

Winnipeg Health Region Overview

This chapter presents the population health profile for the entire Winnipeg Health Region (WHR). Population health profiles have also been generated for the 12 community area (CA) populations, as well as for seven populations of special interest within the WHR. These profiles synthesize and integrate population health information from the *Data Book, Community Health Assessment Report 2004* (CHA Report 2004) for each of these populations.

While recognizing the diversity of individual needs and strengths, a population health approach responds to the collective needs and strengths of an entire population. The term population health emphasizes not just health outcomes as issues that need to be addressed but also the determinants of health known to influence the health and well-being of an entire population.

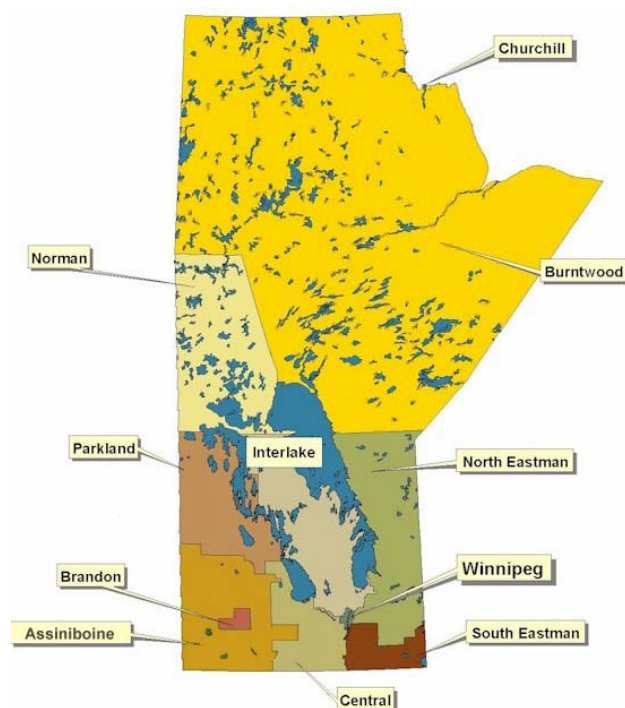
The population health profile for the WHR Overview contains the following:

- Geography -describing where the population lives
- Population Characteristics -describing who the people are
- Health Issues -leading health issues based on size and severity
- Determinants of Health –reporting selected non-medical determinants of health
- Underlying Population Health Issues –exploratory analysis of the relationships among the indicators
- Summary of Key Issues -emerging themes from the data

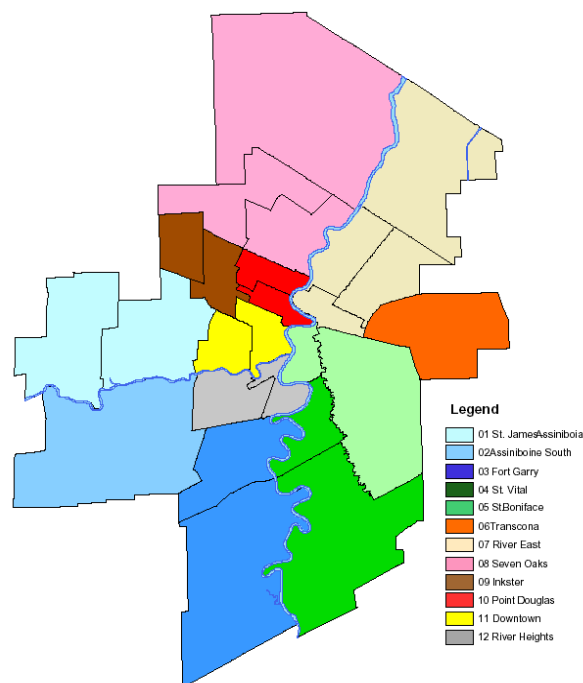
Geography

The WHR is one of the smallest geographies of the 11 health regions in Manitoba. It includes the City of Winnipeg proper, as well as, the rural municipalities of East St. Paul and West St. Paul.

**Regional Health Authorities
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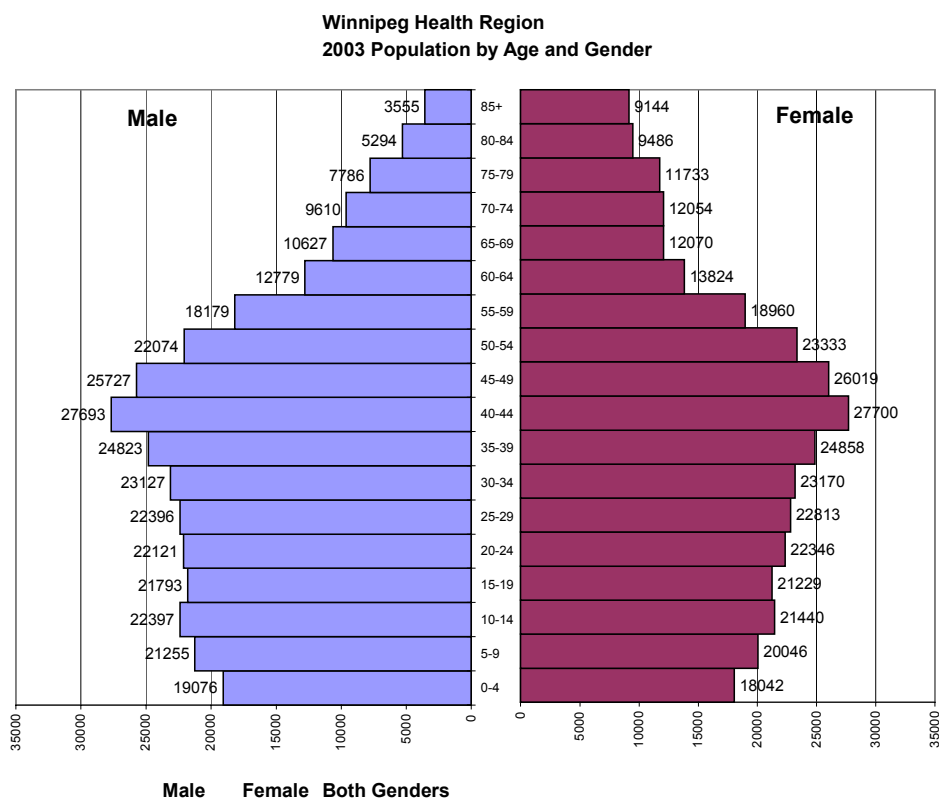
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Population Characteristics

The demography of the population forms the foundation of our community health assessment.¹ The most basic pieces of information – the age and sex distribution of the population – form a fundamental understanding of the population. Information in such areas as family structure, ethnicity, economic, social environment and housing describes population characteristics that enhance the understanding of people living in the WHR. Every community has characteristics that make it unique, with both strengths and challenges to overcome. In this section, characteristics for the entire WHR are described. This information is derived from 2001 Census of Canada (2001 Census) data, along with the most recent population figures from the 2003 Manitoba Health Population File.

Figure 1: Age and Sex Distribution



Total All Ages 320312 338267 658579

Source: Manitoba Health Population Health Registry File, June 2003.

In the WHR, 25.3% of the population is comprised of children and youth (19 years of age and under) compared to 27.7% for Manitoba and 26.3% for Canada. In contrast, the percentage of senior citizens (65 years of age and older) in the WHR is 13.9%, which is higher than that for Manitoba (12.2%), but similar to that for Canada (13.6%).

In the WHR, the male to female ratio is approximately equal for most age groups (Figure 1). Overall, however, females tend to outnumber males slightly, this is more pronounced in the older age groups (70 years and older). This tendency is also true for Manitoba and for Canada.

¹ See Population Health Assessment Framework, CHA Report 2004.

Life Expectancy

Life expectancy at birth in the WHR population is 78.2 years. However, it is higher for women (80.6 years) than for men (75.8 years). These life expectancies are similar to those for Manitoba and those for Canada. Life expectancy is also measured for the senior years, as additional years of life one can expect after reaching age 65. In the WHR, individuals who reach age 65 can expect to live (on average) an additional 18.1 years. Again, women, at 19.8 years, tend to fare better than men whose additional life expectancy at age 65 is 16.2 years. These results are also similar to those for Manitoba and those for Canada.

Family Structure

The WHR is home to many different types of families. “Families shape and are shaped by the communities and societies in which they are embedded.”² According to Statistics Canada, Canadian families have become more diverse over the past twenty years. This has been attributed to increases in separation, divorce, remarriage, common-law unions and lone parent families. This is also influenced by a general decline in fertility rates and an increase in the ageing population. Statistics Canada routinely measures components of family structure through the Census of Canada (Census).

Statistics Canada has developed two definitions of family to describe Census data: *economic families* and *census families*.³ An ‘economic family’ refers to a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common-law or adoption.² A ‘census family’ refers to a married couple (with or without children of either or both spouses), a couple living in common-law (with or without children of either or both partners) or a lone parent of any marital status, with at least one child living in the same dwelling. A couple living in common-law can be of opposite or same sex. Children in a census family include grandchildren living with their grandparent or grandparents, but with no parents present.² It is important to note that census families are a subset of economic families, the latter being a broader definition of family.

Although these definitions may seem limiting, it is important to note that the Census provides the best available information about family structure. In this section, selected information about family structure of the WHR population is presented. Further detail can also be found in the Data Book, CHA Report 2004.

The majority of people in the WHR (83.8%) are considered members of *economic families*, while a similar majority of the WHR population (81.7%) was determined to be part of *census families*. Those individuals who are not in economic families are termed ‘unattached individuals’. At 16.2%, the percentage of *unattached individuals* in the WHR is higher than that for Manitoba (14.0%) and that for Canada (13.4%). It is particularly interesting to note that the percentage of WHR senior citizens (65 years of age and older) who live alone (34.9%) is higher than that for Canada (28.9%). The percentage of senior citizens in Manitoba that live alone is 34.3%.

