

**INDICATORS OF NORTHERN HEALTH:  
A RESOURCE FOR NORTHERN MANITOBANS AND  
THE BAYLINE REGIONAL ROUND TABLE**

**FINAL REPORT**

January 2009

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## Executive Summary

The Rural Development Institute, Brandon University and the Saskatchewan Population Health and Evaluation Research Unit, University of Regina partnered to conduct a three-year research project entitled *Community Collaboration to Improve the Health Care Access of Northern Residents*. Funded by an Aboriginal People's Grant from the Canadian Institutes of Health Research, the project was founded on the principles of a participatory action research.

In Manitoba, the Bayline Regional Round Table (BRRT) and its communities of Cormorant, Thicket Portage, Pikwitonei, Illford/War Lake and Wabowden partnered with the Burntwood Regional Health Authority, and the Nor-Man Regional Health Authority. This report was designed to bring together information for use by these northern communities, residents of northern Manitoba, regional health authorities, health service providers, and others interested in the health of northern residents. Health indicators and demographic statistics from a variety of sources are noted in each section and are used to illustrate the health of northern populations, their use of the health care system, and population characteristics that influence and determine their health status.

The report begins with information about the project and the data that have been gathered (Section I), followed by a comparison of the health status of Canadians by province (Section II), a discussion of the health of northern Canadians by regional peer groupings (Section III), details on the health of First Nations people of Manitoba (Section IV), and data on health in Northern Manitoba as compared with the South and Winnipeg (Section V). The report then focuses on the health districts and community groupings within the Burntwood Region (Section VI) and the Nor-man Region (Section VII), including population demographics of factors that influence health and well-being. Some highlights of these sections follow. Details on these highlights and other information about health indicators and demographics are located in the full report.

Section II - In a comparison of the 10 Canadian provinces, Manitoba ranked 10 in health status, 3 in health care outcomes, and tied for 9 in health care utilization and performance, for an overall ranking of 10 or last in overall health performance. Per capita health care spending was not indicative of performance as Manitoba ranked 7 for health care spending, with only 3 provinces spending more per person and Manitoba's per capita rate above the national average.

Section III - Statistics Canada grouped Canada's 139 health regions into 10 peer groups on the basis of 24 demographic characteristics such as population count, household income, education, employment status, and life expectancy. Health outcomes and risk factors were compared between and within these peer groups. Peer Group C, which included Burntwood and Churchill Health Regions of northern Manitoba, and Peer Group F, which included Nor-Man Health Region, had the lowest life expectancy of all Peer Groups for the nation. Group C, in last place with a life expectancy of 71.8 years, was almost 5 years lower than second last place Group F at 76.7. Both were significantly lower than the national average life expectancy of 78.3. These results suggested that the farther north people live in Manitoba, the shorter their life expectancy. Group C scored poorest of all peer groups on the four health behaviour indicators, related to smoking, obesity, infrequent exercise and heavy drinking. However, Group C scores for the psychosocial factors of high stress and depression were the best scores, significantly better than the national average. Group F had significantly poorer scores than the national averages on all indicators except infrequent exercise and high stress.

Section IV - For all health regions in Manitoba, the health status of the Registered First Nations (RFN) population was poorer than that of the other Manitobans in each region. However in health regions in the south with the best overall health status, RFN populations had poorer health status than they did in northern health regions. Data suggested that for RFN populations, who live in northern regions and practice more traditional lifestyles, better health status than RFN populations in the south may be a result. The diabetes treatment prevalence among RFN was over four times higher (18.9%) than for other Manitobans (4.5%). Injury hospitalization rates were 3.7 times higher for RFN (30.4/1000), than for all other Manitobans (8.3/1000). A higher rate for the RFN population was consistent for every health region in Manitoba. Overall, immunization rates for RFN children were about 2/3 of those for other Manitoban children. Family practitioners and general practitioners provided for 83.9% of physician contacts for the RFN and 73.7% for other Manitobans. Given the poorer health status of RFN populations, the converse could be expected. Some 83.6% of family practitioner and general practitioner visits for RFN people, occurred in the health region of residence. For other Manitoban's 90.9% occurred in the region of residence. Jurisdictional ambiguity and the lack of clarity on the respective roles and responsibilities of the federal and provincial governments concerning health and health services of First Nations people have an impact on accessibility and comprehensiveness of health care delivery in all Canadian provinces and territories.

Section V - Overall, health status in Northern Manitoba was significantly poorer than in the South and in Winnipeg. Treatment prevalence of diabetes, hypertension, and cumulative mental health disorders (due largely to the diagnosis of substance abuse) were significantly higher in Northern Manitoba. Immunization of one-year olds occurred 16% less often for males living in the North compared to the Province and 14% less often for females. The difference was more pronounced among two year olds. Despite the fact that individuals in the North suffer poorer health than their southern counterparts, Northern residents had lower rates of health care utilization.

Section VI - BRRT communities of Thicket Portage, Pikwitonei, and Wabowden were located in the same health district within the Burntwood Health Region, while War Lake was located in a district with Shamattawa, York Landing, and Split Lake. In general health status and health care data showed that the district including Thicket Portage/ Pikwitonei/ Wabowden fared somewhat better than the Burntwood Region as a whole. The district in which Ilford/War Lake was located showed a poorer health status than the Burntwood Region as a whole. Demographic details describing characteristics of the population of the Burntwood Region were compared to those of the Province of Manitoba as a whole. Demographics were provided for the total population of the Burnwood Region and for the Aboriginal Identity Population (AIP) (who identified themselves as being of Aboriginal decent when they completed the census).

Section VII - The BRRT community of Cormorant is located in District 3 of Nor-Man Health Region (often referred to as Nor-Man Other in reports) along with Sherridon/Cold Lake, Easterville/ Chemawawin First Nation, Grand Rapids/ Grand Rapids First Nation, Moose Lake/ Mosakahiken Cree Nation, Pukatawagan/Mathias Colomb First Nation. District 3 generally rated poorer than the other two districts of the Region on various health indicators. Demographics were provided for the total population of the Region and the AIP of the Region.

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# **I Introduction**

This report is a component of the three-year research project *Community Collaboration to Improve the Health Care Access of Northern Residents* that was funded by an Aboriginal People's Grant from the Canadian Institutes of Health Research. The project involved the communities of the Bayline Regional Round Table (BRRT) and their respective regional health authorities.

The initial purpose of the report is to provide information for use by each community; its BRRT partners; the northern health regions; and others interested in the health and health care access of residents of northern Manitoba. The report begins with a discussion of health status and health care across provinces in Canada and moves to a focus on the health of northern Canadians. Health and health care indicators for the Registered First Nation population of Manitoba are discussed followed by a review of the health of northern Manitobans. Health status and health care in the Burntwood Region and the Nor-Man Region in general are discussed and followed by a discussion of the same topics, to the extent possible, regarding the Bayline Communities located in those regions. Some data are provided on the demographics of populations by health region and health district. In this report the health regions of interest are the Burntwood and Nor-Man Health Regions, with a focus on the Bayline Communities of Ilford/War Lake First Nation, Pikwitonei, Thicket Portage, and Wabowden located in the Burntwood Health Region and Cormorant located in the Nor-Man Health Region.

## ***Research Project***

Concern about the quality of access to health services within BRRT communities locally, regionally and provincially sparked interest in conducting a participatory action research (PAR) project engaging a variety of stakeholders. Conversations, interviews and focus groups were conducted with community members, service providers (itinerant, local, regional and provincial), and government representatives. Inclusion of personal experiences and community knowledge to empower participants is fundamental in PAR. This type of research activity values the process through which awareness and consciousness of issues is raised. Sharing knowledge across partners and collaboratively creating solutions are important outcomes of the project. In keeping with the inherent principles of community development, community members actively engaged in the process, extending their skills and knowledge necessary to take further charge of their own destinies and extending their partnerships to strengthen their actions to improve the health care access of northern residents.

In this report data will be provided on demographics and health status for use by the partnering communities. These data will complement the information gathered from community residents and their health care providers through the interviews and focus groups (Moss, Racher, Jeffery, Hamilton, Burles, & Annis, forthcoming).

## ***Organization of the Report***

Section I, the introduction of the report, includes information about the purpose of this report, the research project, and the content of the report. Sources and limitations of the data are discussed. In addition the use of health indicators for health status and health care system evaluation is described.

In Section II, the health status of Canadians and Manitobans is discussed. The chapter begins with information about the ranking of Manitoba among provinces in Canada in terms of health status of its residents, health care outcomes and health care utilization. Provincial health care expenditures are compared.

In Section III, the focus is on northern health and the health of populations living in the northern health regions of Canada. Health regions of Canada are grouped according to demographics or characteristics of the populations, with the northern health regions being compared to the other health regions on indicators to measure health outcomes, health behaviours and psycho-social factors of the respective populations.

In Section IV, the health of Registered First Nations People of Manitoba are discussed including health status, measures of illness and injury, preventative care measures and health care utilization. Jurisdictional factors related to FN health care delivery are considered with attention to areas of agreement and areas of disagreement between federal and provincial jurisdictions.

In Section V, the health of Northern Manitobans is the focus considering health status, measures of illness, preventative care measures, and health care utilization. Mental health is discussed in light of treatment prevalence and use of physician services.

In Section VI, the Burntwood Region and the Bayline Communities therein are the focus of attention. Health and health care in the Burntwood Region are discussed by health district covering topics of health status, measures of illness, preventative care measures, and health care utilization. Mental health data are discussed in light of treatment prevalence and use of physician services. A variety of demographics to describe the characteristics of the population of the Burntwood Region are provided including figures for the Aboriginal Identity Population and the Region as a whole. Population counts for 2001 and 2006 by community are provided for Census Division 22.

In Section VII, the Nor-Man Region and the Bayline Communities therein are the focus of attention. Health and health care in the Nor-Man Region are discussed by health district covering topics of health status, measures of illness, preventative care measures, and health care utilization. Mental health data are discussed in light of treatment prevalence and use of physician services. A variety of demographics to describe the characteristics of the population of the Nor-Man Region are provided including figures for the Aboriginal Identity Population and the Region as a whole. Population counts for 2001 and 2006 by community are provided for Census Division 21.

The Executive Summary is provided at the front of the report to give the highlights of the report at a convenient glance.

### ***Sources of the Data***

This report includes data from a variety of resources. Much of the data are demographic. Statistics Canada provided population information such as marital status, language characteristics, educational attainment, income and labour force characteristics, and occupation characteristics, as well as family and household characteristics. Other data were health indicators or measures of health of populations and were taken from regional health assessments and provincial studies by the Manitoba Centre on Health Policy.

Demographics were retrieved from Statistic Canada's website at [www.statcan.ca](http://www.statcan.ca). On the website links were used to the *2001 Community Profiles*; the *2001 Census Aboriginal Population Profiles*; and the *2001 Aboriginal Peoples Survey (APS)*. The APS provided a number of statistics that may not be included in the 2001 Census Aboriginal Population profile and therefore can be used to supplement the Census Profiles.

Other data were retrieved from regional sources such as the *Burntwood RHA Community Health Assessment* (BRHA, 2004) and the *Nor-Man RHA Community Health Assessment* (NRHA, 2004). Reports used from the Manitoba Centre for Health Policy included: *Health and Health Care Use of Registered First Nations People Living in Manitoba: A Population-Based Study* (Martens et al., 2002), the *Manitoba RHA Indicators Atlas: Population-Based Comparisons of Health and Health Care Use* (Martens et al, 2003), *Patterns of Regional Mental Illness Disorder Diagnoses and Service Use in Manitoba: A Population-Based Study* (Martens, P. et al, 2004) and *Sex Differences in Health Status, Health Care Use, and Quality of Care: A Population-Based Analysis for Manitoba's Regional Health Authorities* (Fransoo et al, 2005). Internet links to these reports were included in the reference list at the end of the report.

Although some 2006 census data were available at the writing of this report, detailed community data were not available as yet. Further, many of the studies discussed and data provided from other sources are related to 2001 data. Therefore 2001 data was used throughout this report with the addition of a comparison of population counts by census division and sub-division for 2001 and 2006.

### **Limitations of the Data**

In gathering data, two issues arose: the amount of data available and the quality of existing data. While data were readily available at the provincial and regional levels, when the focus shifts to smaller communities data become increasingly scarce. Locating community health data was difficult for two possible reasons: data have never been gathered in large enough samples to represent the community and/or community members in the area may not have the resources necessary or may not have identified the need to produce a statistical picture of the health status of their residents. However, data have been generated by the Manitoba Centre for Health Policy at the level of health districts within each health region. These data were the 'closest to home' data available for communities with populations of less than 500 persons.

Although census data cannot be generated in any detail (due to sample size) for communities with populations of less than 500 persons, demographics have been generated by health region within each province. These data about the characteristics of the population of each health region complement the data on health indicators from the Manitoba Centre for Health Policy. In addition, aspects of the entire population of a region can be compared to specific populations such as the "Aboriginal Identity Population" to better understand the characteristics of populations of interest. These data were included in the latter two sections of the report.

Often the data provided by Statistics Canada were weighted to predict the responses of the entire population from the sample of a population that completed the survey. As a result of weighting or due to low response rates to surveys, the reliability of data may be questionable. When data were less reliable, Statistics Canada urged that data should be used with caution and symbols were used within tables to indicate those particular data. When such data were identified, these

symbols were included in the tables and the related footnotes were incorporated throughout this report.

## ***Health Indicators***

The Canadian Institute for Health Information (2006) defined health indicators as standardized measures for comparing health status as well as health system performance and characteristics among different jurisdictions in Canada. A variety of indicators have been used to measure health status. The indicators chosen largely depended on those that were available for study; that is those factors that were possible to measure and had been measured. The goals of the research helped to focus on the most appropriate indicators for use within the study. Broadly speaking, health indicators are medical and non-medical.

Common medical indicators of health include:

- life expectancy at birth,
- infant mortality or death rates, and
- physical indicators such as body mass index (a calculation of body weight in relation to height), and blood pressure.
- Access to health services is a medical indicator that is often evaluated using indicators such as
  - availability (Do services exist?),
  - accessibility (Can people get to services?),
  - accommodation (Do services meet the needs of residents?),
  - affordability (Can people afford the costs of services and access to them?), and
  - acceptability (Are services delivered in acceptable ways?) (Racher & Vollman, 2002).

Common non-medical health indicators may include:

- socio-economic factors such as income and social status, education, and employment;
- physical environmental factors such as housing, transportation and water quality;
- social environmental factors such as safe and supportive communities;
- social networks including availability of friends and family;
- culture and gender; as well as
- personal health behaviours such as the use of tobacco or alcohol, frequency and type of exercise undertaken and nutritional practices (PHAC, 2001).

Regional health authorities use demographic statistics and health indicators to monitor the health of their populations and the functioning of their health systems through comparative information. They seek to analyze existing information and to gather additional information on the health of the population served; the health services received by the region's residents; and non-medical factors that influence health of residents of the region (often referred to as social determinants of health); and characteristics of the community and the health system that provide useful contextual information.

## II Provincial Health Status and Health Care

In discussing health status and health care in Manitoba two areas of focus were considered. The first was a comparison of the Province of Manitoba to the other Canadian provinces on three evaluation categories of health indicators including health outcomes, health behaviours and psycho-social factors. The second was an illustration of the per capita government health expenditures by province.

### ***Provincial Health Indicators***

In February 2006, the Conference Board of Canada released a report, *Healthy Provinces, Healthy Canadians: A Provincial Benchmarking Report* (Hamilton, 2006). The report contained an assessment of the state of provincial health care in Canada and the overall health of residents of each province. The report was based on the data from the Health Canada publication *Healthy Canadians: A Federal Report on Comparable Health Indicators 2004*. The aim of the report was to examine and compare provincial health care systems by using the 70 most recent health indicators. Researchers divided up the 70 indicators by gender when possible, which led to the identification of 119 health indicators. These health indicators were grouped into three categories: 51 were classified as health status (e.g. life expectancy, physical activity), 27 as health care outcomes (e.g. mortality or death rates for certain diseases, five-year survival rates for selected types of cancer), and 41 as health care utilization and performance (e.g. patient satisfaction with health care, wait times for selected surgeries). The health status of each province was rank ordered in terms of these 3 categories and an overall rank was calculated (Table 2.1).

The health status top performer was British Columbia, followed by Quebec and Ontario. The health status poorest performer was Manitoba. British Columbia placed first in the health care outcomes category followed by Alberta and Manitoba. Quebec dropped to last in this category which may be explained by its lack of reporting on 13 indicators in this category. Health care utilization and performance leader was New Brunswick, followed by Saskatchewan and Quebec. British Columbia dropped to second lowest followed by Manitoba and Ontario who tied for last place.

While no province did well in all areas, British Columbia and Alberta followed by Saskatchewan did best in the overall provincial comparison. Manitoba ranked 10<sup>th</sup> or last overall largely due to its low scores on a number of indicators in health status and health care utilization and performance.

Placing last in overall health performance by the Province of Manitoba suggested a substantial need for improvement in the health status of Manitoba residents and development of the health care system. Challenges in Manitoba that must be managed in the future included Manitoba's placement as having:

- the highest male infant mortality rate
- the highest female incidence rate for lung cancer, (tied with Quebec)
- the second highest incidence rate for female breast cancer
- the second highest female incidence rate for Chlamydia

**Table 2.1 Provincial Ranking by Evaluation Category**

Health Status		Health Care Outcomes		Health Care Utilization and Performance		Overall Health Performance	
Rank	Province	Rank	Province	Rank	Province	Rank	Province
1.	British Columbia	1.	British Columbia	1.	New Brunswick	1.	British Columbia
2.	Quebec	2.	Alberta	2.	Saskatchewan	2.	Alberta
3.	Ontario	3.	Manitoba	3.	Quebec	3.	Saskatchewan
4.	Alberta	3.	Saskatchewan	3.	Alberta	4.	Ontario
5.	Prince Edward Island	5.	Ontario	5.	Prince Edward Island	5.	Quebec
6.	Saskatchewan	6.	New Brunswick	5.	Nova Scotia	6.	New Brunswick
7.	New Brunswick	7.	Nova Scotia	7.	Newfoundland/Labrador	7.	Prince Edward Island
8.	Newfoundland/Labrador	8.	Newfoundland/Labrador	8.	British Columbia	8.	Newfoundland/Labrador
9.	Nova Scotia	9.	Prince Edward Island	9.	Ontario	9.	Nova Scotia
10	Manitoba	10	Quebec	9.	Manitoba	10	Manitoba

Source: Hamilton, C. (2006). *Healthy provinces, Healthy Canadians: A provincial benchmarking report*. Ottawa: Conference Board of Canada.

- the third highest rate of potential years of life lost due to unintentional injury for males, second highest rate for females
- the highest proportion of the population waiting more than a month for diagnostic and specialist visits
- the highest proportion of the population reporting difficulty obtaining health information or advice any time of day

The report stated “Patients must truly be patient in Manitoba: the proportion of them who had to wait more than a month for diagnostic services and specialist visits was higher than in any other province. Manitoba also had the highest proportion of the population reporting difficulty obtaining health information or advice any time of day”.

### ***Provincial Health Expenditures***

The report indicated that higher government spending per capita on health care was not indicative of better performance on health indicators (See Table 2.2). Nova Scotia had the lowest government health spending per capita at \$2,096 and an overall performance ranking of eighth. Newfoundland/Labrador tied with Nova Scotia at eighth overall for performance and Newfoundland/Labrador was the highest spender at \$2,828 per capita. Clearly over \$700 difference in per capita spending between Newfoundland/Labrador and Nova Scotia did not generate any difference in ranking on overall health performance between the provinces. Quebec and New Brunswick were the next lowest spenders and were ranked 5<sup>th</sup> and 6<sup>th</sup> respectively in overall health performance. Manitoba spent \$2,438 which is the fourth highest amount per capita but had an overall health performance rating of 10<sup>th</sup> or last place among the provinces. These findings certainly suggested that money would not be the entire solution to providing better health care.

**Table 2.2 Per Capita Government Health Expenditure by Province**

<b>Per Capita Expenditure (\$ lowest to highest)</b>	<b>Province</b>	<b>Overall Ranking by Province</b>
2,096	Nova Scotia	8
2,109	Quebec	5
2,157	New Brunswick	6
2,242	Saskatchewan	3
2,264	Ontario	4
2,422	Prince Edward Island	7
2,438	Manitoba	10
2,545	British Columbia	1
2,687	Alberta	2
2,823	Newfoundland and Labrador	8
2,321	Canada	-

Source: Hamilton, C. (2006). *Healthy provinces, Healthy Canadians: A provincial benchmarking report*. Ottawa: Conference Board of Canada.



### III Health of Northern Canadians

To understand the health of northerners in Canada generally and in Manitoba specifically, it was informative to compare health indicators, with demographic and geographic factors being considered. These comparisons were accomplished by creating peer groupings of health regions across the nation and examining health indicators of those peer groupings. In its 2002 annual report, *How Healthy are Canadians?*, Statistics Canada grouped Canada's 139 health regions into 10 peer groups (A through J) on the basis of 24 common socio-demographic characteristics such as population count, household income, education, employment status, and life expectancy (Statistics Canada, 2002a). Health outcomes and risk factors were then compared between and within these peer groups. Since this work in 2002, the Peer Groups have been reorganized and renamed. However since limited research to compare health indicators across peer groups has been published with the new groupings, and little has changed regarding health status in the north, the 2002 groupings were used in this report.

#### **Canadian Health Regions Comprise Peer Groups**

The variables considered most important in assigning health regions to peer groups were the proportion of Aboriginal and visible minority populations, unemployment rate, population size, percentage of the population aged 65 years or older, and income inequality. For example, in 2002, Peer Group A included large urban centres with populations over 1 million people, such as Toronto, Montreal, and Vancouver. Peer Group A had a high percentage of visible minority population, a low percentage of Aboriginal people, higher than average years of schooling, and high inequality of income distribution. Peer Group B included urban centres with average population sizes over 500,000, a high percentage of visible minority population, low percentage of Aboriginal population and a high average number of years of schooling. For a listing of peer groups and their principle characteristics see Appendix A.

The Burntwood and Churchill Health Regions were considered together for this study and were included in Peer Group C, along with Région du Nunavik, Région des Terres-Cries-de-la-Baie-James, Northern Health Services Branch, and Nunavut. (See Appendix B for a list of the health regions by peer groups.) The characteristics of Peer Group C (Table 3.1) included: mostly northern health regions, high percentage (75.5%) of Aboriginal population, high unemployment rate (17.2%), low density of population (3.9/sq. km.), low percentage of visible minority population (0.9%), and low average number of years of schooling (10.6 years). Six health regions with 0.4% of the population of Canada belonged to Peer Group C.

The Nor-Man Health Region was included in Peer Group F (Table 3.1) which at the time of the study consisted of 13 health regions having 2.2% of the population of Canada. Characteristics of this peer group included: mostly northern health regions, high percentage (17.2%) of Aboriginal population, low density of population (5/sq. km.), low inequality of income distribution (median share = 23.6), and high percentage of inter-municipality migrants (22.8%).

Table 3.1 illustrates the principal characteristics of Peer Group C and Peer Group F for easy comparison. Peer Group C and Peer Group F both contained health regions that were similar in that they both contained mostly northern health regions with high percentages of Aboriginal populations and low density of population.

**Table 3.1 Principal Characteristics of Peer Groups of Northern Manitoba RHAs**

<p><b>Peer Group C</b> (included Burntwood RHA)          Mostly northern health regions          High percentage of Aboriginal population          Low density of population          High unemployment rate          Low percentage of visible minority population          Low average number of years of schooling</p>	<p><b>Peer Group F</b> (included Nor-Man RHA)          Mostly northern health regions          High percentage of Aboriginal population          Low density of population          Low inequality of income distribution          High percentage of inter-municipality migrants</p>
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Peer Group C included health regions with high rates of unemployment, low percentages of visible minority populations, and low average years of schooling. Meanwhile, health regions in Peer Group F experienced low inequality of income distribution (less difference between upper and lower income distribution across the population), and high percentages of inter-municipality migrants (residents moved more frequently between municipalities and communities).

### ***Health of Peer Groups***

Life expectancy is considered to be one of the most important indicators of the health of a population. Average life expectancy in Canada is among the best in the world, a consistent placing for many years. While the average life expectancy in Canada is admirable, life expectancy within Canada varied considerably from region to region, from a low of 65.4 years in the Région du Nunavik, Quebec, to a high of 81.2 in Richmond, British Columbia (Shields & Tremblay, 2002), a difference of almost 16 years. Factors known to contribute to these disparities include socio-demographic differences between communities such as unemployment rates, proportions of people with postsecondary education and proportions of people who were Aboriginal (Gilmore & Wannell, 1999).

The study conducted by Shields and Tremblay (2002) looked at peer groupings to study health outcomes and risk factors both between and within peer groups. It is important to note that health indicators such as life expectancy varied considerably between peer groups. Often the range of estimates for the health regions within a peer group was also sizeable. In the study three categories of factors and a total of nine characteristics were measured both between peer groups and within peer groups. The three categories included:

1. Health outcomes – Measures used were life expectancy, disability free life expectancy, and self-reported health status of fair or poor.
2. Health behaviours – Measures used were daily smoking, obesity, infrequent exercise and heavy drinking.
3. Psychosocial factors – Measures used were high stress and depression.

Estimates of life expectancy and disability-free life expectancy used in this study were based on 1996 Census of Population, Canadian Vital Statistics Database, and population projections from the Demography Division. Other estimates, as well as population counts and sample sizes, were based on the 2000/01 Canadian Community Health Survey (CCHS), a comprehensive survey of more than 130,000 Canadians, aged 12 years and over, in 139 health regions covering all provinces and territories. The CCHS did not include persons living on Indian reserves, Canadian Forces Bases or in some remote areas. Estimates based on CCHS data were age-standardized to

account for populations with larger numbers of younger or older residents. Table 3.2 compared the peer groups along with the Canadian averages using the 3 categories and 9 characteristics. The ordering of peer groups was based on life expectancy, from highest to lowest.

When reading the tables comparing peer groups it was important to note that the differences between numbers was not indicative of whether the differences between groups was significant. The tables were organized with symbols to indicate when figures were significantly different from the average Canadian figures and whether the differences were significantly higher or lower than the averages. Similarly significance in differences of regions with their overall peer group was indicated. The coding at the bottom of each table provides these details.

As seen in Table 3.2, Peer Group C, which included Burntwood and Churchill Health Regions of northern Manitoba, and Peer Group F, which included Nor-Man Health Region, had the lowest life expectancy of all Peer Groups for the nation. Peer Group C, in last place with a life expectancy of 71.8 years, was almost 5 years lower than second last place Peer Group F at 76.7. Both were significantly lower than the national average life expectancy of 78.3 and the highest ranked Peer Group B at 79.6 years. These results suggested that the farther north people live in Manitoba, the shorter their life expectancy.

