the main reason for mental health hospitalizations for all age groups with 45 to 54-year-olds having the highest proportion at 67%. For those under age 15 and age 35 to 64, the second highest proportion of mental health hospitalizations were mood disorders (depression and bipolar). Schizophrenia was the second most common reason for 15 to 34-year-olds and organic disorders (primarily dementia and delirium) for those 65 and older.

5.3: Suicidal Behaviour and Suicide

Suicidal behaviour is a sign of serious distress and sometimes is an outcome of mental illness such as depression as well as substance abuse. Assessing the incidence of attempted suicide is very difficult. Unless a suicide attempt leads to a serious injury requiring hospitalization, then the individual may receive treatment in the community, or he/she may not see a health professional at all. Also, while most self-inflicted injury hospitalizations are for prescription (e.g. antidepressants) and non-prescription (e.g. aspirin and acetaminophen) drug overdoses, some hospitalizations may be due to self-harm that was not intended to be a suicide attempt (e.g., burning or cutting one's hands or arms). With the above limitations considered, intentional or self-inflicted injury hospitalizations do provide some indication of the rate of suicide attempts.

Figure 56 refers to individuals who have been hospitalized at least once per year due to a self-inflicted injury as the primary reason for the hospitalization. The rate of hospitalization has fluctuated considerably over this 14-year period – ranging from a low of 9.9 in 2007/08 to a high of 18.9 in 1999/00. Given the relatively small number of individuals involved, the spikes and drops in rates may be due to random fluctuation and should be interpreted with caution.

Figure 56: Population Hospitalized due to Self-Inflicted Injury



Source: CIHI, Department of Health and Social Services NWT, Discharge Abstract Database

Those hospitalized for a self-inflicted injury by sex and age for the three-year period 2007/08 to 2009/10.

On average, females are more than twice as likely to be hospitalized for a self-inflicted injury than males – 17 versus 6.3 per 10,000.

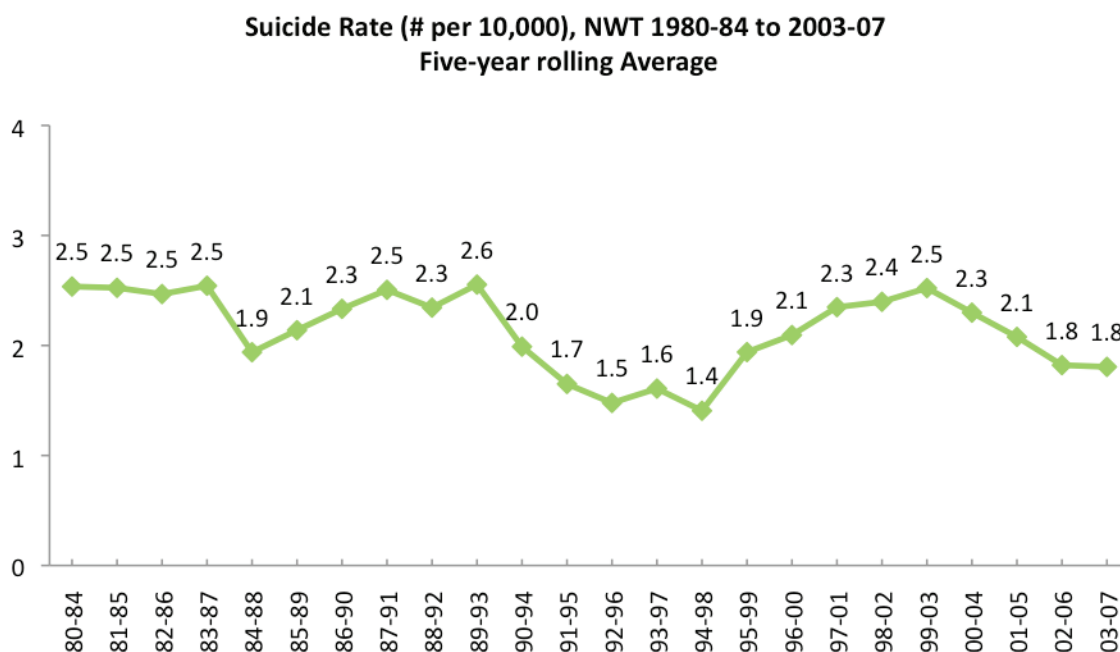
Given the relatively small number of cases that occur each year in the NWT, the following analysis needs to be treated with caution as rates may be unstable and fluctuating from year to year, making it difficult to identify trends.

Between 2003 and 2007, 39 NWT residents committed suicide, for an overall average rate of 1.8 per 10,000 (population) per year. This was approximately 65% higher than the 2005 national rate of 1.1 per 10,000.¹⁸

Overall, suicide rates have not moved in any one particular direction over the years presented.

¹⁸ The 2005 Canadian suicide rate has been age-standardized to the NWT population. Source: Statistics Canada and NWT Bureau of Statistics.

Figure 57: Suicide Rate per 10,000



Source: Department of Health and Social Services NWT, NWT Bureau of Statistics, Statistics Canada

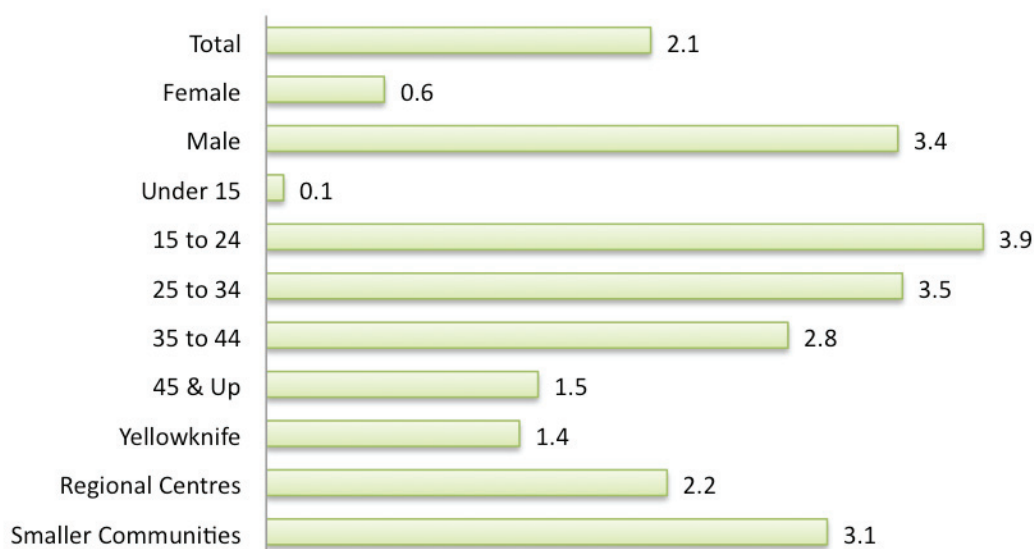
In the early 1980s, the rate hovered at 2.5 suicides per 10,000, dropping slightly during the middle of the 1980s only to increase by the end of that decade. At the beginning of the 1990s, the rate began to drop, reaching a low of about 1.5 per 10,000 by the mid 1990s. Once again, the rate increased from the mid 1990s into the early 2000s reaching around 2.5 per 10,000. Since the beginning of the decade, the rate dropped off slightly to 1.8 deaths per 10,000 in 2003-07.

Between 1998 and 2007, suicide rates were higher in males than females, with males being five times more likely to commit suicide than females (3.4 vs. 0.6 per 10,000). Females are more likely than males to be hospitalized for a self-inflicted injury. Men had higher suicide rate while women had higher attempted suicide rate which may in part be that males generally used more lethal means (firearms and hanging).¹⁹

¹⁹ Health Canada, A Report on Mental Illnesses in Canada (Ottawa, 2002).

Figure 58: Suicide Rate per 10,000 by Sex, Age, and Community Type

Suicide Rates (# per 10,000) by Selected Groups, NWT 1998-2007 Average



Sources: NWT Health and Social Services, NWT Bureau of Statistics and Statistics Canada.

NWT youth and adults, age 15 to 44, were twice as likely to commit suicide, than residents age 44 and older. Between 1998 and 2007, the suicide rate for those aged 15 to 24 was 3.9 per 10,000 and for those 25 to 34 it was similar at 3.5 per 10,000. In contrast, the rate for residents age 45 and older was 1.5 per 10,000.

The suicide rate for residents of the smaller communities at 3.1 per 10,000 was more than twice that for residents of Yellowknife at 1.4 per 10,000.

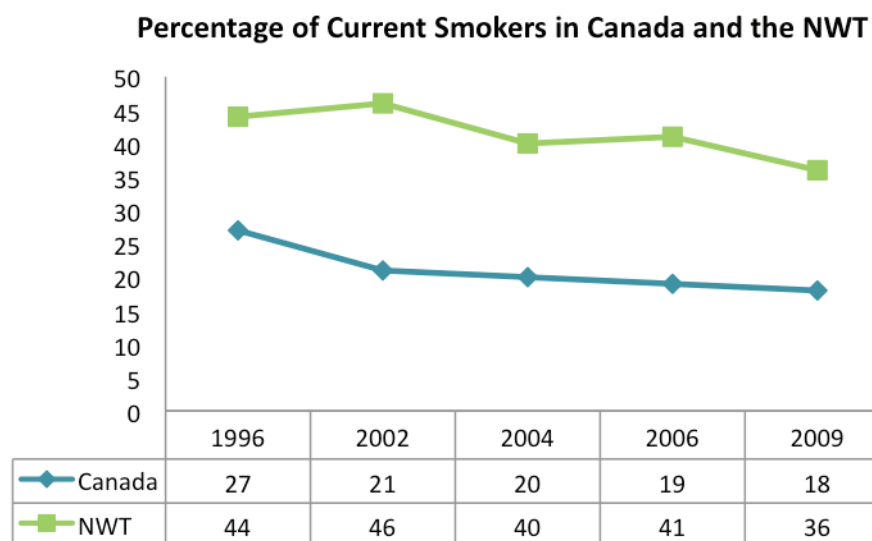
5.4: Tobacco

Tobacco use is a serious threat to health. The effects of tobacco smoke, directly inhaled or second-hand smoke have been linked to many diseases and conditions including cancers, cardiovascular diseases and respiratory problems. Smoking remains the leading cause of preventable deaths in Canada.²⁰

The prevalence of smoking in the NWT is consistently double that of the Canadian rate. In 2009, the Canadian smoking rate for individuals 15 years and older was 18% compared to the NWT rate of 36%.

Approximately one in five NWT residents are exposed to second hand smoke in their homes every day or almost every day. Daily smokers are six times more likely to live in a home where regular indoor smoking occurs. At 20%, the NWT rate of exposure to second hand smoke in the home is significantly higher than the Canadian rate of 6.2%. (CTUMS 2009)

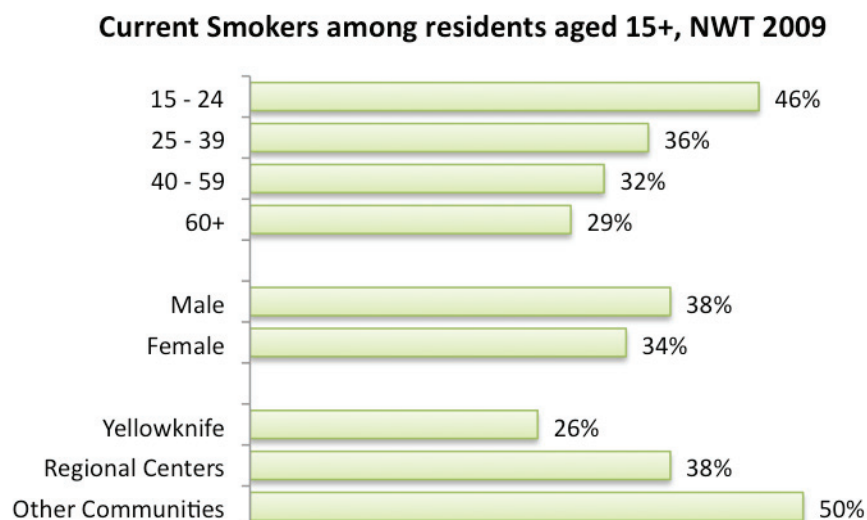
Figure 59: Current smokers 15 years and over, NWT and Canada 1996 - 2009



Source: NWT Addiction Surveys, Health Canada (CTUMS), Statistics Canada.

Smoking rates for males are slightly higher than for females. Smoking rates are higher among younger people. Smoking prevalence is lower in Yellowknife than in the regional centres and other NWT communities. Fifty percent of residents 15 years and older living in smaller communities and 38% in Fort Smith, Hay River and Inuvik indicated they smoked compared to 26% in Yellowknife.

Figure 60: Current Smokers among residents aged 15 years of age and older, NWT 2009



Source: 2009 NWT Addictions Report

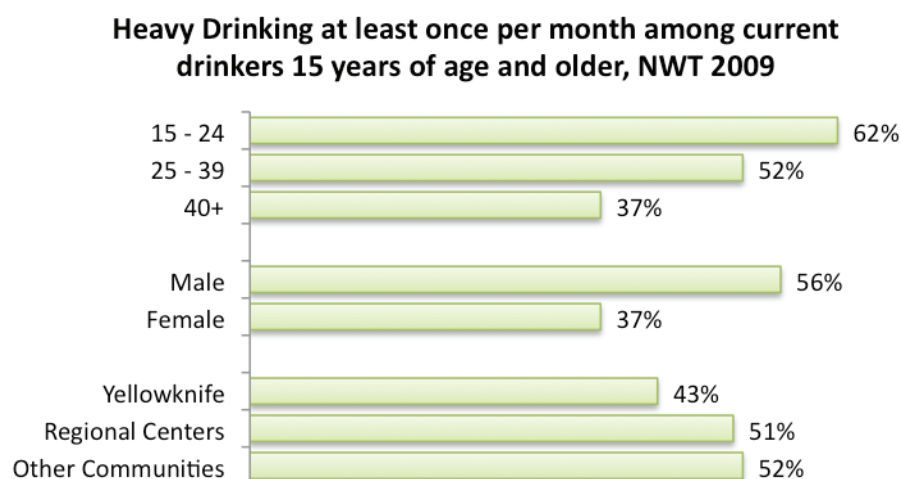
5.5: Alcohol

While the impact of moderate drinking continues to be debated, there is no doubt that regular heavy drinking contributes to a large number of negative outcomes. Although the majority of residents who drink alcohol do so in moderation and without causing harm, alcohol misuse affects many NWT residents. Heavy drinking is linked to motor vehicle accidents, Fetal Alcohol Spectrum Disorder, mental illness, diseases of the cardiovascular system and many social problems.