At 49.1%, there are fewer married people in the WHR than in Manitoba (52.4%) and in Canada (50.0%). At 6.9%, the WHR also has fewer people living in a common-law relationship than Canada (7.7%). The percentage of people who report living in a common-law relationship in Manitoba is 6.8%.

Most married couples in the WHR have children living with them at 58.8%, while only 39.4% of common-law couples have children living with them. This percentage (the latter) is lower than that for Manitoba (44.9%) and Canada (45.8%). One possible explanation for this is the higher percentage of single parent families in the WHR. It is also of interest to note that while common-law couples in the WHR are less likely to have children living at home, this varies throughout the community areas. This information is reported in the individual community area profiles.

There are about 31 285 single parent families in the WHR (termed ‘lone parent’ in the 2001 Census). This represents 18.3% of WHR census families (see definition above) and is higher than that for Manitoba (17.0%)

² Vanier Institute of the Family. *Profiling Canada's Families II*. Ottawa: Vanier Institute of the Family, 2002.

³ Canada. Statistics Canada. *Profile of Canadian families and households: Diversification continues*. Ottawa: Government of Canada, 2002.

and Canada (16.0%). In the WHR, as in Manitoba and Canada, the majority of single parent families (83.0%) are headed by women. In the WHR, the CAs with the highest proportions of single parent families can be found in Point Douglas, Downtown and Inkster. The percentage of single parent families in the Point Douglas CA is 32.8%, which is substantially higher than that for the WHR as a whole. The Downtown CA follows at 27.2% and the Inkster CA is the third at 20.9%.

Ethnicity

The WHR is well known for its cultural diversity. It is evident that a variety of cultures exists in the WHR, as many individuals provided more than one response to the Census questions regarding ethnic origin. For ease of data interpretation, only single responses, provided by 53.3% of the WHR population, were examined. Of these, the most common response regarding ethnic origin was Canadian, reported by 17.0% of the population. This was followed by Ukrainian (reported by 9.6%) and German (reported by 9.1%). In comparison, 18.8% of the Manitoba population reported Canadian ethnic origin, followed by German (12.5%) and North American Indian (12.4%). In Canada, 36.9% of the population reported Canadian ethnic origin, followed by English (8.1%) and French (5.8%). The three major ethnic groups reported vary by CA: this information is provided in the community area profiles.

As with ethnic origin, it is evident that a variety of languages exists in the WHR. For ease of data interpretation, only single responses, provided by 86.5% of the WHR population, were examined. In the WHR, English, at 86.5%, is the most commonly reported language spoken at home. This is followed by French (0.9%) and Tagalog (Filipino) (0.8%), as the second and third most common languages spoken at home. For Manitoba, French and German were reported by 0.9% (each), followed by Tagalog (Filipino) and Cree (0.5% each). In Canada, 22.7% reported French spoken at home, followed by Chinese (0.8%) and Cantonese (0.7%).

In the WHR, 8.5% of residents identified themselves as Aboriginal, which is higher than the 3.3% of all Canadians who identified themselves as Aboriginal. According to Statistics Canada, Winnipeg has the largest urban Aboriginal population of the 'major' cities in Canada.⁴ For Manitoba, 13.6% of the population identified themselves as Aboriginal.

The most 'recent' immigrants to the WHR (those who immigrated between 1996 and 2001) make up 12.4% of the total immigrant population (those not born in Canada). This is low compared to the 17.7% for Canada and 13.1% for Manitoba. For the WHR, Manitoba and Canada, the three highest-ranking places of birth of recent immigrants were the same - the Philippines, India and the People's Republic of China - although the order varied. In addition, there is an expected increase in the number of immigrants to Manitoba, and thereby to the WHR, to 10 000 per year by the year 2006.⁵ This would double the number of immigrants from that of 2001.

In the WHR, 13.2% of the population is comprised of visible minorities, compared to 13.4% for all of Canada. Broken down by group, the populations of both the WHR and Manitoba are comprised of similar proportions of visible minorities, namely Filipino (36.6%), South Asian (14.9%) and Black (13.8%). For Canada, Chinese (25.8%), South Asian (23.0%) and Black (16.6%) were the most reported visible minorities.

Economic Characteristics

In 2001, the average household income in the WHR was \$53,752 and the median household income was \$43,837. The median indicates that 50% of the population has an annual income of more than \$43,837 and that 50% of the population has annual income of less than \$43,837. In this report, median income is used for comparison purposes, as it is less influenced by extremely high or low values than an average income is. In comparison, the median household income of the WHR is higher than that of Manitoba, at \$41,661 but lower than that of Canada at \$46,752.

⁴ Canada. Statistics Canada. (2003) *2001 Census: Analysis Series Aboriginal peoples of Canada: A demographic profile*. Ottawa: Government of Canada.

⁵ Manitoba. Manitoba Labour and Immigration. (2003) *Manitoba Immigration Facts, 2002 Statistics Report*. Government of Manitoba.

For the WHR, differences in median income exist between the two sexes. The median income for WHR women was \$18,215, while it was \$28,410 for WHR men; compared to \$16,602 for Manitoba women and \$26,265 for Manitoba men. For Canada as a whole, median income for women was \$17,122 and \$29,276 for men. Overall, there is a larger difference in median income between men and women for Canada than in Manitoba and the WHR.

People living in poverty face difficult challenges that may ultimately have an effect on their health and well-being. While the majority of WHR families do not live in poverty, special attention needs to be paid to this issue. Census information on poverty status is provided using 'low-income cut-offs', also known as LICOs.⁶ These dollar values vary by family structure and geography. In 2000, the incidence of low income (poverty status) in the WHR population in private households was 20.0%. This measure is further subdivided to report incidence of low income for unattached individuals and those individuals in economic families. In the WHR, unattached individuals are nearly three times more likely to live at or below the LICO than persons in economic families (44.0% and 15.0% respectively). In the WHR, the community areas with the highest incidence of low income are Point Douglas CA and Downtown CA. In the Point Douglas CA, approximately 35.0% of economic families live at or below the LICO, while that in the Downtown CA is approximately 31.0% of economic families. These values are more than double those for the WHR (15.0%), Manitoba (13.0%) and Canada (13.0%).

Of special note is the majority of Aboriginal children in the WHR who live in poverty: 58.7% of all Aboriginal children in census families live at or below the LICO. In the WHR, Aboriginal children who live in a female single parent family are two and a half times more likely to be at or below the LICO than Aboriginal children who live in two parent families (80.9% and 35.6% respectively). Aboriginal children living in single parent families headed by males were also more likely to be living at or below the LICO (63.4% versus 35.6%). These estimates of poverty for Aboriginal children in the WHR are substantially higher than poverty estimate for other Aboriginal children in Manitoba and in Canada. This supports the growing evidence of urban child poverty (and its related issues) as a key factor influencing the health and well-being of this population.

Health Issues

A multi-method approach was used to identify the major health issues in the WHR and the factors that influence them. Two of the methods made use of indicators that are reported in the Data Book, CHA Report 2004. The other two methods made use of qualitative information from field experts and published information. These latter methods were used to increase the validity of the findings and to minimize the biases of any one method.

The following methods were used:

1. Comparison of Health Indicators: Comparison of relative ratios and rate differences to identify those health outcomes in which the WHR rate was better or worse than the Canadian rate.
2. Underlying Population Health Issues: Use of factor analysis to identify patterns in the data and to identify clusters of indicators and communities.
3. Expert review of identified health issues in the WHR to identify gaps and to validate findings.
4. Review of existing reports and research to identify additional information on the health issues and determinants of health.

COMPARISON OF HEALTH INDICATORS

Health issues were identified by examining indicators in seven health domains:

- Cancer
- Chronic Health Conditions

⁶ Low Income Cut Off (LICO): Defined by Statistics Canada as the income level at which families (or unattached individuals) spend 20% more than the average on food, shelter, and clothing (the basic necessities). This assumes that a household paying 20% more than the average for the basic necessities would be in economic constraint. LICO values are updated annually and are based upon national family expenditure data gathered in previous years. They are determined by community size and family size, not age group or province. *Although Statistics Canada does not endorse using LICOs as a measure of poverty, they are often quoted as such.*
Source: Canada. Statistics Canada. 2001 Canadian Census Dictionary (rev. ed.). Ottawa: Government of Canada, 2004.

- Communicable Disease
- Infant and Maternal Health
- Injury
- Mental Health
- Quality of Life

The seven domains comprise the health status indicators reported in the Data Book, CHA Report 2004. WHR rates were specifically compared to Canadian rates whenever possible, or to Manitoba rates if a satisfactory national comparator was unavailable. Indicators had to have valid crude rates for both the WHR and Canada (or Manitoba) and use the same or (at the very least) similar methodology. In each domain, four to thirteen indicators were compared using relative ratio of the rates and rate differences. As a supplementary filter, mortality rates for chronic disease and injuries were compared between the WHR and Canadian rates, as an additional assessment of the seriousness of the health issue. This data was graphed and is presented following the discussion of the health issues from each of these domains.

In the WHR, the following health issues were identified:

- **Cancer**
- **Cardiovascular disease**
- **Diabetes**
- **Infant and maternal health**
- **Injury**
- **Mental Health**
- **Obesity**
- **Respiratory illness (including tuberculosis)**
- **Sexually transmitted infections**

Cancer

Incidence rates of cancers of the breast, large intestine and lung for females, and of the lung for males, were slightly higher for the WHR than for Canada (Figure 3). The overall rate of death from all cancers was slightly higher for the WHR than for Canada (Figure 10).⁷ More specifically, the death rates of lung cancer, female breast cancer and colorectal cancer for the WHR were slightly higher compared to those for Canada (Figure 10). In addition, the *Mortality Report: WRHA 2004* found that the third and fourth leading causes of death in the WHR were malignant neoplasm of the digestive organ (mostly colorectal cancers) and malignant neoplasm of the respiratory organ (mostly lung cancers) between 1990 and 1999.⁸

In summary, in the WHR, as elsewhere in Canada, cancer is a leading health concern due to the size and seriousness of the issue.