### **Peer Group C (with Burntwood Region)**

Peer Group C, which included Burntwood and Churchill Health Regions, had the poorest scores on the other two health outcome scores and the four health behaviour scores, all scores were significantly poorer than the calculations for the entire Canadian population. Peer Group C had a disability free life expectancy (number of years of life one can expect to live without activity limitation and outside of a health care institution) of 62.7 years, almost four years shorter than the national average of 68.6 years. Some 15% of those surveyed from Peer Group C considered their health to be poor or fair compared with 12% of the national population. Peer Group C scored poorest of all peer groups on the four health behaviour indicators, with 39% of survey respondents aged 12 years or older reporting smoking daily; 26% of those aged 20 years and older having body weights in the range for obesity; 27% of those aged 12 years or older reporting infrequent exercise (3 or less times per month); and 22% of those aged 18 years and older reporting heavy drinking (consuming 5 or more drinks on one occasion in the past 12 months). Peer Group C scores for the psychosocial factors of high stress (ages 18 years and older) and depression (ages 12 and older) were the best scores, significantly better than the national average.

In grouping health regions together, individual health region scores can be masked. However, when looking within Peer Group C to compare the different health regions in that peer group (See Table 3.3), the Burntwood and Churchill Health Regions had no significant differences from Peer Group C averages on any of the indicators.

### **Peer Group F (with Nor-Man Region)**

Peer Group F, which included Nor-Man Health Region, had significantly lower scores than the national averages on the other two health outcomes indicators, three of the four health behaviour indicators, and one of the two psychosocial factors. Peer Group F had a disability free life expectancy of 66.7, almost 2 years less than the national average. Some 13% of those surveyed considered their health to be poor or fair compared with the national calculation of 12%. On the health behaviour indicators 25% aged 12 years smoked daily; 19% of those aged 20 years and older had body weights in the range for obesity; and 21% of those aged 18 years and older

**Table 3.2 Comparison of Peer Groups for Selected Characteristics**

	No. of Health Regions	Health Outcomes			Health Behaviours				Psycho-social Factors	
		Life Expectancy (years)	Disability Free Life Expectancy (years)	Fair or Poor Health (age 12+) %	Daily Smoking (age 12+) %	Obese (age 20+) %	Infrequent Exercise %	Heavy Drinking (age 18+) %	High Stress (age 18+) %	Depression (age 12+) %
Canada	139	78.3	68.6	12	22	15	22	16	26	7
Peer B	8	79.6 ✓	69.5 ✓	11 ✓	18 ✓	14 ✓	19 ✓	15 ✓	27	8
Peer A	5	78.8 ✓	69.6 ✓	12	18 ✓	11 ✓	27 ×	12 ✓	26	6 ✓
Peer J	8	78.8 ✓	68.8 ✓	11 ✓	22	16	17 ✓	18 ×	24	8
Peer I	34	78.3	67.6 ×	12	23 ×	17 ×	19 ✓	18 ×	26	8 ×
Peer G	21	77.9 ×	67.5 ×	12	23 ×	20 ×	20 ✓	20 ×	24 ✓	8
Peer E	13	77.8 ×	67.0 ×	14 ×	26 ×	22 ×	22	19 ×	22 ✓	7
Peer H	22	77.7 ×	68.8 ✓	12	25 ×	15	24 ×	17	29 ×	7
Peer D	9	77.0 ×	66.5 ×	15 ×	26 ×	21 ×	28 ×	20 ×	19 ✓	6 ✓
Peer F*	13	76.7 ×	66.7 ×	13 ×	25 ×	19 ×	18 ✓	21 ×	22 ✓	8 ×
Peer C*	6	71.8 ×	62.7 ×	15 ×	39 ×	26 ×	27 ×	22 ×	19 ✓	5 ✓

\* Peer Group C includes Burntwood and Churchill Health Regions and Peer Group F includes Nor-Man Health Region.

✓ indicates that peer group estimate is significantly better than Canadian estimate.

× indicates that peer group estimate is significantly worse than Canadian estimate.

Estimates of life expectancy and disability-free life expectancy are based on 1996 Census of Population, Canadian Vital Statistics Database, and population projections from Demography Division. Other estimates, as well as population counts and sample sizes, are based on 2000/01 Canadian Community Health Survey (CCHS).

Source: Shields, M., & Tremblay, S. (2002). The health of Canada's Communities. *Health Reports Supplement*, 13, 9-33. Statistics Canada Catalogue 82-003.

**Table 3.3 Comparison of Peer Group C Health Regions for Selected Characteristics**

	Health Outcomes						Health Behaviours						Psycho-social Factors					
	Life Expectancy (years)		Disability Free Life Expectancy (years)		Fair or Poor Health (age 12+) %		Daily Smoking (age 12+) %		Obese (age 20+) %		Infrequent Exercise %		Heavy Drinking (age 18+) %		High Stress (age 18+) %		Depression (age 12+) %	
	P	C	P	C	P	C	P	C	P	C	P	C	P	C	P	C	P	C
Canada	78.3		68.6		12		22		15		22		16		26		7	
Peer Group C	71.8	×	62.7	×	15	×	39	×	26	×	27	×	22	×	19	√	5	√
QC	Région des Terres-Cries-de-la-Baie-James	73.9	×	65.9	√	×	...		...		...		...		...		...	
SK	Northern Health Services Branch	73.3	×	62.5	×	15		33	×	22	×	22		24	×	22		...
MN	Burntwood and Churchill	72.9	×	62.4	×	15		35	×	26	×	27		24	×	19	√	6
NU	Nunavut	69.8	×	62.9	×	16		48	×	×	28	×	30	×	18		4	√
QC	Région du Nunavik	65.4	×	×	61.0	×	...		...		...		...		...		...	

Estimates for peer group C based on CCHS data exclude Région des Terres-Cries-de-la-Baie-James and Région du Nunavik since CCHS data were not collected in these health regions.

The questions on depression were not asked in the Northern Health Services Branch in Saskatchewan.

In column P, √ indicates that health region estimate is significantly better than per group estimate; in column C, √ indicates that health region or peer group estimate is significantly better than Canadian estimate.

In column P, × indicates that health region estimate is significantly worse than peer group estimate, in column C, × indicates that health region or peer group estimate is significantly worse than Canadian estimate.

Source: Shields, M., & Tremblay, S. (2002). The health of Canada's Communities. *Health Reports Supplement*, 13, 9-33. Statistics Canada Catalogue 82-003.

**Table 3.4 Comparison of Peer Group F Health Regions for Selected Characteristics**

	Health Outcomes						Health Behaviours						Psycho-social Factors										
	Life Expectancy (years)		Disability Free Life Expectancy (years)		Fair or Poor Health (age 12+) %		Daily Smoking (age 12+) %		Obese (age 20+) %		Infrequent Exercise %		Heavy Drinking (age 18+) %		High Stress (age 18+) %		Depression (age 12+) %						
	P	C	P	C	P	C	P	C	P	C	P	C	P	C	P	C	P	C					
Canada	78.3		68.6		12		22		15		22	√	16		26		7						
Peer Group F	76.7		66.7	×	13	×	25	×	19	×	18		21	×	22	√	8	×					
AB North West RHA	80.0	√	67.7		18		21		34	×	×	25		14	√	23		7					
BC North West	77.9	√	67.1	×	11		22		20		13	√	√	19		16	√	7					
AB Mistahia RHA	77.5	×	66.6	×	12		26	×	18		20		18		29	×	10						
BC Peace Liard	77.5		67.4	×	12		22		18		17		23	×	22		7						
QC Northern Quebec	76.9		68.7	√	11		28	×	17		19		18		21	√	4	√	√				
BC Northern Interior	76.8	×	66.8	×	14		25		15		16	√	20		22		10						
NT North West Territories	76.8	×	67.0	×	17	×	35	×	×	27	×	×	32	×	×	29	×	×	24				
BC Cariboo	76.7	×	66.5	×	15		21		16		13	√	21		24		11	×					
AB Northern Lights RHA	75.8	×	66.3	×	13		28	×	19		23		23	×	23		6						
YT Yukon Territory	75.7	×	66.9	×	11		26	×	17		16	√	23	×	19	√	9						
NF Health Labrador Corp.	74.9	×	66.3	×	13		32	×	24	×	23		26	×	13	√	√	5					
AB Keeweenok Lakes RHA	74.8	×	×	64.4	×	×	19	×	32	×	×	22	×	24		18		24					
MN Nor-Man	74.6	×	×	65.1	×	×	16		21		27	×	×	12	√	√	30	×	×	15	√	√	8

In column P, √ indicates that health region estimate is significantly better than per group estimate; in column C, √ indicates that health region or peer group estimate is significantly better than Canadian estimate.

In column P, × indicates that health region estimate is significantly worse than peer group estimate, in column C, × indicates that health region or peer group estimate is significantly worse than Canadian estimate.

Source: Shields, M., & Tremblay, S. (2002). The health of Canada's Communities. *Health Reports Supplement*, 13, 9-33. Statistics Canada Catalogue 82-003.

participated in heavy drinking (consuming 5 or more drinks on one occasion in the past 12 months). Peer Group F scored significantly lower for proportion of the population reporting infrequent exercise; this group had the lowest and best score compared to all other peer groups. On the two psychosocial factors, Peer Group F reported 8% of the population experiencing depression, significantly higher than the national average (7%), and 22% experiencing high stress, significantly lower than the national average of 26%.

Comparison within Peer Group F showed Nor-Man Health Region (See Table 3.4) had the lowest life expectancy (74.6 years) of the entire peer group including 13 health regions; just over two years lower than the peer group average (76.7 years) and over 3 ½ years lower than the national average (78.3 years). Nor-Man Health Region performed significantly poorer than the peer group average scores with a lower disability free life expectancy (65.1 years) than the peer group (66.7 years), higher proportion of the population with obesity (27%) than the peer group (19%), and higher proportion reporting heavy drinking (30%) than peer group (21%). Nor-Man Health Region scored significantly better than the Peer Group F for percentage of the population that reported infrequent exercise (12%) compared to (18%) and for the proportion of residents of the Region who reported high stress (15%) compared to the proportion of the Peer Group (22%).



## IV Manitoba First Nations Health

According to Statistics Canada 2001 Aboriginal Identify Population tables (2002b), the total population of all persons living in Manitoba (minus those in institutions) was 1,103,695. Of those, about 150,040 or 13% of Manitobans had identified themselves as being of Aboriginal decent. Within the total number of people who identified themselves as Aboriginal, 90,340 individuals indicated the single identity of North American Indian; 56,795 indicated the single identity of Métis, and 345 indicated the single identity of Inuit. Some 500 individuals indicated multiple Aboriginal responses and 2,060 indicated Aboriginal identity and did not fit specifically in any of the above categories. In 2001, the Burntwood RHA had a total population of about 42,995 people, with 31,235 Aboriginal people about 73% of that population (See Table 6.10 in Section VI). At the same point in time, the Nor-Man RHA had a total population of about 22,385 with 9,430 or about 42% indicating Aboriginal identity (See Table 7.10 in Section VII). Aboriginal Identity Populations are discussed in more detail related to the demographics of the Burntwood Health Region in Section VI and the Nor-Man Health Region in Section VII. Discussion of Registered First Nations Peoples (RFN) is the focus of this Section.

Two documents were explored to provide information on the health of First Nations people in Manitoba. Firstly, a report from the Manitoba Centre for Health Policy (MCHP) *The Health and Health Care Use of Registered First Nations People Living in Manitoba: A Population-Based Study* (Martens et al, 2002) offered much insight into the health and health care of RFN in the Province. Secondly, *First Nations Health and Wellness in Manitoba*, a report prepared for the Inter-governmental Committee on First Nations Health (ICFNH), provided a health profile of First Nations people in Manitoba, and discussed social determinants of health, jurisdictional factors, demographics and selected health care issues (Allec, 2005).

### **Registered First Nations Health and Health Care Indicators**

In *The Health and Health Care Use of Registered First Nations People Living in Manitoba: A Population-Based Study*, Martens and colleagues (2002) provided information on overall health status, rates of illness, preventive care measures, and use of health services by Registered First Nation People (RFN) of Manitoba who were living in Manitoba. The MCHP report used three types of geographical comparisons: 1) comparison by Tribal Council (and Independent groupings) for RFN living 'on reserve'; 2) comparison by RHA, between RFN and all other Manitobans living within an RHA; and 3) comparison by RHA, between RFN living 'on reserve' or 'off reserve' within the RHA. The study focused on people in relation to their place of residence not by place where treatment was received. Data sources for information from the MCHP report included administrative data from Manitoba Health, Vital Statistics data (1995-1999), Census data from Statistics Canada (1996), and publicly-available reports from Indian and Northern Affairs Canada. Populations of RFN by health region in Manitoba were categorized by residency 'on reserve' and 'off reserve' (See Table 4.1). In the MCHP Report 'on reserve' included those individuals who had a band membership with a Manitoba FN community and a postal code within or near that community. Otherwise RFN individuals were considered to be living 'off reserve'. Only those with Manitoba First Nations band membership were included in the RFN figures. Appendix B of the MCHP report provided comparisons of population counts in 1998 from a variety of sources.

**Table 4.1 Manitoba RFN Population by RHA for On Reserve and Off Reserve RFNs, 1998**

RHA	On Reserve	Off Reserve	Total RFN	Other (not RFN)	Total
South Eastman	21	286	307	52,386	52,693
Central	3,900	2,019	5,919	91,149	97,068
Brandon		2,143	2,143	44,547	46,690
South Westman	261	217	478	34,079	34,557
Winnipeg		21,204	21,204	622,585	643,789
Interlake	5,387	2,456	7,843	66,629	74,472
Marquette	2,623	367	2,990	34,737	37,727
North Eastman	5,343	1,026	6,369	32,394	38,763
Parkland	3,236	1,603	4,839	38,518	43,357
Burntwood	21,737	4,736	26,473	18,418	44,891
Nor-Man	5,528	1,611	7,139	18,198	25,337
Churchill		255	255	782	1,037
MB Total	48,036	37,923	85,959	1,054,422	1,140,381

Source: Martens, P., et al. (2002). *The health and health care use of Registered First Nations People living in Manitoba: A population-based study*. Winnipeg, MB: Manitoba Centre for Health Policy.

In 1998, Burntwood Health Region had the largest RFN population of all the health regions, with 26,473 or 59% of the total population of the Region having treaty status. Of the RFN people living in the Burntwood Region 21,737 or 82% lived on reserve and 4,736 or 18% lived off reserve. Some 28% of the population of the Nor-Man Region was comprised of individuals with treaty status and 77% of those lived on reserve.

Some highlights of the study including health status of RFN, and measures of illness and injury of RFN, as well as preventive care measures and health care utilization related to RFN are discussed below.

### **Health Status**

Three indicators of health status were used 1) life expectancy measures the expected length of life from birth (frequently used for worldwide comparisons); 2) premature mortality rate (PMR) measures the number of deaths before the age of 75 years for every 1000 people aged 0 to 74 years who live in the region (considered to be the best single measure of a population's health status); and 3) potential years of life lost (PYLL) measures premature mortality or death before the age of 75 years and gives greater weight to deaths occurring at younger ages than deaths at later ages (See Table 4.2.).

*Life expectancy* of RFN was about 8 years less than that of all other Manitobans with male RFN life expectancy at 68.4 years compared to 76.1 years for all other Manitobans, and female RFN at 73.2 years compared to 81.4 years.

The RFN population of Manitoba had double the *premature mortality rate* (PMR) with 6.6 deaths/1000 people, compared to all other Manitobans (3.3 deaths/1000 people), indicating that the RFN population had a much poorer health status. Within each RHA, Registered First Nations people had substantially higher PMRs compared to all other people living in the region.

For RFN people, the *potential years of life lost* (PYLL) was much higher (2.5 times higher for males, 3 times higher for females) than for all other Manitobans. The PYLL for RFN males was

158 years/1000 males aged 1-74 years, compared to 63 years/1000 males. PYLL for RFN females was 103 years/1000 females aged 1-74 years compared to 36 years/1000 females. These figures indicated higher mortality rates for RFN and greater numbers of potential years of life lost.

**Table 4.2 Health Status of Registered First Nations People and Other Manitobans**

Life Expectancy		Premature Mortality Rate		Potential Years of Life Lost	
RFN	Other MB	RFN	Other MB	RFN	Other MB
Male 68.4 years	Male 76.1 years	6.6 years /1000	3.3 years /1000	Male 158 years /1000	Male 63 years /1000
Female 73.2 years	Female 81.4 years			Female 103 years /1000	Female 36 years /1000

Source: Martens, P., et al. (2002). *The health and health care use of Registered First Nations People living in Manitoba: A population-based study*. Winnipeg, MB: Manitoba Centre for Health Policy.

Premature Mortality Rate - years per 1,000 population Age 0-74 Years 1995 – 1999

Potential Years of Life Lost - years per 1,000 population Age 1-74 Years 1995 - 1999

While comparisons across health regions in general were covered in the next section of this report, it is apparent that for all health regions in Manitoba, the health status of the RFN population was always poorer than that of the other Manitobans in each region. However of note were the findings in this study that in health regions in the south with the best overall health status, RFN populations had poorer health status (for all three indicators above) than they did in northern health regions. Findings suggested that for RFN populations, who live in northern regions and practice more traditional lifestyles, better health status than RFN populations in the south may be a result.

### **Measures of Illness and Injury**

In discussions of illness and injury, three indicators were used 1) diabetes treatment prevalence or the number of persons diagnosed with diabetes and receiving treatment for it (at least two physician visits or one hospitalization) from 1996/97 to 1998/99, per thousand residents of the region; 2) hypertension prevalence or the number of persons aged 25 years or older diagnosed with hypertension (at least one physician visit) from 1996/97 to 1998/99, per thousand residents of the region; and 3) injury hospitalization rates of the number of hospitalizations (one day or longer) that resulted from injury, per thousand area residents (1994/95 to 1998/99). Rates for these three indicators were sex and age adjusted so comparisons across regions were not influenced by the differences in the sex and ages of the residents of different regions.

The *diabetes treatment prevalence* among RFN in Manitoba was over four times higher than for all other Manitobans. The RFN population had 189 cases/1000 residents compared to 45 cases/1000 residents for all other Manitobans. A rate or the number of cases per 1000 persons can be converted to percent of the population by calculating the number of cases per 100 persons (dividing numerator and denominator by 10) and converting to percent. Therefore 189 cases/1000 persons calculated to 18.9 cases/100 persons or 18.9% of the RFN population of Manitoba had diabetes, compared to 4.5% of other Manitobans.

*Hypertension prevalence* for RFN in Manitobans was 221 cases/1000 residents or 22.1% compared to other Manitobans with 202 cases/1000 residents or 20.2%.

*Injury hospitalization* rates were 3.7 times higher for RFN in Manitoba, than for all other Manitobans. The injury hospitalization rate for RFN was 30.4/1000 compared to all other Manitobans at 8.3/1000. A higher rate for RFN was consistent for every health region in Manitoba. Main causes for injury hospitalization for the RFN population, 31.6% of cases, were classified as ‘violence’, with 17.1% of due to ‘violence by others’ and 14.5% due to ‘violence to self’. The other Manitoba population had 10.4% of cases classified as ‘violence’, with 4.1% due to ‘violence by others’ and ‘6.3% due to ‘violence to self’. Falls were the cause of 21.8% of RFN injury hospitalizations and 48% of other Manitoba injury hospitalizations (See Table 4.3).

**Table 4.3 Illness and Injury Rates for Registered First Nations People & Other Manitobans**

Diabetes Treatment Prevalence		Hypertension Prevalence		Injury Hospitalization	
RFN	Other MB	RFN	Other MB	RFN	Other MB
18.9%	4.5%	22.1%	20.2%	3.0%	0.8%
				Violence 31.6% - by others 17.1% - to self 14.4%	Violence 10.4% - by others 4.1% - to self 6.3%
				Falls 21.8%	Falls 48.0%

Source: Martens, P., et al. (2002). *The health and health care use of Registered First Nations People living in Manitoba: A population-based study*. Winnipeg, MB: Manitoba Centre for Health Policy.

### **Preventive Care Measures**

Three indicators of preventative care were considered 1) childhood immunization rates for one-year old children (1994-1997) and two-year old children (1994-1996) with up-to-date completion of recommended immunization; 2) screening mammography (women ages 50-69 years with at least 1 mammogram in 1997/98-1998/99; and 3) breastfeeding initiation rates which identify the number of live born babies who were exclusively or partially breastfed at hospital discharge.

*Childhood immunization* rates for one-year old children were 62% for RFN compared to Other Manitobans at 89%. For two-year old children 45% of the RFN population was immunized compared to 77% for other Manitobans. Overall, immunization rates for RFN children were about 2/3 of those for other Manitoban children.

The *mammography* rate for RFN women aged 50-69 years was 26%, less than half the rate compared to other Manitoban women at 56%. Mammography rates for all Manitoban women fell short of the goals of the screening program. Mammography is a procedure used to screen for breast cancer. Screening every two years for women aged 50-69 years is recommended.

The *breastfeeding* initiation rate for RFN newborns was 57.1% compared to 80.5% for other Manitoban newborns. In both groups breastfeeding rates decreased as the health status of the population decreased (Table 4.4).

**Table 4.4 Preventive Care Measures by Registered First Nations People & Other MB**

Childhood Immunization		Mammography		Breastfeeding	
RFN	Other MB	RFN	Other MB	RFN	Other MB
One-year olds 62%	One-year olds 89%	26%	56%	57.1%	80.5%
Two-year olds 45%	Two-year olds 77%				

Source: Martens, P., et al. (2002). *The health and health care use of Registered First Nations People living in Manitoba: A population-based study*. Winnipeg, MB: Manitoba Centre for Health Policy.

### Health Care Utilization

Health care utilization included the use of physician services and hospital services. Physician ambulatory visits included all physician contacts except those by hospital in-patients.

*Physician services* consisted of general practitioner and family practitioner visit rates, consult rates, specialist contact rates, types of providers and locations of visits. In 1998/99, 78.2% of the RFN population of Manitoba and 83.1% of other Manitobans made at least one visit to a physician. RFN had 6.1 visits per person that year compared to all other Manitobans at 4.9 visits per person. This finding was considered in keeping with the poorer health status of the RFN population. Consult rates were only slightly higher for RFN at .29 visits/person/year compared to other Manitobans at .27 visits/person/year. Specialist contact seemed to be driven by location of residence, with those living in Winnipeg having the greatest contact with specialists. Overall 16.1% of the RFN population had a visit with a specialist in 1998/99 compared to 26.3% of other Manitobans. Family practitioners and general practitioners provided for 83.9% of physician contacts for the RFN and 73.7% for other Manitobans. Given the poorer health status of RFN populations, the converse could be expected. Of the family practitioner and general practitioner visits for RFN people, 83.6% occurred in the health region of residence. For other Manitobans 90.9% occurred in the region of residence. (See Table 4.5).

**Table 4.5 Use of Physician and Hospital Services by RFN People & Other Manitobans**

Physician Services		Hospital Services	
RFN	Other MB	RFN	Other MB
Made at least 1 Physician Visit		Admitted at least 1 to Hospital	
78.2%	83.1%	15.5%	11.4%
Visit Rate		Hospitalization Rate	
6.1 visits/person/year	4.9 visits/person/year	348/1000	156/1000
Consult Rate		Total Days of Hospital Care	
.29 visits/person/year	.27	1.75 days/person	1.05 days/person
Type of Visit Provider		Location of Hospitalizations	
Specialists 16.1%	Specialists 26.3%	Within RHA 66%	Within RHA 80%
FP/GP 83.9%	FP/GP 73.7%		
Location of GP/FP Visits			
Within RHA 83.6%	Within RHA 90.9%		

Source: Martens, P., et al. (2002). *The health and health care use of Registered First Nations People living in Manitoba: A population-based study*. Winnipeg, MB: Manitoba Centre for Health Policy.

*Hospital services* included hospitalization rates or separations, total days of hospital care and location of hospitalization. Over 15% of RFN people were admitted to hospital at least once in 1998/99 compared to just over 11% of other Manitobans. The rate of hospitalization or hospital separation (includes discharges, transfers, sign-outs against physician advice and deaths) was 384 separations per 1000 people in the RFN population compared to 156 per 1000 people in the population of other Manitobans. Total days of hospital care for RFN was 1.75 days/person compared to 1.05 days/person for other Manitobans. Some 66% of hospitalizations by RFN occurred within the health region of residence compared to 80% of hospitalizations for other Manitobans.