5.5.1: Heavy drinking

People who have five or more drinks at one sitting, at least once per month, are considered heavy drinkers by the CCHS definition. The risk of alcohol-related problems increases with heavy drinking.

Figure 61: Heavy Drinking by selected group



Source: 2009 NWT Addictions Report

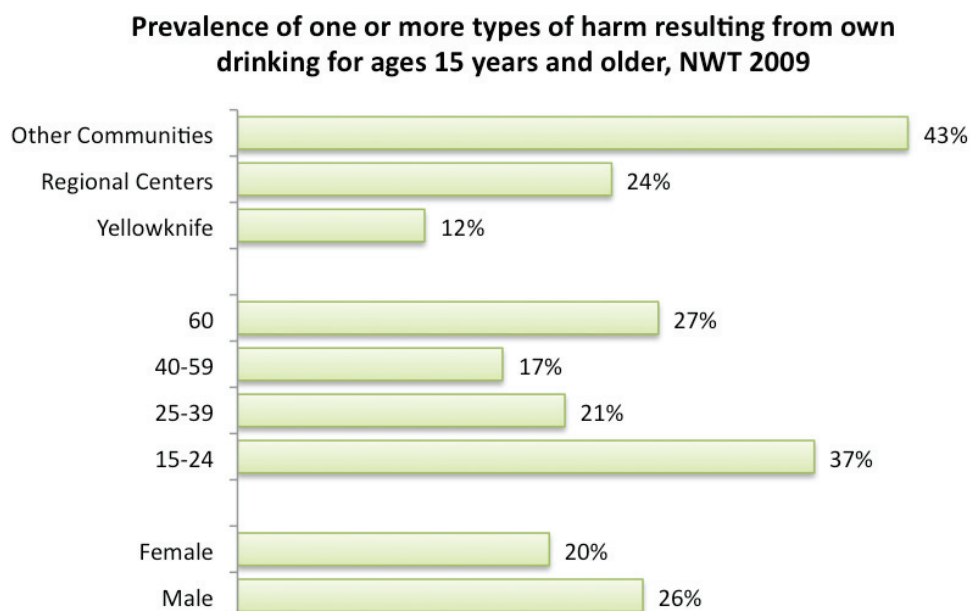
5.5.2: Alcohol-related problems

Although most alcohol consumption occurs without harm and most people do not have health issues related to alcohol, adverse experiences do occur, especially when measured over one's lifetime.

In the 2004, 2006 and 2009 NWT Addiction Surveys, current drinkers were asked if their drinking had harmful effects on their friendships, physical health, home life/marriage, work/studies or created financial, legal, housing and learning difficulties.

In 2009, 23% of current drinkers age 15 and older reported at least one type of harm as a result of their drinking. Harmful effects on friendships or social life (14%), physical health (10%) and home life or marriage (8%) were the most common types of self-reported harm in the past year.

Figure 62: Harm resulting from own drinking, NWT 2009



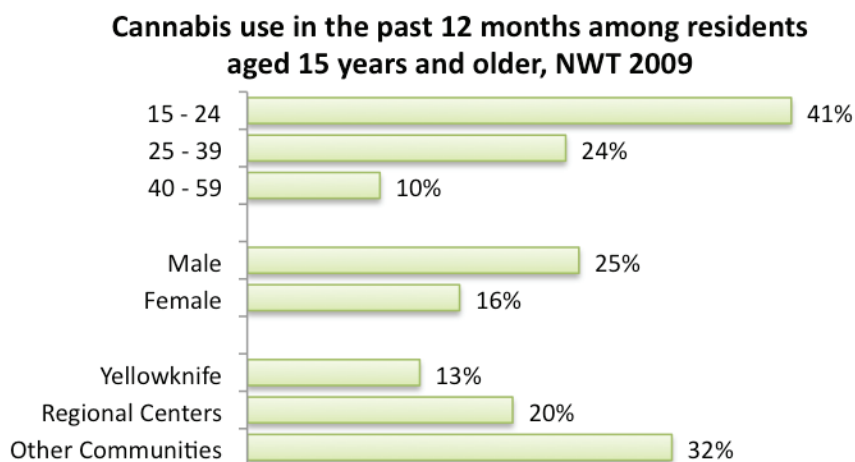
Source: 2009 NWT Addictions Report

5.6: Drugs

Drug abuse may have similar impacts as alcohol abuse including impact on the health and social services system, productivity in the workplace and impacts on families. There are also the additional crime, law enforcement and criminal justice costs associated with the fact that any use of cannabis (marijuana) or cocaine/crack, ecstasy, and hallucinogens is considered illegal.²¹

In the past year, NWT residents 15 years and older reported using cannabis at a rate of 20%, almost double the Canadian rate of 11% of the population.

Figure 63: Cannabis use in the NWT

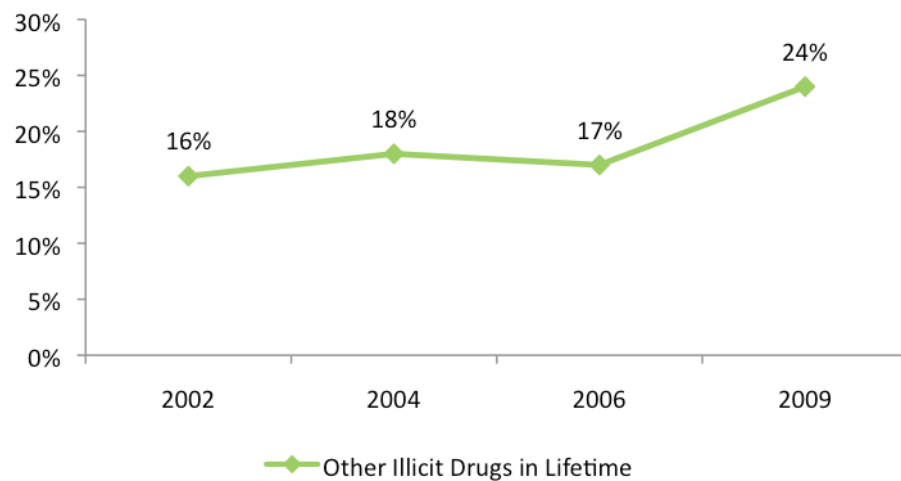


Source: 2009 NWT Addictions Report

²¹ International Guidelines for the Estimation of Avoidable Costs of Substance Abuse, November 2006.

NWT residents also reported trying the following types of drugs at least once in their lifetime: cocaine/crack, hallucinogens (magic mushrooms, PCP or LSD/acid), speed, ecstasy and heroin.

Figure 64: Cocaine/crack, hallucinogens, speed, ecstasy and heroin “ever used in lifetime” among residents aged 15+, NWT 2002 - 2009



Source: 2009 NWT Addictions Report

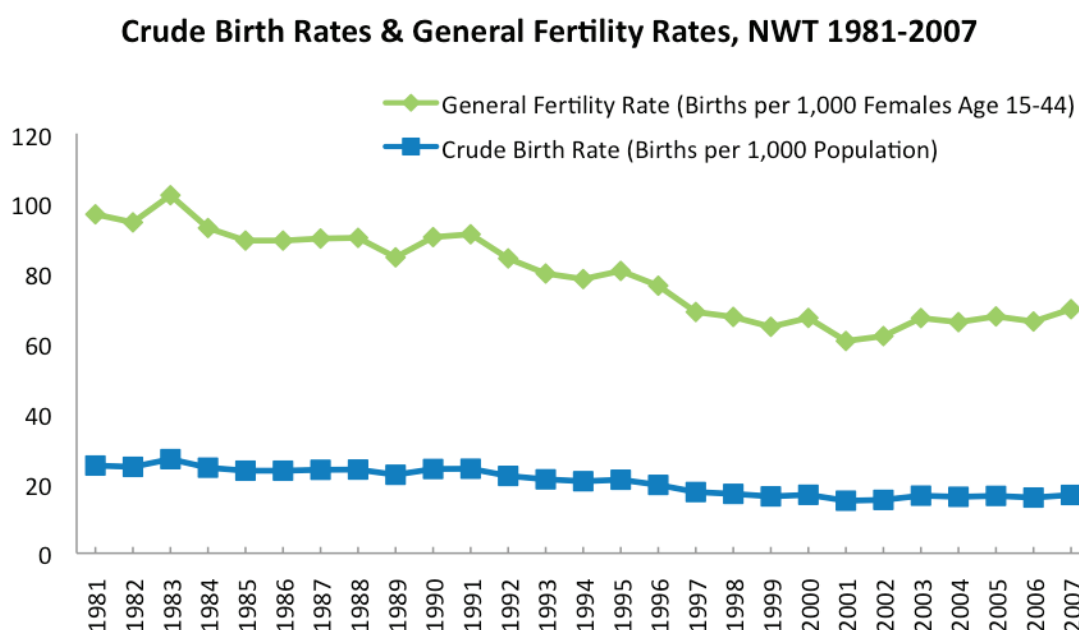
By 2009, the most common drugs in the NWT used at least once were hallucinogens (20%), followed by cocaine/crack (11%), ecstasy (6%) and speed (3%).

6: Child and Infant Health

6.1: Births and Fertility

Examining trends and patterns of birth rates provide some indication of the state of reproductive and infant health along with the need for any supportive services. Several indicators are used to measure the fertility of a population. One measure is the crude birth rate – the number of live births per 1,000 people. A more refined measure is the general fertility rate – the number of live births per 1,000 women of childbearing age (age 15 to 44 years).

Figure 65: Crude Birth and Fertility Rates, NWT 1981-2007



Sources: NWT Health and Social Services and Statistics Canada.

The crude birth rate has declined by 34% between 1981 and 2007, from 25.1 to 16.6 births per 1,000 population. The majority of the decline in the birth rate occurred during the 1990s. In terms of the absolute number, number of births, there were 725 births to NWT residents in 2007.

The general fertility rate has declined by 28% between 1981 and 2007, from 96.9 to 69.8 births per 1,000 women age 15 to 44 years. The majority of this decline also took place in the 1990s. There appears to be a slight increase in general fertility rate since 2000.

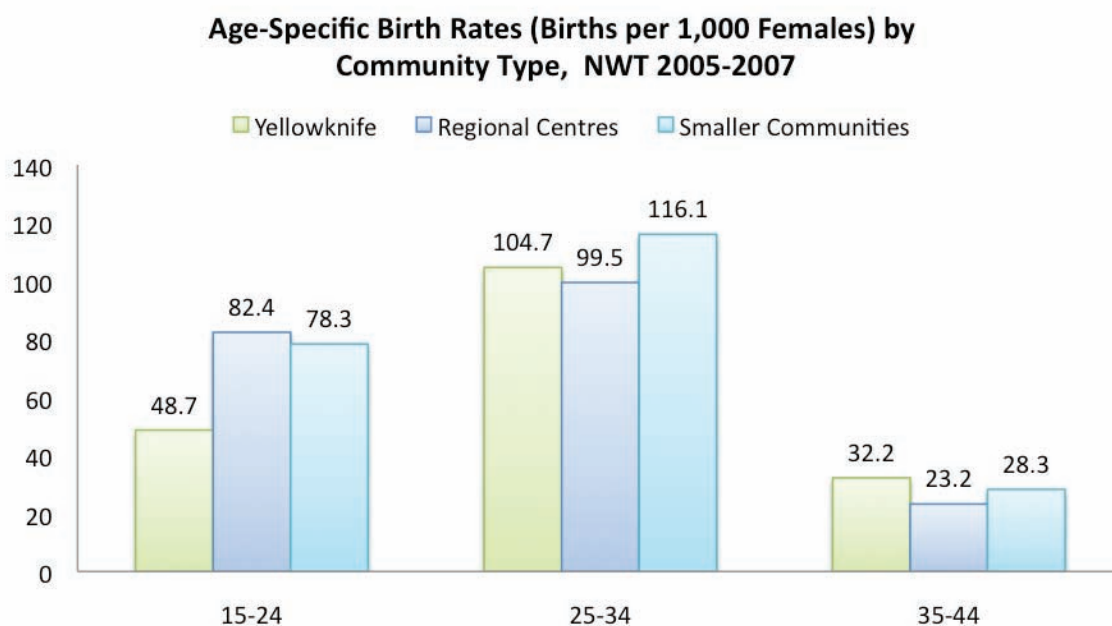
Age-specific fertility rates – the number of births per women in a specific age group – provides a more detailed indicator of fertility within a population. A decline in the birth rate among women under the age of 35 accounted for the overall decrease in the general fertility and crude birth rates since 1990. Between 1990 and 2007, the birth rate for women age 15 to 24 decreased by 37% from 111 to 70 births per 1,000.

Over the same time period, the birth rate for women age 25 to 34 decreased by 13% from 121 to 105 births per 1,000. In contrast, between 1990 and 2007, the birth rate for women age 35 to 44 increased by 55% from 21 to 33 births per 1,000.²² In more recent times, similar to other jurisdictions, women have been postponing childbearing until later ages.

Between 2005 and 2007, the general fertility rate for Yellowknife was 62.7 births per 1,000 women, 68 births per 1,000 in the regional centres and 74.4 in the smaller communities. However, when birth rates are examined by age group, the differences between community types grows more apparent.

Yellowknife has the lowest rate of births to women age 15 to 24, at 48.7 per 1,000. The birth rates for 15 to 24 year olds in the regional centres and smaller communities are almost the same at 82.4 and 78.3, respectively. In terms of total births by community type, 23% of all births in Yellowknife were to women age 15 to 24, compared 39% and 40% in the regional centres and smaller communities.