Cardiovascular Disease

Two indicators of cardiovascular disease (CVD) – prevalence rates of treatment for acute myocardial infarction (AMI) and stroke – appeared to be lower in the WHR compared to Manitoba (Figure 4). The most recent data from Canadian Institutes for Health Information (CIHI) confirm that in 2001-02 (fiscal year) the WHR had lower

⁷ Canada. Statistics Canada. (2003) *Health Indicators, November 2003*. (Electronic publication) Available on-line at <http://www.statcan.ca/english/freepub/82-221-XIE/free.htm>

⁸ Winnipeg Regional Health Authority. (2004) *Mortality Report: WRHA 2004*. Winnipeg: Winnipeg Regional Health Authority.

rates of hospitalization for AMI and stroke than at least eight other provinces and territories.⁹ Another indicator of cardiovascular disease – high blood pressure (a self-reported measure from the Canadian Community Health Survey, Cycle 1.1) – was lower in the WHR in comparison to Canada. This was confirmed in hypertension treatment prevalence (based on physician-visit data), which showed that the percentage of the WHR population receiving hypertension treatment by a physician in a three-year period was lower than that for Manitoba.

The WHR, however, fares worse for CVD death than Canada. Death rates reported by Statistics Canada in 1999 show that in the WHR rates for all circulatory deaths (ischaemic heart disease and cerebrovascular death) were higher compared to Canadian rates.⁷ The *Mortality Report: WRHA 2004* also found that the leading cause of death in the WHR (between 1990 and 1999) was *ischaemic heart disease*, followed by *cerebrovascular disease*. 'Other' forms of heart disease was the fifth leading cause of death in the WHR.⁸ Statistics Canada data also show that the number of 'potential years of life lost' (PYLL) for CVD in the WHR is higher than that for Canada, indicating that it is possible that more young people die of CVD in the WHR compared to Canada.⁷ It should be noted that there is a lack of current cause-specific mortality information at the national level. This creates an information gap, thereby hindering comparison. The most recent available mortality information reported by Statistics Canada is for the period from 1996 to 1998.

In conclusion, there is a greater burden of CVD death in the population, particularly at younger ages, although hospitalization rates for CVD are lower in the WHR. It is possible, given the CVD death rates, that the hypertension treatment rates do not reflect the true prevalence of high blood pressure in the WHR population. The prevalence of high blood pressure is also a health issue, as it is a modifiable risk factor for CVD death.

Diabetes

Self-reported diabetes was nearly 20% higher in the WHR population than the entire Canada population (Figure 4). This diabetes indicator, however, does not distinguish between type 1 and type 2 diabetes and does not include females with gestational diabetes. Type 1 diabetes is diagnosed at an early age (usually under 19 years of age) has a strong genetic determinant, and must be controlled by insulin. Type 2 diabetes is usually diagnosed at older ages, however, studies have shown that this is changing, as more young persons are diagnosed with the disease. It is important to distinguish between the two types because the onset of type 2 diabetes has more modifiable risk factors, including diet and physical activity.

According to the 2003 WRHA report entitled *Diabetes in the Winnipeg Health Region 1996-1999* (Diabetes in the WHR 2003), approximately 85-90% of all persons with type 2 diabetes are older adults.¹⁰ The report also indicates that in the WHR, diabetes incidence is highest in the 50-69 year-olds, followed by the 20-49 year-olds and those 70 years of old and older.

In the WHR, diabetes incidence rose between 1996 and 1999 an average of 0.4 cases per 1000.¹⁰ The prevalence of diabetes also rose between 1996 and 1999, by an average rate of 2.2 cases per 1000 population per year. This rise was especially apparent in the older age groups (50-69 and 70+). As with incidence, there is geographic variation of diabetes prevalence rates in the WHR (see **Diabetes Maps** presented in the **Community Area Overview**).

For WHR residents, hospitalization events for diabetes increased from 4586 to 5575 between 1995 and 2000. An analysis of these records revealed that 12% of these patients had diabetes as a primary diagnosis, meaning that this diagnosis was responsible for the largest proportion of time spent in hospital.⁸ This represents approximately 3592 patient visits over a six-year period between 1995 and 2000.

⁹ CIHI. (2004) Quickstat (a searchable database of health statistics) available on-line at: <http://secure.cihi.ca>. Note: A national rate was unavailable from the CIHI 2004. However, rates for all provinces and territories are available on-line for comparison purposes (CIHI, 2004).

¹⁰ Winnipeg Regional Health Authority (2003). *Diabetes in the Winnipeg Health Region 1996-1999*, Winnipeg: Winnipeg Regional Health Authority.

Diabetes treatment prevalence rates (age and sex adjusted) for registered First Nations people in Manitoba are over four times higher than for all other Manitobans (189 versus 45.4 per 1000 population, or 18.9% versus 4.5% respectively).¹¹ Many studies show a substantial increased risk of diabetes in the Aboriginal population.

In summary, the WHR had a higher rate of diabetes compared to that for Canada. In the WHR, diabetes is most prevalent in older adults and senior citizens. There also appears to be an increasing trend of both incidence and prevalence of diabetes in the WHR, particularly in older adults and Aboriginal people.

Infant and Maternal Health

In 2000, the WHR infant mortality rate was more than 20% higher than the infant mortality rate for Canada (Figure 6). The leading cause of infant mortality was found to be *other conditions originating in the perinatal period*. This is followed by *congenital anomalies* and *ill-defined unknown morbidity conditions*.⁸ Although it is unclear what factors in the WHR may be contributing to this; it has been reported that low birth weight and premature birth contribute to infant mortality.¹² Two other infant-maternal health indicators of concern are low birth weight and teenage pregnancy. Rates in the WHR were higher than those for Manitoba (note: no national comparators were available). In addition, some of the smaller geographies within the WHR show a much higher burden of infant and maternal health issues (see **Community Area Overview**).

Childhood immunization rates in the WHR are better than those for Manitoba. This was found for children at one-year, two-years and seven years of age. High immunization rates in the WHR minimize outbreaks of serious diseases in children, such as measles, mumps, and rubella.

To summarize, infant mortality in the WHR is a concern mainly because the infant mortality rate is higher than that reported for Canada. No one specific cause of infant death is apparent, as the leading cause of infant death is a mixture of various causes of death. Higher teenage pregnancy rates and low birth weight rates also contribute to overall infant and maternal health issues.

Injury

Injury indicators for rates of hospitalization and death for the WHR were lower than those for Canada (Figure 7). It should be noted that the WHR rates were generated by the WRHA and that the national rates were generated by Statistics Canada. Since different methodologies were likely used, caution should be used when interpreting rate comparisons between the WHR and Canada. It is of interest to note that currently, no national body produces comparable indicators of injury for hospital or death events that would enable comparison between health regions and national rates. This creates information gap in this area.

Injury data has been produced by the WRHA and will be reported in forthcoming report on injury for the WHR. Some highlights include *injury death* in the WHR increased by 20% between 1990-1994 and 1995-1999, while national trends show an overall decrease in injury death.¹³ The hospitalization rate for injury has not changed substantially between 1997 and 2002. *Suicide* contributes 32.6% while *unintentional injury* death contributes 57.7% of all injury deaths in the WHR (1995 to 1999). Leading causes of unintentional injury death from 1995 to 1999 were due to: Falls, Motor Vehicle Traffic, and Poisonings

Self-inflicted contributes 8.4% while *unintentional injury* contributes 80.4% of all injury hospitalizations in the WHR (2000 to 2002). Leading causes of hospitalization for unintentional injury from 2000 to 2002 were due to: Falls, Motor Vehicle Traffic and Cuts and Pierces.

¹¹ Martens, P. et al. (2002). *The Health and Healthcare Use of Registered First Nations People Living in Manitoba: A Population-based Study*. Winnipeg: Manitoba Centre for Health Policy.

¹² Canada. Health Canada. (2003). *Canadian Perinatal Health Report 2003*. Ottawa: Minister of Public Works and Government Services Canada.

¹³ Winnipeg Regional Health Authority (2004). *Mortality Report*. Winnipeg: Winnipeg Regional Health Authority.

For monitoring the rate of injuries that do not necessarily warrant hospitalization, Canadian Community Health Survey Cycle 2.1 (CCHS 2.1) data was examined. WHR residents were more likely to report an injury in the CCHS 2.1 than all Canadians (15.3% and 13.1%, respectively). In the CCHS 2.1, a sample of Canadians, including WHR residents, were asked to report on injuries that occurred in the past year. This refers to injuries that were serious enough to limit normal activities and medical attention was sought. Medical attention could include a visit to an emergency department, family physician, or other health professional. This finding is important because there are no other means of monitoring injuries of this nature, which also happen to affect such a large proportion of the population. It should also be considered that injuries of this type may also significantly contribute to disability and chronic pain, which reduce quality of life (also reported in this chapter).

In conclusion, WHR rates of injuries resulting in hospitalization and death were lower than those for Canada. However, WHR rates of self-reported injury are higher than those for Canada, having affected more people in the population. The seriousness of the burden or impact of injury in the population should also be considered, especially given the increase in death due to injury in the WHR in the latter half of the 1990s.

Obesity

Overall, approximately 16.5% of WHR residents are considered to be obese and 34.4% to be overweight (see Data Book, CHA Report 2004). Although based on self-reported measurements of height and weight, one should expect to see a bias towards more 'low' BMIs than 'high' BMIs in a population. Obesity is most important as a risk factor for chronic disease, including diabetes, CVD, hypertension and cancer. Obesity is also a significant issue, as more people in the WHR are affected by it (with a rate difference of approximately 16 persons more per 1000 population) relative to Canada as a whole.