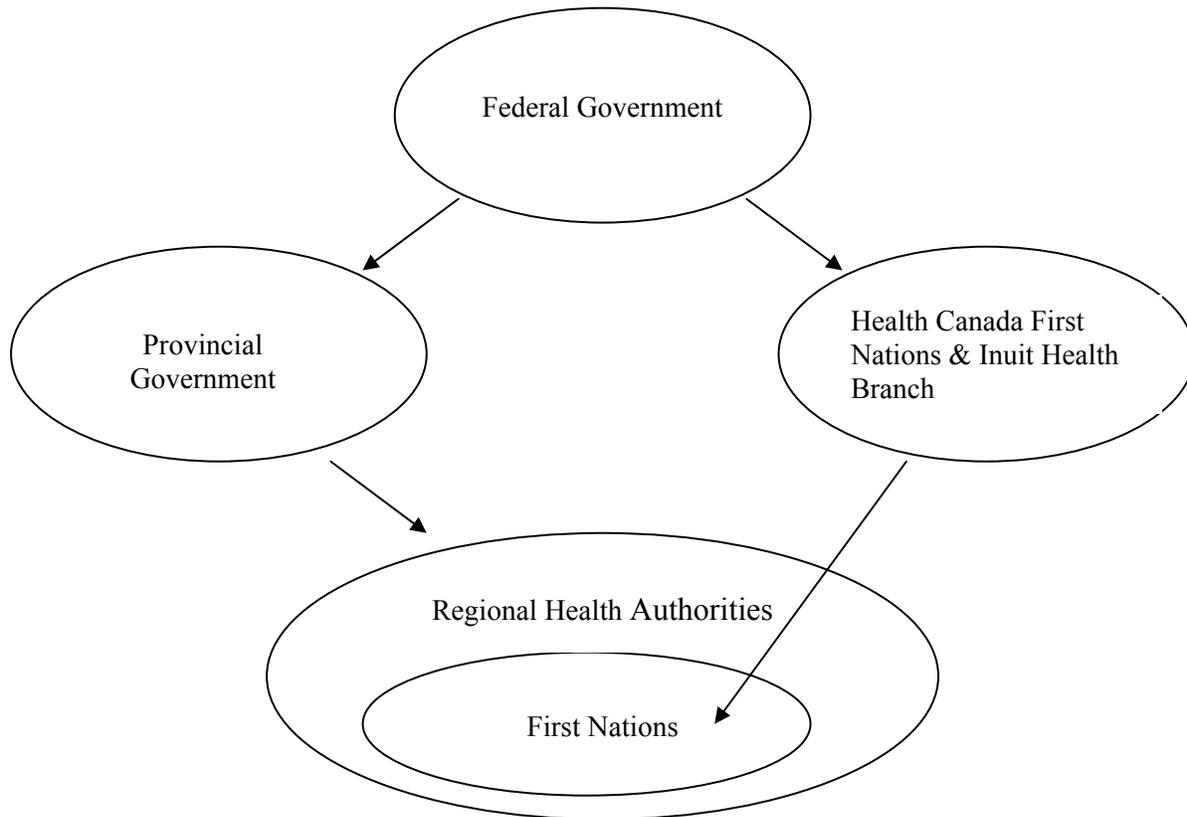
### ***Jurisdictional Factors in First Nations Health Care Delivery***

*First Nations Health and Wellness in Manitoba*, a report prepared for the Inter-governmental Committee on First Nations Health (ICFNH), provided a health profile of First Nations in Manitoba and discussed social determinants of health, jurisdictional factors, demographics and selected health care issues (Allec, 2005). Much of the health profile included in this report used the data from the MCHP report discussed previously. Of particular interest was the discussion on jurisdictional ambiguity and the lack of clarity on the respective roles and responsibilities of the federal and provincial governments concerning health and health services of First Nations people. Jurisdictional issues have an impact on accessibility and comprehensiveness of health care delivery in all Canadian provinces and territories. Residents of northern communities and the health care providers that serve them have identified jurisdictional issues as primary barriers to the access of health services in northern Manitoba (Moss et al, forthcoming). Understanding of the complexities of jurisdictional ambiguity is central to problem solving and resolution. To that end, a framework for current health service delivery in Manitoba, areas of consensus and areas of ambiguity were discussed.

### **Framework of Health Service Delivery in Manitoba**

First Nation communities are located on a federal land base but within provincial health authorities (Allec, 2005). A framework to understand the First Nation health delivery system in Manitoba was developed by Dr. Catherine Cook (See Figure 4.1). First Nation communities received funding from the federal government through Health Canada and First Nations and Inuit Health Branch (FNIHB) for community-based programs such as Brighter Futures and Building Healthy Communities, as well as drug and alcohol prevention. FNIH also provided for non-insured health services to FN peoples. Regional health authorities received funding from the provincial government for the delivery of insured health services, including physician and hospital based services. Funding from the federal government flowed to the provincial government and provided for the delivery of insured health services to First Nation people and communities. In Manitoba some insured services were delivered in some reserve communities. Most often First Nations people had to leave their communities to access services provided by regional health authorities.

**Figure 4.1: Framework for Current First Nation Health Service Delivery in Manitoba**



Created by Catherine L. Cook, MD 2003

Source: Allec, R. (2005). *First Nations Health and Wellness in Manitoba: Overview of Gaps in Service and Issues Associated with Jurisdictions Final Report*. Report prepared for the Inter-governmental Committee on First Nations Health. Winnipeg: Government of Manitoba.

### **Areas of Agreement**

According to the report prepared for the ICFNH (Allec, 2005), despite jurisdictional disputes and ambiguity on many fronts, some areas of consensus seemed to exist. Table 4.6 was used to identify departments responsible for a variety of services. While agreement may have existed regarding who delivered the service, agreement did not necessarily follow as to 1) funding responsibility or who paid for the service, 2) whose service standards applied (federal, provincial or FN), or 3) whose rules of entitlement applied.

**Table 4.6 Responsible Department for Select First Nations Health Services**

	<b>On-Reserve</b>	<b>Off-Reserve</b>
<b>Professional Services</b>		
Physician	Manitoba Health	Manitoba Health
Audiology	FNIHB	Manitoba Health (if hospital based)
Oral Surgery	Manitoba Health	Manitoba Health
Regular Dental Treatment	FNIHB	FNIHB
Acute Care Hospital Services	Manitoba Health	Manitoba Health
Promotion of Health and Prevention of Illness	FNIHB	Manitoba Health
<b>Protection of Health</b>		
Immunization	FNIHB	Manitoba Health
Communicable Disease	FNIHB	Manitoba Health
<b>Home and Community Care</b>		
Care Coordination / Assessment	FNIHB	Manitoba Health
Nursing	FNIHB	Manitoba Health
Home Care	FNIHB	Manitoba Health
<b>Aids to Persons with Physical Disabilities</b>		
Hearing Aids	FNIHB / Manitoba Health	FNIHB / Manitoba Health
Visual Aids	FNIHB	FNIHB / Manitoba Health

Source: Allec, R. (2005). *First Nations Health and Wellness in Manitoba: Overview of Gaps in Service and Issues Associated with Jurisdictions Final Report*. Report prepared for the Inter-governmental Committee on First Nations Health. Winnipeg: Government of Manitoba.

The information was based on interviews and a review of information provided by Manitoba Health, FNIHB, INAC, AMC, the Romanow Report and a presentation by Josee G. Lavoie at the Primary Health Care conference on First Nations Health and Wellness, Winnipeg, March, 2005.

## **Areas of Ambiguity**

Table 4.7 was used to illustrate jurisdictional areas of ambiguity. According to Allec (2005):

Jurisdictional ambiguity has allowed both levels of government to minimize respective responsibility for First Nations entitlement to health services. The *Indian Act* does not define the responsibility for the provision of health services for First Nations. Provincial governments have not explicitly asserted jurisdiction in relation to health, and, since jurisdiction carries with it financial responsibility, provinces have not contested the federal government's responsibility to provide health care to First Nations. As a result, neither government acknowledges a mandate to provide coordinated health care to First Nations on and off reserve. The federal government maintains it provides health services to First Nations as a matter of policy and practice, and not as a result of constitutional or treaty obligations. (pg. 17)

**Table 4.7 Services with Jurisdictional Ambiguity – Who pays? Which standards apply? What are the rules of entitlement?**

	<b>On-Reserve</b>	<b>Off-Reserve</b>
<b>Professional Services</b>		
Podiatry / Chiropody	Ambiguity	Manitoba Health
Chiropractic	Ambiguity	Manitoba Health
Optometric	FNIHB/ Manitoba Health	Ambiguity
<b>Home / Community Based Services</b>		
Respite Care	Ambiguity	Manitoba Health
Palliative Care	Ambiguity	Manitoba Health
<b>Community Rehabilitation</b>		
Physiotherapy	Ambiguity	Manitoba Health
Speech & Language	Ambiguity	Manitoba Health
Audiology	Ambiguity	Manitoba Health
<b>Aids to Persons with Physical Disabilities</b>		
Communication Aids	Ambiguity	Ambiguity
Orthodontic / Prosthetic Devices	Ambiguity	Ambiguity
Respiratory Equipment & Supplies	Ambiguity	Ambiguity
Wheelchair, Mobility Aids & Seating	Ambiguity	Ambiguity
Medical Supplies & Equipment	FNIHB	Manitoba Health
<b>Public Health</b>		
Public Health Inspector and Monitoring	Ambiguity	Manitoba Health
Food and Drug Safety	Ambiguity	Manitoba Health / Health Canada
<b>Residential Long Term</b>		
Personal Care Homes (higher levels of care)	Ambiguity	Manitoba Health
Personal Care Homes (lower levels of care)	INAC	Manitoba Health
Residential Care Facilities	Ambiguity	Ambiguity
Independent Living Units with Support Services	Ambiguity	Ambiguity
Chronic Care Hospitals	Ambiguity	Ambiguity
<b>Mental Health Services</b>		
Crisis Counseling	FNIHB	Ambiguity
Prevention	Ambiguity	Manitoba Health
<b>Transportation</b>		
Medical Transportation	Ambiguity	Ambiguity
<b>Ambulance Services</b>		
Ground Ambulance	Ambiguity	Manitoba Health
Air Ambulance	Ambiguity	Manitoba Health

Source: Allec, R. (2005). *First Nations Health and Wellness in Manitoba: Overview of Gaps in Service and Issues Associated with Jurisdictions Final Report*. Report prepared for the Inter-governmental Committee on First Nations Health. Winnipeg: Government of Manitoba.

The information was based on interviews and a review of information provided by Manitoba Health, FNIHB, INAC, AMC, the Romanow Report and a presentation by Josee G. Lavoie at the Primary Health Care conference on First Nations Health and Wellness, Winnipeg, March, 2005.



## V Health in Northern Manitoba

Examining different populations helped to pinpoint similarities and differences in health status and health care utilization between populations. To look at the health of Manitobans, researchers at the Manitoba Centre for Health Policy developed reports that shared information about residents of each of the regional health authorities (RHAs) of Manitoba. In addition some comparisons were made by placing the province's various RHAs into two groups: Northern and Southern RHAs. Both approaches helped create pictures of the health status of Manitobans, and the ways that Manitoba residents used health care services.

Two documents were used to provide information on the health and health care use of residents of northern Manitoba. The first source was the MCHP report *Sex Differences in Health Status, Health Care Use, and Quality of Care: A Population-Based Analysis for Manitoba's Regional Health Authorities* (Fransoo et al, 2005). Comparisons included indicators or measures of health status, illness, preventative care, and health care utilization across regions. The second source by the MCHP entitled *Patterns of Regional Mental Illness Disorder, Diagnoses, and Services Use in Manitoba: A Population-Based Study* (Martens et al, 2004) provided information specifically on mental illness. Comparisons included treatment prevalences and physician visits.

Tables included all RHAs in Manitoba and groupings for Rural South, North, Winnipeg and Manitoba as a whole. 'South' referred to the group of all southern and mid-province RHAs including South Eastman, Central, Assiniboine, Parkland, Interlake, and North Eastman. 'North' referred to a grouping of Manitoba's three northern RHAs: Churchill, Nor-Man, and Burntwood.

When reading the tables comparing health regions it was important to note that the differences between numbers was not indicative of whether the differences between groups was significant. The tables were organized with symbols to indicate when figures were significantly different from the average Manitoba figures and whether the differences between male and female figures were significant for that area. The coding details at the bottom of each table provides these details.

### **Health Status**

The health status of the North was measured using the indicators of *life expectancy*, *premature mortality rate*, and *potential years of life lost*. Overall, health status in the North was significantly poorer than in the south and in Winnipeg. *Life expectancy* for males and females in Northern Manitoba was lower than the Manitoba average for the years 1999-2003: 4 years less for Northern males, 3.8 years less for Northern females (Table 5.1). In comparison to individuals in the Rural South, the differences were even more striking. Life expectancy for Northern males was 4.6 years less than those of the Rural South, while for Northern females was 4.4 years less.

*Premature mortality rates* were higher and *potential years of life lost* were greater for those living in the North compared to those living in Manitoba overall. In the years 1999-2003, 6.2 deaths per 1000 population aged 0-74 years occurred among males living in the North and 4.1 deaths per 1000 occurred among females, compared to 4.4 deaths per 1000 population among males, and 2.6 for females. For potential years of life lost, the differences again were striking. For males living in northern Manitoba, potential years of life lost were 113.4 years per 1000

**Table 5.1 Health Status and Mortality by Health Region**

RHAs	Life Expectancy <sup>#</sup>			Premature Mortality Rate*			Potential Years of Life Lost <sup>†</sup>	
	Male	Female		Male	Female		Male	Female
South Eastman	78.4	82.2	m,f,d	3.3	2.1	d	56.6	32.6
Central	77.0	81.9	m,f,d	3.8	2.2	d	64.8	34.6
Assiniboine	76.2	82.6	f,d	4.3	2.3	d	73.9	31.2
Brandon	75.8	82.6	f,d	4.3	2.3	d	58.4	31.2
Parkland	76.1	80.9	d	4.3	2.8	d	76.6	42.6
Interlake	76.1	82.1	d	4.3	2.6	d	72.2	38.4
North Eastman	75.1	80.6	d	4.2	2.8	d	85.8	56.5
Churchill	74.4	75.8		5.3	3.3	m,d	122.3	38.5
Nor-Man	72.8	77.8	m,f,d	5.7	4.1	f	89.4	65.3
Burntwood	71.5	77.3	m,f,d	6.4	4.1	m,f,d	129.3	80.9
Rural South	76.5	81.9	m,f,d	4.0	2.4	d	69.8	37.0
North	71.9	77.5	m,f,d	6.2	4.1	m,f,d	113.4	75.0
Winnipeg	75.9	81.3	d	4.4	2.6	d	60.7	38.2
Manitoba	75.9	81.3	d	4.4	2.6	d	68.1	40.6

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

<sup>#</sup> 5 Year Life Expectancy, 1999-2003

\*Premature Mortality Rate - Years per 1,000 population, Age 0-74 Years, 1999 – 2003

<sup>†</sup>Potential Years of Life Lost - Years per 1,000 population, Age1-74 Years, 1999 - 2003

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

population compared to a provincial rate of 68.1 years per 1000 population and a Winnipeg rate of 60.7 years per 1000 population. Potential years of life lost for females living in northern Manitoba was 75.0 per 1000 population, compared to 40.6 years for Manitoba residents and 38.2 years for Winnipeg residents. Burntwood Region had the lowest life expectancy, the highest premature mortality rate and the highest potential years of life lost. These figures illustrated the disparity of health status between those living in the North (Burntwood Region in particular) and those living in the Rural South and Winnipeg.

## Measures of Illness

Given the differences in health status between the North and the Provincial average, the North also compared poorly against Manitoba in measures of illness. Table 5.2 illustrated the treatment prevalence of two relatively common diseases, diabetes and hypertension. *Treatment prevalence* was the measure of the number of people who received treatment for a particular illness in a given period of time, in this case for the years 2001/02 – 2003/04. The treatment prevalence of these diseases was seen to be significantly higher in Northern Manitoba than in Manitoba overall. Some 11% of men received treatment for diabetes in the North in this time period, compared to 7% in men in Manitoba. In women, the treatment prevalence for diabetes was 14%, compared to the provincial prevalence of 6%. Hypertension was also higher in the North, with 25.2% of men and 30.5% of women aged 20 years and over receiving treatment for the disease in this period.

**Table 5.2 Diabetes and Hypertension Treatment Prevalence by Health Region**

RHAs	Diabetes Treatment Prevalence*		Hypertension Treatment Prevalence+			
		Male	Female		Male	Female
South Eastman	m,f,d	5.7%	4.4%	d	22.7%	25.4%
Central	m,f,d	5.8%	4.6%	m,f,d	21.8%	24.3%
Assiniboine	f,d	6.7%	5.3%	m,d	22.5%	26.8%
Brandon	f,d	7.4%	5.3%		24.2%	25.6%
Parkland	m,f,d	7.8%	7.0%	m,d	22.0%	25.9%
Interlake	d	7.2%	6.2%	f,d	25.2%	27.7%
North Eastman		6.8%	6.2%	d	24.3%	26.4%
Churchill	f	10.0%	14.8%	m	35.6%	33.8%
Nor-Man	m,f,d	9.2%	10.9%	m,d	21.0%	25.4%
Burntwood	m,f,d	12.2%	16.7%	m,f,d	28.2%	34.3%
Rural South	f,d	6.5%	5.4%	m,d	23.0%	26.0%
North	m,f,d	10.9%	14.2%	f,d	25.2%	30.5%
Winnipeg	f,d	6.6%	5.6%		24.3%	25.4%
Manitoba	d	6.8%	6.3%	d	24.0%	25.9%

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

\*Diabetes Prevalence 2001/02-2003/04 per cent age 20-79

+Hypertension Prevalence 2001/02-2003/04 per cent age 25+

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

## Preventive Care Measures

Preventative care measures referred to *childhood immunizations*. Researchers at the Manitoba Centre for Health Policy found a relationship between area average incomes and rates of immunization. Individuals living in the North engaged in these preventative care measures less often than individuals living in Manitoba overall. This trend was demonstrated in Table 5.3. For example, immunization of one-year olds in the North was shown to occur at a rate of 66.3% in Northern males and 68.7% in Northern females. These figures were in contrast with Manitoba as a whole, in which 82.7% of one-year old males and of one-year old females were immunized in the years 2001-2002. The rates of immunization were even higher in Winnipeg. The difference in rates becomes more pronounced among two year olds, with 51.5% of Northern males and 53.3% of Northern females receiving their recommended immunizations, while for Manitoba the rates were 69.8% and 70.7% respectively.

**Table 5.3 Immunization of One and Two-Year Olds by Health Region**

RHAs	Immunization of One-Year Olds*		Immunization of Two-Year Olds+	
	Male	Female	Male	Female
South Eastman	85.2%	87.7%	71.0%	75.9%
Central	78.0%	77.9%	64.2%	68.5%
Assiniboine	87.0%	86.7%	75.8%	74.1%
Brandon	87.3%	85.0%	72.8%	74.6%
Parkland	85.1%	86.9%	73.2%	74.0%
Interlake	82.1%	79.7%	71.3%	67.8%
North Eastman	f	76.4%	f	61.8%
Churchill		93.8%		92.9%
Nor-Man	m	71.1%		62.9%
Burntwood	m,f	63.8%	m,f	46.3%
Rural South		81.8%		68.9%
North	m,f	66.3%	m,f	51.5%
Winnipeg	m,f	86.1%	m,f	73.9%
Manitoba		82.7%		69.8%
				70.7%

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

Proportion of children born 2001-2002 immunized at 1 year  
 Proportion of children born 2000-2001 immunized at 2 years

'm' indicates area's rate for males was statistically different from Manitoba average for males  
 'f' indicates area's rate for females was statistically different from Manitoba average for females  
 'd' indicates difference between male and female rates was statistically significant for that area  
 's' indicates data suppressed due to small numbers

## Health Care Utilization

Despite the demonstrated differences in health status, with individuals in the North suffering poorer health and shorter life expectancy than their southern counterparts, Northern residents had lower rates of health care utilization. *Ambulatory visit rates* and *ambulatory consultation rates* were lower among Northerners than among Manitobans as a whole. Northern males visited physicians 4.0 times per individual in the year 2003-2004, while females had 5.1 visits to a

physician. In the South for the same period, men visited a physician 4.4 times and females visited 5.4 times. Rates in Winnipeg were even higher, with men visiting physicians 4.8 times on average, and women visiting a physician 5.7 times.

Ambulatory consultation rates were somewhat better. The rate women received a consultation for the period of 2003-2004 was statistically the same for Northerners as it was in Manitoba overall. Northern men however, received consultations less often than the provincial rate, with 0.2 ambulatory consults per individual, compared to 0.3 provincially.

*Visit rates to specialists* by Northerners were significantly lower: 0.5 Northern males and 0.6 Northern females visited a specialist in the period of 2003-2004, while 1.2 Manitoban males and 1.3 Manitoban females visited specialists in the same period. Again, the visit rates to specialists in Winnipeg were higher yet, with 1.7 visits per individual in both men and women. These figures were in keeping with what is known; that health care services, particularly services from specialists, were more difficult to access by Northerners than by residents of the Rural South and particularly by residents of Winnipeg.

**Table 5.4 Physician Services by Health Region**

RHAs	Ambulatory Visit Rates*			Ambulatory Consultation Rates+			Visit Rates to Specialists#		
		Male	Female		Male	Female		Male	Female
South Eastman	d	4.2	5.1	m,d	0.2	0.3	m,f,d	0.8	0.8
Central	m,f,d	3.8	4.7	m,f,d	0.2	0.3	m,f,d	0.7	0.7
Assiniboine	d	4.2	5.3	m,f,d	0.2	0.2	m,f,d	0.5	0.5
Brandon	m,f,d	5.2	6.5	d	0.3	0.3	m,f,d	1.0	1.0
Parkland	d	4.4	5.6	m,f,d	0.2	0.3	m,f,d	0.4	0.5
Interlake	d	4.1	5.1	d	0.3	0.3	m,f,d	1.1	1.2
North Eastman	d	4.2	5.6	d	0.3	0.3	m,f,d	0.9	1.0
Churchill	m,f,d	2.2	3.0		0.2	0.3	m,f,d	0.5	0.5
Nor-Man	d	4.5	5.8	m,f,d	0.2	0.3	m,f,d	0.4	0.5
Burntwood	m,f,d	3.8	4.7	m,d	0.2	0.3	m,f,d	0.5	0.7
Rural South	m,f,d	4.1	5.1	m,f,d	0.2	0.3	m,f,d	0.7	0.8
North	m,f,d	4.0	5.1	m,d	0.2	0.3	m,f,d	0.5	0.6
Winnipeg	m,f,d	4.8	5.7	m,f,d	0.3	0.4	m,f,d	1.7	1.7
Manitoba	d	4.4	5.4	d	0.3	0.3	d	1.2	1.3

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

\*Ambulatory Physician Visit Rates 2003/04 per individual

+Ambulatory Consult Rates 2003/04 per individual

#Ambulatory Visit Rates to Specialists 2003/04 per individual

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

Individuals living in the North stayed in the hospital longer than their peers in the Rural South. Total *separation rates* were the number of individuals who had left a hospital due to death, discharge or transfer, and were commonly used as indicators of hospital service use. As seen in Table 5.5, the total separation rate for northern females was double the rate for Manitoban females in the period of 2003/04. The same was true for *total hospital days used* in the same period of time. The difference in rates between Northern and Southern men was less, but still was striking. Northern men had a total separation rate of 208.7, while provincially the rate for men was 126.6, and in Winnipeg, it was 105.8. It is important to note these differences in the context of the rates of preventative care in the North, discussed earlier in this section, and in health care utilization, also discussed earlier.

**Table 5.5 Hospital Services by Health Region**

RHAs	Total Separation Rates*			Total Hospital Days Used+		
		Male	Female		Male	Female
South Eastman	d	116.5	163.3		745.8	900.8
Central	m,f,d	152.3	190.4		907.6	1075.5
Assiniboine	m,f,d	161.7	200.6		1033.7	1209.2
Brandon	d	132.4	164.4		1025.2	1053.2
Parkland	m,f,d	172.3	241.1	f,d	1113.3	1584.4
Interlake	m,f,d	145.1	185.3		797.8	955.3
North Eastman	m,f,d	141.0	189.2		965.8	1056.1
Churchill	m,f,d	207.4	316.0	m,f,d	5356.7	1979.7
Nor-Man	m,f,d	155.9	253.8		1021.2	1323.2
Burntwood	m,f,d	245.2	371.8	m,f,d	1449.6	2161.2
Rural South	m,f,d	147.4	191.7	d	905.8	1089.3
North	m,f,d	208.7	324.5	m,f,d	1306.6	1817.7
Winnipeg	m,f,d	105.8	137.1		854.4	911.3
Manitoba	d	126.6	162.0		878.2	998.1

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

\*Hospital Separation Rates 2003/04 per 1000

+Total Hospital Days Rates 2003/04 per 1000

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

## **Mental Health**

Mental illness, addiction, and acquired brain injury present challenges in Manitoba, Canada, and internationally. The World Health Organization stated that 1 out of 4 individuals would be affected by mental illness in their lifetime. Stigma and a lack of recognition of mental illness among community members as well as front line health care providers were recognized as difficulties. The mental health data were taken largely from the MCHP report *Patterns of Regional Mental Illness Disorder Diagnoses and Service Use in Manitoba: A Population-Based Study* (Martens et al, 2004). Most analyses included all residents aged 10 or older, living in

Manitoba for at least one year in the five fiscal years between 1997/98-2001/02. Age was determined at the mid-point of the five-year period used in the analysis (December 31, 1999).

## Treatment Prevalence

Table 5.6 was used to illustrate the *treatment prevalence of mental illnesses* (the number of people who have received treatment for the illness during a given period of time) among Northern Manitobans compared to the treatment prevalence among Manitobans overall, during a five-year period of time. Cumulative disorders included depression, schizophrenia, anxiety, substance abuse, and personality disorders. Any other disorders for which individuals sought treatment were classified as “other”.

**Table 5.6 Treatment Prevalence of Mental Disorders 1997/98 – 2001/02**

Mental Illness Categories Disorders	Treatment Prevalance by Aggregate Areas of Manitoba+				Income Gradient of Treatment*	
	Rural South	North	Winnipeg	Brandon	Urban Quintiles	Rural Income Quintiles
<b>The two main aggregate groupings of mental disorders</b>						
Cumulative Disorders	L	H	H	H (females); S (males)	-	N
Other Disorders	L	L	H	H (males); S (females)	N	+ (small)
<b>The separate disorders in the cumulative disorders category</b>						
Depression	L	L	H	H	-	+ (small)
Anxiety Disorders	L	S	H	S	-	N
Substance Abuse	L	H (very high)	L (near MB)	H (females)	-	- (erratic pattern)
Schizophrenia	L	L	H	H	-	- (small)
Personality Disorder	L	L	H	H	-	- (erratic pattern)
<b>Other selected disorders</b>						
Dementia	L	L	H	S	-	N
ADD/ADHD	L	L	H	H (males); S (females)	N	N
<b>Indicators derived from the CCHS Cycle 1.1 survey</b>						
Positive Mood	S	L	S	H		
Balance Work Stress	S	S	S	S		
Probable Depression /Felt Depressed	L	S	S	S		

Source: Martens, P., et al. (2004). *Patterns of Regional mental illness disorder diagnoses and service use in Manitoba: A population-based study*. Winnipeg, MB: Manitoba Centre for Health Policy.

+Treatment prevalence are coded so that H means higher than the Manitoba average, L means lower than the Manitoba average and S means similar to the Manitoba average

\*Income Gradient of Treatment are coded so that - means negative association, + means positive association; N means no association. A “negative association” means that as neighbourhood income increases, treatment prevalence decreases. Similarly, a “positive association” means that as neighbourhood income increases, the treatment prevalence also increases.

The term ‘treatment prevalence’ was used by researchers at the Manitoba Centre for Health Policy to describe the number of people who received treatment for a mental illness in a given period of time. This definition was in contrast to the term ‘prevalence’, which would describe the number of people who had the mental illness in a given period of time. Treatment prevalence for the cumulative group of mental illnesses in the North was higher than provincially. As shown in Table 5.6, this difference was due almost exclusively to the higher rates of substance abuse among Northerners, compared to Manitobans as a whole. The treatment prevalence of the other disorders in the cumulative group were lower than or the same as for Manitobans overall.