Figure 66: Age Specific Birth Rates, NWT 2005-2007



Sources: NWT Health and Social Services and Statistics Canada.

In Yellowknife, 59% of all births were to women age 25 to 34, compared to 49% and 48% in the regional centres and smaller communities.

Yellowknife has the highest proportion of births to women 35 to 44 years of age, at 18%, compared to 12% for both the regional centres and smaller communities.

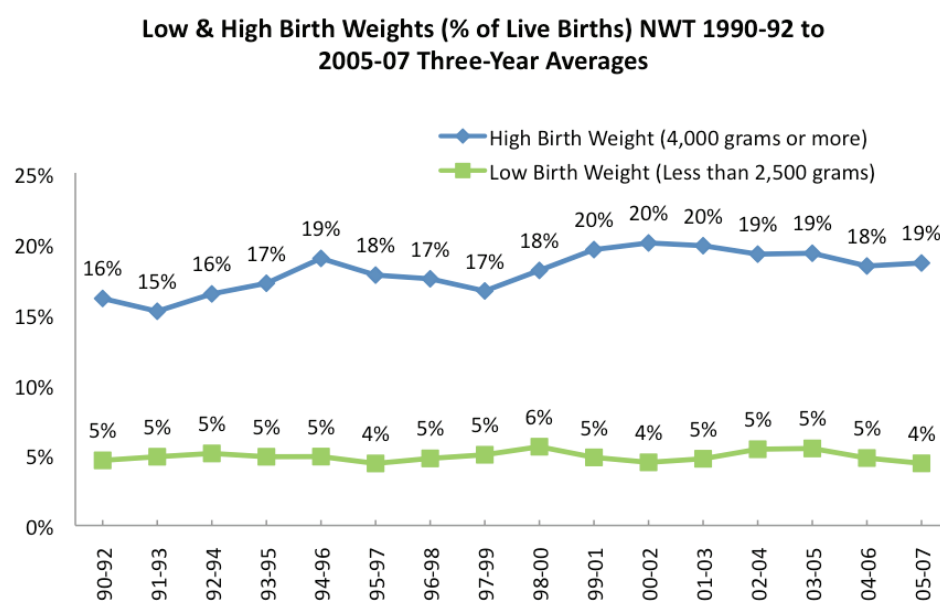
²² Births to women younger than 15 years of age were included in the 15 to 24 age group, and births to women over age 44 were included in the 35 to 44 age group. Births to women, less than 15 and over 44, were rare – around 3 per year.

6.1.1: Low and High Birth Weight

Birth weight is an indicator of the health status of newborns. Moreover, birth weight can have long-term consequences on late adult health status. Low birth weight (less than 2,500 grams) is the main determinant of perinatal and infant mortality, and is strongly associated with the risk of illness in infants. Low birth weight babies are also more likely to have developmental delays, learning and behavioural problems, and other long-term health problems including physical disabilities. Factors associated with low birth weight include maternal smoking, poor diet during pregnancy, low weight prior to pregnancy, poverty, low levels of education, pregnancy at very early or late ages, multiple births (e.g. twins) and genetic factors.

High birth weight (4,000 grams or greater) is associated with higher neonatal mortality, a higher incidence of birth injuries and intellectual and development problems later in life.²³ High birth weight is also associated with gestational diabetes in mothers and in turn, gestational diabetes is a significant risk factor for the later development of non-insulin dependent diabetes mellitus in a woman's offspring²⁴ High birth weights are reported to be more common among some Aboriginal women.²⁵

Figure 67: Low and High Birth Weights



Sources: NWT Health and Social Services, NWT Bureau of Statistics and Statistics Canada.

Low birth weight babies accounted for 4.4% of all live births in the NWT during 2005-07, compared to 6% nationally in 2007. Proportion of all births that are low birth weight babies had not changed much since 1990-92 when it was 4.6%.

High birth weight babies accounted for 18.6% of all births in the NWT in 2005-07, compared to 11.7% nationally in 2007. Unlike low birth weights, the proportion of high birth weight babies has increased slightly by 3% from 1990-92 levels.

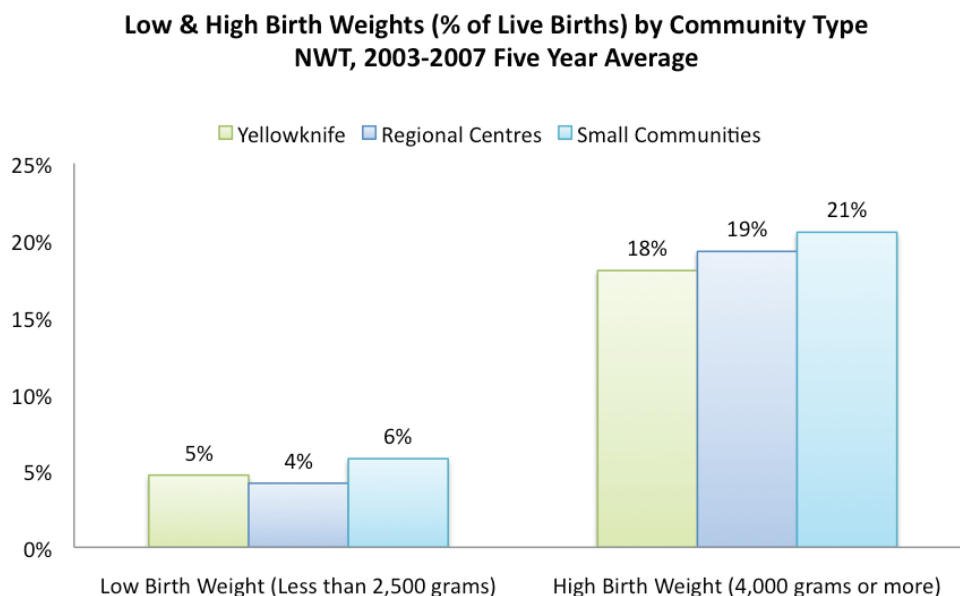
The differences between the community types were small, and were not statistically significant for both low and high birth weights.

²³ MacMillian H. et al, "Children's Health" First Nations and Inuit Regional Health Survey: National Report 1999.

²⁴ Petit DJ, et al, "Congenital susceptibility to NIDDM: Role of intrauterine environment" in *Diabetes* Vol. 37, No. 5, 1988, pp. 628-628.

²⁵ Thomson M., "Health birth weight in native Indians of British Columbia" in *Canadian Journal of Public Health*, Vol. 81, 1990, pp. 443-446.

Figure 68: Low and High Birth Weights by Community Type



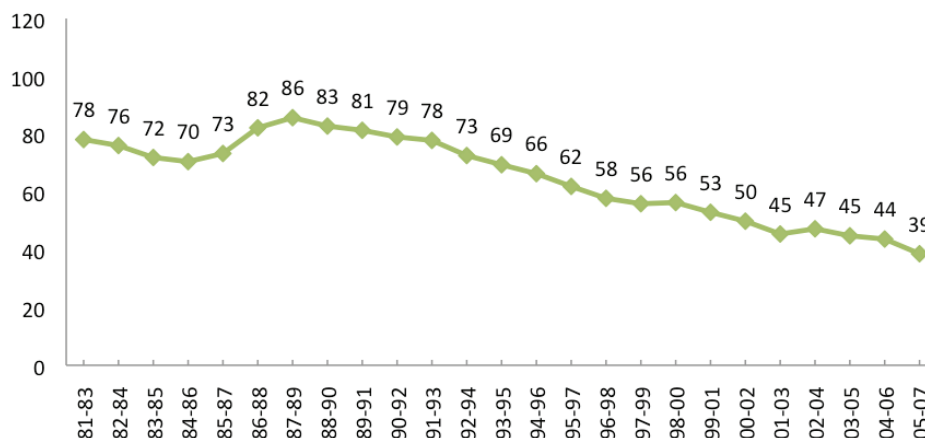
Sources: NWT Health and Social Services and Statistics Canada.

6.1.2: Teen Births

Teenage birth rates provide an indication of the number of children who may experience difficulties. Teen births expose both mother and child to a certain number of risks including physical complications such as prematurity and low birth weight, as well as psychological stress. The demands of raising a child at a young age may make it more difficult to pursue an education, thereby potentially affecting future income. These factors may end up negatively affecting the well-being of both child and mother.²⁶

Figure 69: Teenage Birth Rate

Teen Birth Rate (Births per 1,000 Women Age 15 to 19) NWT,
1981-83 to 2005-07 Three-Year Averages

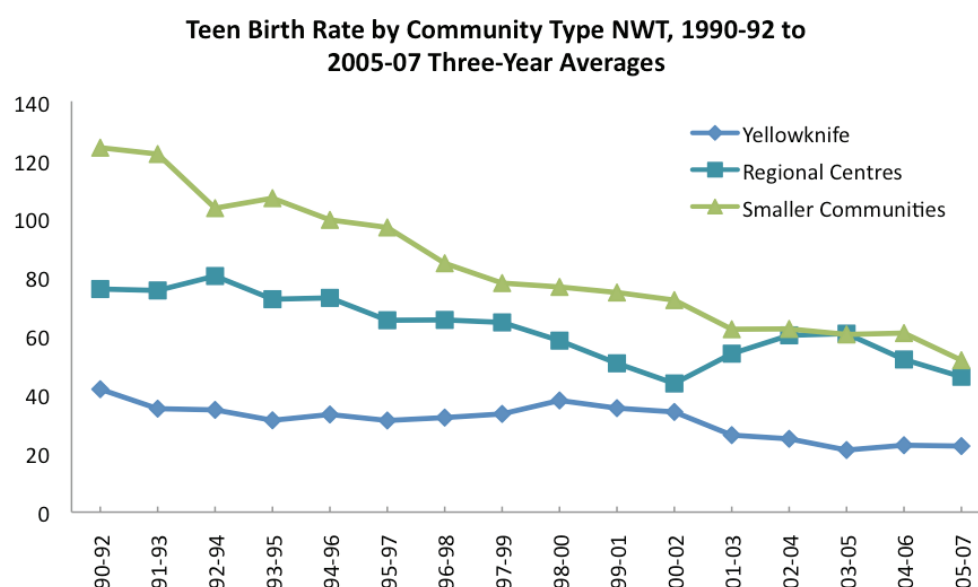


Sources: NWT Health and Social Services, NWT Bureau of Statistics and Statistics Canada.

²⁶ American Academy of Pediatrics - Committee on Adolescence and Committee on Early Childhood and Adoption, and Dependent Care, "Care of Adolescent Parents and Their Children" in *Pediatrics* Vol. 107, No. 2, February 2001, pp. 429-434.

However, despite the risks associated with teen births, it is important to note the rich culture of extended families that exists in the NWT. Such family structures may provide young mothers and infants with more support compared to the average family in southern regions of Canada. Teen mothers with extended family supports may also have greater opportunities to pursue educational and employment opportunities.

Figure 70: Teen Birth Rate by Community Type



Sources: NWT Health and Social Services, NWT Bureau of Statistics and Statistics Canada.

There has been an overall decrease in the teen birth rate. Most of the decrease has occurred since the early 1990s and has continued into the first decade of the 21st century. Between 1990-92 and 2005-07, the NWT teen birth rate declined by 51% from 78 births per 1,000 to 39 births per 1,000. While the teen birth rate has declined in the NWT, it is still over 2.5 times the national rate of 14 per 1,000 for 2007.

The teen birth rate has decreased, between 1990-92 and 2005-07, across all community types. The smaller communities have experienced a decrease of 58%, from 124 to 52 births per 1000 women ages 15 to 19 years old. Yellowknife saw a decrease of 46%, from 42 to 23 births per 1,000 over the same time period, and the rate in the regional centres decreased by 39% from 76 to 46. The teen birth rate in the smaller communities remains the highest.

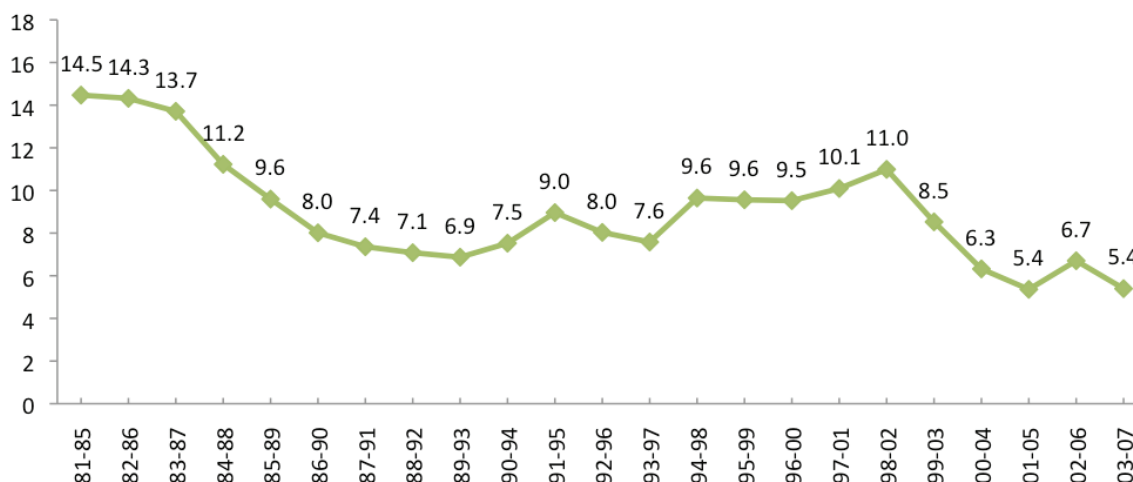
6.2: Infant Mortality

Infant mortality refers to the death of babies less than one year of age. The infant mortality rate is the number of these deaths per 1,000 live births and is an important public health indicator. The infant mortality rate is related to the underlying health of the infant's mother, public health practices, the mother's socioeconomic conditions and availability of and appropriate use of health care. The rate measures a region's health status along with the effectiveness of preventive care and the attention paid to the health of the mother and her infant.²⁷

²⁷ Canadian Institute for Information, Community Health Indicators: Definitions and Interpretations, (1997).