In summary, obesity is a contributing factor to the higher rates of various chronic diseases observed in the WHR.

Mental Health

The mental health domain includes indicators for *anti-depressant use, depression, hospitalization for mental health disorders and suicide*. Anti-depressant use was slightly higher for the WHR compared to that for Manitoba (Figure 8). In the CCHS 2.1, a multiple item survey tool based upon DSMIII-R criteria for diagnosing depressive symptoms was used for this assessment.¹⁴ Although respondents in the WHR appear to have a slightly higher rate of depression than their Canadian counterparts (Figure 8), the actual percentage of respondents with a probable risk of a major depressive episode is 7.7% for the WHR and 7.1% for Canada.

For both the suicide rate and hospitalization rate for mental health disorders, the rates in the WHR were lower than those for Canada. However, it is important to note that the national data for suicide is somewhat dated, and refers to the period of 1996 to 1998 (see footnote 6). This represents an information gap when examining trends in suicide. It is also of importance to note that suicide rates vary substantially within the smaller geographies of the WHR (see Data Book, CHA Report 2004). Mental health is one area where an increased effort for monitoring trends is being made nationally.¹⁵

Mental health issues are of concern in the WHR due to information gaps and the need for increased monitoring within the region. Suicide is also of concern due to its health, social and economic impacts, particularly within the smaller geographies within the WHR.

¹⁴ DSMIII-R refers to the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, revised, which was published by the American Psychiatric Association in 1987. This is the most accepted handbook for diagnosing mental health disorders in the US and Canada.

¹⁵ Canada. Health Canada. (2002). *A report on mental illnesses in Canada*. Ottawa: Minister of Public Works and Government Services Canada.

Quality of Life

Quality of life can be divided into two areas: physical and emotional functioning. The source of the quality of life indicators reported on in this section is the 2001 CCHS 1.1 and 2003 CCHS 2.1. As part of CCHS 2.1, survey respondents 12 years of age and older, were asked to self-report their quality of life by answering a series of quality of life related questions. These indicators cover a range of topics such as chronic pain, disability days, self-esteem, life stress, and self-rated health.

For *quality of life, physical functioning*, survey respondents in the WHR were slightly more likely than the rest of Canadians to report having chronic pain or discomfort, which prevents or limits activities on a continuing basis (titled “chronic pain-prevents most activities” in Figure 4). At the same time, WHR respondents were less likely to report severe chronic pain than Canadians were.

Approximately 1 in 4 WHR and Canadian respondents reported having an *activity limitation*. This is defined as having a disability or being limited in certain activities on a continuing basis (at least six months) because of a physical or mental condition or health problem. There was also little difference between the WHR and Canada in the percentage of residents who reported activity limitation (Figure 9).

An indicator of short-term disability, the *two-week disability days* was measured by asking the respondent if in the past two weeks his or her daily activities were limited by illness or injury for at least one day. Approximately 1 in 5 persons in the WHR reported having had one or more days of disability in the two-week period before the survey interview. A slightly higher percentage of respondents in the WHR compared to Canada indicated having ‘one or more two-week disability days’ (Figure 9).

Almost 16.0% of WHR residents reported that they had a diagnosis of *arthritis or rheumatism*, this is similar to that for Manitoba and Canada (see Data Book, CHA Report 2004). In the WHR, women were significantly more likely than men to report arthritis or rheumatism: 19.7% and 11.8%, respectively. This difference (between men and women) is similar to that found for Canada and Manitoba.

Functional health status measures nine dimensions of functioning: vision, hearing, speech, mobility, dexterity, feelings, cognition, memory and pain. This is used to determine overall functional health. The proportion WHR respondents that was determined to have moderate or severe functional health problems was nearly the same as that for the Canadian respondents. Approximately 1 in 5 persons 12 years of age and older reported moderate or severe functional health problems in both the WHR and Canada (Figure 9).

Quality of life, emotional functioning could also be considered a measure of general well-being. These include indicators of *life stress, self-esteem, and self-rated health*. WHR residents were more likely than Canadians to report a moderate level of life stress (referred to as ‘some’ life stress in both the CCHS, 2.1 and the Data Book, CHA Report 2004), but were less likely to report a high level of life stress. The indicator for *life stress* is measured by the level of psychological distress, which is determined by a series of 17 questions used in the CCHS 2.1. In contrast, WHR residents were less likely to report low self-esteem and fair or poor self-rated health than Canadian respondents (Figure 9).

In summary, WHR residents are slightly more likely to report short-term disability (*two-week disability days*). And while chronic pain affects many of the activities of WHR residents, they are less likely to perceive this as severe pain. On a number of physical functioning issues there was little difference between WHR and Canadian residents. The WHR population also appears to have a good overall sense of well-being (related to emotional functioning) and perception of ‘good’ self-rated health.

Therefore, there is little evidence to include Quality of Life as an overall health issue in the WHR.

Respiratory Illness (including tuberculosis)

Respiratory illness includes a broad range of diseases that affect physical functioning and quality of life. It is associated with high morbidity, but relatively low mortality. The WHR rate of self-reported asthma is higher than that for Canada. When the total respiratory morbidity indicator was examined, the WHR was shown to have a higher rate than that for Manitoba as a whole (Figure 4).¹⁶

The tuberculosis infection rate was about 75% higher than that for Canada, with rates in the WHR fluctuating over time (Figure 5). In Canada, the tuberculosis infection rate is higher for the immigrants and refugee populations than any other population. However, in the WHR, the highest prevalence of tuberculosis is estimated to be among the Aboriginal population, rather than the WHR's immigrant or refugee populations.

In summary, respiratory illnesses (including tuberculosis) are a health issue in the WHR population, due to the size and seriousness of the issue.

Sexually Transmitted Infections and Blood Borne Pathogens

A communicable disease is an illness caused by micro-organisms spread from one person to another. Such a disease has the potential to affect a large number of people. From a public health perspective, sexually transmitted infections (STIs) – one type of communicable disease – have long-term and sometimes widespread consequences in a population. For gonorrhoea, the WHR rate is nearly three times greater than that for Canada, with large fluctuations in the gonorrhoea infection rates having occurred over time.¹⁷ The rate of chlamydia infection was about 60% higher than that for Canada, with a higher rate difference than the other STIs (meaning that more people were affected by chlamydia than by other STIs) (Figure 5). While the chlamydia infection rate is higher than the national rate, this trend continues to increase in the WHR¹⁸. The incidence rate (new cases) of hepatitis C was also slightly higher than the Canadian rate (Figure 5).

In conclusion, the WHR has higher infection rates for many of the STIs than Canada. The incidence of STIs appears to be increasing over time.

Missing Information

While the above issues were identified by the presence of available information, there remains an under-representation and under-reporting of other population health issues. Other population health issues that need to be considered, as they comprise either a pending threat to the health of a large number of people or a serious outcome for specific persons. These issues include:

- Emerging communicable disease issues that require contingency planning, such as Severe Acute Respiratory Syndrome (SARS), avian influenza and pandemic influenza.
- Animal bites that occur in the WHR population and relate to injury, rabies and prophylaxis. Historical information systems, however, have been primarily unavailable.
- Mental health and well-being are also emerging as health issues. The information currently available contains gaps that may be masking other issues.

¹⁶ Total respiratory morbidity includes hospital abstract data for chronic obstructive pulmonary disorder (COPD), asthma, emphysema, and bronchitis.

¹⁷ Refer to the Data Book, CHA Report 2004.

¹⁸ Refer to the Data Book, CHA Report 2004.

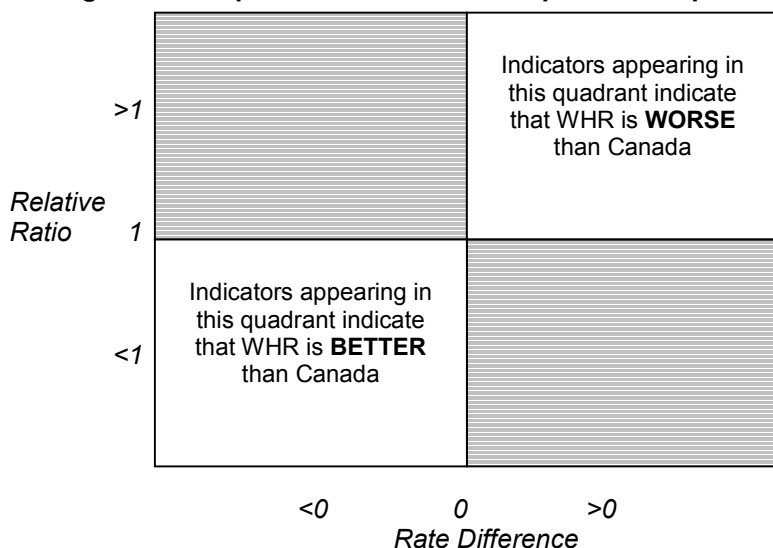
Comparison of Health Outcomes – The Winnipeg Health Region Compared to Canada

The following graphs represent comparisons of crude rates between the regional and national indicators (or provincial values if a national comparator was unavailable) for each of the seven domains used to describe health outcomes in the population. Relative ratios and rate differences were calculated for each of the indicators. The final graph shows the relative ratios for a variety of mortality indicators.

How to Interpret Comparison Graphs

For all indicators in the seven domains, a large rate is associated with a negative health outcome, with the exception of immunization.

Figure 2: Interpretation Guide for Comparison Graphs



Note: The only exception is immunization, for which a higher immunization rate is associated with a positive health outcome (e.g., more children are immunized). In this circumstance, a rate difference greater than 0 and a relative ratio greater than 1 mean that the WHR is better than Canada. In all other circumstances, a rate difference greater than 0 and a relative ratio greater than 1 mean that the WHR is worse than Canada. For example, a higher diabetes prevalence rate reflects a greater burden of illness.