Data also showed that individuals with mental illness were hospitalized more than twice as often as those without mental illness. These differences were not accounted for by hospitalizations for mental illness. Individuals with mental illness suffered physical ailments more often than those without mental illness.

The *treatment prevalence of cumulative disorders* was 22.5% for males and 33.2% for females in the North, figures significantly higher than the Manitoba averages of 18.8% for males and 29.1 for females (See Table 5.7). The differences were even greater when the North was compared to the Rural South.

**Table 5.7 Mental Illness Treatment Prevalence by Health Region**

RHAs	Treatment Prevalence of Cumulative Disorders+			Treatment Prevalence of Other Mental Illness Disorders*		
		Male	Female		Male	Female
South Eastman	m,f,d	17.1%	27.6%	d	11.2%	14.4%
Brandon	f,d	19.5%	30.7%	m,d	12.2%	13.7%
Central	m,f,d	15.7%	25.6%	m,f,d	9.3%	11.6%
Assiniboine	m,f,d	15.2%	26.1%	m,f,d	8.7%	11.3%
Parkland	m,f,d	16.0%	27.5%	m,f,d	10.8%	15.2%
Interlake	m,f,d	17.1%	27.9%	m,f,d	9.5%	12.1%
North Eastman	m,f,d	17.0%	27.8%	m,f,d	9.4%	12.3%
Burntwood	m,f,d	24.5%	33.7%	m,f,d	7.5%	8.6%
Churchill	d	20.6%	27.3%		9.6%	9.5%
Nor-Man	f,d	19.5%	32.6%	f,d	11.4%	15.1%
Rural South	m,f,d	16.2%	26.8%	m,f,d	9.7%	12.6%
North	m,f,d	22.5%	33.2%	m,f,d	9.1%	11.3%
Winnipeg	m,f,d	19.8%	29.7%	m,f,d	12.8%	15.0%
Manitoba	d	18.8%	29.1%	d	11.5%	14.0%

Source: Martens, P. et al. (2004). *Patterns of regional mental illness disorder diagnoses and services use in Manitoba: A population-based study*. Winnipeg: Manitoba Centre for Health Policy.

+Rate of Individuals with any of 5 conditions per 100 (%) - 1997-2001

\*Rate of Individuals with not any of 5 conditions per 100 (%) - 1997-2001

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

The *treatment prevalence of other mental illness disorders* referred to the proportion of the population who had at least one diagnosis of a mental illness disorder during the five years, but either did not have ‘enough’ diagnostic codes to be classified in the five disorders if the cumulative group or had codes only for other mental illness conditions not included in the cumulative group. Dementia, hyperactivity, and eating disorders were examples of other mental illness diagnoses. Treatment prevalence of other mental illness disorders was highest for residents of Winnipeg at 12.8% for males and 15% for females, compared with those living in the North with the lowest rates at 9.1% for males and 11.3% for females.

*Treatment prevalence of depression* was lowest in the North with 9.4% of males and 20.1% of females being treated for depression, compared to the Provincial rate of 12.6% for males and 23.6% for females. The rates for Winnipeg were higher yet with males at 13.7% and females at 24.3%. (see Table 5.8.)

*Treatment prevalence of substance abuse* was highest among Northern residents, more than double that of the Province, with 14.1% of males and 15.4% of females being treated. The Manitoba rate for males was 6.3% and for females was 5.3%. Rates were lower again among residents of the Rural South at 5.4% for males and 4.4% for females.

**Table 5.8 Treatment Prevalence of Depression/Substance Abuse by Health Region**

RHAs	Treatment Prevalence of Depression+			Treatment Prevalence of Substance Abuse*		
		Male	Female		Male	Female
South Eastman	m,d	11.9%	23.0%	m,f,d	5.1%	4.1%
Brandon	m,f,d	13.5%	25.4%	f,d	6.4%	5.9%
Central	m,f,d	10.9%	21.7%	m,f,d	4.9%	3.7%
Assiniboine	m,f,d	10.3%	21.4%	m,f,d	5.2%	4.6%
Parkland	m,f,d	10.7%	22.4%	m,f,d	5.6%	4.7%
Interlake	m,d	11.6%	23.6%	m,f,d	5.8%	4.7%
North Eastman	m,d	11.0%	22.9%	d	6.4%	5.1%
Burntwood	m,f,d	8.9%	18.4%	m,f,d	17.5%	20.2%
Churchill	m,f,d	6.5%	14.0%	m,f	13.9%	16.8%
Nor-Man	m,d	10.2%	22.7%	m,f,d	9.1%	8.2%
Rural South	m,f,d	11.0%	22.4%	m,f,d	5.4%	4.4%
North	m,f,d	9.4%	20.1%	m,f,d	14.1%	15.4%
Winnipeg	m,f,d	13.7%	24.3%	m,f,d	6.1%	4.7%
Manitoba	d	12.6%	23.6%	d	6.3%	5.3%

Source: Martens, P., Fransoo, R., McKeen, N. et al. (2004). *Patterns of regional mental illness disorder diagnoses and services use in Manitoba: A population-based study*. Winnipeg: Manitoba Centre for Health Policy.

+Rate of Individuals with any of 5 conditions per 100 (%) - 1997-2001

\*Rate of Individuals with not any of 5 conditions per 100 (%) - 1997-2001

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

## Use of Physician Services

*All-cause physician visit rates* were the average annual number of ambulatory visits to all physicians including general practitioners, family practitioners and specialists, for all causes including physical and mental health concerns, per resident. Since salaried physicians had less incentive to complete 'shadow billing forms', and some services may have been provided by nurses/ nurse practitioners in northern and isolated communities, the rate for general practitioner use may be undercounted. In addition, salaried psychiatrists working in the provincial mental health centres provided outpatient care but did not complete individual service claims for these visits. Therefore, visit rates reported were considered to be underestimates of actual visit rates, particularly among residents living near mental health centres.

As stated in the MCHP report, close examination of visit rates for mental illness showed a striking difference between Burntwood and Nor-Man RHAs, with no reason to believe that the need for mental health services differ greatly between the RHAs as the prevalence of cumulative disorders was so similar. The report suggested that Burntwood residents simply do not visit physicians for mental illness as often as Nor-Man residents, or that other alternate explanations also were possible. Burntwood residents may have been seeking as much care for mental health problems, but from other care providers such as nurses and social workers. Physicians in Burntwood may have been more likely to record physical problems for visits, even if mental health concerns also were addressed. Regardless of the explanation, the report suggested that the lower rate of physician visits for mental illness among Burntwood residents was a concern that would benefit from further exploration.

Despite their higher treatment prevalence of cumulative mental illnesses, Northerners had less use of physician services for mental illness than other Manitobans. Table 5.9 illustrated physician visits for all causes by individuals with and without a diagnosis of a cumulative mental illness. As seen in the table, both male and females with a cumulative disorder sought physician services at a greater rate than individuals without a cumulative disorder; similar findings were apparent throughout Manitoba.

When considering *physician visits for all causes*, the rate of visits for males with a cumulative disorder was 5.8 visits per person for the period 1997/98 to 2001/02 (age-adjusted for those 10 years old and over) for residents of the North, a lower figure when compared to 7.1 for Manitoba residents and 6.4 for residents of the Rural South. For those individuals with no cumulative disorder, the rate for males living in the North during the same period was 2.8 visits per person, compared with residents of the Province at 3.1 and those living in the Rural South at 3.0. For northern females with a cumulative disorder the physician visit for all causes rate was 7.8 per person for the period of 1997/98 to 2001/02, compared with the Province at 8.7 and the Rural South at 8.1. When considering females with no cumulative disorder, the visit rate for those living in the North was the same as the Province at 4.0 and higher than that for the Rural South at 3.9

For overall physician visits for mental illness, Northern males had 0.8 visits for the same period, compared with Rural Southern males at 1.0 and Manitoba males at 1.5 visits. Females living in the north had 0.9 visits compared with 1.3 visits by those in the Rural South and 1.6 visits for Manitobans overall. The differences between those living in the North and in the Province were significant for males and females as were the differences between those living in the Rural South

and in the Province as a whole. The differences between males and females were significant for those living in the North, in the South and in the Province overall.

**Table 5.9 Physician Visits for All Causes/Mental Illness by Health Region**

RHA	Physician Visits for All Causes+						Physician Visits for Mental Illness*		
	Male			Female				Male	Female
		With cumulative disorder	No cumulative disorder		With cumulative disorder	No cumulative disorder			
S. Eastman	1,0,d	6.4	2.9	1,0,d	8.1	3.7	m,f,d	1.1	1.3
Brandon	0,d	6.9	3.3	d	8.8	4.1	m,f,d	1.3	1.5
Central	1,0,d	6.1	2.8	1,0,d	7.7	3.6	m,f,d	1.0	1.2
Assiniboine	1,d	6.2	3.1	1,0,d	8.1	3.9	m,f,d	0.9	1.2
Parkland	d	7.0	3.2	1,0,d	9.1	4.2	m,f,d	1.0	1.2
Interlake	1,0,d	6.2	3.0	1,d	7.9	4.0	m,f,d	1.1	1.4
N. Eastman	d	6.7	3.1	d	8.6	4.1	m,f,d	1.1	1.3
Burntwood	1,0,d	5.2	2.6	1,d	7.4	3.9	m,f	0.6	0.6
Churchill	d	5.6	2.7	d	9.2	4.3	m,d	0.6	1.8
Nor-Man	d	6.7	3.0	d	8.5	4.0	m,f	1.1	1.2
Rural South	1,0,d	6.4	3.0	1,0,d	8.1	3.9	m,f,d	1.0	1.3
North	1,0,d	5.8	2.8	1,d	7.8	4.0	m,f,d	0.8	0.9
Winnipeg	1,0,d	7.7	3.2	1,0,d	9.2	4.1	m,f,d	1.9	1.9
Manitoba	d	7.1	3.1	d	8.7	4.0	d	1.5	1.6

Source: Martens, P., Fransoo, R., McKeen, N. et al. (2004). *Patterns of regional mental illness disorder diagnoses and services use in Manitoba: A population-based study*. Winnipeg: Manitoba Centre for Health Policy.

+ Physician Visit Rates for Males With/Without Cumulative Disorders by RHA, 1997/98-2001/02, Age-adjusted annual rate of visits per resident aged 10 years +

\*Visit Rates to All Physicians for Mental Illness Disorders for those With Cumulative Disorders by District, 1997/98-2001/02, Age-adjusted annual rate of visits per resident aged 10 years +

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

'1' indicates area's rate for those with disorder was statistically different from Manitoba average with disorder

'0' indicates area's rate for those without disorder was statistically different from Manitoba average without disorder

'd' indicates difference between two groups' rates was statistically significant for that area

's' indicates data suppressed due to small numbers



## VI Burntwood Region and Bayline Communities

In 2001, the Burntwood Region had a population of 42,995 (Statistics Canada, 2002c), the majority of whom self-identified as Aboriginal. This Region had a younger population compared to the Province, a trend that was projected to continue into the future due largely to higher birth rates and lower life expectancies than the provincial averages. The Region faced many challenges unique in the Province. Geographic isolation, high unemployment rates, and overcrowded and unaffordable housing were just some of those challenges. Each health region in Manitoba was made up of health districts. In the MCHP reports the Burntwood Region was comprised of 11 districts and some of the data were organized by districts. The districts within Burntwood Region included:

- Thompson
- Gillam, Fox Lake
- Leaf Rapids, Lynn Lake, South Indian Lake
- Thicket Portage, Pikwitonei, Wabowden
- Island Lake
- Cross Lake
- Norway House
- Tadoule Lake, Brochet, Lac Brochet
- Oxford House, Gods Lake
- Shamattawa, York Landing, Split Lake, War Lake
- Nelson House

(Martens et al, 2004, p. 401)

The Burntwood Region communities that were members of the Bayline Regional Round Table (BRRT) included Thicket Portage, Pikwitonei, Wabowden and Ilford/War Lake. Cormorant, the other community in the BRRT, was located in the Nor-Man Region. In this section, the health status of the population of the Burntwood Region and of the districts that included the communities of the Bayline Regional Round Table were examined and compared to the Province. Cormorant is discussed in the next section along with the Nor-Man Region.

Thicket Portage, Pikwitonei, and Wabowden were located in the same district, while War Lake was located in a district with Shamattawa, York Landing, and Split Lake. In general when examining health status and health care, data showed that the district including Thicket Portage/Pikwitonei/ Wabowden fared somewhat better than the Burntwood Region as a whole. The district in which Ilford/War Lake was located showed a poorer health status than the Burntwood Region as a whole.

Two documents were used to provide information on the health and health care use of residents of Burntwood Region and the districts therein. The first source was the report the MCHP *Sex Differences in Health Status, Health Care Use, and Quality of Care: A Population-Based Analysis for Manitoba's Regional Health Authorities* (Fransoo et al, 2005). Comparisons included indicators or measures of health status, illness, preventative care, and health care utilization across regions. The second source by the MCHP entitled *Patterns of Regional Mental*

*Illness Disorder, Diagnoses, and Services Use in Manitoba: A Population-Based Study* (Martens et al, 2004) provided information specifically on mental illness. Comparisons included treatment prevalences and physician visits.

While it can be informative to examine the health of the population located within the Burntwood Region, information about the health districts within that region is also useful. Health status may differ between districts and communities within the Region. The sometimes considerable differences between the districts in the overall region can give a clearer understanding of the different needs of various communities. The Burntwood Region covered a large amount of land, much of which is accessible only by train or by air. Circumstances differed as did populations; therefore the health of residents of different districts within the Burntwood Region were illustrated. In the tables of this section and the next section of this report, the comparisons among and between populations residing in different health districts were used to identify differences in comparison to residents of the Province as a whole, not whether the differences were significant in comparison to residents of the Region as a whole. These criteria were included in the notes located at the bottom of each table.

The researchers at the Manitoba Centre for Health Policy calculated visits according to the place of residence of the user of the service, not according to the location of the services that were used. Burntwood Region was the residence of the service user, not necessarily the location of the service delivery.

## **Health Status**

Interesting trends emerged when examining the *life expectancy*, *premature mortality rate*, and *potential years of life lost* for the districts within the Burntwood Region. In looking at the 5-year life expectancy at birth (1999-2003) the Thicket Portage/ Pikwitonei/ Wabowden District showed a male *life expectancy* of 70.8 years per 1000 people, the Shamattawa/ York Landing/ Split Lake/ War Lake District had a male life expectancy of 71.0 years, both lower than the Burntwood Region as a whole at 71.5 years. Female life expectancy was higher (83.3 years) in the Thicket Portage/ Pikwitonei/ Wabowden District than in the Region at 77.3 years; the Shamattawa/ York Landing/ Split Lake/ War Lake District was lower yet at 70.1 years for females. (See Table 6.1.)

*Premature mortality rates* in the Thicket Portage/ Pikwitonei/ Wabowden District were 6.0 years per 1000 population aged 0-74 years old (1999 – 2003) in males and 3.0 in females, lower than in the Region at 6.4 years per 1000 population in males and 4.1 in females. While the Region as a whole was significantly higher than the Province, this District was not significantly different than the Province for males or females. The Shamattawa/ York Landing/ Split Lake/ War Lake District showed very different numbers with premature mortality rates in males at 9.0 years per 1000 population, and in females at 7.6 years, both significantly different than the Province as a whole. These higher figures for this District contributed to the higher average for the Burntwood Region as a whole and resulted in an average that was significantly higher the Province overall.

Numbers showed interesting differences in *potential years of life lost* (PYLL) across districts in the Region. The Thicket Portage/ Pikwitonei/ Wabowden District fared better in potential years of life lost, with rates of 85.4 years per 1,000 population, aged 1-74 years (1999 – 2003) in males and 36.6 years in females; figures not significantly different from the Province as a whole, but lower or better than the Regional rates of 129.3 years in males and 80.9 years in females. The influence of the Shamattawa/ York Landing/ Split Lake/ War Lake District on the overall higher

or poorer rates for Burntwood Region were apparent with rates of PYLL at 198.7 years in males and 188.6 years in females in that District. Both male and female rates were significantly higher or poorer in the Shamattawa/ York Landing/ Split Lake/ War Lake District than for the Province at 68.1 PYLL for males and 40.6 for females.

**Table 6.1 Health Status and Mortality of Burntwood Region by District**

District	Life Expectancy#			Premature Mortality Rate*			Potential Years of Life Lost+	
	Male	Female		Male	Female		Male	Female
Thompson	74.7	83.7	d	4.7	2.7		84.5	51.7
Gillam/Fox Lake	70.6	76.1		4.8	3.1	d	93.8	33.9
Lynn/Leaf/SIL	74.6	73.6	f	6.0	4.8		122.8	95.1
Thick Por/Pik/Wab	70.8	83.3		6.0	3.0		85.4	36.6
Island Lake	67.9	75.0	m,f,d	8.2	4.9		144.1	74.0
Cross Lake	69.4	77.3	m,f,d	7.6	4.4		155.6	78.9
Norway House	68.3	73.1	m,f	8.2	5.7		146.1	83.4
Tad/Broch/Lac Br	68.4	78.5	m	7.3	4.8	m,f	178.9	103.2
Oxford H & Gods	73.1	77.1	m,f	7.3	5.0	m,f	172.3	119.8
Sha/York/Split/War	71.0	70.1	m,f	9.0	7.6	m,f	198.7	188.6
Nelson House	67.4	72.4	m,f	8.8	7.6	m,f	182.6	139.5
Burntwood	71.5	77.3	m,f,d	6.4	4.1	m,f,d	129.3	80.9
Manitoba	75.9	81.3	d	4.4	2.6	d	68.1	40.6

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

# 5 Year Life Expectancy at Birth, 1999-2003

\*Premature Mortality Rate - Years per 1,000 population, Age 0-74 Years, 1999 – 2003

+Potential Years of Life Lost - Years per 1,000 population, Age 1-74 Years, 1999 - 2003

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

## Measures of Illness

As in previous sections, *treatment prevalence of diabetes and hypertension* were used as measures of illness for comparative purposes. The Burntwood Region had a *diabetes treatment prevalence* of 12% in males and 17% in females. The treatment prevalence of this same disease in the Thicket Portage/ Pikwitonei/ Wabowden District was 10.8% in males and 21.1% in females (females significantly higher than the Province). In the Shamattawa/ York Landing/ Split Lake/ War Lake District, diabetes treatment prevalence was 16.9% in males and 28.7% in females; significantly higher than the Province for both males and females. (See Table 6.2.)

Similar differences were seen with *hypertension treatment prevalence*. In the Burntwood Region, the treatment prevalence of hypertension was 28.2 % males and 34.3% in females. The Thicket Portage/ Pikwitonei/ Wabowden District had lower treatment prevalence at 23.9% for males and 32.2% for females, while the Shamattawa/ York Landing/ Split Lake/ War Lake District

proportions showed 30.0% of males and 31.5% of females were treated for hypertension. Neither district was significantly different from the Province for males or females.

**Table 6.2 Diabetes and Hypertension Treatment Prevalence by Burntwood Health District**

District	Diabetes Treatment Prevalence+			Hypertension Treatment Prevalence*		
		Male	Female		Male	Female
Thompson	m,f	8.6%	9.0%	m,f,d	27.3%	34.9%
Gillam/Fox Lake	m,f	12.3%	17.1%	m,f	39.0%	47.9%
Lynn/Leaf/SIL	f,d	9.5%	15.8%	m,f	38.5%	42.4%
Thick Por/Pik/Wab	f	10.8%	21.1%		23.9%	32.2%
Island Lake	m,f,d	25.7%	40.7%	f,d	24.5%	33.4%
Cross Lake	m,f	18.7%	23.1%	m,f	29.8%	33.3%
Norway House	m,f,d	18.4%	25.9%	m,f	32.5%	40.1%
Tad/Broch/Lac Br		2.9%	6.7%		23.4%	23.5%
Oxford H & Gods	m,f,d	12.1%	22.2%		23.2%	25.3%
Sha/York/Split/War	m,f,d	16.9%	28.7%		30.0%	31.5%
BW Nelson House	f,d	8.9%	16.6%	f	29.3%	34.4%
Burntwood	m,f,d	12.2%	16.7%	m,f,d	28.2%	34.3%
Manitoba	d	6.8%	6.3%	d	24.0%	25.9%

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

+Diabetes Prevalence 2001/02-2003/04 per cent age 20-79

\*Hypertension Prevalence 2001/02-2003/04 per cent age 25+

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

## Preventative Care Measures

Children living in the Thicket Portage/ Pikwitonei/ Wabowden District and the Shamattawa/ York Landing/ Split Lake/ War Lake District had higher proportions of the population receiving *childhood immunization* than children living the Burntwood Region as a whole. Some 63.8% of male children residing in the Burntwood Region were immunized at one year of age and 65.6% of female children were immunized at the same age. Also among one-year olds, 84.6% of male children living in Thicket Portage/ Pikwitonei/ Wabowden had been immunized and 82.4 % of female children. The Shamattawa/ York Landing/ Split Lake/ War Lake District had slightly lower proportions at 77.3% of male children in the same age group and 81.4% of females. (See Table 6.3.)

The trend continued among two-year old children. Some 46.3% of male children two-years of age and residing in the Burntwood Region were immunized; 48.7% of female children aged two-years old were immunized. In the Thicket Portage/ Pikwitonei/ Wabowden District 81.3% of male children and 87.5% of females in this age group were immunized. Interestingly these numbers showed a lower proportion of immunization of two-year old males and a higher proportion of immunization of two-year old females. In the Shamattawa/ York Landing/ Split

Lake/ War Lake District, 64.3% of two-year old male children, and 65.1% of female children the same age were immunized.

Of note were the very low immunization rates for one-year olds in Oxford House and Gods Lake District and the Nelson House District of the Burntwood Region. Similar trends were noted for the two-year old population in these two districts and several other communities also have immunization rates below 50% for two-year olds.

**Table 6.3 Immunization of One and Two-Year Olds by Burntwood Health District**

District	Immunization of One-Year Olds*		Immunization of Two-Year Olds+			
	Male	Female	Male	Female		
Thompson	75.9%	70.2%	60.0%	58.5%		
Gillam/Fox Lake	88.9%	95.2%	100.0%	81.8%		
Lynn/Leaf/SIL	81.6%	74.5%	64.1%	76.1%		
Thick Por/Pik/Wab	84.6%	82.4%	81.3%	87.5%		
Island Lake	m,f	51.9%	62.5%	m,f	40.4%	37.2%
Cross Lake		63.6%	65.4%	m	43.8%	56.7%
Norway House		80.8%	81.3%	m,f	39.0%	44.8%
Tad/Broch/Lac Br		65.2%	61.9%		34.4%	38.2%
Oxford H & Gods	m,f	36.1%	30.3%	m,f	8.5%	15.6%
Sha/York/Split/War		77.3%	81.4%		64.3%	65.1%
Nelson House	m,f	26.8%	28.3%	m,f	24.6%	23.4%
Burntwood	m,f	63.8%	65.6%	m,f	46.3%	48.7%
Manitoba		82.7%	82.7%		69.8%	70.7%

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

Proportion of children born 2001-2002 immunized at 1 year  
 Proportion of children born 2000-2001 immunized at 2 years

'm' indicates area's rate for males was statistically different from Manitoba average for males  
 'f' indicates area's rate for females was statistically different from Manitoba average for females  
 'd' indicates difference between male and female rates was statistically significant for that area  
 's' indicates data suppressed due to small numbers

## Health Care Utilization

*Ambulatory visit rates, ambulatory consultation rates, and ambulatory visit rates to specialists* were health indicators used to demonstrate the use of health services. Ambulatory visit rates and visit rates for specialists were significantly higher for females living in the Burntwood Region than for females living in the Province of Manitoba. All three rates were significantly lower for males residing in the Burntwood Region than for males living in Manitoba. (See Table 6.4.)

*Ambulatory visit rates were* significantly higher among females than males in the Burntwood Region, with 3.8 visits per person for males in 2004/05 compared 4.7 visits per person for females. Ambulatory visit rates for both females and males living in the Burntwood Region were significantly lower than for Manitoba at 4.4 visits per person for males and 5.4 visits per person for females. In the Thicket Portage/ Pikwitonei/ Wabowden District, ambulatory visit rates were 3.3 for males and 5.0 for females; not significantly different than the Province for males, but significantly different for females. In the Shamattawa/ York Landing/ Split Lake/ War Lake

District, the rates were 2.9 visits per person for males and 3.7 visits per person for females. Ambulatory visit rates in this district were significantly lower for males and females when compared to the Province. Given the poorer health status of residents of Burntwood and their more limited use of health services, issues related to access to health services come to the foreground.

*Ambulatory consultation rates* in the two districts were similar to Burntwood Region, at rates of 0.2 visits per person in 2003/04 for males and 0.3 visits for females. The Thicket Portage/ Pikwitonei/ Wabowden District had rates of 0.1 for males and 0.2 for females, while in the Shamattawa/ York Landing/ Split Lake/ War Lake District the rates were 0.2 and 0.3 for males and females respectively – the same rates as for the entire Burntwood Region and significantly different from the Province for males in both districts and significantly different from the Province for females in the Shamattawa/ York Landing/ Split Lake/ War Lake District only.

*Ambulatory visit rates to specialists* in the Burntwood Region were 0.5 visits for males and 0.7 visits for females. In the Thicket Portage/ Pikwitonei/ Wabowden District rates were lower, with males visiting at a rate of 0.2 visits per year and females at a rate of 0.4 visits per year. In the Shamattawa/ York Landing/ Split Lake/ War Lake District, rates were slightly higher, but still lower than in the Burntwood Region as a whole and significantly lower than Manitoba visit rates for both genders, with males visiting specialists 0.4 times a year and women 0.5 times a year in the District, compared to males visiting 1.2 times a year and females visiting 1.3 times a year in the Province.