Figure 71: Infant Mortality

Infant Mortality Rates (Deaths per 1,000 Live Births) NWT, 1981-85 to 2003-07 Five-Year Averages



Sources: NWT Health and Social Services, NWT Bureau of Statistics and Statistics Canada.

Before an analysis of infant mortality rates in the NWT is discussed, it is important to point out that due to the territory's small population, along with the small number of births and infant deaths, the trends presented must be interpreted with caution.

For example, two or three additional infant deaths in any year can change the annual rate substantially. Recognizing this limitation, Figure 71 presents five-year rolling averages, thereby smoothing out the extremes of the annual variability. Even using this method, infant mortality rates are still subject to a great degree of fluctuation.

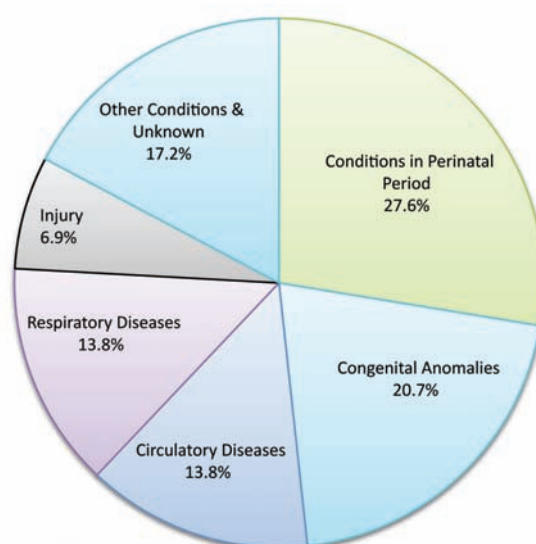
Between 1998-02 and 2003-2007 the infant mortality rate dropped by 51% from 11.0 to 5.4 deaths per 1,000 live births. In comparison, the national infant mortality rate was 5.1 deaths per 1,000 live births in 2007.²⁸ This difference in rates between the NWT and Canada was not statistically significant.²⁹

²⁸ Statistics Canada, CANSIM Table 102 – 0504.

²⁹ Statistical significance refers to whether or not it is likely the difference between two numbers occurred by chance or not. It is important to consider statistical significance when there are a small number of cases being measured, and/or when small populations are being compared (to one another or against a much larger population).

Figure 72: Causes of NWT Infant Mortality

Infant Mortality by Cause NWT, 2001 to 2007 (n=29)



Sources: NWT Health and Social Services and Statistics Canada.

Conditions originating in the perinatal period, which include disorders related to short gestation (premature), complications during delivery and respiratory distress were responsible for 28% of infant deaths, followed by congenital anomalies (birth defects) at 21%. The remaining infant deaths were due to a number of conditions, including cardiovascular and respiratory diseases.

Infant mortality can be separated into neonatal mortality (deaths under 28 days of life) and post-neonatal deaths (deaths from 28 to 364 days). Generally, the causes of deaths are different in each category and this has implications for prevention. Neonatal deaths are considered to be more closely associated with the quality of medical care, while post-neonatal deaths are more heavily influenced by socioeconomic conditions.³⁰

Between 2001 and 2007, neonatal deaths accounted for 55% of all infant deaths. Half of the neonatal deaths were due to conditions originating during the perinatal period (premature, complications during labour and delivery). Most of the remaining deaths were due to congenital anomalies. Post-neonatal deaths were due to a variety of causes, including respiratory issues (bronchiolitis, pneumonia), meningitis, injuries and sudden infant death syndrome.

6.3: Children Receiving Services

It is difficult to quantify the number of children growing up in circumstances that put them at risk. However, the number of children either removed from the care of their parents or guardians or receiving Child and Family Services (CFS) in their own homes may be used as indicators to measure this problem. Responsibility to protect and nurture children rests with parents/legal caregivers. At the same time, child protection agencies are responsible to investigate all allegations of maltreatment and intervene if necessary. In addition, these agencies are mandated to provide support to families facing challenging circumstances in order to ensure the safety and wellbeing of children.

³⁰ Young, T.K., *Population Health: Concepts and Methods* (Oxford University Press: New York, 1998).

Table 3: Children Receiving Services by Status, Annual Snapshot 2005-09

Status	2005	2006	2007	2008	2009
Total (March 31 of each year)	581	613	601	594	611
Total - Court Involved	326	346	354	358	321
Permanent Custody Order	213	221	226	227	212
Temporary Custody Order	84	89	88	90	77
Supervision Order	20	23	18	20	22
Apprehension	9	13	22	21	10
Total - Voluntary	255	267	247	236	290
Plan of Care Agreement	139	152	113	124	184
Voluntary Services Agreement	86	85	103	81	79
Support Services Agreement	30	30	31	31	27

Department of Health and Social Services, NWT
Data extracted as of July 13, 2009

Children may receive services because they were abused or neglected. Other children may come into care voluntarily and/or receive services because they have unmanageable behavioural problems resulting from developmental delays, mental health issues or Fetal Alcohol Spectrum Disorder (FASD). Still others may come into care or receive services because their parents require temporary or short-term support.

The number of children receiving services by status and by location is provided as a single day snapshot, given that the status and location of a child can change more than once in a year.

As seen in Table 2, on March 31, 2009, 611 children were receiving services. On March 31, 2009, approximately 53% of these children (321) were receiving services through a court order (apprehension, permanent custody order, supervision order and temporary custody order), with the remaining 47% (290) receiving services through a family-based agreement (plan of care agreement, support services agreement and voluntary services agreement). The parent having a drug or solvent problem has consistently been the top cause of CFS referrals in the NWT since 2004, representing 20% of all referrals.

Children who receive services under the Child and Family Services Act most often stay in their own home or community when there is a need to intervene or provide support. As seen in Table 3, the majority of children receiving services in the single day count are located in their home community. On average, 82% of all the children receiving a service in a single day count were located in their community over the five year period.

Table 4: Children Receiving Services by Location. Annual Snapshot 2005-09

Location of Child	2005	2006	2007	2008	2009
Total (March 31 of each year)	581	613	601	604	611
In Home	184	203	196	194	229
Out of Home, in community	286	299	308	293	283
In NWT, out of community	64	63	51	54	44
Temporarily outside NWT	47	48	46	63	55

Department of Health and Social Services, NWT
Data extracted as of July 13, 2009

6.3.1: Child Abuse and Neglect

Child abuse has negative effects on children's mental and social development. The term child abuse refers to the violence, mistreatment or neglect while in the care of someone they either trust or depend on such as a parent, sibling, relative, caregiver or guardian.

Child abuse may involve one or more of the following: physical abuse, sexual abuse, emotional abuse and neglect. Neglect involves failing to provide necessities for physical, psychological, and/or emotional well being.

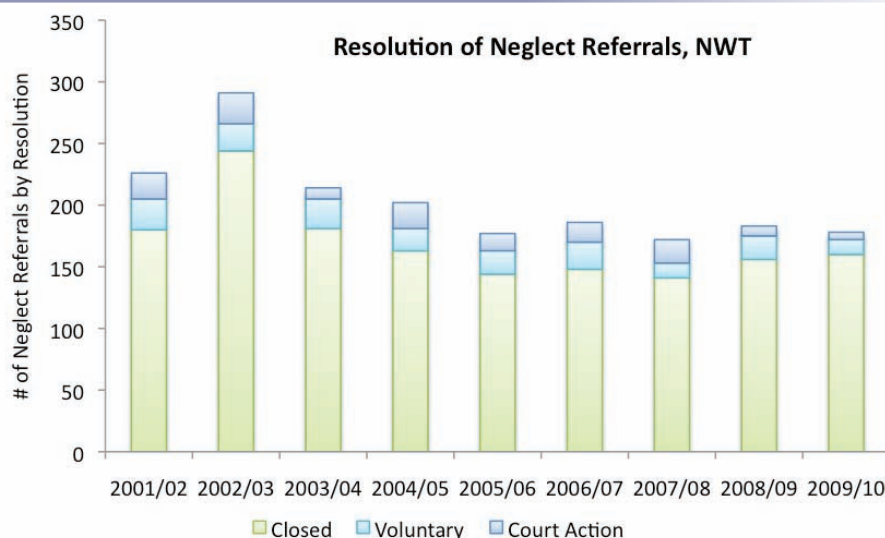
It is important to note that data from the Department of Health and Social Services only pertains to parents/legal guardians and their children. For example, physical or sexual assaults by non-immediate family members (e.g. aunt/uncle) or other persons (e.g. coach, teacher) go directly to the RCMP, not to Child and Family Services (CFS). In these cases, the role of CFS is usually to support the family. However, when an immediate family member does the abuse or allows the abuse from a non-immediate family member or other person to continue, then it is a child protection issue and CFS intervenes.

The reported incidents and substantiated cases of abuse or neglect provide some indication of the level of this social problem when examined over a number of years. Referrals for neglect are higher than referrals of abuse. While all referrals result in investigation, the number of referrals resulting in services provided by CFS are relatively small compared to the total number of referrals. For example, in 2009/10, 178 referrals for alleged neglect were received by CFS. Of those, 160, were unfounded (closed), 12 resulted in voluntary agreements and 6 resulted in court action. Similarly, a total of 168 referrals were received for possible abuse in 2009/10. Of those 168 referrals, 138 were closed, 22 resulted in voluntary agreements and in court action.

There is no single, definitive cause of child abuse. Any child – regardless of age, sex, race, ethnicity, cultural identity, socioeconomic status, spirituality, sexual orientation, physical or mental abilities or personality – may be vulnerable to being abused.

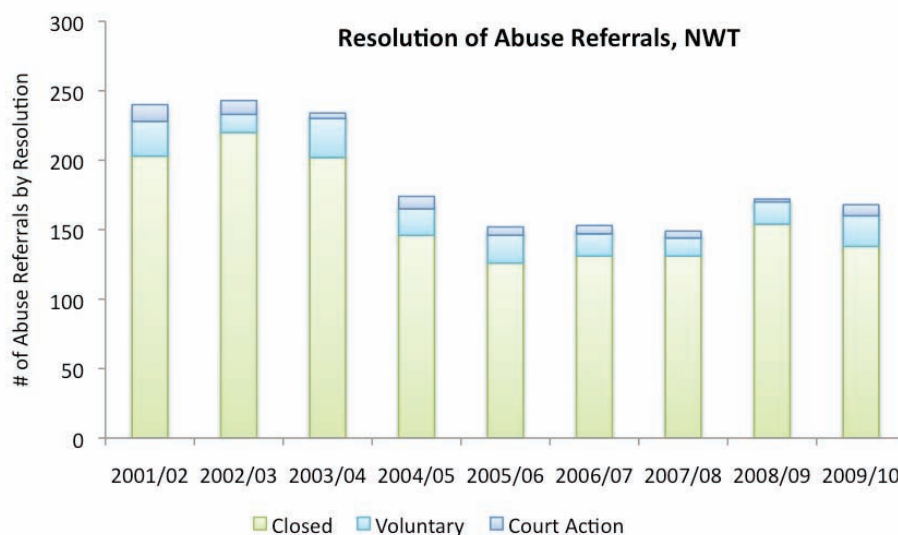
However, there is increasing understanding that a child's vulnerability to abuse may be increased by factors such as dislocation³¹, colonization³², racism, sexism, homophobia, poverty and social isolation. Many of these factors are prevalent in the NWT.

Figure 73: Number of neglect referrals by type of resolution, NWT 2004/05 – 2009/10



Source: NWT Department of Health and Social Services

Figure 74: Number of abuse referrals by resolution, NWT 2004/05 – 2009/10



Source: NWT Department of Health and Social Services

There are also factors that may increase vulnerability to being abused, or compound the effects of abuse. For example, a child's caregivers may experience barriers that prevent them from acquiring the necessary skills, resources and supports to prevent abuse, or they may lack access to the services and supports they need to address it.

³¹ "Dislocation" means being removed from one's language, culture, family and community. Dislocation is a situation that has affected Aboriginal children who were sent to residential schools, as well as immigrants and refugees to Canada. Child Abuse: A fact sheet from the Department of Justice Canada. 2001.

³² "Colonization" is "that process of encroachment and subsequent subjugation of Aboriginal peoples since the arrival of Europeans. From the Aboriginal perspective, it refers to the loss of lands, resources, and self-direction and to the severe disturbance of cultural ways and values." Child Abuse: A fact sheet from the Department of Justice Canada. 2001. Source: Emma D. LaRoque, *Violence in Aboriginal Communities*.

7: Preventive Services and Screening

7.1: Immunizations

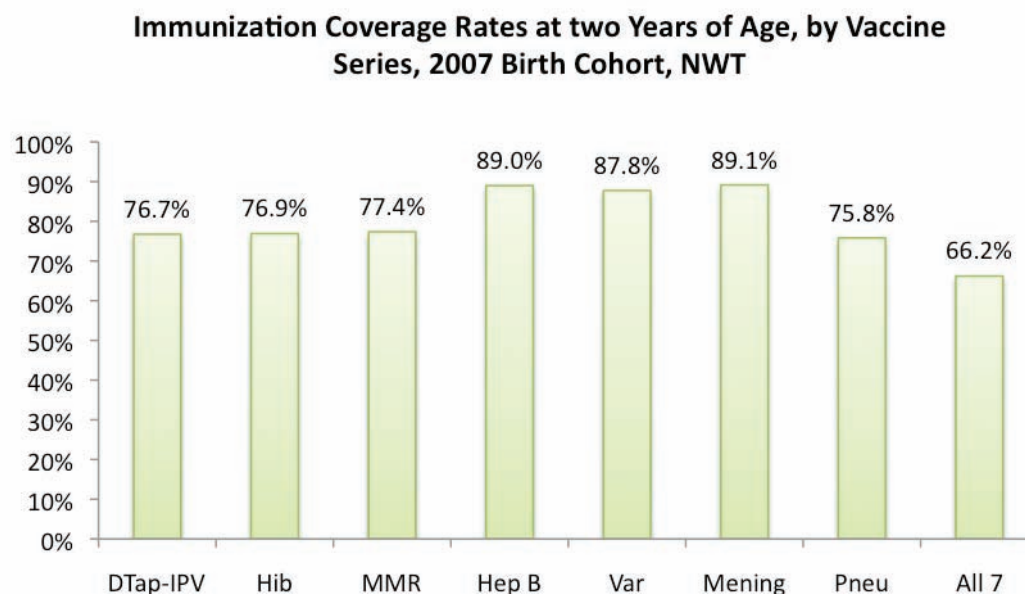
Immunization is one of the most cost effective public health interventions available. Children in the NWT are routinely vaccinated against: diphtheria, pertussis, tetanus, polio, chicken pox, Haemophilus influenzae type b (Hib), measles, mumps, rubella, hepatitis B, and tuberculosis. Maintaining high vaccine coverage is necessary for preventing the spread of vaccine preventable diseases and outbreaks within a community. For more information on vaccine preventable diseases, please see section 4.5.