Please see the *Relative Ratios and Rate Differences* section in the **Methods** chapter of this report for a detailed description of how to interpret these measures.

Figure 3: Cancer

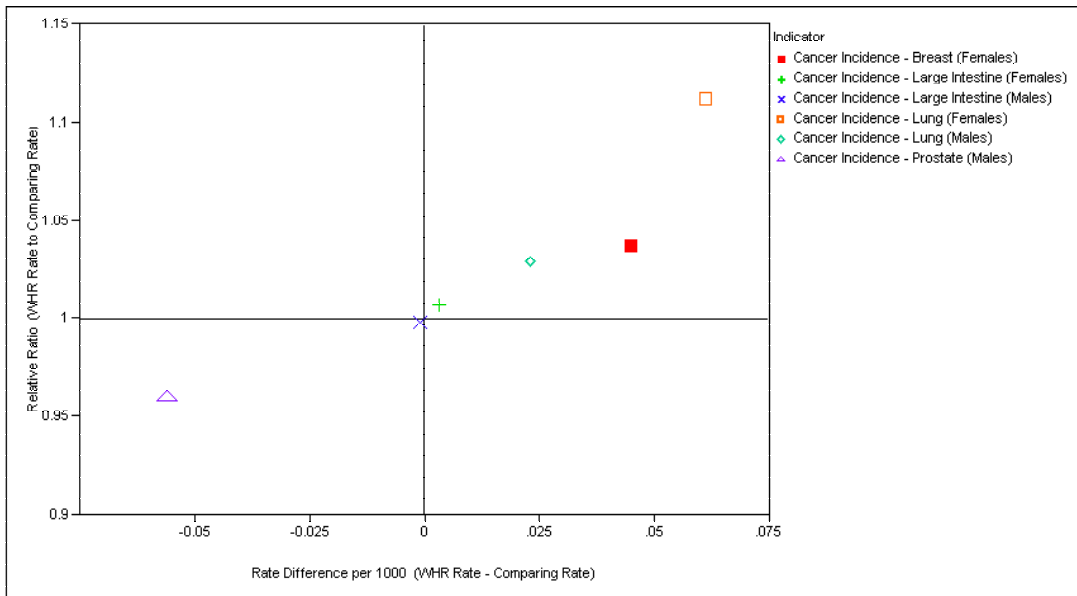


Figure 4: Chronic Health Conditions

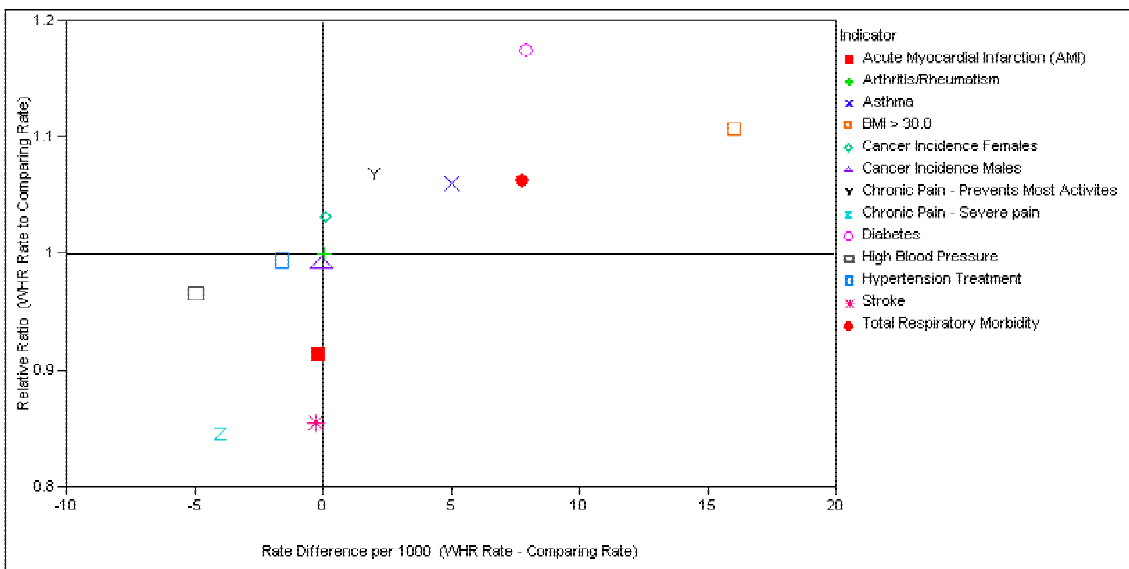


Figure 5: Communicable Diseases

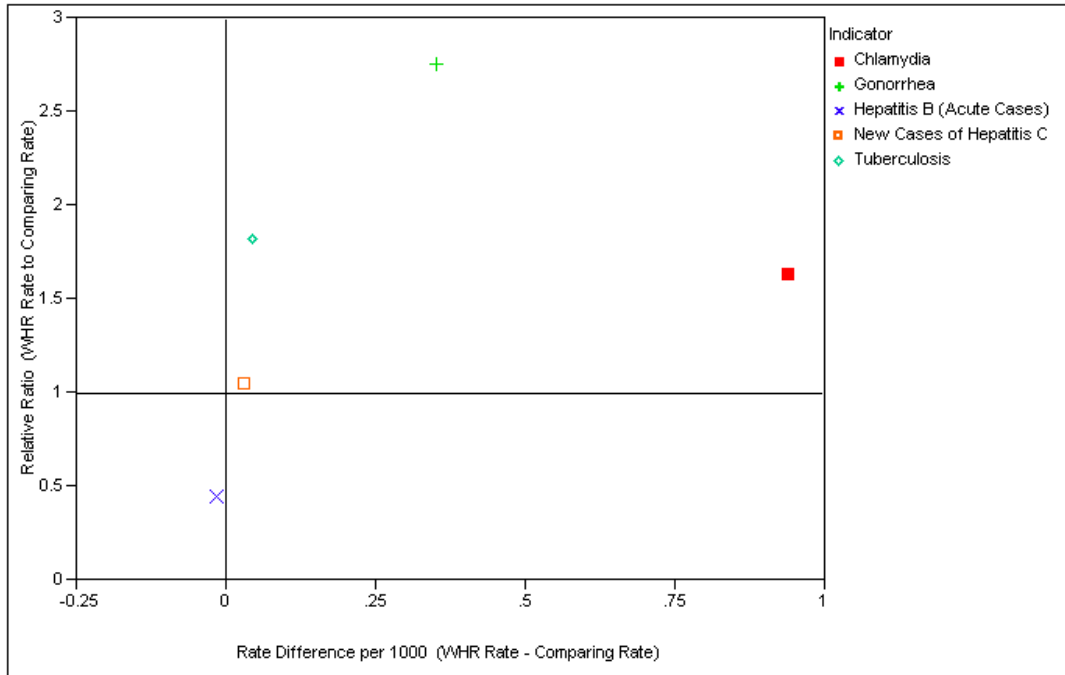


Figure 6: Infant and Maternal Health

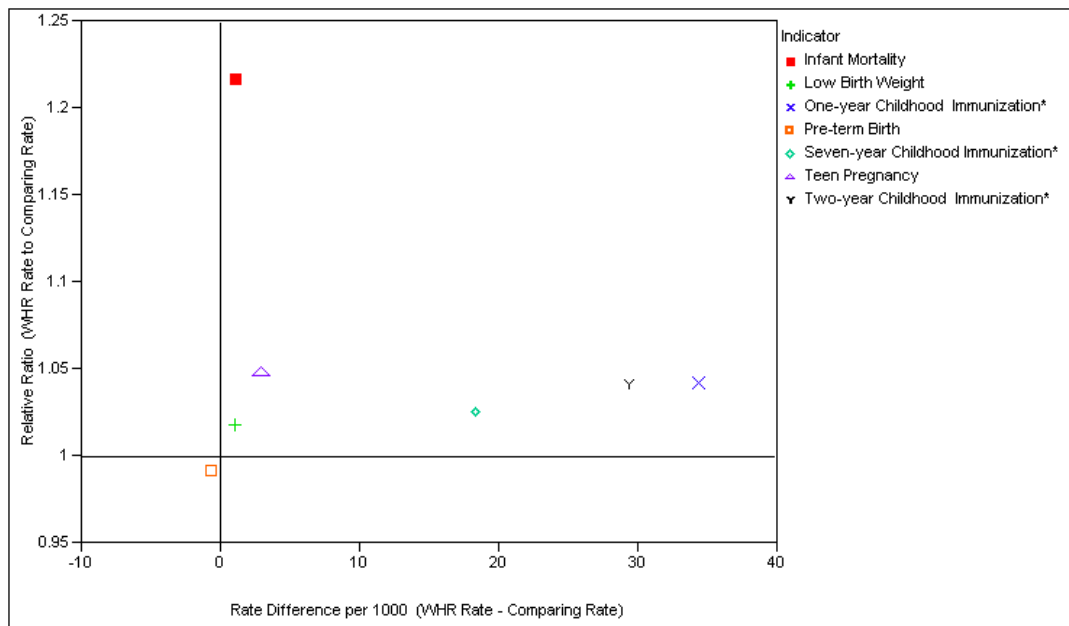


Figure 7: Injury

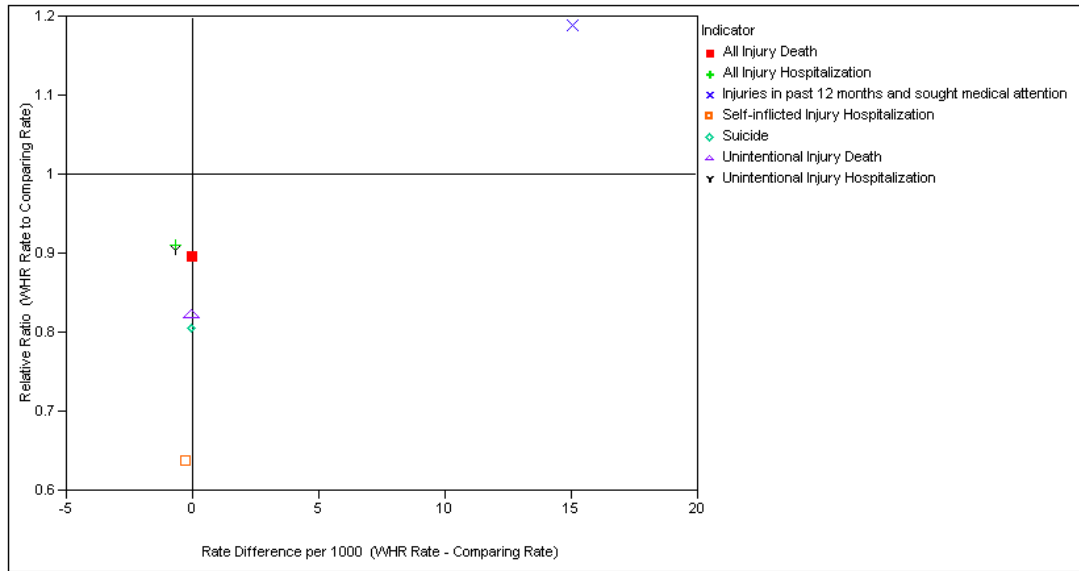


Figure 8: Mental Health

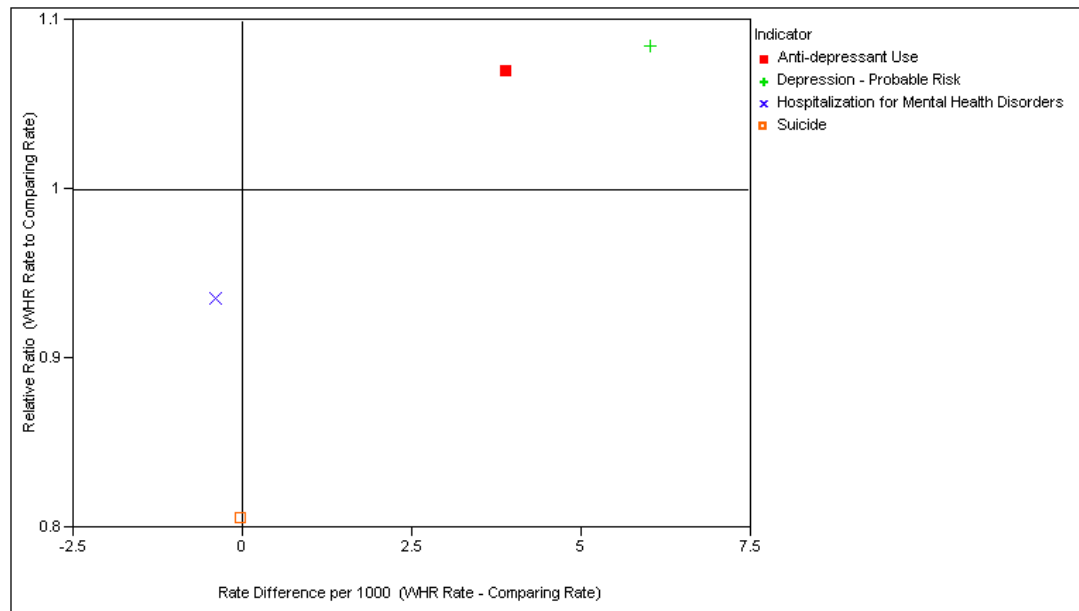


Figure 9: Quality of Life

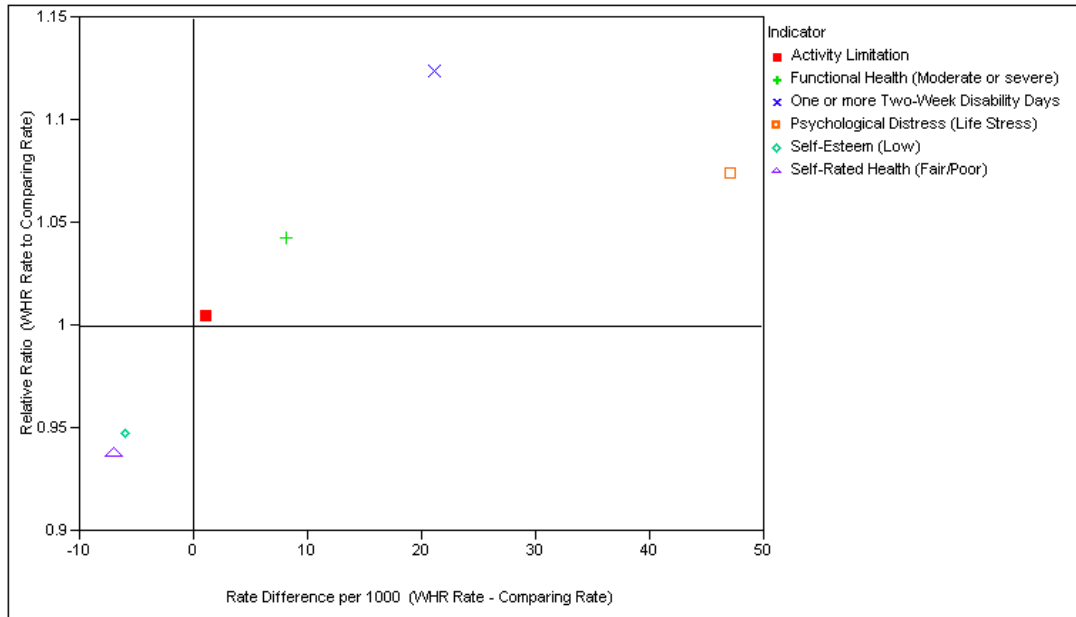
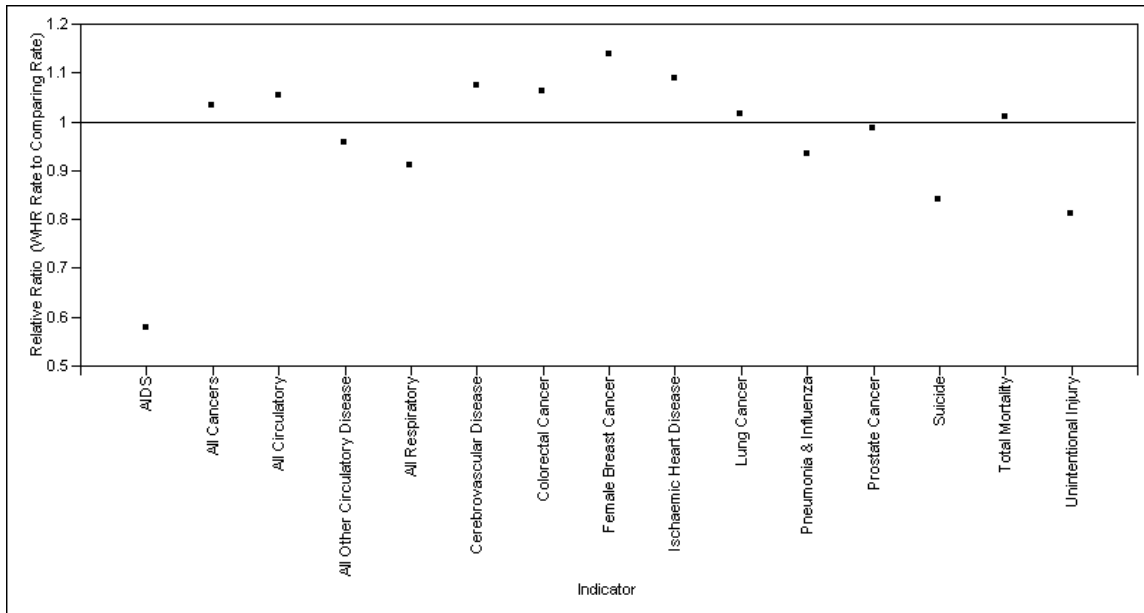


Figure 10: Mortality



Determinants of Health

There are many factors that contribute to the health and well-being of individuals and the entire population. These are often referred to as determinants of health and represent one component of the Population Health Assessment Framework.¹⁹

The determinants of health are social environments, gender, culture, health services, healthy child development, personal health behaviours, biology and genetics, physical environment, employment and working conditions, education and literacy, social support, and income and social status. Indicators are reported on for each of the 12 determinants of health in the Data Book, CHA Report 2004. Although the Data Book, CHA Report 2004 provides information on each of the determinants of health separately, it is important to recognize that the factors are often interrelated. For example, personal health behaviours, such as diet and smoking, differ considerably for persons with different education levels.

The determinants of health form the cornerstone of a population health approach. This moves the focus from the individual to the population. There is a large amount of research that has demonstrated the influence of the determinants of health on the health status of a population. The following section highlights the determinants of health for the region.

Income and Social Status

Income and social status is thought to be the most influential health determinant. Higher social and economic status is associated with better health. This leads to better living conditions (for example, housing, food and transportation), which ultimately affect health. However, research suggests that the degree of control over one's life circumstances affects health at a biological level. This degree of control is usually mediated by income and social status. The elements described in **Economic Characteristics** in the **Population Characteristics** section inform us of this important health determinant in the WHR.