**Table 6.4 Physician Services by Burntwood Health District**

District	Ambulatory Visit Rates*			Ambulatory Consultation Rates+			Visit Rates to Specialists#		
		Male	Female		Male	Female		Male	Female
Thompson	d	4.1	5.4	m,d	0.2	0.3	m,f,d	0.4	0.6
Gillam/Fox Lake	m,f,d	6.3	9.0	f,d	0.3	0.5	m,f	0.8	0.9
Lynn/Leaf/SIL	f,d	4.0	6.5	m,d	0.2	0.3	m,f,d	0.3	0.5
Thick Por/Pik/Wab	m,d	3.3	5.0	m,d	0.1	0.2	m,f,d	0.2	0.4
Island Lake	m,f,d	3.2	4.5	d	0.3	0.4	d	1.0	1.3
Cross Lake	m,f,d	3.6	4.3		0.3	0.3	m,f,d	0.4	0.6
Norway House	m,d	3.6	5.2	f,d	0.3	0.5	m,f,d	0.6	1.0
Tad/Broch/Lac Br	m,f,d	2.7	4.4	m,d	0.2	0.4	m,f,d	0.3	0.5
Oxford H & Gods	m,f	3.7	4.1		0.3	0.3	m,f	0.5	0.6
Sha/York/Split/War	m,f,d	2.9	3.7	m,f,d	0.2	0.3	m,f,d	0.4	0.5
Nelson House	m,f,d	2.7	4.1	m,f,d	0.1	0.2	m,f,d	0.2	0.5
Burntwood	m,f,d	3.8	4.7	m,d	0.2	0.3	m,f,d	0.5	0.7
Manitoba	d	4.4	5.4	d	0.3	0.3	d	1.2	1.3

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

\*Ambulatory Physician Visit Rates; +Ambulatory Consult Rates; and #Ambulatory Visit Rates to Specialists were per individual for the year 2003/04

'm' indicates area's rate for males was statistically different from Manitoba average for males  
 'f' indicates area's rate for females was statistically different from Manitoba average for females  
 'd' indicates difference between male and female rates was statistically significant for that area  
 's' indicates data suppressed due to small numbers

Significant differences were seen when examining hospital service use by residents of the Burntwood Region in comparison to the Province. Information on hospital use was provided by looking at two indicators: *total separation rates* per 1000 population for 2003/04 and *total hospital days, rates* per 1000 population for the same time period (Table 6.5). In comparing male and female utilization rates, whether at a provincial, regional or district level, females had significantly more hospital admissions than males (noted by the separation rates) and significantly longer hospital stays (noted by hospital days rates). Some of these differences may be explained by the female use of hospital services during pregnancy, labour and delivery. In addition, females have longer life expectancies so may make more use of hospital services during the later years of life.

Residents of the Burntwood Region used hospital services at rates significantly higher than the Province as a whole. Thicket Portage/ Pikwitonei/ Wabowden District utilized fewer hospital services than residents of the Burntwood Region as a whole, while residents of the Shamattawa/ York Landing/ Split Lake/ War Lake District utilized a great deal more hospital services in general than residents of the Region.

In the Burntwood Region residents had *total hospital separation rates* of 245.2 per 1000 males in 2003/04 and 371.8 in females (significantly higher than for the Province), compared to residents of the Thicket Portage/ Pikwitonei/ Wabowden District with rates of 113.2 per 1000 males and 271.3 in females. In the Shamattawa/ York Landing/ Split Lake/ War Lake District residents used hospital services at rates of 402.5 per 1000 males and 660.4 for females significantly higher than the Province, with rates of 126.6 for males and 162.0 for females.

**Table 6.5 Hospital Services by Burntwood Health District**

RHAs		Total Separation Rates*			Total Hospital Days Rates+	
		Male	Female		Male	Female
Thompson	f,d	154.6	259.0		1195.5	1565.1
Gillam/Fox Lake	m,f	250.8	356.7	f,d	1326.1	10422.1
Lynn/Leaf/SIL	m,f,d	189.0	361.0	d	1354.8	2103.7
Thick Por/Pik/Wab	f,d	113.2	271.3	m,d	448.3	1144.2
Island Lake	m,f,d	221.7	426.8	m,f,d	1506.1	2853.6
Cross Lake	m,f,d	332.6	476.8	m,f	1959.1	2131.7
Norway House	m,f,d	288.2	421.9	m,f	1853.9	2457.8
Tad/Broch/Lac Br	f,d	173.8	329.1		951.5	1187.9
Oxford H & Gods	m,f,d	231.1	403.0	m,f	1403.8	2294.7
Sha/York/Split/War	m,f,d	402.5	660.4	m,f	2342.7	3074.3
Nelson House	m,f,d	274.2	607.1	m,f	2409.4	3232.3
Burntwood	m,f,d	245.2	371.8	m,f,d	1449.6	2161.2
Manitoba	d	126.6	162.0		878.2	998.1

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

\*Hospital Separation Rates 2003/04 per 1000

+Total Hospital Days Rates 2003/04 per 1000

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

The data for total hospital days used showed similar trends. In the Burntwood Region, the rate of *total hospital days* used for males was 1449.6 and for females was 2161.2 per 1000 population, both rates significantly higher than for the Province. In the Thicket Portage/ Pikwitonei/ Wabowden District, the rates were 448.3 days per 1000 for males and 1144.2 for females, much lower than the Region. In the Shamattawa/ York Landing/ Split Lake/ War Lake District, numbers were much higher than the Region at 2342.7 days per 1000 males and 3074.3 days per 1000 females. The Region and both districts of interest within the Region were significantly higher than the Province for males and the Region along with the Shamattawa/ York Landing/ Split Lake/ War Lake District were significantly higher than the Province for females.

## **Mental Health**

The mental health status of persons living in the two districts of concern were examined and compared to the Burntwood Region and to the Province. Two indicators were used for comparisons: *treatment prevalence of cumulative disorders* (depression, schizophrenia, anxiety, substance abuse and personality disorders) and *treatment prevalence of other mental illness disorders* (other disorders such as eating disorders, attention deficit disorders, and dementia). The individuals living in these districts, with few exceptions, had poorer mental health and suffered from more disorders than residents living in the Burntwood Region overall. It should be noted that acute care and community mental health services in the Burntwood Region were centralized in the City of Thompson.

## **Treatment Prevalence**

The *treatment prevalence of cumulative disorders* (depression, schizophrenia, anxiety, substance abuse and personality disorders) was a concept used to identify that individuals were treated for these diseases and did not confirm their diagnosis with these disorders. (See Table 6.6.)

For residents of the Region and both districts of interest, treatment prevalence rates of cumulative disorders were significantly higher than for residents of the Province. Some 24.5% of males residing in the Burntwood Region were treated for a cumulative disorder and 33.7% of females were treated, compared to the Province at 18.8% and 29.1%. Of males residing in the Thicket Portage/ Pikwitonei/ Wabowden District, 25.9% were treated for a cumulative disorder; 41.0% of females were treated. In the Shamattawa/ York Landing/ Split Lake/ War Lake District, males had a treatment prevalence rate of 31.8% and females had a treatment prevalence rate of 37.5%.

For Burntwood residents, the *treatment prevalence of other mental disorders* was 7.5% of males and 8.6% of females, this time significantly lower than for the Province at 11.5% for males and 14.0% for females (Table 6.6). In the Thicket Portage/Pikwitonei/Wabowden District, the treatment prevalence for other mental disorders was 9.2% for males and 8.3% in females. In the Shamattawa/ York Landing/ Split Lake/ War Lake District, treatment prevalence was lower still, with treatment prevalence in males at 4.2% and in females 6.2%. For residents of the Burntwood Region, and the two districts, the treatment prevalence of other mental illness disorders were significantly lower than for the Province. Given the health status of residents in this northern region and these northern districts, these lower treatment prevalence rates cause questions to be raised concerning access to mental health services for residents of northern Manitoba.

**Table 6.6 Mental Illness Treatment Prevalence by Burntwood Health District**

District		Treatment Prevalence of Cumulative Disorders+		Treatment Prevalence of Other Mental Illness Disorders*		
		Male	Female		Male	Female
Thompson	m,f,d	24.2%	34.8%	m,f	9.9%	9.8%
Oxford H & Gods)	m,f,d	25.7%	34.9%	m,f	6.1%	6.1%
Cross Lake	m,f,d	25.8%	33.4%	m,f	5.5%	7.0%
Lynn/Leaf/SIL	m,f,d	24.7%	40.1%	m,f,d	5.4%	8.2%
Island Lake	m,f	15.3%	14.6%	m,f	5.4%	6.9%
Tad/Broch/Lac Br	m,f,d	25.6%	43.0%	m,f	4.0%	5.8%
Gillam/Fox Lake	f,d	22.2%	36.3%	m,d	6.0%	10.0%
Thick Por/Pik/Wab	m,f,d	25.9%	41.0%	f	9.2%	8.3%
Norway House	m,f,d	24.9%	33.9%	m,d	9.1%	12.8%
Sha/York/Split/War	m,f,d	31.8%	37.5%	m,f	4.2%	6.2%
Nelson House	m,f,d	36.2%	50.8%	m,f	6.1%	8.2%
Burntwood	m,f,d	24.5%	33.7%	m,f,d	7.5%	8.6%
Manitoba	d	18.8%	29.1%	d	11.5%	14.0%

Source: Martens, P., Fransoo, R., McKeen, N. et al. (2004). *Patterns of regional mental illness disorder diagnoses and services use in Manitoba: A population-based study*. Winnipeg: Manitoba Centre for Health Policy.

+Percentage of individuals with any of 5 conditions - 1997-2001; \*Rate of individuals with not any of 5 conditions

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

One of the cumulative disorders, *treatment prevalence of depression*, was significantly lower for males than for females at the district, regional and provincial levels. (See Table 6.7.)

The treatment prevalence of depression was significantly higher among residents of the Burntwood Region at 8.9% for males and 18.4% for females compared to 12.6% for males and 23.6% for females in the Province as a whole. Questions arose as to whether the incidence and prevalence of depression were actually lower in the Region, or if the lower treatment prevalence was due to limited access to health services for treatment of depression. Given the rates of suicides among residents of northern Manitoba, lack of access to treatment for depression seems worth exploring as a contributing factor.

Males in the Thicket Portage/ Pikwitonei/ Wabowden District had a treatment prevalence for depression of 8.0%; males in Shamattawa/ York Landing/ Split Lake/ War Lake District had a higher treatment prevalence of 9.1%. Treatment prevalence of depression for females was 19.0% in the Thicket Portage/ Pikwitonei/ Wabowden District and 15.6% in the Shamattawa/ York Landing/ Split Lake/ War Lake District. (See Table 6.7.)

The *treatment prevalence of substance abuse* was significantly higher for residents of the Burntwood Region and of the two districts of interest than for residents of Manitoba. In addition, the treatment prevalence of substance abuse was significantly different for males and females at the provincial and the regional levels. Significantly more males than females were being treated for substance abuse at the Provincial level, while significantly more females than males were being treated at the Regional level. Treatment prevalence of substance abuse for Manitoba males

was 6.3%, a rate significantly higher than for Manitoba females at 5.3%. The converse was noted for residents of the Burntwood Region with 17.5% of males receiving treatment for substance abuse, a rate significantly lower than the 20.2% of females receiving treatment for substance abuse.

**Table 6.7 Treatment Prevalence for Depression/Substance Abuse by Burntwood District**

District	Treatment Prevalence of Depression+		Treatment Prevalence of Substance Abuse*			
		Male	Female	Male	Female	
Thompson	m,f,d	11.1%	20.8%	m,f,d	15.0%	19.4%
Oxford H & Gods	m,f,d	8.1%	18.1%	m,f	19.1%	21.8%
Cross Lake	m,f,d	7.6%	16.6%	m,f	20.1%	21.3%
Lynn/Leaf/SIL	m,d	8.1%	21.2%	m,f,d	18.8%	25.6%
Island Lake	m,f,d	6.0%	10.6%	m,d	10.0%	5.4%
Tad/Broch/Lac Br	m,f,d	7.3%	15.6%	m,f,d	21.1%	33.8%
Gillam/Fox Lake	d	10.8%	24.3%	m,f	14.7%	17.8%
Thick Por/Pik/Wab	d	8.0%	19.0%	m,f,d	18.4%	25.9%
Norway House	m,d	8.3%	22.0%	m,f,d	18.9%	15.3%
Sha/York/Split/War	m,f,d	9.1%	15.6%	m,f	27.2%	29.8%
Nelson House	m,f,d	4.1%	11.0%	m,f,d	33.6%	44.6%
Burntwood	m,f,d	8.9%	18.4%	m,f,d	17.5%	20.2%
Manitoba	d	12.6%	23.6%	d	6.3%	5.3%

Source: Martens, P., Fransoo, R., McKeen, N. et al. (2004). *Patterns of regional mental illness disorder diagnoses and services use in Manitoba: A population-based study*. Winnipeg: Manitoba Centre for Health Policy.

+Rate of Individuals with any of 5 conditions per 100 (%) - 1997-2001

\*Rate of Individuals with not any of 5 conditions per 100 (%) - 1997-2001

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

These comparisons between genders raised questions as to whether treatment prevalence were indicative of the actual prevalence of substance abuse by either gender, or if these rates were indicative of treatment prevalence or use of services (perhaps more dependent upon willingness or ability to use the service) rather than presence of the need for service. Such questions bear further examination.

For residents of the Thicket Portage/ Pikwitonei/ Wabowden District, treatment prevalences for both males (18.4%) and females (25.9%) were higher than for residents of the Region. In this District the prevalence of treatment was significantly higher for females than for males. For residents of the Shamattawa/ York Landing/ Split Lake/ War Lake District, no significant difference was noted between males with a treatment prevalence 27.2% and females with a treatment prevalence of 29.8%; both rates were significantly higher than for the Province.

## Use of Physician Services

Use of physician services were measured through the use of two indicators: *physician visits for all causes* (differentiated as all causes with cumulative disorders and all causes without

cumulative disorders), and *physician visits for mental illness*. Rates for both indicators were calculated for the five year period from 1997/98 - 2001/02, using age-adjusted annual rates of visits per resident 10 years of age and older.

Physician visit rates for male residents of the Burntwood Region, all causes with or without cumulative disorders as well as for mental illness were significantly lower than for the Province of Manitoba for males. Rates for females with the exception of the regional female rate for those without a cumulative disorder were statistically lower than Manitoba averages (Table 6.8).

**Table 6.8 Physician Visits for All Causes/Mental Illness by Burntwood Health District**

District	Physician Visits for All Causes+						Physician Visits for Mental Illness*		
	Male			Female				Male	Female
		With disorder	No disorder		With disorder	No disorder			
Thompson	1,0,d	5.4	2.7	1,d	7.4	3.9	m,f	0.7	0.8
Oxford H & Gods	0,d	5.5	2.1	0,d	6.9	2.9	f	0.8	0.6
Cross Lake	1,0,d	5.2	2.4	1,d	6.3	3.6	m,f	0.4	0.5
Lynn/Leaf/SIL	1,d	5.1	2.8	d	8.5	4.4	m,f,d	0.5	0.8
Island Lake	1,0,d	4.8	2.3	1,d	6.4	3.6	m,f	0.6	0.6
Tad/Broch/Lac Br	1,0,d	3.5	1.3	1,0,d	4.6	2.4	m,f	0.4	0.3
Gillam/Fox Lake	d	6.0	3.6	0,d	10.3	5.9	m,f	0.6	0.6
Thick Por/Pik/Wab	d	5.6	2.4	d	6.7	3.4	m,f	0.4	0.4
Norway House	0,d	7.2	3.6	0,d	10.1	5.8	m,f	0.8	0.6
Sha/York/Split/War	1,0,d	3.9	2.0	1,d	6.0	3.5	m,f	0.4	0.5
Nelson House	1,0,d	4.2	1.8	1,d	6.4	3.3	m,f	0.3	0.4
Burntwood	1,0,d	5.2	2.6	1,d	7.4	3.9	m,f	0.6	0.6
Manitoba	d	7.1	3.1	d	8.7	4.0	d	1.5	1.6

Source: Martens, P. et al. (2004). *Patterns of regional mental illness disorder diagnoses and services use in Manitoba: A population-based study*. Winnipeg: Manitoba Centre for Health Policy.

+All-Cause Physician Visit Rates for Males With and Without Cumulative Disorders by RHA, 1997/98-2001/02, Age-adjusted annual rate of visits per resident aged 10 years +

\*Visit Rates to All Physicians for Mental Illness Disorders for those With Cumulative Disorders by District, 1997/98-2001/02, Age-adjusted annual rate of visits per resident aged 10 years +

'1' indicates area's rate for those with disorder was statistically different from MB average with disorder

'0' indicates area's rate for those without disorder was statistically different from MB average without disorder

'd' indicates difference between two groups' rates was statistically significant for that area

's' indicates data suppressed due to small numbers

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

For residents of the Thicket Portage/ Pikwitonei/ Wabowden District the 'visits for all causes' rates for those with a cumulative disorder were significantly different than the rates for those without a cumulative disorder (for males and females). Visits for all causes rates for the District were not significantly different from the Provincial rates. The rates for physician visits for

mental illness were significantly lower for males and females living in this District when compared to the rates for the Province.

For male residents of the Shamattawa/ York Landing/ Split Lake/ War Lake District 'visits for all causes' rates were significantly lower for those with a cumulative disorder and those without a cumulative disorder compared to the Province; for female residents rates were significantly lower for those with a cumulative disorder. Again the rates for physician visits for mental illness were significantly lower than for the Province.

Despite the higher prevalence of mental illness among residents of the Burntwood Region, health care utilization rates, measured as physician visits for all causes and physician visits for mental illness were significantly lower than for residents of Manitoba.

### ***Demographics of Burntwood Region***

Exploring the characteristics of populations can be useful in planning health services and in understanding the other important factors that contribute to health and well-being of individuals and their communities. Demographic details describing characteristics of the population of the Burntwood Region were compared to those of the Province of Manitoba as a whole. The statistics used were taken from the 2001 Canadian census. One in every five people or 20% of the population was provided with a more detailed census form used to gather additional information about the characteristics of the population. The data from this sample were weighted to estimate the entire population. The demographics for Burntwood and for Manitoba included in this section of the report were based upon responses from the 20% sample of the population.

Demographics were provided for the total population of the Burnwood Region and for the Aboriginal Identity Population. The Aboriginal Identity Population was comprised of those individuals who identified themselves as being of Aboriginal decent when they completed the census. Since a large proportion of the residents of the Burntwood Region (73%) identified with at least one Aboriginal group, the AIP population information has been included.

### **Population by Age and Gender**

As seen in Table 6.9, in 2001 the total population when calculated from the 20% sample was 42,995 for the Burntwood Region and 1,103,695 for Manitoba. Occasionally male and female subtotals when added together did not equal the reported total, due to weighting of data to estimate the population (Statistics Canada. 2002c).

The proportions of the population for every age group from 0 to 4 years of age through to 30 to 34 years of age was higher in the Burntwood Region than for the Province, demonstrating a much younger population in the North than for the Province in its entirety. The greatest differences were noted in the two youngest age groups 0 to 4 years and 5 to 9 years of age, with almost 24% of residents in Burntwood Region being under 10 years of age compared to the Province with almost 14% of its population under the age of 10 years. At the other end of the age spectrum, barely 3% of the Burntwood population was aged 65 years and older compared to just over 13% of the Province.

**Table 6.9 Population of Burntwood Region and Manitoba by Age and Gender, 2001**

Age	Burntwood				Manitoba			
	Male	Female	Total	%	Male	Female	Total	%
Total	22030	20970	42,995	100	542895	560800	1,103,695	100
0-4	2505	2440	4,945	11.5	36695	34335	71,030	6.4
5-9	2695	2585	5,280	12.3	41370	39405	80,775	7.3
10-14	2540	2345	4,885	11.4	41970	40605	82,575	7.5
15-19	1980	1955	3,935	9.2	40890	38810	79,700	7.2
20-24	1580	1605	3,185	7.4	35850	36435	72,285	6.5
25-29	1595	1685	3,280	7.6	34900	35095	69,995	6.3
30-34	1685	1695	3,380	7.9	35800	36460	72,260	6.5
35-39	1705	1580	3,285	7.6	42950	43870	86,820	7.9
40-44	1435	1280	2,715	6.3	44225	44735	88,960	8.1
45-49	1215	1100	2,315	5.4	40220	41390	81,610	7.4
50-54	1110	920	2,030	4.7	35930	36765	72,695	6.6
55-59	750	660	1,410	3.3	27165	27625	54,790	5.0
60-64	535	430	965	2.2	21705	22805	44,510	4.0
65-74	505	450	955	2.2	36225	40835	77,060	7.0
75+	205	240	445	1.0	27005	41630	68,635	6.2

Source: Statistics Canada. (2007). *2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography*. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12. <http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

### ***Aboriginal Identity Population***

The total population of the Burntwood Region was 42,995, and the Aboriginal Identity Population (AIP) totalled 31,235 people. Some 73% of the population of the Burntwood Region was included in the Aboriginal Identity Population, compared to the Province at 14%. Statistics Canada (2002d) defined 'Aboriginal Identity Population' as composed of those persons who reported identifying with at least one Aboriginal group, that is, North American Indian, Métis or Inuit, and/or who reported being a Treaty Indian or a Registered Indian, as defined by the Indian Act of Canada, and/or who were members of an Indian Band or First Nation. (See Table 6.10.)

**Table 6.10 Aboriginal Identity Population of Burntwood Region and Manitoba, 2001**

Aboriginal Identity	Burntwood Region			Manitoba		
	Total	% AIP	% non-Ab	Total	% AIP	% non-Ab
Total Population	42,995	72.6	27.4	1,103,695	13.6	86.4
Total AIP	31,235	100.0	--	150,040	100.0	--
North American Indian	28,265	90.0	--	90,340	60.0	--
Métis	2,450	7.8	--	56,795	37.0	--
Inuit	15	0.05	--	345	0.2	--
Multiple Aboriginal response	45	0.1	--	500	0.3	--
Other Aboriginal response	455	1.5	--	2,060	1.4	--
Non-Aboriginal	11,765	--	100.0	953,660	--	100.0

Source: Statistics Canada (2002); Census Aboriginal Population Profiles (2001).

Some 90% of those living in the Burntwood Region and who identified with at least one Aboriginal group, indicated that identity to be North American Indian; about 8% identified with the Métis. On a provincial level 60% of those who indicated Aboriginal identity specified North American Indian; 37% specified Métis.

As seen in Table 6.11, the distribution by age of those who identified themselves as Aboriginal and who resided in the Burntwood Regions was very similar to the age distribution for the total AIP in the Province of Manitoba. Larger proportions of the populations in both Burntwood and Manitoba were noted for younger age groups with very small proportions of the populations in the older age groups of 65 years of age and older.

**Table 6.11 Aboriginal Identity Population by Age, Burntwood Region and Manitoba 2001**

Age Group	Burntwood AIP		Manitoba AIP	
	Total	%	Total	%
Total	31,230	100.0	150,040	100.0
Age 0-4	4,200	13.0	17,995	12.0
Age 5-14	8,405	27.0	36,065	24.0
Age 15-19	3,110	10.0	14,395	9.5
Age 20-24	2,500	8.0	11,610	8.0
Age 25-44	8,470	27.1	43,710	29.0
Age 45-54	2,225	7.1	13,305	9.0
Age 55-64	1,315	4.2	7,410	5.0
Age 65-74	665	2.1	3,755	2.5
Age 75-84	285	1.0	1,460	1.0
Age 85+	60	0.2	330	0.2
Median age	19.8	19.8	22.8	22.8

Source: Statistics Canada (2002); Census Aboriginal Population Profiles (2001).

## Legal Marital and Common-Law Status

Researchers at Statistics Canada provided data on legal marital status of Canadians by using five categories including single (never married), married (including common law), separated, divorced, and widowed. (See Table 6.12.)

**Table 6.12 Marital Status for Burntwood Region and Manitoba**

Marital Status	Burntwood Region		Manitoba	
	Total	%	Total	%
Pop. ≥ 15 years	27,895	100.0	869,315	100.0
Single	12,385	44.4	275,150	31.7
Married	12,545	45.0	455,915	52.4
Common-law	3,405		59,410	
Separated	840	3.0	24,445	2.8
Divorced	1,185	4.2	56,305	6.5
Widowed	945	3.4	57,505	6.6

Source: Statistics Canada. (2007). *2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography*. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12. <http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

In 2001, 44.4% of the total population of the Burntwood Region (15 years of age and older) were single and had never married, compared to 31.7% of the total provincial population. Some 45% of the total population of the Burntwood Region considered themselves to be married including common-law, compared to the total provincial population at 52.4%. Higher proportions of the population of the Burntwood Region reported living in a common law relationship (12.2%) compared with the provincial population (6.8%).

### ***Aboriginal Identity Population***

In 2001, those who resided in the Burntwood Region and indicated Aboriginal Identity had reported marital status with a similar distribution when compared to the total Aboriginal Identity Population of the Province. For example, 50% of the AIP (15 years of age and older) residing in the Burntwood Region reported being single and never married compared to the AIP of Manitoba at 51%. The proportion of the Burntwood AIP who reported being married (including common-law) was 40% compared to the provincial AIP at 34%. Some 3% of the Burntwood AIP was divorced compared to the provincial AIP at 7%. (See Table 6.13.)

**Table 6.13 Aboriginal Identity Population by Marital Status, Burntwood and Manitoba**

Marital Status	Burntwood AIP		Manitoba AIP	
	Total	%	Total	%
Pop. ≥ 15 years	18,630	100.0	95,975	100.0
Single	9,420	50.0	49,425	51.0
Married	7,380	40.0	32,400	34.0
Common-law	2,330		14,050	
Separated	555	3.0	3,825	4.0
Divorced	550	3.0	6,630	7.0
Widowed	720	3.8	3,700	4.0

Source: Statistics Canada (2002); Census Aboriginal Population Profiles (2001).

### **Language Characteristics**

Knowledge of the official languages of English and French were tabulated for the total population of the Burntwood Region in comparison with the Province. As seen in Table 6.14, the greatest proportion of people in the Region (95%) and the Province (90%) reported having knowledge of the English language. Proportions speaking English and French were very small, and the proportion of those speaking only French was negligible. (See Table 6.14.)

**Table 6.14 Language Characteristics for Burntwood Region and Manitoba**

Language	Burntwood Region		Manitoba	
	Total	%	Total	%
Total population	42,995	100.0	1,103,700	100.0
English only	40,810	95.0	990,280	89.7
French only	0	0	1,250	0.1
English and French	950	2.2	10,840	9.3

Source: Statistics Canada. 2007. *2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography*. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12. <http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

### ***Aboriginal Identity Population***

Of the total Aboriginal Identity Population in the Burntwood Region 28% of individuals reported speaking English only, compared to 64% of the AIP in Manitoba. (See Table 6.15.)

**Table 6.15 Language Characteristics for Burntwood Region and Manitoba AIP**

Language	Burntwood AIP		Manitoba AIP	
	Total	%	Total	%
Total population	31,230	100.0	150,045	100.0
English only	8,795	28.2	95,530	64.0
French only	0	0.0	145	0.10
English and French only	100	0.3	10,245	7.0
Knowledge of Aboriginal language	22,320	71.5	43,215	29.0
% Aboriginal language(s) first learned/understood		63.7		24.6
% Aboriginal language(s) spoken at home		64.1		22.8

Source: Statistics Canada (2002); Census Aboriginal Population Profiles (2001).