Table 5: NWT Vaccines and Corresponding Diseases/ Infections

Vaccine	Disease/ Infection Prevented	Recommended number of Doses
DTap-IPV	Diphtheria, Tetanus, Pertussis, Polio	4
Hib	Haemophilus influenzae type b (Hib Disease)	4
MMR	Measles, Mumps, and Rubella	2
Hep B	Hepatitis B	3
Var	Varicella (Chickenpox)	1
Mening	Meningococcal C Virus	2
Pneu	Pneumococcal Infection	4

Of all children born in the NWT, 66.2% were fully immunized at the age of two years. Over 87% of this population was vaccinated against Meningitis, Hepatitis B, and Varicella. The other vaccines, DTap-IPV, Hib, MMR, and Pneu, ranged from 75.8% to 77.4% coverage.

Figure 75: Immunization coverage for NWT residents less than two years from the 2007 birth cohort



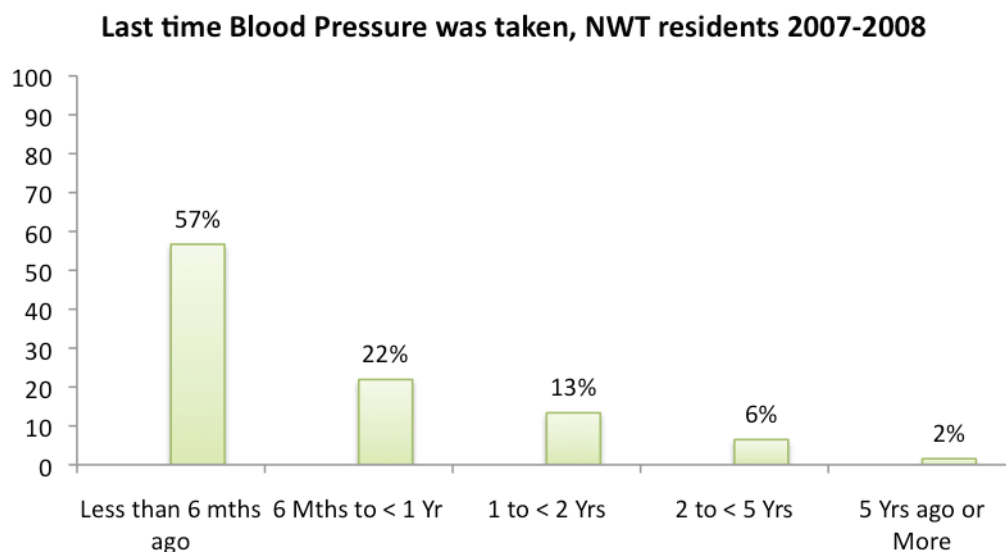
Source: Continuous Health Registration

7.2: Blood Pressure Check-up

Hypertension damages the lining of the blood vessels causing increased risk of stroke, heart attack, heart failure, kidney failure and eye damage.³³ Seniors and people with diabetes are most vulnerable to the negative health effects of high blood pressure.

Lifestyle factors contribute to the risk of developing hypertension and when controlled, have shown to be effective methods of lowering high blood pressure or maintaining normal blood pressure. The best methods to control blood pressure include: maintaining a healthy body weight, consuming a healthy diet, participating in regular physical activity, being smoke free, limiting alcohol intake, and managing stress effectively.

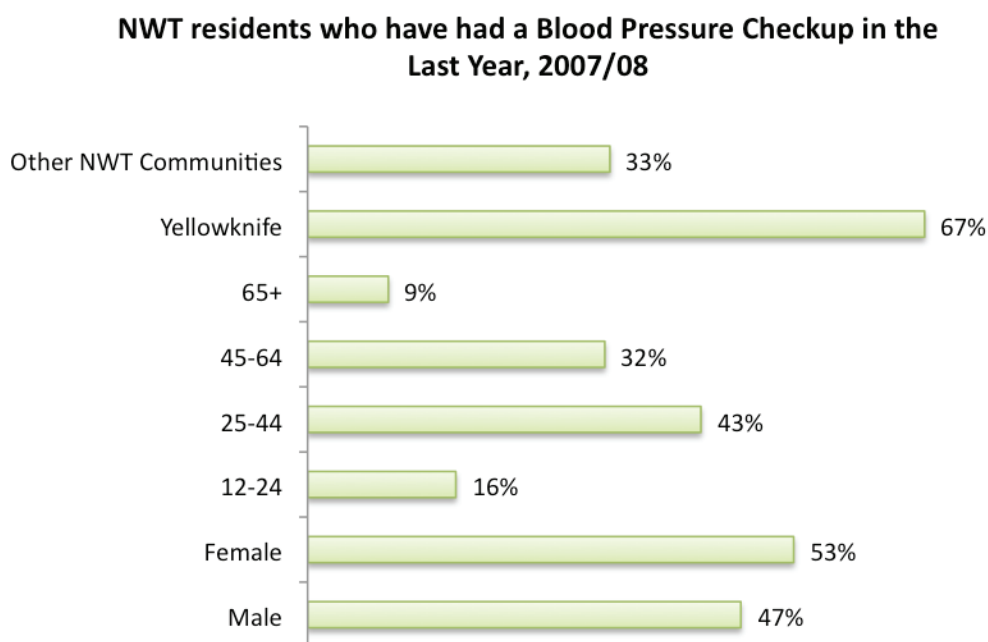
Figure 76: Last time blood pressure was taken, NWT 2007/08



Source: CCHS Share File
NWT Ages 12 and older

In the NWT, 92% of residents have had their blood pressure checked within the last two years, and 79% within the last year. Of those residents who have had their blood pressure checked within the past year, two-thirds were from Yellowknife, while only a third were from other communities in the NWT. The age group who had the largest proportion of residents receiving blood pressure checkups in the last year was the 25-44 year olds, closely followed by the 45-64 year olds. Seniors over the age of 65 had the lowest prevalence rate of having blood pressure checkups in the last year. Women were slightly more likely to have received a blood pressure check in the last year than men.

Figure 77: Blood Pressure Check up in the last year by selected groups



Source: CCHS Share File 2007/ 2008

7.3: Breast Cancer Screening

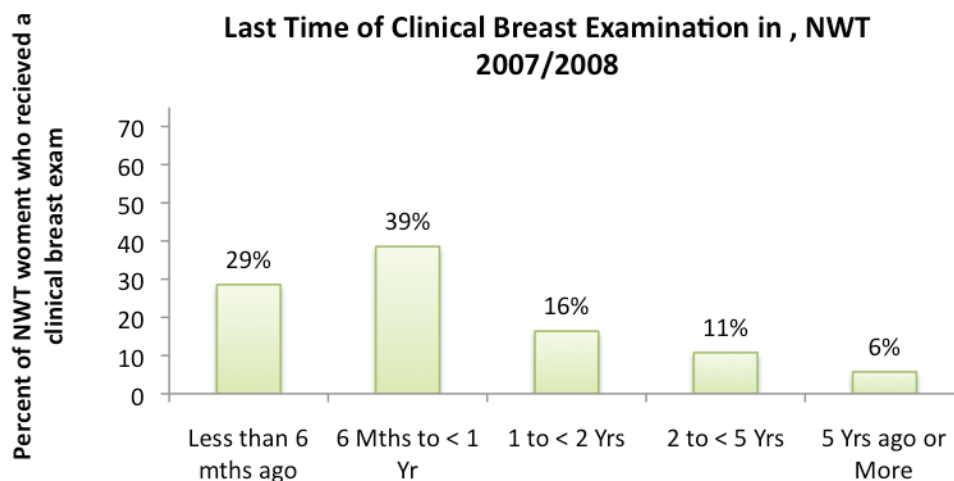
Deaths from breast cancer have been reduced significantly due to improvements in cancer treatment and the development of screening programs such as mammography and clinical breast examinations. Since 1986, the incidence of breast cancer in Canada has stabilized with the death rate decreasing by 30%.³⁴ Currently in Canada, women diagnosed with breast cancer have an 87% likelihood of living for at least 5 years after their initial diagnosis.³⁵

Health Canada recommends that women between the ages of 50 and 69 should participate in an early detection program consisting of mammography and physical breast examinations every two years. In the NWT 82% of women between the ages of 50-69 years of age were screened for breast cancer through mammography between 2007 and 2008.

³⁴ Source: Canadian Breast Cancer Foundation, http://www.cbcf.org/breastcancer/bc_whatbc_bc.asp

³⁵ Source: http://www.cbcf.org/breastcancer/bc_whatbc_bc.asp

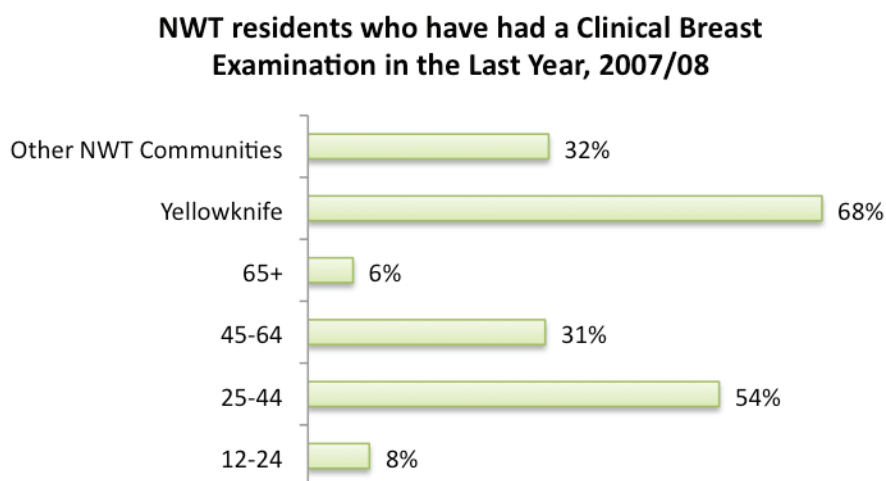
Figure 78: Last Time of Clinical Breast Examination



Source: CCHS Share File
Females only

NWT women also report frequent screening through clinical breast examination. Sixty eight per cent of women have had a clinical examination in less than a year, while 84% of women have been examined within two years.

Figure 79: Residents who have had Clinical Breast Examinations



Source: CCHS Share File

Clinical breast examination is more frequent in Yellowknife than in small communities, with 68% of those who received an examination living in Yellowknife. The largest proportion of women receiving breast examinations were between the ages of 25 and 44 years at 54%. Seniors and young people had the lowest prevalence of clinical breast examinations.

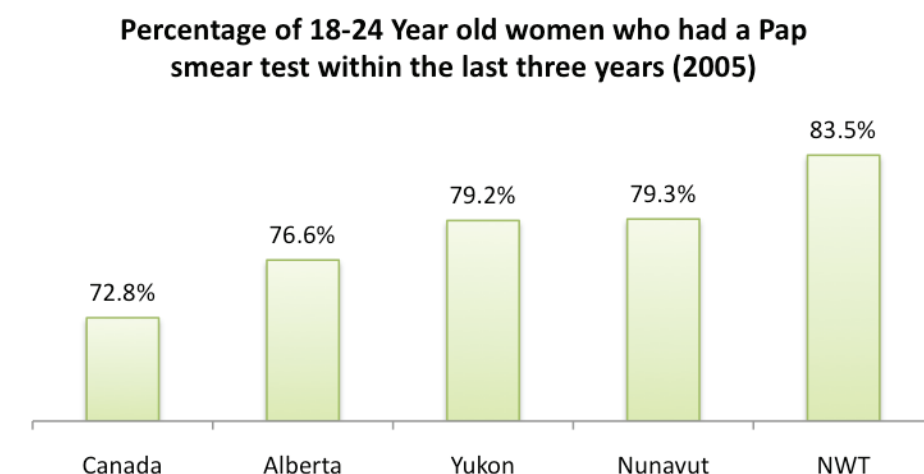
7.4: Cervical Cancer Screening

Cervical cancer screening in the NWT like elsewhere in Canada, consists of annual Papanicolaou (Pap) tests after the onset of sexual activity or by the age of 21. The cervix can be examined during a physical exam. During the Pap test a small number of cells from the cervix are tested for abnormal, pre-cancerous cells. At early stages, all precancerous cells can be removed so cancer does not develop.

The main known risk factor for cervical cancer is the Human Papillomavirus (HPV), a virus that causes no symptoms and is spread through sexual activity. The NWT launched an HPV vaccine program for school-aged girls in 2009. The vaccine does not prevent all types of HPV and because there may be other factors causing cervical cancer, PAP tests are recommended for all women until age 69 years irrespective of whether they have been vaccinated.