Social Support Networks

People who have support from families and friends tend to have better health. This includes having someone to confide in and to count on in a crisis, as well as, feeling loved and cared for. Studies have shown that people with more social contacts have lower premature death rates. The elements described in **Family Structure** (see the **Population Characteristics** section) inform us about the *social support* health determinant in the WHR. The WHR population appears to experience a fair level of social support overall; marital status and family size are not too different from those for Canada. In the WHR, however, there is a sizeable proportion of senior citizens who live alone. The WHR also has a higher proportion of single parent families compared to that of Canada.

Social Environments

The concept of social environments expands the importance of social support (among individuals) to the community: the relationship of the individual to the community and vice versa. This includes one's sense of belonging and safety in a community, as well as, participation in the community. Volunteerism and community vitality are key themes of this determinant. Transience or mobility of a population is important to the stability of the social environment. A less mobile population is more stable, and provides opportunity to build strong community networks. Mobility status is determined in the Census by asking the question: "Have you moved in the past year or the past five years?"

The percentage of the WHR population that moved in the past year was 15.0%, while the percentage of the WHR population that moved in the past five years was 42.1% (both percentages refer to the period prior to the 2001 Census). At 15.0%, the WHR one-year mobility measure is higher than that for Manitoba (13.6%) and that Canada (14.3%). The five-year mobility rate for the WHR is 42.1% of residents, which is higher than the 38.8% for Manitoba. The five-year mobility rate for Canada as a whole is 41.9%.

¹⁹ See Population Health Assessment Framework, CHA Report 2004.

Education and Literacy

It is well documented that education levels of a population are tied to economic characteristics, as those who achieve higher levels of education are more employable and tend to earn more income. In addition, literacy (the ability to interpret the written word and numbers) is considered to be a determinant of health, as it may influence the ability to use health information, which is largely written. Literacy levels in a population can be indirectly measured through educational attainment levels. In the WHR, 7.7% of the population 20 years of age and older has less than a grade nine level of education, which is lower than that for Canada (10.5%) and that for Manitoba (11.0%). In the WHR, 11.7% of population graduated from high school, compared to 11.4% for Manitoba and 13.9% for Canada. It is interesting to note that a high proportion of the WHR population has a university education, at 27.9%. This is higher than that for Canada, at 23.9% and Manitoba, 22.5%.

Employment and Working Conditions

Employment has a significant effect on all aspects of health and well-being. Unemployment, underemployment and stressful or unsafe working conditions are associated with poorer health. Some dimensions of employment and working conditions in the WHR are presented.

The WHR's unemployment rate at the time of the 2001 Census was 6.0% for the population 15 years of age and older. In terms of both age definitions and by sex, there is little difference in the unemployment rate in the WHR. In 2001, 7.0% of the Canadian population 15 years of age and older was unemployed, while 6.0% of the equivalent Manitoba population was unemployed. Youth (15 to 24 years of age) in the WHR as well as in Canada and Manitoba tend to have higher rates of unemployment compared to the general population. At 11.0%, the unemployment rate for WHR youth was lower than the 14.0% of the Canadian youth population. The youth unemployment rate for Manitoba was 12.0%.

The labour force participation rate for the general population was examined for those individuals 15 years of age and older. In the WHR, this rate was 68.0%, while it was 67.0% for Manitoba and 66.0% for Canada. There appears to be a difference in male and female labour force participation in the WHR for those individuals 15 years of age and older: it is higher for males than for females. This difference is also true for Manitoba and Canada, with the Manitoba labour force participation rate of 61.0% for males and 74.0% for females. For Canada, the labour force participation rate was 61.0% for females and 73.0% for males. Labour force participation is further examined for two age groups: *youth 15-24 years of age* and *adults 25 years and over*. There is little difference in labour force participation rates between men and women of the youth population. However, the difference between labour force participation of men and women is more pronounced in adults 25 years of age and older. In the WHR, the respective labour force participation rates of males and females 25 years and older are 74.0% and 61.0%. There is a similar difference in the male and female labour force participation rates for both Manitoba and Canada.

One possible reason that women have lower labour force participation rates is that they are more likely to be involved in unpaid work, such as childcare or eldercare. Approximately 37.6% of the WHR population 15 years of age and older spent *any* amount of time providing unpaid childcare.²⁰ The percentage of WHR women who spent *any* amount of time providing unpaid childcare is 40.1%, while the equivalent percentage for WHR men is 34.1%. In Manitoba, 43.6% of women and 36.3% of men *any* amount of time providing unpaid childcare, while in Canada, the equivalent percentages are 41.5% for women and 34.4% for men. However, as the number of hours increased, a larger percentage of women than to men reported providing unpaid childcare. For example, 10.2% of women reported that they spent 60 hours or more weekly providing unpaid childcare, compared to only 3.7% of men. These percentages are more similar to those for Canada than those for Manitoba. In Manitoba, 12.1% of females and 4.6% of males reported that they spent 60 hours or more providing unpaid childcare. In Canada, 9.5% and 3.1% of females reported that they spent 60 hours or more providing unpaid childcare.

²⁰ *Any* refers to those that spend less than five hours, 5-14 hours, 15-29 hours, 30-59 hours, or 60 hours or more providing unpaid childcare; this excludes those who reported 0 hours (Data Book, CHA Report 2004).

Eldercare can be examined using Statistics Canada data for provision of *unpaid care or assistance to senior citizens*. In the WHR, 19.1% of the population 15 years of age and older reported having spent *any* time providing eldercare.²¹ This percentage was lower than that for Manitoba, where 20.8% of the population 15 years of age and older reported having spent *any* time providing eldercare, but higher than that for Canada whose equivalent percentage is 18.2%.

Physical Environment

The physical environment that members of a population live and work in can have an effect on health. This determinant comprises two areas: the 'natural' environment (such as air, water, food and soil) and the 'built' environment (such as dwellings). This section will focus on presenting 2001 Census information on the dwelling characteristics for the WHR's built environment.

At 64.1%, most residents of the WHR live in *owned housing*. This is also true for Manitoba (67.8%) and Canada (65.8%), where most residents live in owned housing. Housing stock in the WHR is older than housing stock in Canada as a whole. At 79.0%, the majority of WHR's housing stock was built prior to 1980, compared to 67.3% of Canada's housing stock. The percentage of individuals who reported that their dwellings required major repairs is 9.3% in the WHR, 11.1% in Manitoba and 8.2% in Canada.

In 2001, the average gross rent for a tenant in the WHR was \$541, while it was \$523 in Manitoba and \$648 in Canada. In the WHR, 38.0% of tenants spent 30% or more of their household incomes on shelter costs (rent), which is a slightly higher percentage than that for Manitoba (37.0%) and slightly lower than that for Canada (39.4%). In 2001, the average value of an owner-occupied dwelling in the WHR was \$102,537, which is higher than that for Manitoba (\$97,670) and lower than that for Canada (\$162,709).

Biology and Genetics

The human body is a complex biological system. Genetic and environmental factors begin interacting at an early stage in life, and continue to interact throughout one's lifespan. For some diseases, a strong genetic component is present and little can be done to change one's predisposition to certain diseases or health issues. However, environmental influences in the form of the determinants of health may improve health outcomes significantly, assisting an individual to reach his or her full health potential. An example of this is individuals with a strong family history of cardiovascular disease. Such individuals should be monitored for high blood pressure and abnormal lipid profiles. They can also be encouraged to maintain a healthy lifestyle to minimize the risk of developing cardiovascular disease at a young age. There are currently no indicators measured for this determinant in the CHA Report, 2004.

Personal Health Behaviours

This refers to the actions that a person can take to prevent disease and to live a healthy lifestyle. It is important to recognize that personal choices that affect lifestyle are influenced by social, economic and environmental factors. For example, exposure to recreation and recreational facilities contributes positively to personal health, economic, social and spiritual needs and healthy child development. Research suggests that an individual's mental health benefits from exercise and physical activity, as they reduce depression and anxiety and promote self-esteem. As a result, a population's health, well-being and quality of life, as well as its communities and environment, are enhanced. The reader is directed to the Data Book, CHA Report 2004 for information on selected indicators of personal health behaviours in the WHR.

Healthy Child Development

Healthy children grow up to become healthy adults. A child's development is greatly affected by experiences early in life. A loving secure environment helps children to develop trust, self-esteem and the ability to form positive relationships. These contribute to children's readiness to learn (education), and to their health especially

²¹ Any refers to those that spend less than five hours, 5-9 hours or 10 hours or more providing unpaid care or assistance to seniors; this excludes those who reported 0 hours (Data Book, CHA Report 2004).

as they grow and develop. The reader is directed to the Data Book, CHA Report 2004 for additional information on selected indicators of healthy child development in the WHR.

Health Services

The health services continuum of care includes treatment and secondary prevention of disease. Of the 12 health determinants, this one appears to have the least affect on a population's health and well-being. The Data Book, CHA Report 2004 contains information on indicators of health services in the WHR.

Culture

Culture affects health on several levels. Cultural values may influence individuals' socio-economic status. There may be loss or devaluation of culture and language (resulting in stigmatization and marginalization) and lack of access to culturally appropriate health care. In addition, language barriers may limit access to health information and health services. Together or alone, these realities may have an impact health. The elements described under **Ethnicity** in the **Population Characteristics** section provide information about this health determinant.

Gender

This refers to the attitudes, behaviours, values, relative power and influence that society confers upon both sexes. Many health issues are influenced by gender-based social status or roles. For example, WHR suicide rates for males are much higher than those for females: the WHR suicide rates are also much higher than for those for Canada. The literature suggests that the gender difference for suicide in developed countries may be partly explained by the changes in gender roles for men and women.²² There are many indicators listed in the Data Book, CHA Report 2004, which provide information on gender differences at the regional level.

Each of the determinants of health is important in its own right. At the same time, the determinants of health are interrelated. Understanding the influences of the determinants of health on the health issues is key to improving the health of the population.