Nearly 72% of the AIP in Burntwood Region had knowledge of Aboriginal language; 29% of the AIP in Manitoba had such knowledge. Some 64% of the AIP living in the Burntwood Region who had knowledge of Aboriginal language reported speaking an Aboriginal language in their homes, compared with about 23% of the AIP population of Manitoba.

### **Level of Schooling**

Levels of schooling have been calculated for the populations of Burntwood Region and Manitoba for those residents who were aged 20 years and older (Table 6.16). In 2001, about 19% of that population residing in the Burntwood Region had less than grade 9 education compared to the Province at 11%. Over 50% of Burntwood Region residents who were 20 years of and older had not graduated from high school; 34% of Manitobans of the same age had not graduated from high school. Similar proportions of the populations of Burntwood (10%) and Manitoba (11%) had some college or university education. Some 6% more Manitobans (28.5%) than Burntwood residents (22.4%) had a trades, college or university certificate or diploma. Almost double the proportion of Manitobans (14.3%) compared to Burntwood residents (7.8%) held a university degree at a bachelor level or higher.

**Table 6.16 Schooling for Burntwood and Manitoba**

Level of Schooling	Burntwood		Manitoba	
	Total	%	Total	%
Total population aged 20 years and older	23,955	100.0	789,615	100.0
Less than grade 9	4,650	19.4	86,810	11.0
Grade 9 - 13, less than high school graduation	7,545	31.5	185,090	23.4
High school graduation certificate	2,065	8.6	89,720	11.4
Some college or university education	2,450	10.2	90,160	11.4
Trades/college/university diploma or certificate	5,375	22.4	224,685	28.5
University degree at bachelor's level or higher	1,880	7.8	113,150	14.3

Source: Statistics Canada. 2007. *2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography*. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12. <http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

## Aboriginal Identity Population

While data for the total populations of Burntwood Region and Manitoba were available for those aged 20 years and older, the Aboriginal Identity Population data were available for persons aged 25 years and older. As seen in Table 6.17, some 63% of the Burntwood Aboriginal Identity Population had not completed high school compared to the Provincial AIP at 50%. Similar proportions of the AIP populations for the Region and the Province had graduated from high school or had some postsecondary education. Higher proportions of the Manitoba AIP had received postsecondary certificates or diplomas (25.5%) compared to the Regional AIP (17.3%). Similarly, 5.2% of the Manitoba AIP had received a university degree while 3.8% of the Burntwood AIP had completed a degree. (See Table 6.17.)

**Table 6.17 Schooling for Burntwood and Manitoba AIP by Gender**

Level of Schooling	Burntwood AIP			Manitoba AIP		
	Total	Male	Female	Total	Male	Female
Population aged 25 years and older	13,020	6,445	6,575	69,970	32,920	37,050
Less than high school graduation	8,145	4,170	3,975	34,940	17,310	17,625
High school graduation certificate	815	380	430	5,430	2,580	2,850
Some postsecondary education	1,325	610	710	8,100	3,570	4,530
Trades/college/university certificate or diploma	2,250	1,105	1,145	17,870	8,155	9,705
University degree at bachelor's level or higher	490	180	310	3,635	1,305	2,335
% with less than high school grad	62.6	64.7	60.5	49.9	52.6	47.6
% with high school graduation certificate	6.3	5.9	6.5	7.8	7.8	7.7
% with some postsecondary education	10.2	9.5	10.8	11.6	10.8	12.2
% with trades/college/university certificate or diploma	17.3	17.1	17.4	25.5	24.8	26.2
% with a university degree at bachelor's level or higher	3.8	2.8	4.7	5.2	4.0	6.3

Source: Statistics Canada (2002); Census Aboriginal Population Profiles (2001).

## Earnings and Income Characteristics

At first glance the employment income and labour force characteristics for residents of Burntwood Region appeared to be better than for the Province as a whole. Average employment incomes were slightly higher in the Region than in the Province overall, whether looking at all employment income or focusing on average employment income from full year, full time work. However, upon examination of the participation, employment and unemployment rates, the residents of the Burntwood Region fared much poorer than the residents of the Province as a whole. (See Table 6.18.)

In 2001, the average employment income of the total population of Burntwood aged 15 years and older was similar (\$27,265) to that of the total population of Manitoba (\$27,178). The average employment income of the population of Burntwood who worked full year full time was \$40,913, with males earning about 33% more than females (\$47,522 for males and \$31,520 for females respectively). The average income for Manitobans who worked full year full time was

\$36,729. Employment income made up over 80% of the income of the residents of the Burntwood Region compared to 75% of the income of provincial residents.

A review of labour force indicators for 2001 showed that the employment rate was 50% for Burntwood residents compared to 63% for residents of the Province. The employment rate for females of either population was lower than the employment rate for males. Further, the Burntwood Region population had an unemployment rate of 17.5%, which was approaching three times the Manitoba unemployment rate of 6.1%. The rates of unemployment in Burntwood Region for both the males at 20% and females at 14% were substantially higher than for the Manitoba population of males at 6% and females at 6%.

**Table 6.18 Employment Income & Labour Force Indicators for Burntwood & Manitoba**

Employment Income	Burntwood			Manitoba		
	Total	Male	Female	Total	Male	Female
Population 15 years & older with employment	17,395	9,495	7,905	609,575	320,670	288,905
Avg. employment income \$	27,265	32,984	20,396	27,178	32,312	21,480
# Worked full year full time	8,355	4,900	3,450	337,105	197,990	139,110
Avg. employment income \$	40,913	47,522	31,520	36,729	41,153	30,433
Employment income - %	80.9			75.3		
<b>Labour Force Indicators</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>
Participation rate %	60.4	65.5	55.0	67.5	73.7	61.7
Employment rate %	49.8	52.3	47.1	63.4	69.0	58.1
Unemployment rate %	17.5	20.1	14.3	6.1	6.3	5.7

Source: Statistics Canada. 2007. *2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography*. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12. <http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

### ***Aboriginal Identity Population***

The average employment income of the Burntwood AIP aged 15 years and older was similar (\$18,220) to that of the AIP population of Manitoba (\$19,271); both figures being substantially lower than the average employment income for total populations of Burntwood (\$27,265) or Manitoba (\$27,178) noted earlier. (See Table 6.19.)

**Table 6.19 Employment Income & Labour Indicators for Burntwood & Manitoba AIP**

Employment Income	Burntwood			Manitoba		
	Total	Male	Female	Total	Male	Female
Population 15 years & older with earnings	9,435	4,970	4,460	58,285	29,915	28,365
Avg. employment income \$	18,220	19,710	16,558	19,271	21,597	16,817
# Worked full year full time	3,490	1,770	1,725	25,325	13,420	11,905
Avg. employment income \$	30,237	33,185	27,216	29,079	31,957	25,835
Employment income - %	67.7			73.5		
<b>Labour Force Indicators</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>
Participation rate %	49.3	53.5	45.0	59.0	64.8	53.8
Employment rate %	35.3	35.2	35.3	47.8	51.1	44.8
Unemployment rate %	28.4	34.2	21.5	19.0	21.2	16.7

Source: Statistics Canada (2002); Census Aboriginal Population Profiles (2001).

The average employment income of the AIP in Burntwood that worked full year full time, was \$30,237, with males earning about 16% more than females (\$33,185 and \$27,216 respectively). The average income for AIP in Manitoba who worked full year full time was \$29,079. Employment income made up 68% of the income of the AIP in Burntwood Region compared to 74% of the income of the provincial AIP.

The employment rate was 35% for the Burntwood AIP compared to 48% for the provincial AIP. Both figures were considerably lower than for total populations of the Region (50%) or the Province (63%). Further, the Burntwood Region AIP had an unemployment rate of 28.4% compared to the overall regional unemployment rate of 17.5%. Similarly the Manitoba AIP had an unemployment rate of 19% compared to the overall provincial rate of 6.1%. The rates of unemployment for males of the AIP in the Region and Province were higher than for females.

### Occupation Characteristics

In the Burntwood Region, the highest numbers of people were employed in (a) sales and service; (b) trades, transport and equipment operation; or (c) social science, education, government, or religion. These categories with the highest numbers were similar for the Province, with business, finance and administration replacing the social science, education, government, or religion in the top three categories.

Occupation characteristics varied by gender within the Burntwood Region, with males employed more in trades, transport and equipment operation (2,690) compared to females (100); in primary industry (1,045) compared to females (25); and in natural and applied sciences (600) compared to females (90). On the other hand, females dominated employment in business, finance and administration (1,510) compared to males (355); social science, education, government and religion (1,475) compared to males (710); and health occupations (515) compare to males (135).

**Table 6.20 Occupation Characteristics for Burntwood Region and Manitoba by Gender**

Occupation	Burntwood			Manitoba		
	Total	Male	Female	Total	Male	Female
Total – Experienced labour force	15,620	8,640	6,980	577,340	307,465	269,875
Management	1,145	725	420	50,850	33,200	17,650
Business, finance, administration	1,865	355	1,510	101,940	27,765	74,180
Natural/applied sciences	690	600	90	26,695	21,370	5,320
Health occupations	650	135	515	36,690	7,410	29,280
Social science, education, government, religion	2,185	710	1,475	45,890	15,810	30,080
Art, culture, recreation, and sport	175	80	95	12,170	5,710	6,465
Sales and service	4,505	1,800	2,705	139,940	59,050	80,895
Trades, transport, and equipment operation	2,790	2,690	100	85,640	80,540	5,105
Primary industries	1,070	1,045	25	40,580	31,295	9,285
Processing, manufacturing and utilities	520	485	35	36,950	25,325	11,620

Source: Statistics Canada. 2007. *2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography*. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12. <http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

Occupation characteristics also varied similarly by gender within the Province, with males employed about 16 times more often in trades, transport and equipment operation (80,540) compared to females (5,105); about three times more often in primary industry (31,295) compared to females (9,285); and about four times more often in natural and applied sciences (21,370) compared to females (5,320). In Manitoba, the female population also dominated employment in business, finance and administration (74,180) by about three times the male population (27,765) employed in that field. Females doubled the male population employed in social science, education, government and religion and quadrupled the male population in the health occupations.

### ***Aboriginal Identity Population***

A review of occupation characteristics of the AIP for Burntwood showed that both the total numbers of males and females in the AIP labour forces were most likely to work in sales and service, followed by trades, transport and equipment operation. In the trades, employment of males strongly outweighed females for both the Region and the Province.

**Table 6.21 Occupation Characteristics for Burntwood and Manitoba AIP by Gender**

Occupation	Burntwood AIP			Manitoba AIP		
	Total	Male	Female	Total	Male	Female
Total - Experienced labour force	8,005	4,255	3,750	53,130	27,725	25,405
Management	540	370	170	3,225	1,895	1,330
Business, finance, and administration	875	150	725	7,730	1,645	6,080
Natural/applied sciences	100	80	20	1,200	905	295
Health occupations	275	50	220	2,390	415	1,975
Social science, education, government, religion	1,230	390	835	5,320	1,515	3,810
Art, culture, recreation, and sport	100	45	55	905	480	425
Sales and service	2,830	1,195	1,635	15,700	6,155	9,545
Trades, transport, equipment operation	1,505	1,455	55	10,115	9,515	600
Primary industries	365	340	25	2,945	2,510	440
Processing, manufacturing/ utilities	190	175	15	3,595	2,685	910

Source: Statistics Canada (2002); Census Aboriginal Population Profiles (2001).

Males also dominated employment in primary industries as well as processing, manufacturing and utilities for both the Region and the Province, while females dominated employment in business, finance and administration as well as health occupations.

### **Family, Household, and Private Dwelling Characteristics**

According to the 2001 census, about 73% of families living in the Burntwood Region were couple families in structure, including those who reported being married-couple families (6,135) and those who reported living as common-law families (1700). About 84% of families living in the Province reported being couple families. Some 2,930 lone-parent families resided in the Region with 75% of those families being female lone-parent families compared to the Province with 82% of lone-parent families being headed by females. (See Table 6.22.)

**Table 6.22 Family and Household Characteristics for Burntwood & Manitoba**

<b>Family Structure</b>	<b>Burntwood</b>		<b>Manitoba</b>	
Total # of couple families by family structure	7,835		253,690	
# married-couple families	6,135		224,055	
# of common-law families	1,700		29,635	
Total # of lone-parent families	2,930		49,160	
# female lone-parent families	2,205		40,095	
# male lone-parent families	730		9,060	
<b>Household Income</b>	<b>Total</b>		<b>Total</b>	
Average household income (\$) all households	48,869		50,756	
Median household income (\$)	40,289		41,661	
<b>Private Dwellings</b>	<b>Total</b>	<b>%</b>	<b>Total</b>	<b>%</b>
Total # of private households or dwellings	11,975	100.0	432,550	100.0
# of owned dwellings	3,945	33.0	293,295	67.8
# of rented dwellings	3,630	30.3	128,925	29.8
# of band dwellings	4,395	36.7	10,330	2.4

Source: Statistics Canada. (2007). *2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography*. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12. <http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

The average household income for Burntwood Region (\$48,869) was lower than for the Province as a whole (\$50,756). The median or the mid-point of all household incomes for Burntwood was \$40,298 compared to the Province \$41,661. In the Burntwood Region, about 1/3 or 33% of households owned their homes, compared with more than 2/3 or 68% of households in the Province. Similar proportions of the populations of the Region (30%) and the Province (30%) reported renting their homes. In the Burntwood Region over 1/3 or 37% of residents reported living in band dwellings while for the Province 2.4% reported living in band dwellings.

### ***Aboriginal Identity Population***

Data related to family status were provided in a different format for the Aboriginal Identity Populations and total numbers of individuals in families were noted compared with the numbers of families in the previous section for the total populations. Some comparisons have been made using the proportions of individuals in each category.

Some 23% of individuals identifying as AIP in Burntwood Region were spouses, compared to 21% of the AIP of Manitoba. In Burntwood Region 8% of the AIP reported being a lone-parent compared with 8.8% of the AIP of Manitoba. Some 53% of the Burntwood AIP were children in census families compared with 47% of the Provincial AIP. About 8% of those indicating identity with the AIP in Burntwood considered themselves to be “non-family persons” compared to about 13% of the Provincial AIP. (See Table 6.23.)

The median or the mid-point of all household incomes for the Burntwood AIP was \$29,360 compared to the Provincial AIP at \$30,290. Both AIP had median household incomes that were much lower than the medians for the total Burntwood Region at \$40,298 and the Province as a whole at \$41,661.

Some 17% of the Burntwood AIP owned their homes, while 27% rented and 56% lived in “other dwellings” such as band housing. Meanwhile, 38% of the Provincial AIP population reported owning homes, compared to 44% who rented and 19% who lived in other dwellings.

**Table 6.23 Family and Household Characteristics for Burntwood and Manitoba AIP**

<b>Family Status</b>	<b>Burntwood</b>		<b>Manitoba</b>	
Total # people identifying as AIP	31,215		149,210	
# spouses	7,225		31,755	
# of common-law partners	2,335		13,990	
# of lone-parents	2,535		13,180	
# children in census families	16,575		70,375	
# non family persons	2,555		19,900	
<b>Household Income</b>	<b>Total</b>		<b>Total</b>	
Median household income (\$)	29,360		30,290	
<b>Private Dwelling s</b>	<b>Total</b>	<b>%</b>	<b>Total</b>	<b>%</b>
Total # of private households or dwellings	7,785	100.0	55,035	100.0
# of owned dwellings	1,295	16.6	20,695	37.6
# of rented dwellings	2,110	27.1	24,040	43.7
# of other dwellings	4,380	56.3	10,300	18.7

Source: Statistics Canada (2002); Census Aboriginal Population Profiles (2001).

## Demographics of Division 22

Earlier in this section, *VI Burntwood Region and Bayline Communities*, health indicators were discussed related to health status, measures of illness, preventative care measures, health care utilization and mental health. These indicators were provided for the Region and Districts within the Region as the “closest to home” data available. To provide demographic information that was consistent with the health indicators, population characteristics were reported for the Region as a whole compared to the Province as a whole. In addition Aboriginal Identify Population characteristics were provided for Burntwood Region and for the Province.

Data by census divisions and sub-divisions were considered to be less useful as they were not consistent with the population groupings by region used to provide data related to health indicators. However, this familiar geographical organization of data has been included to demonstrate community populations by using census division categorization of Census Division 22 which included Thompson and the many communities in the surrounding area. Population counts were provided for the 2006 census, the 2001 census and the percentage of change (Table 6.24). When this report was developed, regional data were not available in detail for 2006. As a result, this table also provided opportunity to share some population data at a 2006 level. The Bayline Communities located in Census Division 22 were shaded for easy identification.

Three of the Bayline Communities were located in Division 22, Unorganized Territory with the population of Pikwitonei showing a decline, the population of Thicket Portage showing some growth, and the population of Wabowden staying relatively stable. Ilford, as noted here, has also experienced a decline in population.

Statistics Canada (2002c) noted that geographic areas may change from one census to another. In order to facilitate comparison, the 2001 Census counts are adjusted to take into account boundary changes between the 2001 and 2006 census. The 2001 counts that were adjusted are identified by

the letter 'A'. The letter 'A' may also refer to corrections to the 2001 counts usually the result of boundary changes. This symbol is also used to identify areas that have been created since 2001, such as newly incorporated municipalities (census subdivisions) and new designated places (DPLs).

**Table 6.24 Population of Census Division 22 by Community**

<b>Geographic Name</b>	<b>2006</b>	<b>2001</b>	<b>% of Change</b>
Division No. 22	38,421	35,077	9.5
Cross Lake (19, 19A, 19E)	3,854	2,544 <sup>E</sup>	51.49
Division No. 22, Unorganized	2,313	2,153 <sup>A</sup> <sup>E</sup>	...
Cross Lake	406	294	38.1
Gods Lake Narrows	88	113	-22.1
Island Lake	49	59	-16.9
Nelson House	0	54	-100.0
Norway House	521	456	14.3
Pikwitonei	91	117	-22.2
Red Sucker Lake	0	33	-100.0
Thicket Portage	156	137	13.9
Wabowden	498	497	0.2
Garden Hill First Nation	1,898	2,021	-6.1
God's Lake 23	1,105	1,156	-4.4
God's River 86A	556	471	18.0
Ilford	116	143	-18.9
Mystery Lake	147	5 <sup>A</sup>	2840.0
Nelson House (170, 170A, 170B, 170C)	2,096	1,710	22.6
Norway House	4,071	3,950	3.1
Oxford House 24	1,947	1,731	12.5
Red Sucker Lake 1976	845	629	34.3

Source: Statistics Canada. (2002c). Community Profiles 2001.

...not applicable - In some cases the figure is deemed to be not appropriate or not applicable. In these cases the symbol, three dots (...) is displayed instead of a value.

E use with caution - Population and dwelling count amendments - After the release of the 2001 Census population and dwelling counts, errors are occasionally uncovered in the data and it is not possible to make changes.

The next section of this report was included to focus on the Nor-Man Region and the Bayline Community of Cormorant located within that Region. Similar data regarding health, measures of illness, health care utilization and mental health, as well as demographics and discussion of the characteristics of the population have been included for the Region and the health districts within that Region.



## VII Nor-Man Region and Bayline Communities

In 2001, the Nor-Man Region had a population of 22,380 (Statistics Canada, 2002c). Each health region in Manitoba was made up of health districts. In the MCHP reports and the Nor-Man RHA reports, the Nor-Man Region was comprised of 3 districts, with some of the data being reported by district. The districts within Nor-Man Region included:

- District 1: Flin Flon, Snow Lake, Cranberry Portage
- District 2: The Pas, Opaskwayak Cree Nation, RM of Kelsey
- District 3 or Nor-Man Other: Cormorant, Sherridon/Cold Lake, Easterville/ Chemawawin FN, Grand Rapids/ Grand Rapids First Nation, Moose Lake/ Mosakahiken Cree Nation, Pukatawagan/Mathias Colomb First Nation)

(Nor-Man RHA, 2004; Martens et al, 2004)

As one of the five communities comprising the Bayline Regional Round Table (BRRT), Cormorant was the only member community located in the Nor-Man Region. In this section, the health status of the population of the Nor-Man Region and the district that included Cormorant were examined and compared to the Province. The other community members of the BRRT were located in the Burntwood Region and were discussed in the previous section.

Two documents were used to provide information on the health and health care use of residents of Nor-Man Region and the districts therein. The first source was the report the MCHP *Sex Differences in Health Status, Health Care Use, and Quality of Care: A Population-Based Analysis for Manitoba's Regional Health Authorities* (Fransoo et al, 2005). Comparisons included indicators or measures of health status, illness, preventative care, and health care utilization across regions. The second source by the MCHP entitled *Patterns of Regional Mental Illness Disorder, Diagnoses, and Services Use in Manitoba: A Population-Based Study* (Martens et al, 2004) provided information specifically on mental illness. Comparisons included treatment prevalences and physician visits.

While it can be informative to examine the health of the population located within the Nor-Man Region, information about the health districts within that region were also useful. Health status may differ between districts and communities within the Region. The sometimes considerable differences between the districts in the overall region can give a clearer understanding of the different needs of various communities. Circumstances differed as did populations; therefore the health of different districts that existed within the Nor-Man Region were illustrated. In the tables of this section, the comparisons of health districts included numbers and stated whether or not the differences were significant in comparison to the Province as a whole, not whether the differences were significant in comparison to the Region as a whole.

### **Health Status**

Some interesting trends emerged when examining the *life expectancy, premature mortality rate, and potential years of life lost* in the districts within the Nor-Man Region. When data of the three districts were separated and examined, residents of District 3 (Nor-Man RHA, 2004) or 'Nor-Man Other' (Martens et al, 2004), the district that included Cormorant, had the poorest health status compared to residents of the other two Nor-Man districts (Table 7.1).

*Life expectancy* among males and females living in the Nor-Man Region was lower than for residents of the Province as a whole. In looking at the 5-year life expectancy at birth (1999-2003)

residents of the ‘Nor-Man Other’ District (which included Cormorant) showed a male life expectancy of 69.4 years of age, a rate lower than the Nor-Man Region as a whole at 72.8 years. Female life expectancy for this District also was lower at 72.4 years of age compared to the Region at 77.8 years.

*Premature mortality rates (PMR)* for residents of the Nor-Man Region as a whole were significantly higher than for residents of the Province overall. Premature mortality rates for residents living in the ‘Nor-Man Other’ District also were significantly higher than rates for the Province and were higher than figures for the Nor-Man Region overall. In the Nor-Man Other District males had a PMR of 8.1 years per 1000 population aged 0-74 Years, (1999 – 2003) and females had a PMR of 6.8 years, compared to residents of the Nor-Man Region overall at 5.7 years per 1000 males and 4.1 years for females.

In the Nor-Man Region, the *potential years of life lost* were significantly higher for females when compared with the Province. Residents of the ‘Nor-Man Other’ District had the highest potential years of life lost (PYLL), although only the rate for females was significantly higher than the Province. The Nor-Man Other District had PYLL at 150.5 years per 1,000 population, aged 1-74 years (1999 – 2003) for males and 111.5 years for females, higher than the Nor-Man Region figures of 89.4 years for males and 65.3 years for females.

**Table 7.1 Health Status and Mortality by Nor-Man District**

District	Life Expectancy#		Premature Mortality Rate*			Potential Years of Life Lost+		
	Male	Female		Male	Female	Male	Female	
F Flon/Snow L/Cran	75.5	79.1		4.3	3.3	54.5	55.5	
The Pas/OCN/Kelsey	72.1	78.3	m,f,d	6.1	3.8	85.8	54.9	
Nor-Man Other	69.4	72.4	m,f	8.1	6.8	f	150.5	111.5
Nor-Man	72.8	77.8	m,f,d	5.7	4.1	f	89.4	65.3
Manitoba	75.9	81.3	d	4.4	2.6	d	68.1	40.6

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba’s regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

# 5 Year Life Expectancy at Birth, 1999-2003

\*Premature Mortality Rate - Years per 1,000 population, Age 0-74 Years, 1999 – 2003

+Potential Years of Life Lost - Years per 1,000 population, Age 1-74 Years, 1999 - 2003

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

## Measures of Illness

Treatment prevalence of diabetes and hypertension were used as measures of illness for comparative purposes. The *diabetes treatment prevalence* for those aged 20 to 79 years of age, during the period of 2001/02 - 2003/04, was significantly poorer for males (9.2%) and females (10.9%) living in the Nor-Man Region compared to males (7%) and females (6%) living in the Province overall. For residents of the Nor-Man Other District which included the community of Cormorant diabetes treatment prevalence was 10.2% for males and 20.9% for females, the highest rates of the three districts within the Nor-Man Region. (See Table 7.2.)

*Hypertension treatment prevalence* for residents of the Nor-Man Region aged 25 years and older was significantly lower for males than the rate for the males of similar age living in the Province overall. The hypertension treatment prevalence for residents of the Nor-man Other District was significantly lower at 17.3% for males and 20.7% for females compared to the Province at 24% and 25.9% respectively. Treatment prevalence for hypertension was the lowest in the Nor-Man Other District compared to all districts in the Region.

**Table 7.2 Diabetes and Hypertension Treatment Prevalence by Nor-Man District**

District	Diabetes Treatment Prevalence+		Hypertension Treatment Prevalence*			
	Male	Female	Male	Female		
F Flon/Snow L/Cran	7.7%	6.6%	f,d	24.4%	29.9%	
The Pas/OCN/Kelsey	m,f	10.2%	12.7%	m,d	19.8%	23.9%
Nor-Man Other	m,f,d	10.2%	20.9%	m,f	17.3%	20.7%
Nor-Man	m,f,d	9.2%	10.9%	m,d	21.0%	25.4%
Manitoba	d	7%	6%	d	24.0%	25.9%

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

+Diabetes Prevalence 2001/02-2003/04 per cent age 20-79

\*Hypertension Prevalence 2001/02-2003/04 per cent age 25+

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

## Preventive Care Measures

Residents of the Nor-Man Region had lower *rates of immunization* for one-year olds (61.7% for males; 65.2% for females) compared with 82.7% for both males and females in the Province.

**Table 7.3 Immunization of One and Two-Year Olds by Nor-Man Health District**

District	Immunization of One-Year Olds*		Immunization of Two-Year Olds+			
	Male	Female	Male	Female		
F Flon/Snow L/Cran	83.1%	82.9%	74.0%	77.9%		
The Pas/OCN/Kelsey	74.9%	80.2%	70.6%	66.9%		
Nor-Man Other	m	61.7%	65.2%	m	48.1%	54.5%
Nor-Man	m	71.1%	75.4%		62.9%	64.3%
Manitoba		82.7%	82.7%		69.8%	70.7%

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

\*Proportion of children born 2001-2002 immunized at 1 year

+Proportion of children born 2000-2001 immunized at 2 years

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

The rates for two-year olds were lower, though not significantly so, when compared to the Province. In comparison to residents of the Province, the difference was significantly lower for one-year old male children living in the Nor-Man Region (71.1%) and significantly lower than the Province for both ages of male children living in the Norman Other District.