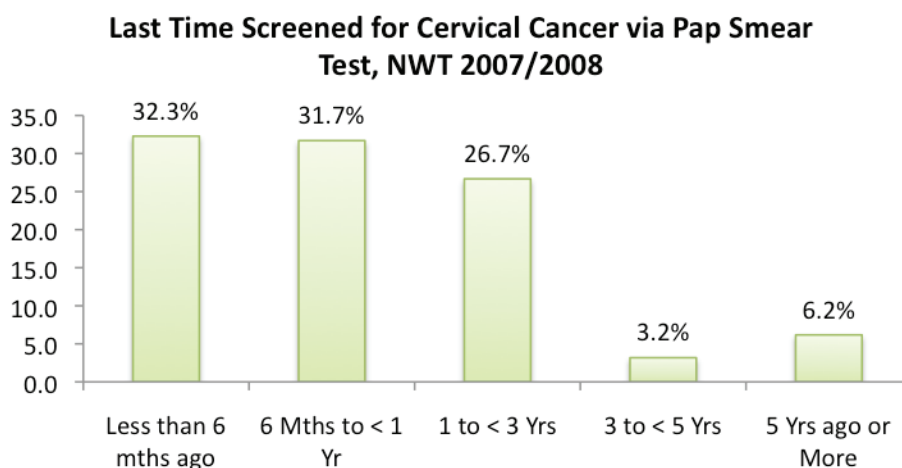
In 2005, NWT had the highest Pap smear coverage rate in Canada at 83.5% in 2005. In 2007/08 the coverage rate for Pap smear tests among NWT women has increased to 91%.

Figure 80: Prevalence of Pap Smear Tests in Selected Canadian Regions



Source: StatsCan Health Indicators, 2005

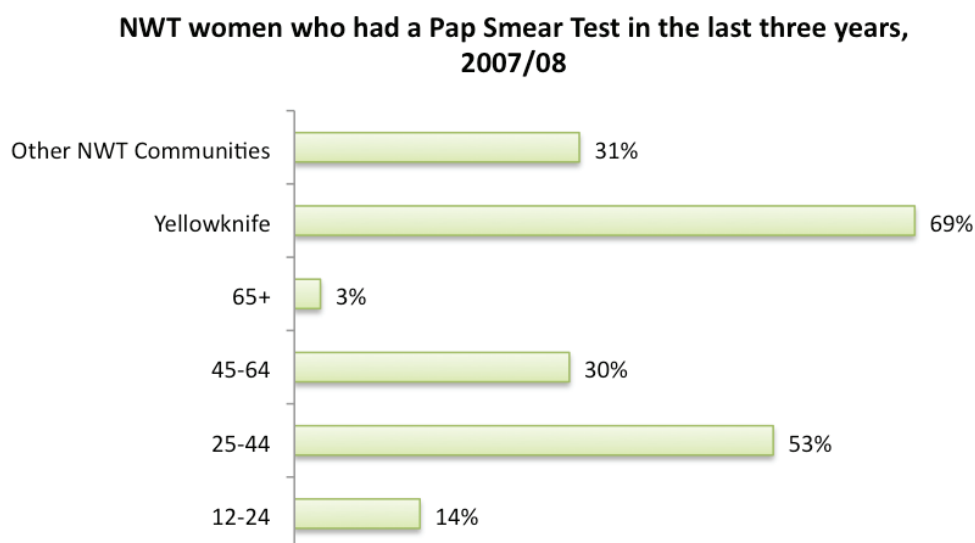
Figure 81: Cervical Cancer Screening



Source: CCHS Share File

Of women who have been screened with a Pap test in the previous three years, the majority (69%) were from Yellowknife, while less than one third lived in other communities. The largest proportion of women who received a Pap smear test within the last three years are between the ages of 25 and 44 years, and secondarily between the ages of 45 and 64 years of age. The low proportion for young people not receiving Pap tests might represent a group which is not entirely sexually active. Pap tests are not recommended for women over 69 years of age.

Figure 82: Cervical Cancer Screening in the Last Three Years by Selected Group



Source: CCHS Share File

7.5: Colorectal Cancer Screening

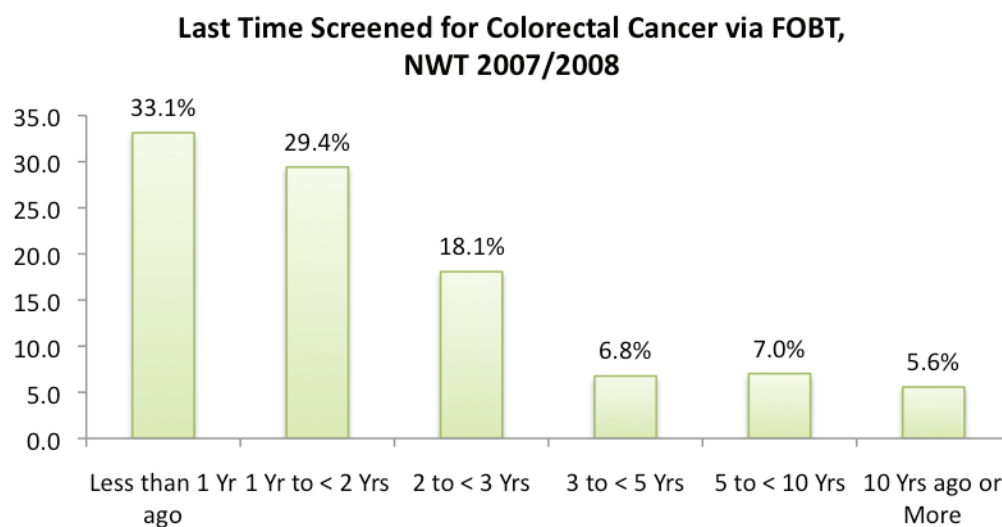
Colorectal cancer is the third most common cancer diagnosed in Canada and the second most common in the NWT. It begins as one or more small, non-cancerous polyps (growth) on the inner surface of the colon. The polyps can become cancerous. In the NWT it is recommended that both men and women aged of 50 and 74 undergo annual screening that consists of a stool test or colonoscopy depending on the individuals risk factors. If detected and treated early, 90% of those diagnosed with colorectal cancer will survive for five years or more.

There are two screening methods for colorectal cancer available in NWT: Fecal Immunochemical Test (FIT) which replaced the former Fecal Occult Blood Test (FOBT) in 2010, and Colonoscopy. The FIT test identifies small amounts of blood in the stool that is invisible to the naked eye. It is safe, and non-invasive. It requires no bowel preparation and is more specific for bleeding from the colon or lower gastrointestinal tract. It is specific for hemoglobin and is not affected by diet or medications. The FIT test is used for screening the average risk population aged 50 to 75 years of age.

Anyone with a positive test will require a colonoscopy. Colonoscopy is an invasive test in which a specialist looks directly inside the large intestine and identifies, and removes polyps.³⁶ It also requires bowel preparation. Screening colonoscopy is reserved for individuals at increased risk for colorectal cancer due to familial predisposition or at special risk due to genetic syndromes or history of inflammatory bowel disease.

³⁶ Source: NWT Health and Social Services, http://www.hlthss.gov.nt.ca/pdf/brochures_and_fact_sheets/diseases_and_conditions/2009/english/colorectal_cancer_screening.pdf

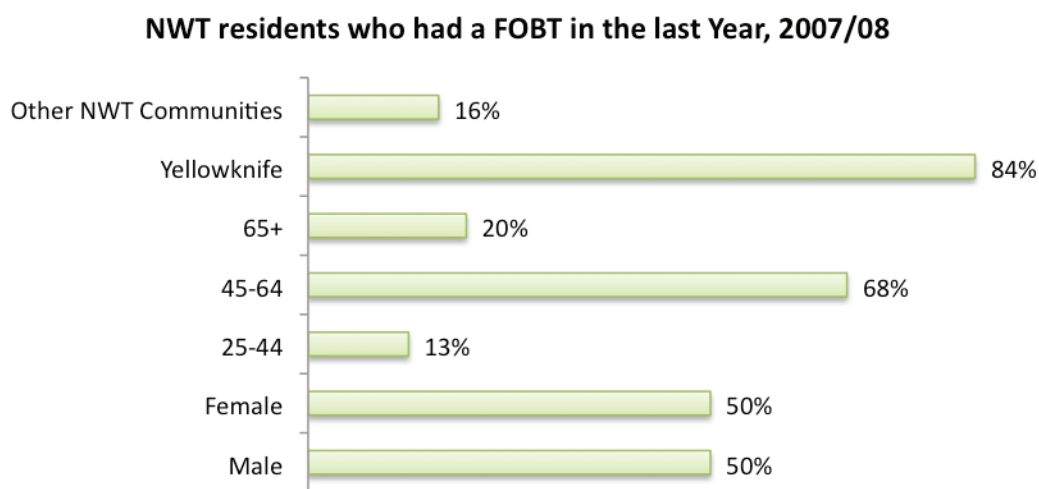
Figure 83: FOBT Screening



Source: CCHS Share File

In 2007/08 one third of NWT residents received a FOBT³⁷ test within one year. The vast majority of those tested were from Yellowknife (84%) and 68% were aged 45-64 years. Fifty per cent of men and women each received the test within one year.

Figure 84: FOBT Screening in the Last Year by Selected Group



CCHS Share File
Ages 25 years and older

³⁷ Fecal Occult Blood Test, same as a FIT test as described above.

Part 3: Health Determinants



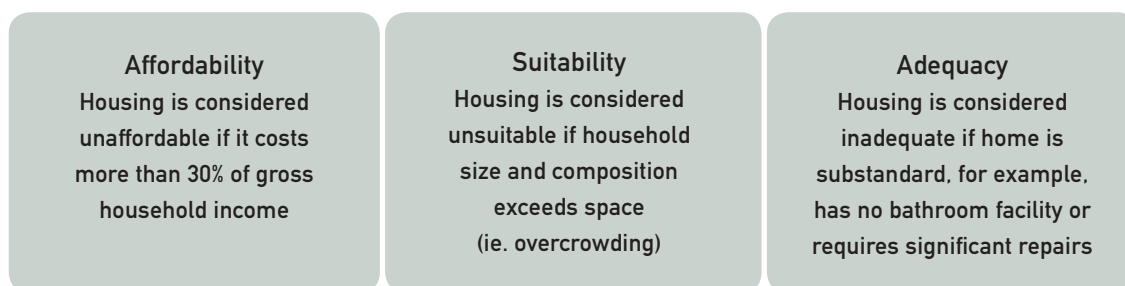
8: Social Determinants of Health

Health determinants are social factors contributing to the attainment of a complete state of physical and mental well being. Health is impacted by social and economic factors such as income and the way wealth is distributed, employment and education and by the working and living conditions experienced by the population. Social determinants of health do not exist in isolation of each other, but are intertwined to fundamentally affect health status. This section will examine the factors of housing, education, income and employment and crime on NWT health status.

8.1: Housing

In 1986, the World Health Organization recognised shelter as a fundamental prerequisite for health. Since then, housing has been widely accepted as an important determinant of health. The Canadian Mortgage and Housing Corporation (CMHC) defines the number of households unable to access suitable accommodation in their community as being in “core need”.³⁸ This term encompasses the ideas of affordability, suitability and adequacy of the accommodation (see figure 85).

Figure 85: Elements of Core Need (CMHC)



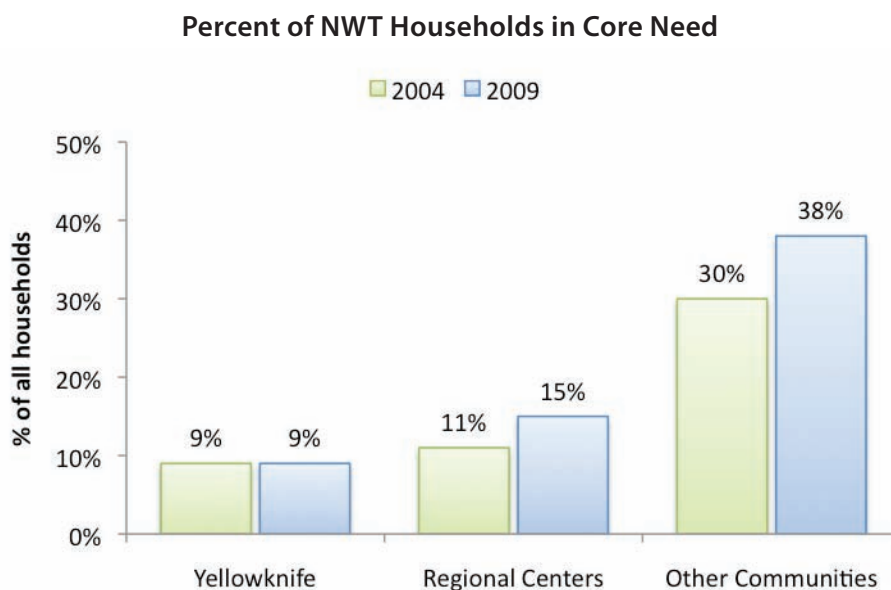
In the NWT, households with one or more of these problems (adequacy, suitability and affordability) and a total income below a community specific threshold are considered to be in core need. Due to this threshold, a number of households with housing problems were not included in the number with core need because they had sufficient income to solve their housing problem without government assistance.

The Northwest Territories Housing Corporation has conducted several housing surveys to monitor housing conditions and needs.³⁹ The latest survey, conducted in 2009, estimates 19% of dwellings in the NWT were considered to be in core need, compared to 16% in 2004 and 20% in 2000.

³⁸ Source: http://www.phac-aspc.gc.ca/ph-sp/oi-ar/09_housing-eng.php

³⁹ More information regarding housing needs surveys can be found on the NWT Bureau of Statistic's website: <http://www.stats.gov.nt.ca/>.

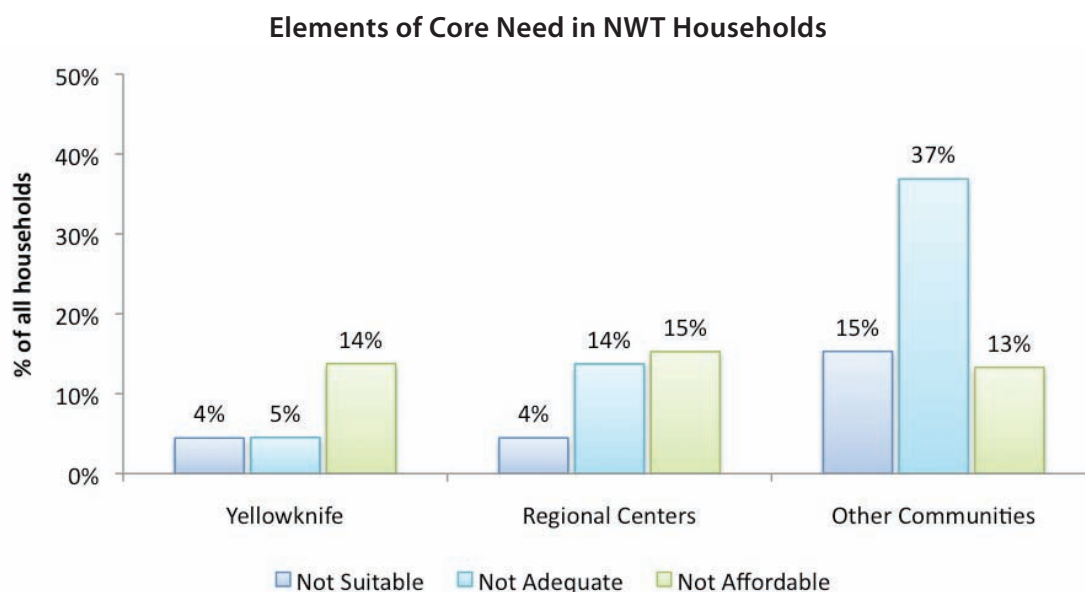
Figure 86: Households with core need by community type, NWT 2009



Source: NWT Bureau of Statistics: 2009 Community Survey, Housing Component

Affordability was the most common housing problem in Yellowknife. In the regional centres, adequacy and affordability were the most common housing problems. In the other communities, adequacy was the most common problem.

Figure 87: Type of housing problem by community type, NWT 2009



Source: NWT Bureau of Statistics: 2009 Community Survey, Housing Component

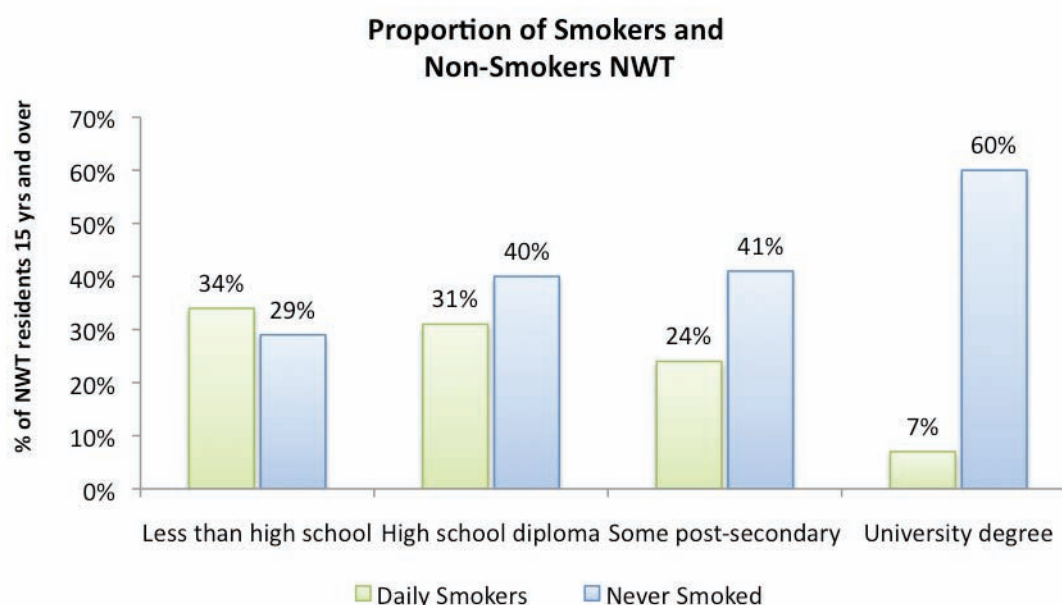
8.2: Education

Education and health are interrelated. WHO has found that unhealthy lifestyles of children have negative impacts on educational attainment and academic performance.⁴⁰

More recently, health has also been thought to influence education. Many studies have shown that higher education gives people the capacity to develop and maintain good health, including making healthy lifestyle choices. In general, people with higher levels of education are more likely to engage in healthy behaviours and avoid unhealthy lifestyle choices.

In the NWT the proportion of residents 15 years and older who smoked daily was almost five times higher for those with less than high school compared to those with university degrees (34% vs. 7%⁴¹). Those with university degrees were two times more likely to have never smoked compared to those with less than high school (60% vs 29%).

Figure 88: Proportion of daily smokers and residents who have never smoked among residents 15 years and over, NWT 2009



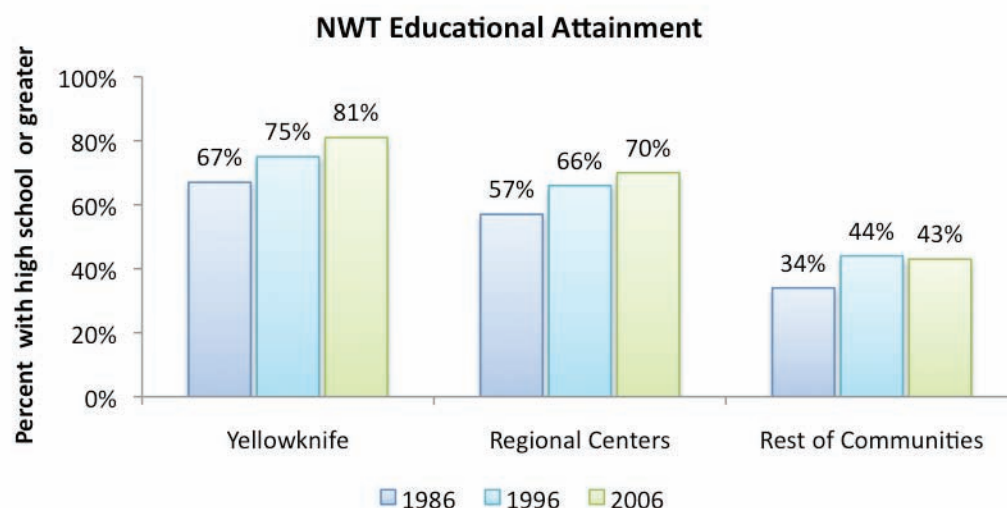
**Source: 2009 NWT Addictions Survey
Ages 15 years and older**

Education levels in the NWT have improved between 1986 and 2006 as indicated by the percentage of the population with high school diplomas or more. Despite the improvements, the smaller communities continue to have lower proportions of people with a high school diploma compared to the larger centres.

Completing high school not only increases employment opportunities and provides a foundation for post-secondary education but higher levels of education and the corresponding higher levels of income contribute to better health outcomes.

⁴¹ Moderate sampling variability – interpret with caution.

Figure 89: Percentage with high school diploma or more, NWT 1986 – 2006



Source: NWT Bureau of Statistics

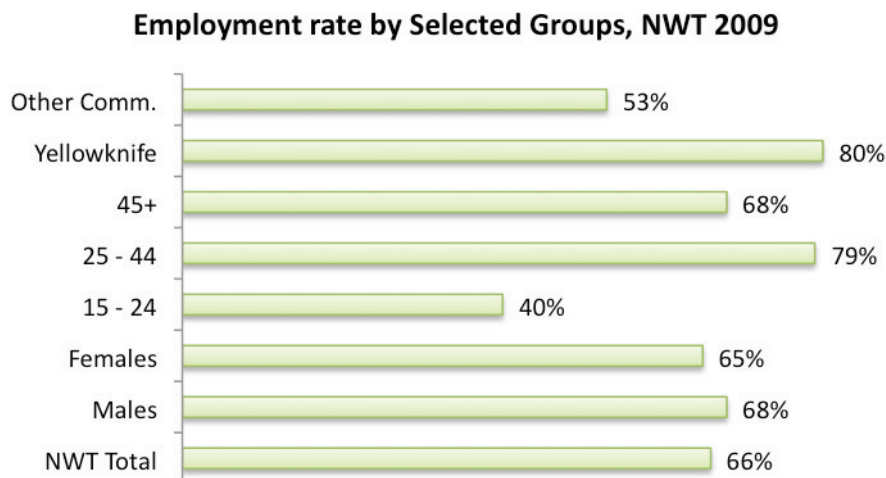
8.3: Income and Employment

Employment and income are fundamental determinants of health demonstrated by the strong correlation between income equity and health outcomes. Canadian studies show that regions with higher unemployment and poverty rates also rank poorly in a wide range of health indicators.⁴²

Employment rates in the NWT mirrored the downturn in the economy and dropped from its peak in 2007. The NWT overall employment rate was 74% in 2007 compared to 67% in 2010.

A higher proportion of men participate in the labour market than women. In 2009, 68% of men and 65% of women were employed. Meanwhile, the proportion of males actively seeking work was higher than females (an 8% unemployment rate compared to 5%).

Figure 90: Employment rate, by selected groups, NWT 2009



Source: NWT Bureau of Statistics

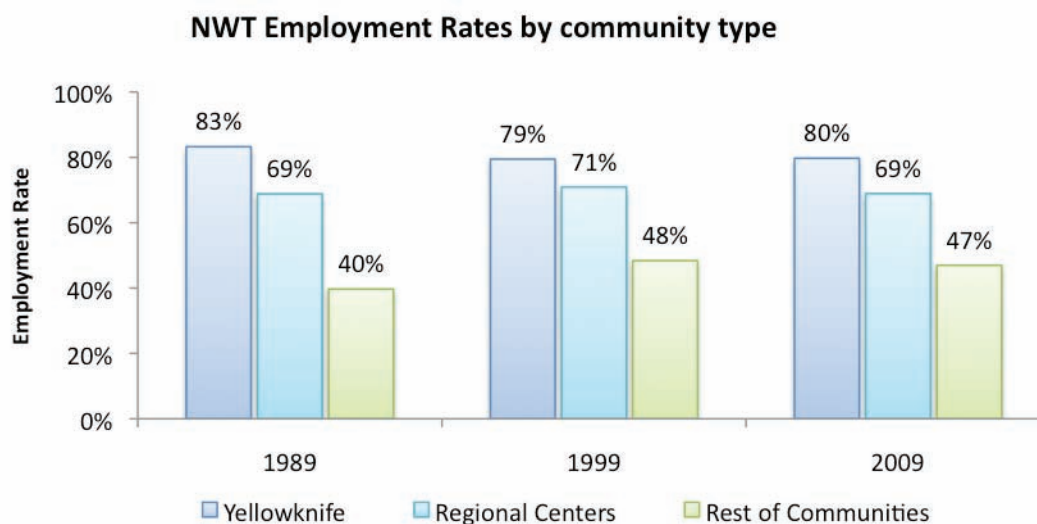
⁴² Source: Public Health Agency of Canada, http://www.phac-aspc.gc.ca/ph-sp/oi-ar/02_income-eng.php

Young people 15 to 24 years old had more difficulty finding work relative to older age groups. At 16%, the unemployment rate for this age group was three times as high as other age groups in 2009. While the low employment rate (40%) for young people may reflect enrolment in education programs, it may also indicate the difficulties entering the labour market, particularly when considering the higher unemployment rates of younger people compared to other age groups.

Within the NWT, significant regional differences in labour force participation exist. Employment rates have been consistently higher in larger NWT communities than in the smaller communities. Yellowknife, with more employment opportunities due to greater diversity of public and private sector jobs compared to other communities, had less of a decline in employment rates with the recent downturn in the economy. In Yellowknife, the 80% employment rate in 2009 was down slightly from 83% in 2007. In the other communities, it fell to 53% from a peak of 63% in 2006.

In 2009 employment rates were 69% in the regional centres and 47% in other NWT communities.

Figure 91: Employment rate by community type. 1989 - 2009



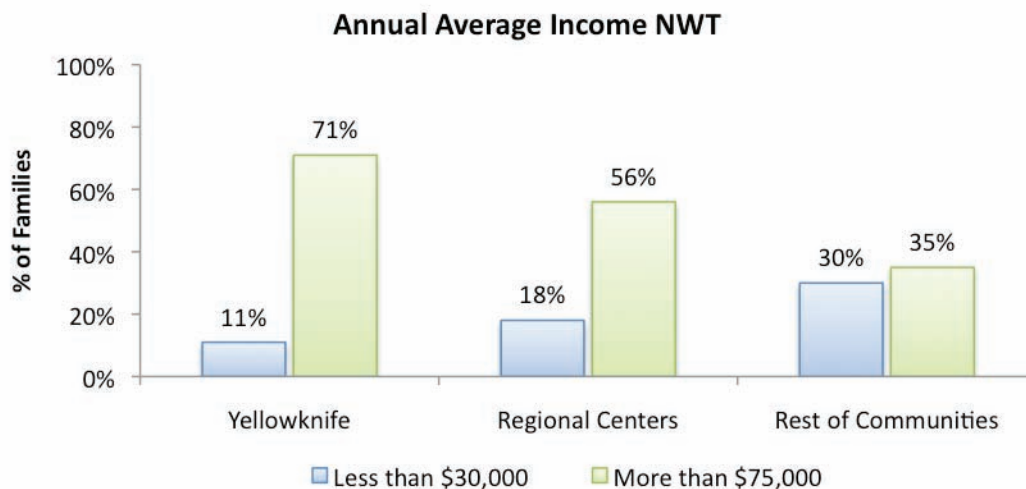
Source: NWT Bureau of Statistics

For those with lower levels of education, employment prospects are limited when the economy is strong; their prospects worsen significantly when the economy is weak. Only 25% of people with less than Grade 9 were working in 2009, compared to 73% of those with a high school diploma, 85% with a trades or college certificate or diploma and 91% for those with a university degree.

Yellowknife had the lowest proportion of families with less than \$30,000 annual income and the highest proportion of families with income more than \$75,000. In contrast, communities outside of Yellowknife and the regional centres had one in three families with incomes of less than \$30,000 and 35% more than \$75,000.

In 2006, the average family income was \$101,622 in the NWT, \$124,200 in Yellowknife, \$97,763 in the regional centres and \$68,822 in the rest of the communities.