Among two-year olds born in 2001/02 in Manitoba, 69.8% of males and 70.7% of females were immunized. In Nor-Man, 62.9% of male children and 64.3% of female children were immunized, and in the Nor-Man Other District, 48.1% of males and 54.4% of females were immunized.

## Health Care Utilization

Health care utilization in the Nor-Man Region and in the different districts within the Region showed no clear patterns, save for much lower rates of visits to specialists. As specialist care in Manitoba is highly centralized, and with transportation issues in the North having great impact on how health care is accessed, these data were not surprising.

*Ambulatory visit rates* for residents of the Nor-Man Region in the years 2003/04 were higher than for residents of Manitoba as a whole, with males visiting physicians 4.5 times per year, compared to Manitoban males 4.4 times per year. Nor-Man females visited physicians 5.8 times per year compared to Manitoban females at 5.4 times per year. Physician visits for residents of the Nor-Man Other District were lower than for residents of the Nor-Man Region and significantly lower than for residents of Manitoba, despite the poorer health status in this District as discussed earlier in this report. Males living in this District visited physicians at a rate of 3.1 times per year, and females visited physicians at a rate of 4.6 times per year. (See Table 7.4.)

*Ambulatory consultation rates* in Manitoba were 0.3 visits for males and 0.3 visits for females. The rates for residents of the Nor-Man and the Other Nor-Man District were the same, at 0.2 visits among males and 0.3 visits among females.

**Table 7.4 Physician Services by Nor-Man Health District**

RHAs		Ambulatory Visit Rates*		Ambulatory Consultation Rates+			Visit Rates to Specialists#		
		Male	Female		Male	Female	Male	Female	
F Flon/Snow L/Cran	d	4.7	5.7	m,f,d	0.2	0.2	d	0.4	0.4
The Pas/ OCN/Kelsey	m,f,d	5.1	6.9	m,d	0.2	0.3	m,f,d	0.4	0.5
Nor-Man Other	m,f,d	3.1	4.6	m,d	0.2	0.3	m,f,d	0.5	0.6
Nor-Man	d	4.5	5.8	m,f,d	0.2	0.3	m,f,d	0.4	0.5
Manitoba	d	4.4	5.4	d	0.3	0.3	d	1.2	1.3

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

\*Ambulatory Physician Visit Rates 2003/04 per individual

+Ambulatory Consult Rates 2003/04 per individual

#Ambulatory Visit Rates to Specialists 2003/04 per individual

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

It is not surprising to find that visit rates to specialists were much lower for residents of the Nor-Man Region at 0.4 visits to a specialist per person among males and 0.5 visits per person among

females, compared to residents of Manitoba with a specialist visit rate among males of 1.2 visits per person, and a specialist visit rate among females of 1.3 visits per person. The numbers in the Nor-Man Other District were slightly higher, at 0.5 visits among males and 0.6 visits among females.

Information on hospital use was provided by looking at two indicators: total separation rates per 1000 population for 2003/04 and total hospital days rates per 1000 population for the same period (Table 7.5). *Total separation rates* for residents of the Nor-Man Region were significantly higher at 155.9 separations per 1000 population for males and 253.8 per 1000 population for females compared to residents of Manitoba at 126.6 separations per 1000 population for males and 162.0 per 1000 for females. Residents of the Nor-Man Other District had a separation rate of 178.1 for males and 370.5 for females. Both statistics were significantly higher than the Province and notably highest among residents of the three districts within the Nor-Man Region.

Individuals who lived in the Nor-Man Region were not only admitted to hospital more frequently, they stayed in hospital for periods that were longer than their peers in Manitoba. The Manitoba *total hospital days rate* was 878.2 for males and 998.1 for females. In Nor-Man, the rate was 1021.2 days for males and 1323.2 days for females. However, neither figure was significantly different than the Province. The total hospital days rate was higher for residents in the Nor-Man Other District, but only the female rate for the District (2013.7 days) was significantly higher than the Province (998.1 days).

**Table 7.5 Hospital Services by Nor-Man Health District**

RHAs		Total Separation Rates*			Total Hospital Days Rates+	
		Male	Female		Male	Female
F Flon/Snow L/Cran	d	138.7	198.6		968.1	1179.7
The Pas/OCN/Kelsey	m,f,d	163.8	265.7		1001.3	1243.6
Nor-Man Other	m,f,d	178.1	370.5	f	1300.1	2013.7
Nor-Man	m,f,d	155.9	253.8		1021.2	1323.2
Manitoba	d	126.6	162.0		878.2	998.1

Source: Fransoo, R. et al. (2005). *Sex differences in health status, health care use, and quality of care: A population-based analysis for Manitoba's regional health authorities*. Winnipeg: Manitoba Centre for Health Policy.

\*Hospital Separation Rates 2003/04 per 1000

+Total Hospital Days Rates 2003/04 per 1000

'm' indicates area's rate for males was statistically different from Manitoba average for males

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'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

## **Mental Health**

The mental health status of persons living in the Nor-Man Other District were examined and compared to residents of the Nor-Man Region overall and the Province. Two indicators were used for comparisons: *treatment prevalence of cumulative disorders* (depression, schizophrenia, anxiety, substance abuse and personality disorders) and *treatment prevalence of other mental illness disorders* (other disorders such as eating disorders, attention deficit disorders, and dementia) for males and females during the five-year period of 1997 to 2001.

## Treatment Prevalence

The *treatment prevalence of cumulative disorders* (depression, schizophrenia, anxiety, substance abuse and personality disorders) was a concept used to identify that individuals were treated for these diseases but did not confirm their diagnosis with these disorders. (See Table 7.6). The treatment prevalence of cumulative disorders was significantly different for males than for females at the provincial, regional and district levels. The rate for female residents of the Norman Region (32.6%) was significantly higher than for the Province (29.1%). Otherwise treatment prevalence rates for cumulative disorders at the Regional and Nor-Man Other District levels were not significantly different than the Province.

*Treatment prevalence of other mental illness disorders* (such as eating disorders, attention deficit disorders, and dementia) was significantly different for males and females at the provincial, regional and district levels. Treatment rates for females living in the Nor-Man Region (15.1%) were significantly higher than the Province (14.0%). Treatment rates for males living in the Nor-Man Other District (9.4%) were significantly lower than the Province (11.5%).

**Table 7.6 Treatment Prevalence by Nor-Man Health District**

District	Treatment Prevalence of Cumulative Disorders+		Treatment Prevalence of Other Mental Illness Disorders*			
	Male	Female	Male	Female		
F Flon/Snow L/Cran	d	18.0%	27.4%	m,d	9.0%	12.9%
The Pas/OCN/Kelsey	m,f,d	21.4%	38.2%	m,f,d	14.4%	18.0%
Nor-Man Other	d	17.5%	29.8%	m,d	9.4%	12.9%
Nor-Man	f,d	19.5%	32.6%	f,d	11.4%	15.1%
Manitoba	d	18.8%	29.1%	d	11.5%	14.0%

Source: Martens, P., Fransoo, R., McKeen, N. et al. (2004). *Patterns of regional mental illness disorder diagnoses and services use in Manitoba: A population-based study*. Winnipeg: Manitoba Centre for Health Policy.

+Rate of Individuals with any of 5 conditions per 100 (%) - 1997-2001

\*Rate of Individuals with not any of 5 conditions per 100 (%) - 1997-2001

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

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Treatment prevalence for two of the cumulative disorders, depression and substance abuse were available for the five-year period from 1997 to 2001. It is evident in looking at the data that residents of the Nor-Man Region received treatment for depression at rates that were significantly lower than that of the Province and received treatment for substance abuse at rates that were significantly higher than that of the Province. (See Table 7.7.)

The proportion of male residents of the Nor-Man Region who received *treatment for depression* (10.2%) was significantly lower than the proportion of males residing in the Province who received treatment (12.6%). Similarly, the proportion of female residents of the Nor-Man Region who received treatment for depression (22.7%) was significantly lower than the proportion of females living in the Province who received treatment (23.6%). The proportions of males living in the Norman Other District (6.9%) and of females (19.9%) who received treatment for depression also were significantly lower than for the Province and lower than the rates for the residents of the Nor-Man Region overall.

In contrast the *treatment prevalence of substance abuse* was significantly higher for male residents of the Norman Region (9.1%) compared to the Province (6.3%) and for females residents of the Region (8.2%) compared to the Province (5.3%). The proportions of males living in the Norman Other District and who received treatment for substance abuse (11.1%) and of females (10.4%) who received treatment also were significantly higher than for the Province and higher than the rates for the residents of the Nor-Man Region overall. The rate for males living in the Nor-Man Other District was not significantly different from the rate for females.

**Table 7.7 Treatment Prevalence for Depression/Substance Abuse by Nor-Man District**

District	Treatment Prevalence of Depression+		Treatment Prevalence of Substance Abuse*			
	Male	Female	Male	Female		
F Flon/Snow L/Cran	m,f,d	10.0%	19.2%	m,f	9.3%	8.7%
The Pas/OCN/Kelsey	f,d	11.5%	27.1%	m,f,d	8.1%	6.9%
Nor-Man Other	m,f,d	6.9%	19.9%	m,f	11.1%	10.4%
Nor-Man	m,f,d	10.2%	22.7%	m,f,d	9.1%	8.2%
Manitoba	d	12.6%	23.6%	d	6.3%	5.3%

Source: Martens, P., Fransoo, R., McKeen, N. et al. (2004). *Patterns of regional mental illness disorder diagnoses and services use in Manitoba: A population-based study*. Winnipeg: Manitoba Centre for Health Policy.

+Rate of Individuals with any of 5 conditions per 100 (%) - 1997-2001

\*Rate of Individuals with not any of 5 conditions per 100 (%) - 1997-2001

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

## Use of Physician Services

Use of physician services were measured through the use of two indicators: *physician visits for all causes* (differentiated as all causes with cumulative disorders and all causes without cumulative disorders), and *physician visits for mental illness*. Rates for both indicators were calculated for the five year period from 1997/98 to 2001/02, using age-adjusted annual rates of visits per resident 10 years of age and older.

Rates of *Physician visits for all causes*, with or without cumulative disorders, for male and females residents of the Burntwood Region, were lower than for the Province of Manitoba, but not significantly lower. Physician visit rates for all cause for females living in the Nor-Man Other District were significantly lower for those with a cumulative disorder (7.0 visits per resident during the 5-year period) and those without a cumulative disorder (3.1 visits) compared to females in the Province with a cumulative disorder (8.7 visits) and without a cumulative disorder (4.0 visits). (See Table 7.8.)

Rates of *physician visits for mental illness* were significantly lower for males living in the Nor-Man Region (1.1 visits per resident during the 5 year period) and for females living in the Nor-Man Region (1.2 visits), compared to those males living in the Province (1.5 visits) and those females (1.6 visits). Male and female residents living in the Nor-Man Other District were also significantly lower in their rates of visit for mental illness, at 0.7 and 0.8 visits respectively. The rates of visits for mental illness in this District were the lowest of the three districts in the Nor-Man Region.

**Table 7.8 Physician Visits for All Causes/ Mental Illness by Nor-Man Health District**

District	Physician Visits for All Causes+						Physician Visits for Mental Illness*		
	Male			Female				Male	Female
		with disorder	no disorder		with disorder	no disorder			
F Flon/Snow L/Cran	0,d	7.1	3.5	0,d	9.2	4.4	m,f	1.1	1.2
The Pas/OCN/Kelsey	d	6.8	3.0	d	8.7	4.0	m,f	1.1	1.2
Nor-Man Other	0,d	5.9	2.1	1,0,d	7.0	3.1	m,f	0.7	0.8
Nor-Man	d	6.7	3.0	d	8.5	4.0	m,f	1.1	1.2
Manitoba	d	7.1	3.1	d	8.7	4.0	d	1.5	1.6

Source: Martens, P., Fransoo, R., McKeen, N. et al. (2004). *Patterns of regional mental illness disorder diagnoses and services use in Manitoba: A population-based study*. Winnipeg: Manitoba Centre for Health Policy.

+All-Cause Physician Visit Rates for Males With and Without Cumulative Disorders by RHA, 1997/98-2001/02, Age-adjusted annual rate of visits per resident aged 10 years +

\*Visit Rates to All Physicians for Mental Illness Disorders for those With Cumulative Disorders by District, 1997/98-2001/02, Age-adjusted annual rate of visits per resident aged 10 years +

'm' indicates area's rate for males was statistically different from Manitoba average for males

'f' indicates area's rate for females was statistically different from Manitoba average for females

'd' indicates difference between male and female rates was statistically significant for that area

's' indicates data suppressed due to small numbers

'l' indicates area's rate for those with disorder was statistically different from Manitoba average with disorder

'0' indicates area's rate for those without disorder was statistically different from Manitoba average without disorder

'd' indicates difference between two groups' rates was statistically significant for that area

's' indicates data suppressed due to small numbers

## Demographics of Nor-Man Region

Exploring the characteristics of populations can be useful in planning health services and in understanding important factors that contribute to health and well-being of individuals and their communities. Demographic details describing characteristics of the Nor-Man Region were compared to those of the province of Manitoba as a whole. The statistics used were taken from the 2001 Canadian census. One in every five people or 20% of the population was provided with a more detailed census form used to gather additional information about the characteristics of the population. The data from this sample were weighted to estimate the entire population. The demographics for Nor-Man and for Manitoba included in this section of the report were based upon responses from the 20% sample of the population. Demographics were provided for the total population of the Nor-Man Region and for the Aboriginal Identity population. The Aboriginal Identity Population was comprised of those individuals who identified themselves as being of Aboriginal decent when they completed the census. Since a large proportion of the residents of the Nor-Man Region identified with at least one Aboriginal group (42.1%), the AIP population information has been included.

## Population by Age and Gender

As seen in Tables 7.9 in 2001 the total population of the Nor-Man Region calculated from the 20% sample was 23,380 and for the Province was 1,103,695. Occasionally male and female subtotals when added together did not equal the reported total, due to weighting of data to estimate the population (Statistics Canada. 2002c).

The proportions of the population for every age group from 0 to 4 years of age through to 20 to 24 years of age was higher in the Nor-Man Region than for the Province, demonstrating a much younger population than for the Province in its entirety. The greatest differences were noted in the two youngest age groups 0 to 4 years and 5 to 9 years of age, with almost 18% of residents in Nor-Man Region being under 10 years of age compared to the Province with almost 14% of its population under the age of 10 years. At the other end of the age spectrum, 8% of the Nor-Man population was aged 65 years and older compared to just over 13% of the Province.

**Table 7.9 Population of Nor-Man Region and Manitoba by Age and Gender**

Age	Nor-Man				Manitoba			
	Male	Female	Total	%	Male	Female	Total	%
Total	11305	11075	22,380	100	542895	560800	1,103,695	100
0-4	980	895	1,875	8.4	36695	34335	71,030	6.4
5-9	1045	995	2,040	9.1	41370	39405	80,775	7.3
10-14	980	985	1,965	8.8	41970	40605	82,575	7.5
15-19	890	990	1,880	8.4	40890	38810	79,700	7.2
20-24	650	725	1,375	6.1	35850	36435	72,285	6.5
25-29	745	745	1,490	6.6	34900	35095	69,995	6.3
30-34	765	700	1,465	6.5	35800	36460	72,260	6.5
35-39	825	875	1,700	7.6	42950	43870	86,820	7.9
40-44	1015	915	1,930	8.6	44225	44735	88,960	8.1
45-49	830	820	1,650	7.4	40220	41390	81,610	7.4
50-54	805	665	1,470	6.6	35930	36765	72,695	6.6
55-59	495	475	970	4.3	27165	27625	54,790	5.0
60-64	420	355	775	3.5	21705	22805	44,510	4.0
65-74	500	495	995	4.4	36225	40835	77,060	7.0
75+	350	435	785	3.5	27005	41630	68,635	6.2

Source: Statistics Canada. (2007). *2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography*. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12. <http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

### ***Aboriginal Identity Population***

The total Nor-Man population in 2001 was 22,380, with 42.1% of the population self-identifying as being a member of an Aboriginal group. The Province had a self-identified Aboriginal population of just under 14% (See Table 7.10). Statistics Canada (2002d) defined ‘Aboriginal Identity Population’ (AIP) as composed of those persons who reported identifying with at least one Aboriginal group, that is, North American Indian, Métis or Inuit, and/or who reported being a Treaty Indian or a Registered Indian, as defined by the Indian Act of Canada, and/or who were members of an Indian Band or First Nation.

In the Nor-Man Region, a majority of those who self-identified as a member of an Aboriginal group, 68.6%, identified with the North American Indian group; 29.5% identified with the Métis. The remaining 1.7% identified as Inuit, “Multiple Aboriginal Response” or “Other Aboriginal Response”. In Manitoba as a whole, 60% of the AIP identified with the North American Indian group, and 37% identified with Métis.

**Table 7.10 Aboriginal Identity Population of Nor-Man Region and Manitoba**

Aboriginal Identity	Nor-Man Region			Manitoba		
	Total	% AIP	% non-Ab	Total	% AIP	% non-Ab
Total Population	22,385	42.1	57.9	1,103,695	13.6	86.4
Total AIP	9,430	100.0	--	150,040	100.0	--
North American Indian	6,470	68.6	--	90,340	60.0	--
Métis	2,785	29.5	--	56,795	37.0	--
Inuit	10	0.1	--	345	0.2	--
Multiple Aboriginal response	20	0.2	--	500	0.3	--
Other Aboriginal response	135	1.4	--	2,060	1.4	--
Non-Aboriginal	12,955	--	100.0	953,660	--	100.0

Source: Statistics Canada. 2007. *Community Highlights for Norman Regional Health Authority (table). 2001 Census Aboriginal Population Profiles*. Last updated January 2, 2007.

<http://www12.statcan.ca/english/profil01/AP01/Details/Page.cfm?Lang=E&Geo1=HR&Code1=4670&Geo2=PR&Code2=46&Data=Count&SearchText=norman&SearchType=Begins&SearchPR=46&B1=All&Custom=> (accessed December 9, 2008).

As seen in Tables 7.11, the AIP population that resided in the Nor-Man Region was distributed similarly to the Manitoba AIP population. Larger portions of the populations in both Nor-Man and Manitoba were noted for younger age groups with very small proportions of the populations in the older age groups of 65 years of age and older.

**Table 7.11 Aboriginal Identity Population by Age, Nor-Man Region and Manitoba**

	Nor-Man AIP		Manitoba AIP	
	Total	%	Total	%
Total	9,425	100.0	150,040	100.0
Age 0-4	1,265	13.4	17,995	12.0
Age 5-14	2,270	24.0	36,065	24.0
Age 15-19	865	9.2	14,395	9.5
Age 20-24	675	7.2	11,610	8.0
Age 25-44	2,770	29.4	43,710	29.0
Age 45-54	800	8.5	13,305	9.0
Age 55-64	440	4.7	7,410	5.0
Age 65-74	215	2.3	3,755	2.5
Age 75-84	115	1.2	1,460	1.0
Age 85+	10	0.1	330	0.2
Median age	22.3	22.3	22.8	22.8

Source: Statistics Canada. 2007. *Community Highlights for Norman Regional Health Authority (table). 2001 Census Aboriginal Population Profiles*. Last updated January 2, 2007.

<http://www12.statcan.ca/english/profil01/AP01/Details/Page.cfm?Lang=E&Geo1=HR&Code1=4670&Geo2=PR&Code2=46&Data=Count&SearchText=norman&SearchType=Begins&SearchPR=46&B1=All&Custom=> (accessed December 9, 2008).

## Legal Marital and Common-Law Status

Researchers at Statistics Canada provided data on legal marital status of Canadians by using five categories including single (never married), married (including common law), separated, divorced, and widowed. Table 7.12 displays the frequencies (counts) of the various groups. In 2001, nearly 49% of the Nor-Man population (15 years of age and older) reported being married; this figure was similar to the overall Manitoba figure (52%). Nearly 6% of the Nor-Man

population was divorced; a figure comparable to the Province. Roughly 11% of Nor-Man population was living in a common-law relationship, a figure which was slightly higher than the corresponding Manitoba figure (6%).

**Table 7.12 Marital Status for Nor-Man Region and Manitoba**

Marital Status	Nor-Man		Manitoba	
	Total	%	Total	%
Pop. > 15 years	16,495	100.0	869,315	100.0
Single	5,895	35.7	275,150	31.7
Married	8,030	48.7	455,915	52.4
Common-law	1,875		59,410	
Separated	480	2.9	24,445	2.8
Divorced	1,150	7.0	56,305	6.5
Widowed	935	5.7	57,505	6.6

Source: Statistics Canada. 2007. *2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography*. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12. <http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

### ***Aboriginal Identity Population***

As seen in Tables 7.13, 35% of the Nor-Man AIP (15 years of age and older) was married in 2001; the corresponding Manitoba AIP figure was 34%. About 7% of Nor-Man AIP was divorced, a figure which is comparable to the provincial AIP figure (7%).

**Table 7.13 Aboriginal Identity Population by Marital Status, Nor-Man and Manitoba**

Marital Status	Nor-Man AIP		Manitoba AIP	
	Total	%	Total	%
Pop. > 15 years	5,895	62.0	95,975	64.0
Single	2,915	49.9	49,425	51.0
Married	2,090	35.0	32,400	34.0
Common-law	910		14,050	
Separated	195	3.0	3,825	4.0
Divorced	395	7.0	6,630	7.0
Widowed	295	5.0	3,700	4.0

Source: Statistics Canada. 2007. *Community Highlights for Norman Regional Health Authority (table). 2001 Census Aboriginal Population Profiles*. Last updated January 2, 2007. <http://www12.statcan.ca/english/profil01/AP01/Details/Page.cfm?Lang=E&Geo1=HR&Code1=4670&Geo2=PR&Code2=46&Data=Count&SearchText=norman&SearchType=Begins&SearchPR=46&B1=All&Custom=> (accessed December 9, 2008).

### **Language Characteristics**

Knowledge of the official languages of English and French were tabulated for the total population of the Nor-Man Region in comparison with the Province. As seen in Table 7.14 most (94.6%) of Nor-Man's population reported speaking English only, somewhat higher than Manitoba's proportion of English only speakers (89.7%). Some 5% of the Nor-Man population and 9.3% of the Manitoba population reported speaking both French and English.

**Table 7.14 Language Characteristics for Nor-Man Region and Manitoba**

Language	Nor-Man Region		Manitoba	
	Total	%	Total	%
Total population	22,380	--	1,103,700	100.0
English only	21,165	94.6	990,280	89.7
French only	0	0	1,250	0.1
English and French	1,120	5.0	102,840	9.3

Source: Statistics Canada. 2007. *2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography*. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12.  
<http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

### **Aboriginal Identity Population**

As seen in Table 7.15, some 64% of the AIP who resided in the Nor-Man Region reported speaking English only. Nearly 35% of the AIP in the Nor-Man Region reported having knowledge of Aboriginal language; compare to Manitoba residents at 29%. Nearly 30% of the Nor-Man AIP who had knowledge of Aboriginal language reported speaking their primary Aboriginal language at home, compared to nearly 23% of the Manitoba AIP.

**Table 7.15 Language Characteristics for Nor-Man Region and Manitoba AIP**

Language	Nor-Man		Manitoba	
	Total	%	Total	%
Total population	9,430	--	150,045	--
English only	6,035	64.0	95,530	63.7
French only	0	0.0	145	0.1
English and French	115	1.2	10,245	6.8
Knowledge of Aboriginal. language	3,270	34.7	43,215	28.8
% Aboriginal language(s) first learned/understood	--	31.6	--	24.6
% Aboriginal language(s) spoken at home	--	29.2	--	22.8

Source: Statistics Canada. 2007. *Community Highlights for Norman Regional Health Authority (table). 2001 Census Aboriginal Population Profiles*. Last updated January 2, 2007.  
<http://www12.statcan.ca/english/profil01/AP01/Details/Page.cfm?Lang=E&Geo1=HR&Code1=4670&Geo2=PR&Code2=46&Data=Count&SearchText=norman&SearchType=Begins&SearchPR=46&B1=All&Custom=> (accessed December 9, 2008).

### **Level of Schooling**

Levels of schooling have been calculated for the populations of the Nor-Man Region and Manitoba for those residents who were aged 20 years and older (Table 7.16). In the Nor-Man Region, 26.1% of the population had completed less than high school graduation, compared to 23.4% of the Manitoba population. Some 9.4% of the Nor-Man population reported having attained a high school graduation certificate, while 11.4% of Manitobans reported the same. In the Nor-Man Region, however, some 33.2% of respondents reported having a trades, college or university certificate; a proportion higher than for the Province of Manitoba, at 28.5%. Meanwhile, in the Nor-Man Region, 9.6% of individuals reported attaining a Bachelor's degree or higher, compared to 14.3% of Manitobans.

**Table 7.16 Schooling for Nor-Man Region and Manitoba by Age & Gender**

Level of Schooling	Nor-Man		Manitoba	
	Total	%	Total	%
Total population 20 years and older	14,615	100.0	789,615	100.0
Less than grade 9	1,635	11.2	86,810	11.0
Less than high school graduation	3,810	26.1	185,090	23.4
High school graduation certificate	1,380	9.4	89,720	11.4
Some college or university education	1,540	10.5	90,160	11.4
Trades/college/university diploma or certificate	4,845	33.2	224,685	28.5
University degree at bachelor's level or higher	1,405	9.6	113,150	14.3

Source: Statistics Canada. 2007. *2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography*. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12. <http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

### **Aboriginal Identity Population**

While data for the total populations of Nor-Man Region and Manitoba were available for those aged 20 years and older, the Aboriginal Identity Population data were available for persons aged 25 years and older. As seen in Table 7.17, slightly less than 7% of residents of the Nor-Man Region who comprised the AIP had a completed high school education, with males having a higher graduation percentage than females (8% and 5% respectively). Nearly 30% of the Nor-Man Region AIP had a completed trades, college or university education below the bachelor's level. About 3% of the AIP had a university degree at the bachelor's level or higher with females having a slightly higher percentage than males (4% and 3% respectively).