Figure 92: Percent of families with average annual income less than \$30,000 and more than \$75,000 by community type, 2006



Source: NWT Bureau of Statistics

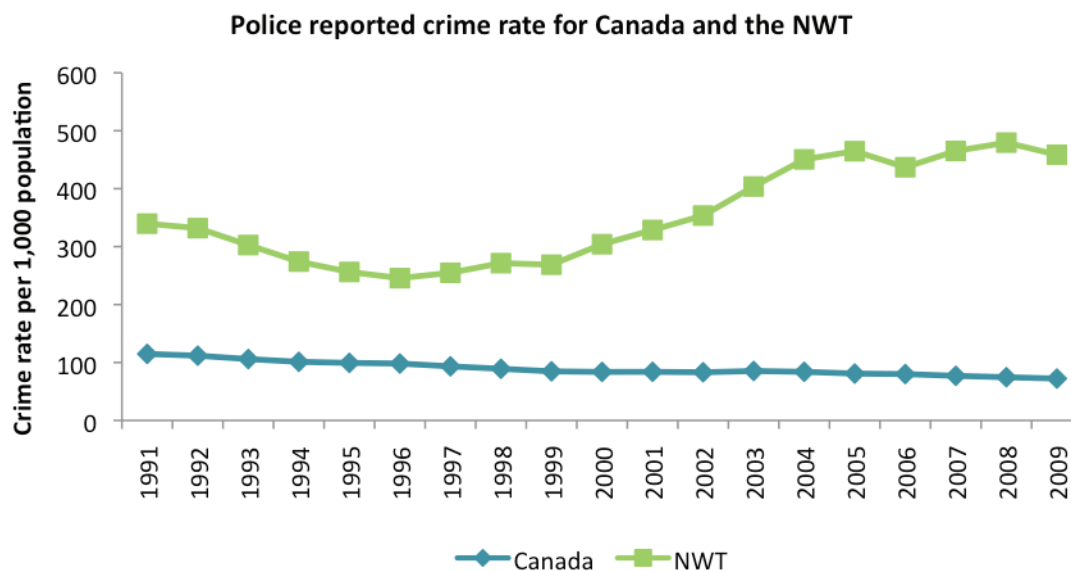
8.4: Crime Rate

Crime adversely affects health. Personal violence and assault, including domestic violence, has direct short-term and long-term effects on the physical and mental health of its victims and witnesses. People convicted of serious crimes are often removed from their home communities and, in cases of sentences greater than two years, may serve their sentence away from the Northwest Territories.

The crime rate represents the sum of all criminal incidents (excluding traffic offences and drug offences) reported to the police, divided by the population. Due to the differences in the type and severity of crimes, it is also useful to look at the three categories that comprise the crime rate: violent, property and other (e.g. disturbing the peace).

Trend data from 2000 to 2009 also shows that, although there have been slight increases in violent crime, increases in the rate of non-violent crime (property and other combined) appears to be “driving” overall changes in the NWT crime rate.

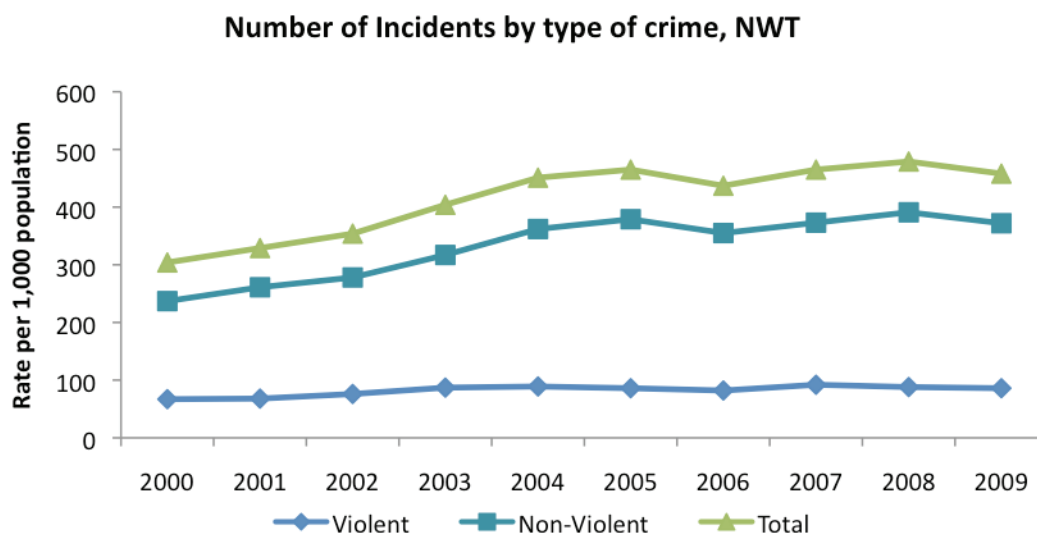
Figure 93: Police Reported Crime per 1,000 – Canada and Northwest Territories, 1995 - 2009



Source: NWT Bureau of Statistics

In the NWT in 2009, approximately 80% of criminal offences that made up the crime rate were non-violent offences (property and other Criminal Code), while 20% involved violent crimes.

Figure 94: Number of incidents per 1,000 persons, NWT 2000 - 2009



Source: Canadian Centre for Justice Statistics

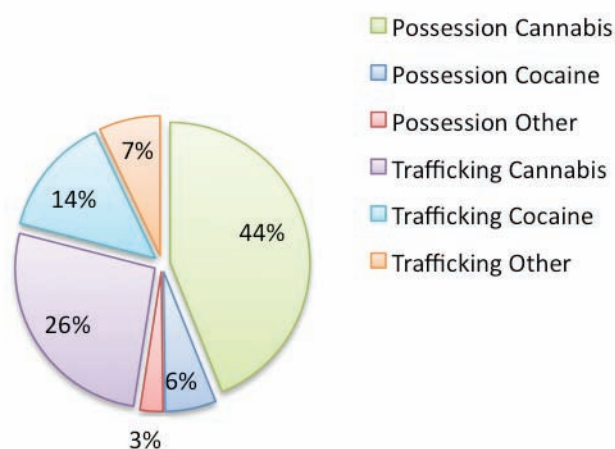
Of the non-violent offences reported by police, most were mischief (45%), disturbing the peace (30%) or administration of justice offences (10%). In 2009, these three offences made up 85% of all police-reported non-violent crime. Mischief and disturbing the peace are offences often related to the abuse of alcohol.

As previously mentioned, the crime rate does not include traffic and drug offences. When drug offences are examined, possession and trafficking of cannabis lead the way at 70%, followed by 20% for trafficking and possession of cocaine, and 10% for possession and trafficking of other drugs.

Trend data on drug offences over the 2000-2009 period shows an increase in most drug activity. Increases in drug offences could be a result of greater enforcement efforts or increased economic activity in the NWT. Both cannabis and other types of illicit drug use have increased in the NWT.

Figure 95: NWT Drug Offences 2009

NWT Drug Offences 2009

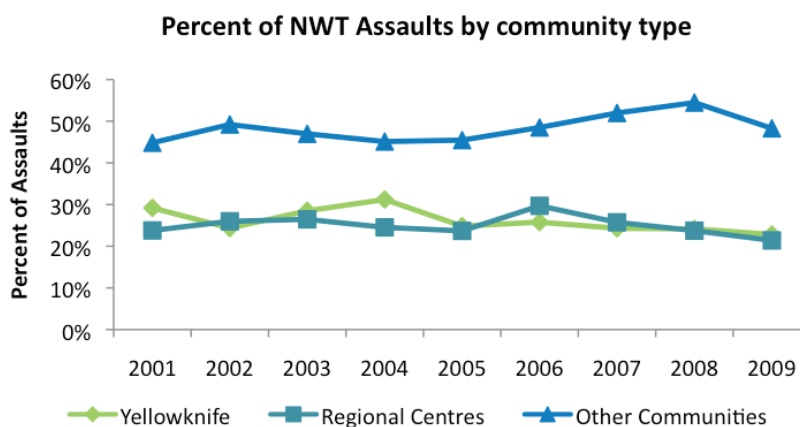


Source: Canadian Centre for Justice Statistics

In 2009, 20% of police-reported offences included in the crime rate were violent offences. The majority of these offences involve assault (82%), followed by threatening or harassing phone calls (9%) and sexual assault (6%).

There were striking differences between community types and assaults. In 2009, Yellowknife had the lowest rate of assaults at 32 incidents per 1,000 persons compared to regional centres at 83 per 1,000 and smaller communities at 97 per 1,000.⁴³ Approximately half of all assaults that take place in the NWT occur in the smaller communities.

Figure 96: Percentage of total assaults by community type, NWT 2001 - 2009

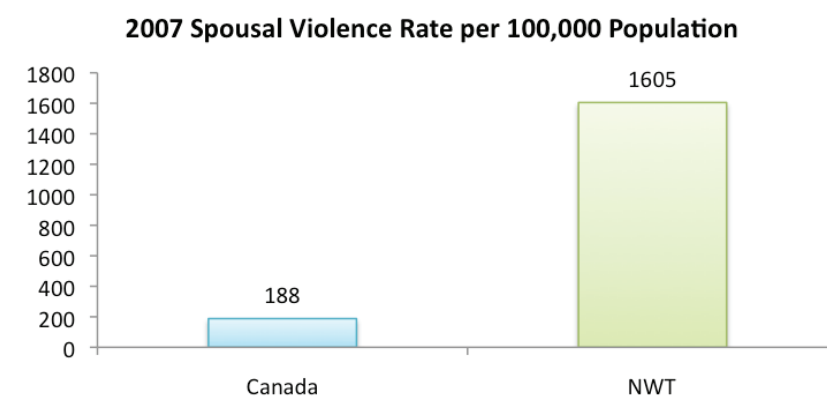


Source: NWT Bureau of Statistics

As there is no specific offence of “spousal violence”, Statistics Canada relies on reports from police on offences that are related to spousal violence, such as common assault, assault with a weapon, sexual assault and stalking. On these cases, police report the sex of the offender, the sex of the victim and the relationship between the victim and the offender. Those cases where the victim and offender are reported to be spouses would be included in the total count of “spousal violence cases”.

The rate (per 100,000 population) of spousal violence in the NWT for 2007 was 1,605. This rate was second-highest in Canada, following Nunavut which reported a spousal violence rate of 2,472. The national rate of spousal violence in 2007 was 188.⁴⁴

Figure 97: Canadian Comparison of Spousal Violence Rate, 2007



Source: Family Violence in Canada: A Statistical Profile, 2009
StatsCan

Family violence continues to be an important issue in the NWT. According to research conducted by Statistics Canada, the risk factors associated with family violence include unemployment, social isolation, alcohol consumption and prevalence of common-law unions.⁴⁵ Many of these risk factors are present in NWT communities. High levels of family violence are seen in NWT communities as evidenced by child protection issues, applications for emergency protection orders, shelter use, police reports of territorial spousal assault, and reports from front line workers who deal with family violence every day.⁴⁶

⁴⁴ Family Violence in Canada: A Statistical Profile, 2009, Statistics Canada

⁴⁵ Family Violence in Canada, A Statistical Profile 2008, Statistics Canada

⁴⁶ Department of Justice, 2011-12 Annual Business Plan, pp. 10

9. Concluding Remarks

The population health approach adopted in this report highlights the important influence that demographics, socioeconomic factors and making healthy lifestyle choices have on health status. Compared to residents living in Yellowknife, people who live in the smaller NWT communities tend to have lower levels of education, lower incomes and lower employment rates. They are also less likely to indicate that they enjoy high levels of social support, have access to affordable and nutritious food, and live in suitable housing.

Evidence suggests that a large number of NWT residents across the NWT are still making unhealthy lifestyle choices. Only 41 percent of our population get enough physical activity to maintain or improve their health. The prevalence of smoking in the NWT is consistently double that of the Canadian rate. Well over half of the population 18 years and over are either obese or overweight. NWT residents are 2.3 times more likely to die from an injury than people in the rest of Canada. The rate of STIs is twelve times higher than the national average with youth and young adults, age 15 to 24 having the highest incidence rates.

High-risk behaviours do not occur in isolation. There are complex interactions between these factors and the other major determinants of health. People with the lowest incomes are more likely to suffer from chronic conditions such as diabetes, arthritis and heart disease; and to be hospitalized for a variety of health problems. They are twice as likely to use health care services as those with the higher incomes. This is not a simple case of poverty versus affluence: there is a gradient in inequalities in health. People tend to be less healthy than those above them on an income scale, but healthier than those below.

An estimated 20% of total health care spending may be attributable to income disparities.⁴⁷ In other words behaviours need to be examined within the context of people's socio-economic situation. Policies that promote healthy socio-economic environments will also have a positive impact on people's health and also on health care spending.

A number of indicators that measure the determinants of health have shown progress. Education levels have increased in many communities. Employment rates have also shown some signs of improvement. These socio-economic improvements may lead to better health and well-being of the population if changes spread evenly in a manner that does not cause major social disruption, fosters greater self-determination and increased opportunities for people to make real healthy choices.

Challenges to maintaining and improving the health status of NWT residents lie ahead. As stated earlier, many factors affecting health are beyond the reach of the care system alone and actions to change them require efforts from all levels of government, other government departments, communities, non-governmental organizations and individuals. The Health Council of Canada states that assessing the impact of health on all government policies can help government officials understand how their ministry's work can have an effect on the health of residents.⁴⁸

Creating a sustainable economy with a fair distribution of meaningful work and income, encouraging educational opportunities and life-long learning, fostering social support networks in families and communities, ensuring adequate housing, encouraging healthy lifestyle decisions, cultivating healthy child development, promoting health and sustainable environments and providing appropriate and accessible health services are all challenges that require everyone's attention.

⁴⁷ Federal/Provincial/Territorial Advisory Committee on Population Health and Health Security, Health Disparities Task Force. (2004) *Reducing Health Disparities – Roles of the Health Sector: Recommended Policy Directions and Activities*. www.phac-aspc.gc.ca.

⁴⁸ Health Council of Canada. (2010) *Stepping it Up: Moving the Focus from Health Care in Canada to a Healthier Canada*.

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