**Table 7.17 Schooling for Nor-Man and Manitoba AIP by Gender**

Level of Schooling	Nor-Man			Manitoba		
	Total	Male	Female	Total	Male	Female
Population 25 years and older	4,350	2,175	2,175	69,970	32,920	37,050
Less than high school graduation	2,075	1,030	1,045	34,940	17,310	17,625
High school graduation certificate	285	185	105	5,430	2,580	2,850
Some postsecondary education	570	265	300	8,100	3,570	4,530
Trades/college/university certificate or diploma	1,280	645	640	17,870	8,155	9,705
University degree at bachelor's level or higher	145	60	85	3,635	1,305	2,335
% with less than high school grad	47.7	47.4	48.0	49.9	52.6	47.6
% with high school graduation certificate	6.6	8.5	4.8	7.8	7.8	7.7
% with some postsecondary education	13.1	12.2	13.8	11.6	10.8	12.2
% with trades/college/university certificate or diploma	29.4	29.7	29.4	25.5	24.8	26.2
% with university degree at bachelor's level or higher	3.3	2.8	3.9	5.2	4.0	6.3

Source: Statistics Canada. 2007. *Community Highlights for Norman Regional Health Authority (table). 2001 Census Aboriginal Population Profiles*. Last updated January 2, 2007. <http://www12.statcan.ca/english/profil01/AP01/Details/Page.cfm?Lang=E&Geo1=HR&Code1=4670&Geo2=PR&Code2=46&Data=Count&SearchText=norman&SearchType=Begins&SearchPR=46&B1=All&Custom=> (accessed December 9, 2008).

## Earnings and Income Characteristics

As seen in Table 7.18, in 2001, the average earnings of the Nor-Man population who worked the full year, full time was \$42,175, with males earning more than females (\$49,040 and \$31,306 respectively). The total figure was about 22% higher than the total Manitoba figure of \$36,729. While on initial review, those individuals who worked full year, full time in Nor-Man seemed to have fared better than their peers in Manitoba, a review of labour force indicators showed that, in 2001, the unemployment rate at 12% was twice the overall Manitoba unemployment rate (6%). Both the male unemployment rate (13%) and the female unemployment rate (11%) in the Nor-Man Region were much higher than the Provincial rates. Employment income made up 80% of the income of those employed and living in the Nor-Man Region, compared to 75% for the Province.

**Table 7.18 Employment Income & Labour Force Indicators for Nor-Man and Manitoba**

Employment Income	Nor-Man			Manitoba		
	Total	Male	Female	Total	Male	Female
Population 15 years & older with employment	11,585	6,230	5,360	609,575	320,670	288,905
Avg. employment income \$	29,521	37,188	20,615	27,178	32,312	21,480
# Worked full year full time	5,965	3,655	2,310	337,105	197,990	139,110
Avg. employment income \$	42,175	49,040	31,306	36,729	41,153	30,433
Employment income %	80.0			75.3		
<b>Labour Force Indicators</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>
Participation rate %	65.4	70.6	60.1	67.5	73.7	61.7
Employment rate %	57.4	61.4	53.4	63.4	69.0	58.1
Unemployment rate %	12.1	13.0	11.2	6.1	6.3	5.7

Source: Statistics Canada. 2007. 2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12. <http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

### *Aboriginal Identity Population*

The average employment income of the Nor-Man AIP aged 15 years and older was similar (\$21,099) to that of the AIP population of Manitoba (\$19,271); both figures being substantially lower than the average employment income for total populations of Burntwood (\$29,521) or Manitoba (\$27,178) noted earlier. (See Table 7.19.)

The average employment income of the AIP in Nor-Man Region that worked full year full time, was \$33,315 with males earning more than females (\$37,922 and \$27,786 respectively). The average income for AIP in Manitoba who worked full year full time was \$29,079. Employment income made up 76% of the income of the AIP in the Nor-Man Region compared to 74% of the income of the provincial AIP.

The employment rate was 43% for the Nor-Man AIP compared to 48% for the provincial AIP. Both figures were considerably lower than for total populations of the Region (57%) or the Province (63%). Further, the Nor-Man Region AIP had an unemployment rate of 24.4% compared to the overall Regional unemployment rate of 12.1%. Similarly the Manitoba AIP had an unemployment rate of 19% compared to the overall provincial rate of 6.1%. The rates of unemployment for males of the AIP in the Region and Province were higher than for females.

**Table 7.19 Employment Income & Labour Force Indicators for Nor-Man & Manitoba AIP**

Employment Income	Nor-Man			Manitoba		
	Total	Male	Female	Total	Male	Female
Population 15 years & older with earnings	3,545	1,875	1,675	58,285	29,915	28,365
Avg. employment income \$	21,099	24,361	17,446	19,271	21,597	16,817
# Worked full yr full time	1,565	850	710	25,325	13,420	11,905
Avg. employment income \$	33,315	37,922	27,786	29,079	31,957	25,835
Employment income %	75.6			73.5		
Labour Force Indicators	Total	Male	Female	Total	Male	Female
Participation rate %	57.4	62.2	52.9	59.0	64.8	53.8
Employment rate %	43.4	44.6	42.3	47.8	51.1	44.8
Unemployment rate %	24.4	28.6	20.0	19.0	21.2	16.7

Source: Statistics Canada. 2007. *Community Highlights for Norman Regional Health Authority (table). 2001 Census Aboriginal Population Profiles*. Last updated January 2, 2007.

<http://www12.statcan.ca/english/profil01/AP01/Details/Page.cfm?Lang=E&Geo1=HR&Code1=4670&Geo2=PR&Code2=46&Data=Count&SearchText=norman&SearchType=Begins&SearchPR=46&B1=All&Custom=> (accessed December 9, 2008).

## Occupation Characteristics

In the Nor-Man Region, the highest numbers of people were employed in (a) sales and service; (b) trades, transport and equipment operation; or (c) business, finance and administration. The top three categories were similar for the Province, with the order of the last two categories switched.

Occupation characteristics varied by gender within the Nor-Man Region, with males employed more in trades, transport and equipment operation (1,835) compared to females (70); in primary industry (890) compared to females (75); and in processing, manufacturing and utilities (530) compared

**Table 7.20 Occupation Characteristics for Nor-Man Region and Manitoba by Gender**

Occupation	Nor-Man			Manitoba		
	Total	Male	Female	Total	Male	Female
Total – Experienced labour force	10,460	5,715	4,750	577,340	307,465	269,875
Management	830	505	325	50,850	33,200	17,650
Business, finance, administration	1,255	225	1,030	101,940	27,765	74,180
Natural/applied sciences	445	360	85	26,695	21,370	5,320
Health occupations	510	90	425	36,690	7,410	29,280
Social science, education, government, religion	970	300	665	45,890	15,810	30,080
Art, culture, recreation, and sport	160	50	115	12,170	5,710	6,465
Sales and service	2,805	930	1,880	139,940	59,050	80,895
Trades, transport, and equipment operators	1,910	1,835	70	85,640	80,540	5,105
Primary industries	965	890	75	40,580	31,295	9,285
Processing, manufacturing and utilities	610	530	80	36,950	25,325	11,620

Source: Statistics Canada. 2007. *2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography*. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12.

<http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

to females (80). On the other hand, females dominated employment in business, finance and administration (1,030) compared to males (225); and health occupations (425) compare to males (90).

Occupation characteristics also varied similarly by gender within the Province, with males employed about 16 times more often in trades, transport and equipment operation (80,540) compared to females (5,105); about three times more often in primary industry (31,295) compared to females (9,285); and about four times more often in natural and applied sciences (21,370) compared to females (5,320). In Manitoba, the female population also dominated employment in business, finance and administration (74,180) by about three times the male population (27,765) employed in that field. Females doubled the male population employed in social science, education, government and religion and quadrupled the male population in the health occupations.

### ***Aboriginal Identity Population***

A review of occupation characteristics for the Nor-Man Region AIP showed that males worked most often in trades, transport and equipment (26% of the male AIP) followed by sales and service (25% of the male AIP). The female AIP worked most often in sales and service (46% of the female AIP) followed by the business, finance and administration (13% of the female AIP).

**Table 7.21 Occupation Characteristics for Nor-Man and Manitoba AIP by Gender**

Occupation	Nor-Man			Manitoba		
	Total	Male	Female	Total	Male	Female
Total – Experienced labour force	3,130	1,680	1,455	53,130	27,725	25,405
Management	220	130	85	3,225	1,895	1,330
Business, finance, and administration	315	40	275	7,730	1,645	6,080
Natural/applied sciences	85	65	15	1,200	905	295
Health occupations	105	35	70	2,390	415	1,975
Social science, education, government, religion	335	75	255	5,320	1,515	3,810
Art, culture, recreation, and sport	50	20	25	905	480	425
Sales and service	1,075	415	665	15,700	6,155	9,545
Trades, transport, equipment operation	465	440	25	10,115	9,515	600
Primary industries	325	305	20	2,945	2,510	440
Processing, manufacturing/utilities	160	155	10	3,595	2,685	910

Source: Statistics Canada. 2007. *Community Highlights for Norman Regional Health Authority (table). 2001 Census Aboriginal Population Profiles*. Last updated January 2, 2007.

<http://www12.statcan.ca/english/profil01/AP01/Details/Page.cfm?Lang=E&Geo1=HR&Code1=4670&Geo2=PR&Code2=46&Data=Count&SearchText=norman&SearchType=Begins&SearchPR=46&B1=All&Custom=> (accessed December 9, 2008).

### **Family, Household, and Private Dwelling Characteristics**

According to the 2001 census, about 81% of families living in the Nor-Man Region were couple families in structure, including those who reported being married-couple families (3,970) and those who reported living as common-law families (940). About 84% of families living in the Province reported being couple families. Some 1,245 lone-parent families resided in the Region with 79% of those families being female lone-parent families compared to the Province with 82% of lone-parent families being headed by females. (See Table 7.22.)

**Table 7.22 Family and Household Characteristics for Nor-Man & Manitoba**

<b>Family Structure</b>	<b>Nor-Man</b>		<b>Manitoba</b>	
Total # of couple families by family structure	4,910		253,690	
# married-couple families	3,970		224,055	
# of common-law families	940		29,635	
Total # of lone-parent families	1,245		49,160	
# female lone-parent families	985		40,095	
# male lone-parent families	260		9,060	
<b>Household Income</b>	<b>Total</b>		<b>Total</b>	
Average household income (\$) all households	52,716		50,756	
Median household income (\$)	45,727		41,661	
<b>Private Dwellings</b>	<b>Total</b>	<b>%</b>	<b>Total</b>	<b>%</b>
Total # of private households or dwellings	8,090	100.0	432,550	100.0
# of owned dwellings	5,100	63.0	293,295	67.8
# of rented dwellings	2,285	28.2	128,925	29.8
# of band dwellings	710	8.8	10,330	2.4

Source: Statistics Canada. 2007. *2001 Basic Profile (table). Health regions: boundaries and correspondence with census geography*. 2001 Census. Statistics Canada Catalogue no. 82-402-XWE. Ottawa. December 12. <http://www.statcan.ca/bsolc/english/bsolc?catno=82-402-X> (accessed November 13, 2008).

The average household income for the residents of the Nor-Man Region (\$52,716) was higher than for the Province as a whole (\$50,756). The median or the mid-point of all household incomes for Nor-Man was \$45,727 compared to the Province \$41,661. In the Nor-Man Region, about 2/3 or 63% of households owed their homes, similar to the Province at 68%. Similar proportions of the populations of the Region (28%) and the Province (30%) reported renting their homes. In the Nor-Man Region 8.8% of residents reported living in band dwellings while for the Province 2.4% reported living in band dwellings.

### ***Aboriginal Identity Population***

Data related to family status were provided in a different format for the Aboriginal Identity Populations and total numbers of individuals in families were noted compared with the numbers of families in the previous section for the total populations. Some comparisons have been made using the proportions of individuals in each category.

Some 22% of individuals identifying as AIP in the Nor-Man Region were spouses, compared to 21% of the AIP of Manitoba. In the Nor-Man Region 9% of the AIP reported being a lone-parent compared with 8.8% of the AIP of Manitoba. Some 49% of the Nor-Man AIP was children in census families compared with 47% of the Provincial AIP. About 10% of those indicating identity with the AIP in Nor-Man considered themselves to be “non-family persons” compared to about 13% of the Provincial AIP.

The median or the mid-point of all household incomes for the Nor-Man AIP was \$30,660 compared to the Provincial AIP at \$30,290. Both AIP had median household incomes that were much lower than the medians for the total Nor-Man Region at \$45,727 and the Province as a whole at \$41,661.

Some 39% of the Nor-Man AIP owned their homes, while 38% rented and 23% lived in “other dwellings” such as band housing. Meanwhile, 38% of the Provincial AIP population reported owning homes, compared to 44% who rented and 19% who lived in other dwellings.

**Table 7.23 Family and Household Characteristics for Nor-Man and Manitoba AIP**

<b>Family Status</b>	<b>Nor-Man</b>		<b>Manitoba</b>	
Total # people identifying as AIP	9,395		149,210	
# spouses	2,060		31,755	
# of common-law partners	910		13,990	
# of lone-parents	840		13,180	
# children in census families	4,615		70,375	
# non family persons	970		19,900	
<b>Household Income</b>	<b>Total</b>		<b>Total</b>	
Median household income (\$)	30,660		30,290	
<b>Private Dwelling s</b>	<b>Total</b>	<b>%</b>	<b>Total</b>	<b>%</b>
Total # of private households or dwellings	3,060	100.0	55,035	100.0
# of owned dwellings	1,190	38.9	20,695	37.6
# of rented dwellings	1,160	37.9	24,040	43.7
# of other dwellings	710	23.2	10,300	18.7

Source: Statistics Canada. 2007. *Community Highlights for Norman Regional Health Authority (table). 2001 Census Aboriginal Population Profiles*. Last updated January 2, 2007.

<http://www12.statcan.ca/english/profil01/AP01/Details/Page.cfm?Lang=E&Geo1=HR&Code1=4670&Geo2=PR&Code2=46&Data=Count&SearchText=norman&SearchType=Begin&SearchPR=46&B1=All&Custom=> (accessed December 9, 2008).

## Demographics of Division 21

Earlier in this section, *VII Nor-Man Region and Bayline Communities*, health indicators were discussed related to health status, measures of illness, preventative care measures, health care utilization and mental health. These indicators were provided for the Region and Districts within the Region as the “closest to home” data available. To provide demographic information that was consistent with the health indicators, population characteristics were reported for the Region as a whole compared to the Province as a whole. In addition Aboriginal Identify Population characteristics were provided for Nor-Man Region and for the Province.

Data by census divisions and sub-divisions were considered to be less useful as they were not consistent with the population groupings by region used to provide data related to health indicators. However, this familiar geographical organization of data has been included to demonstrate community populations by using census division categorization of Census Division 21 which included Flin Flon, The Pas and the many communities in the surrounding area. Population counts were provided for the 2006 census, the 2001 census and the percentage of change (Table 7.24). When this report was developed, regional data were not available in detail for 2006. As a result, this table also provided opportunity to share some population data at a 2006 level. The only Bayline Community located in Census Division 21 was Cormorant which has been shaded for easy identification. Cormorant located in Division 21, Unorganized Territory showed a decline in population between 2001 and 2006, from 400 to 334 residents.

Statistics Canada (2002c) noted that geographic areas may change from one census to another. In order to facilitate comparison, the 2001 Census counts are adjusted to take into account boundary changes between the 2001 and 2006 census. The 2001 counts that were adjusted are identified by the letter ‘A’. The letter ‘A’ may also refer to corrections to the 2001 counts usually the result of boundary changes. This symbol is also used to identify areas that have been created since 2001, such as newly incorporated municipalities (census subdivisions) and new designated places (DPLs).

**Table 7.24 Population of Census Division 21 by Community**

<b>Geographic Name</b>	<b>2006</b>	<b>2001</b>	<b>% of Change</b>
Division No. 21	21,606	22,556	-4.2
Chemawawin 2	983	964	2.0
Division No. 21, Unorganized	1,887	1,947 <sup>A</sup>	-3.1
Cormorant	334	400	-16.5
Easterville	80	80	0.0
Herb Lake Landing	0	15	-100.0
Moose Lake	205	212	-3.3
Sherridon	98	113	-13.3
Flin Flon	5,594	6,000	-6.8
Grand Rapids	336	355	-5.4
Grand Rapids 33	651	591	10.2
Kelsey	2,453	2,520 <sup>A</sup>	-2.7
Moose Lake 31A	698	740	-5.7
Opaskwayak Cree Nation (21A, 21B, 21C, 21E, 21I)	*2,578	*2,432	6.0
Snow Lake	837	1,207	-30.7
The Pas	5,589	5,800 <sup>A</sup>	-3.6

Source: 2006 Census, Statistics Canada

Note: Users wishing to compare 2006 Census data with those of other censuses should then take into account that the boundaries of geographic areas may change from one census to another. In order to facilitate comparison, the 2001 Census counts are adjusted as needed to take into account boundary changes between the 2001 and 2006 census. The 2001 counts that were adjusted are identified by the letter 'A'. The letter 'A' may also refer to corrections to the 2001 counts; however, most of these are the result of boundary changes. This symbol is also used to identify areas that have been created since 2001, such as newly incorporated municipalities (census subdivisions) and new designated places (DPLs).

#### Symbols

...not applicable

In some cases the figure is deemed to be not appropriate or not applicable. In these cases the symbol, three dots (...) is displayed instead of a value.

#### E use with caution

##### Population and dwelling count amendments

After the release of the 2001 Census population and dwelling counts, errors are occasionally uncovered in the data. It is not possible to make changes to the 2001 Census data presented in these tables.



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# Appendix A

## Principal Characteristics of the 10 Peer Groups

Peer group	Number of health regions	% of Canadian population	Principal characteristics
A	5	17.4	<ul style="list-style-type: none"> <li>• Metropolitan areas such as Toronto, Montréal, and Vancouver</li> <li>• Average population size over 1 million</li> <li>• High percentage (32.0%) of visible minority population</li> <li>• Low percentage (0.6%) of Aboriginal population</li> <li>• High average number of years of schooling (13.9 years)</li> <li>• High inequality of income distribution (median share = 18.8%)</li> </ul>
B	8	16.5	<ul style="list-style-type: none"> <li>• Large urban centres with a relatively high population density</li> <li>• Average population size over 500,000</li> <li>• High percentage (20.2%) of visible minority population</li> <li>• Low percentage (1.5%) of Aboriginal population</li> <li>• High average number of years of schooling (13.9 years)</li> </ul>
C	6	0.4	<ul style="list-style-type: none"> <li>• Mostly northern health regions</li> <li>• High percentage (75.5%) of Aboriginal population</li> <li>• High unemployment rate (17.2%)</li> <li>• Low density of population (3.9 people per square kilometre)</li> <li>• Low percentage (0.9%) of visible minority population</li> <li>• Low average number of years of schooling (10.6 years)</li> </ul>
D	9	2.6	<ul style="list-style-type: none"> <li>• Mostly eastern health regions</li> <li>• High unemployment rate (27.7%)</li> <li>• Low percentage (0.5%) of visible minority population</li> <li>• Low percentage (9.1%) of inter-municipality migrants</li> <li>• Low average personal income (slightly over \$18,000)</li> </ul>
E	13	2.8	<ul style="list-style-type: none"> <li>• Mostly rural health regions in the Prairies</li> <li>• High percentage (16.5%) of people aged 65 or older</li> <li>• Low percentage (1.1%) of visible minority population</li> <li>• Low average personal income (slightly over \$20,000)</li> </ul>
F	13	2.2	<ul style="list-style-type: none"> <li>• Mostly northern health regions</li> <li>• High percentage (17.2%) of Aboriginal population</li> <li>• Low density of population (0.5 people per square kilometre)</li> <li>• Low inequality of income distribution (median share = 23.6%)</li> <li>• High percentage (22.8%) of inter-municipality migrants</li> </ul>
G	21	5.5	<ul style="list-style-type: none"> <li>• Mostly rural health regions in the Prairies</li> <li>• Low unemployment rate (7.1%)</li> <li>• Low percentage (10.4%) of lone-parent families</li> <li>• Low percentage (13.8%) of people with low income</li> </ul>
H	22	23.2	<ul style="list-style-type: none"> <li>• Health regions mostly in Québec and its neighbouring provinces</li> <li>• Low population growth (0.6%)</li> <li>• High to moderate unemployment rate (11.2%)</li> <li>• Moderate percentage (14.9%) of lone-parent families</li> </ul>
I	34	23.5	<ul style="list-style-type: none"> <li>• Health regions mostly in Ontario</li> <li>• High percentage (85.9%) of residents commuting to the nearby urban centres</li> <li>• Moderate to high percentage (13.5%) of people aged 65 or older</li> </ul>
J	8	5.9	<ul style="list-style-type: none"> <li>• Mostly sub-metropolitan health regions</li> <li>• High population growth (4.3%)</li> <li>• Low unemployment rate (7.5%)</li> <li>• High percentage (24.0%) of inter-municipality migrants</li> <li>• Low percentage (13.9%) of children living in low-income households</li> <li>• Low inequality of income distribution (median share = 24.4%)</li> <li>• High average number of years of schooling (13.5 years)</li> </ul>

Source: Shields & Tremblay (2002).

# Appendix B

## Health Regions by Peer Groups

### Peer Group A

2406 - Région de Montréal-Centre  
3595 - Toronto Public Health Unit  
5916 - Vancouver  
5917 - Burnaby  
5919 - Richmond

### Peer Group B

3551 - Ottawa Public Health Unit  
3553 - Peel Public Health Unit  
3570 - York Public Health Unit  
4804 - Calgary Regional Health Authority  
4810 - Capital Health Authority  
5907 - South Fraser Valley  
5908 - Simon Fraser  
5918 - North Shore

### Peer Group C

2417 - Région du Nunavik  
2418 - Région des Terres-Cries-de-la-Baie-James  
4680 - Burntwood and Churchill  
4711 - Northern Health Services Branch  
6201 - Nunavut

### Peer Group D

1004 - Health and Community Services Western Region  
1002 - Health and Community Services Eastern Region  
1003 - Health and Community Services Central Region  
1005 - Grenfell Regional Health Services Board  
1205 - Zone 5  
1305 - Région 5  
1306 - Région 6  
1307 - Région 7  
2411 - Région de la Gaspésie-Îles-de-la-Madeleine

### Peer Group E

1102 - Rural Health Region  
1201 - Zone 1  
1202 - Zone 2  
3545 - Muskoka-Parry Sound Public Health Unit  
3563 - Timiskaming Public Health Unit  
4650 - Marquette  
4655 - South Westman  
4660 - Parkland  
4702 - Moose Jaw Service Area  
4705 - Yorkton Service Area  
4708 - Melfort Service Area  
4709 - Prince Albert Service Area  
4710 - North Battleford Service Area

### Peer Group F

1006 - Health Labrador Corporation  
2410 - Région du Nord-du-Québec  
4670 - Norman  
4813 - Mistahia Regional Health Authority  
4815 - Keeweenaw Regional Health Authority  
4816 - Northern Lights Regional Health Authority  
4817 - Northwestern Regional Health Authority  
5912 - Cariboo  
5913 - North West  
5914 - Peace Liard  
5915 - Northern Interior  
6001 - Yukon Territory  
6101 - Northwest Territories

### Peer Group G

3539 - Huron Public Health Unit  
3549 - Northwestern Public Health Unit  
3554 - Perth Public Health Unit  
3557 - Renfrew Public Health Unit  
4620 - North Eastman  
4625 - South Eastman  
4630 - Interlake  
4640 - Central  
4701 - Weyburn Service Area  
4703 - Swift Current Service Area  
4707 - Rosetown Service Area

4801 - Chinook Regional Health Authority  
4802 - Palliser Health Authority  
4805 - Health Authority #5  
4806 - David Thompson Regional Health Authority  
4807 - East Central Health Authority  
4809 - Crossroads Regional Health Authority  
4811 - Aspen Regional Health Authority  
4812 - Lakeland Regional Health Authority  
4814 - Peace Regional Health Authority  
5901 - East Kootenay

### Peer Group H

1001 - Health and Community Services St. John's Region  
1203 - Zone 3  
1204 - Zone 4  
1302 - Région 2  
1304 - Région 4  
2401 - Région du Bas-Saint-Laurent  
2402 - Région du Saguenay - Lac-Saint-Jean  
2403 - Région de Québec  
2404 - Région de la Mauricie et Centre-du-Québec  
2405 - Région de l'Estrie  
2407 - Région de l'Outaouais  
2408 - Région de l'Abitibi-Témiscamingue  
2409 - Région de la Côte-Nord  
2412 - Région de la Chaudière-Appalaches  
2415 - Région des Laurentides  
2416 - Région de la Montérégie  
3526 - Algoma Public Health Unit  
3537 - Hamilton Public Health Unit  
3547 - North Bay Public Health Unit  
3556 - Porcupine Public Health Unit  
3561 - Sudbury Public Health Unit  
4610 - Winnipeg

### Peer Group I

1101 - Urban Health Region  
1206 - Zone 6  
1301 - Région 1  
1303 - Région 3  
2413 - Région de Laval  
2414 - Région de Lanaudière  
3527 - Brant Public Health Unit  
3531 - Elgin-St Thomas Public Health Unit  
3533 - Bruce-Grey-Owen Sound Public Health Unit  
3534 - Haldimand-Norfolk Public Health Unit  
3535 - Haliburton-Kawartha-Pine Ridge Public Health Unit  
3538 - Hastings and Prince Edward Public Health Unit  
3540 - Kent-Chatham Public Health Unit  
3541 - Kingston-Frontenac-Lennox and Addington Public Health Unit  
3542 - Lambton Public Health Unit  
3543 - Leeds-Grenville-Lanark Public Health Unit  
3544 - Middlesex-London Public Health Unit  
3546 - Niagara Public Health Unit  
3552 - Oxford Public Health Unit  
3555 - Peterborough Public Health Unit  
3558 - Eastern Ontario Public Health Unit  
3562 - Thunder Bay Public Health Unit  
3565 - Waterloo Public Health Unit  
3568 - Windsor-Essex Public Health Unit  
4615 - Brandon  
4704 - Regina Service Area  
4706 - Saskatoon Service Area  
5902 - West Kootenay-Boundary  
5903 - North Okanagan  
5904 - South Okanagan Similkameen  
5905 - Thompson  
5906 - Fraser Valley  
5910 - Central Vancouver Island  
5920 - Capital

### Peer Group J

3530 - Durham Public Health Unit  
3536 - Halton Public Health Unit  
3560 - Simcoe Public Health Unit  
3566 - Wellington-Dufferin-Guelph Public Health Unit  
4803 - Headwaters Health Authority  
4808 - WestView Regional Health Authority  
5909 - Coast Garibaldi  
5911 - Upper Island/Central Coast

Source: Shields & Tremblay (2002).

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