Underlying Population Health Issues

"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."²³ As a result, health is the product of complex interactions of multiple factors. Health outcomes are often correlated to other health outcomes, in addition to many determinants of health. The previous section identifies health issues by looking at the comparison of health indicators. The comparison, however, does not consider how these indicators relate to one another. This section identifies a number of underlying population health issues by describing the relationships between the indicators, and in which communities these relationships occur.

Given the high intercorrelation among some health indicators, a factor analysis model was used to study the relationships between health status indicators, determinants of health and demographic variables in the WHR (see **Methods** section). Factor analysis results were used to describe underlying issues and combinations of indicators. Given that the aim of the analysis was exploratory, a total of 91 variables representing the framework for Population Health Assessment for the WHR were used in a factor analysis model. Interest in the analysis included finding clusters of indicators, and linking these clusters/indicators to the communities in which they were observed. The initial factor solution revealed 10 common or explanatory factors accounting for approximately 93% of the total observed variance of the 91 variables were required to represent the data adequately. The remaining factors reflecting unique variance (such as measurement error) associated with the individual variables. The existence of distinct clusters or subsets of the indicators were uncovered and identified

²² Hawton, K. (2000) *Sex and suicide*. British Journal of Psychiatry. 177: 484-485.

²³ Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no.2, p.100) and entered into force on 7 April 1948.

with the factors. The presence of each factor within smaller geographies of the WHR was also identified to describe unique underlying issues. What is achieved is a link between the factors underlying the indicators (variables) and the spatial areas where the indicators (variables) are observed.

Findings

The first two factors, which jointly explain 71.2% of the variance of all 91 variables, represent the overall dominant influence of health outcomes in the WHR. The first factor explains 49.6% of the total variance and, therefore, represents the largest influence. Based on the variable-factor correlations (the loadings), the factor relates the socio-economic and demographic variables to variables representing health conditions, on one hand, and variables measuring the use of resources, on the other. The second factor explains 21.6% of the total variance, and represents the other major overall influence related to older populations in the WHR. All other factors represented more minor and unique characteristics to the sub-geographies within the region.

Factor 1: Low Socio-Economic Status Health Factor

The first factor – **Low Socio-Economic Status Health Factor** – represents a poverty factor closely associated with an Aboriginal population, and characterized by high unemployment, low individual incomes, low numbers of years of education, higher-than-average younger male population, and single parent families (females) exhibiting both high female fertility and high teenage pregnancies. It is also highly and positively correlated with mortality rates, premature mortality, PYLL, and death due to injury in both males and females. The above average mortality is accompanied by the high presence of sexually transmitted infection, hepatitis C, hepatitis B, tuberculosis, respiratory problems and an extensive prevalence and incidence of diabetes among all ages (except the incidence in the *70+ age group*). A strong absence of breast-feeding initiation is also observed. Use of resources by the low socio-economic status and aboriginal populations indicates higher use of antibiotics, higher prescription rate, and higher hospitalization for injury, followed by a slightly increased general use of hospitals and physicians. A lack of preventative care (i.e., immunizations and screenings) by the low socio-economic status was observed. The first factor is labelled a **Low Socio-Economic Status Health Influence**.

This dominant underlying factor is associated with poverty characterized by a variety of health disparities and a higher use of resources at least on the part of some people in the neighbourhoods.

The factor-variable correlations for Factor 1 (**Low Socio-Economic Status Health Factor**) is given below:

Table 1: Socio-economic, Demographic Variables

Variable	Factor 1
Aboriginal Population (based on Identity)	0.964
Socio-economic Factor Index	0.936
Unemployment Rate - Females 15 Years and Over	0.913
Unemployment rate - Males 15 Years and Over	0.906
Both Sexes – Age 20+ (with less than grade 9 schooling)	0.903
Lone Parent Families	0.908
Fertility Rate Female Ages 15-49	0.957
Teen Pregnancy Female Ages 15-19	0.943
Visible Minority Population	0.437
Male Population	0.640
Median Census Total Income in 2000 for Females	-0.858
Median Census Total Income in 2000 for Males	-0.876
Median Census Family Income in 2000	-0.850
Both Sexes (Age 20 years and over with High School Diploma, or More)	-0.866
Population Ages 45-64	-0.717

Table 2: Mortality Variables

Variable	Factor 1
Mortality Rate, females	0.400
Mortality Rate, males	0.523
Premature Mortality Rate, females	0.676
Premature Mortality Rate, males	0.703
Infant Mortality	0.568
Potential Years of Life Lost, females	0.810
Potential Years of Life Lost, males	0.851
Deaths Due to Injury, females	0.581
Deaths Due to Injury, males	0.786

Table 3: Health Conditions

Variable	Factor 1
Chlamydia, females	0.952
Chlamydia, males	0.913
Gonorrhoea, females	0.936
Gonorrhoea, males	0.909
Hepatitis C Virus	0.900
Hepatitis B Virus	0.494
Tuberculosis	0.878
Incidence of Diabetes, Age 20-49	0.929
Incidence of Diabetes, Age 50-69	0.897
Incidence of Diabetes, Age 70+	0.070
Prevalence of Diabetes, Age 20-49	0.945
Prevalence of Diabetes, Age 50-69	0.951
Prevalence of Diabetes, Age 70+	0.648
Total Respiratory Morbidity Treatment Prevalence	0.852
Stroke Treatment Prevalence	0.549
Prematurity (pre-term births)	0.758
Number of Tonsillectomy and Adenoidectomy Procedures	-0.471
High Birth Weight, Live Births	-0.478
Caesarean Sections	-0.762
Breastfeeding Initiation	-0.967

Table 4: Use of Resources

Variable	Factor 1
Days Used for Long Stays	0.519
Days Used for Short Stays	0.623
Hospitalization Rates for Injuries	0.822
Visits to General and Family Practitioners	0.764
Use of Physicians	0.615
Residents with One or More Prescriptions	0.530
Average Number of Different Prescriptions Dispensed	0.778
Average Number of Antibiotic Prescriptions Dispensed	0.930
Residents Using Antibiotics During Two-year Period	0.899
One-year Immunization	-0.880
Two-year Immunization	-0.852
Seven-year Immunization	-0.865
Mammography Screening	-0.879
Diagnostic Mammography	-0.919
Cervical Screening	-0.886

Factor 2: Older Adult Chronic Disease Factor

The second factor - **Non-Affluent Older Adult Chronic Disease Factor** – correlates with variables which identify an older population tending (but not exclusively) to be female, with an absence of visible minorities and a marked absence of 0-19 year-olds, but neutral of 20-44 year-olds. The highest correlates are cancer rates, CT scans, total hip replacements, cataracts and cardiac catheterization, followed by cardiac conditions. The second factor is also correlated with mortality rates (especially for males) to a somewhat higher degree than the first factor, and almost as highly with premature mortality, confirming that it correlates variables associated with an older age, but not necessarily one with persons older than 75 years of age. The second factor is uncorrelated with individual incomes, but a somewhat low correlation with family income indicates a certain lack of affluence. It also has a slight correlation with lone parent families and with the socio-economic index. This second factor is labelled an **Older Adult Chronic Disease** influence.

The factor-variable correlation for Factor 2 (Older Adult Chronic Disease Factor) is given below:

Table 5: Socio-economic, Demographic Variables

Variable	Factor 2
Population, Ages 0-19	-0.852
Population, Ages 20-44	-0.058
Population, Ages 45-64	-0.209
Population, Ages 65-74	0.886
Population, Ages 75+	0.939
Visible Minority Population	-0.510
Female Population	0.557
Male Population	-0.557
Median Census Family Income in 2000	-0.301
Lone Parent Families	0.260

Table 6: Mortality Variables

Variable	Factor 2
Mortality Rate, females	0.538
Mortality Rate, males	0.714
Premature Mortality Rate, females	0.663
Premature Mortality Rate, males	0.614
Potential Years of Life Lost, females	0.239
Potential Years of Life Lost, males	0.283
Deaths Due to Injury, females	0.581
Deaths Due to Injury, males	0.357

Table 7: Health Conditions

Variable	Factor 2
Cancer Incidence	0.966
Number of CT Scans	0.903
Number of Total Hip Replacements	0.901
Number of Total Knee Replacements	0.798
Number of Cataract Replacements	0.861
Number of Cardiac Catheterizations	0.843
Stroke Treatment Prevalence	0.682
Number of Angioplasty Procedures	0.664
Number of Coronary Bypass Surgeries	0.651
Hypertension Treatment Prevalence	0.723
Number of Hysterectomies, women ages 25+ years	-0.415
Number of Caesarean Sections	-0.201

Table 8: Use of Resources

Variable	Factor 2
Number of New Home Care Cases	0.926
Total Number of Open Cases of Home Care	0.913
Number of Home Care Cases Closed	0.845
Average Number of Days of Home Care Received	0.736
Days Used for Short Stays	0.762
Days Used for Long Stays	0.717
Separation Rates	0.777
Ambulatory Consultations	0.777
Ambulatory Visits	0.574
Hospitalization Rates for Injuries	0.441
Use of Physicians	0.459
Residents with One or More Prescriptions	0.652
Number of Different Prescriptions Dispensed	0.554
Number of Residents Age 75+ Admitted to PCH, first time	0.679
Number of Residents Age 75+ Who Were in a PCH	0.658

The remaining eight factors were found to correlate with a smaller number of variables. Hence, they profile more unique conditions and smaller populations in the WHR. For several of these factors, it was difficult to clearly interpret and explain their meaning. The factors that were summarized for the unique populations are presented in the **Community Areas Overview**.

Summary of the Key Issues

Based upon the information presented in this chapter, in general, the health status of residents of the WHR is average when compared with Canadian health status values. However, examination of the indicators in the seven health domains shows that there are some areas where the WHR ranks below the Canadian norm.

Leading health issues were identified based on the burden of illness in the population, comparisons to national rates and the potential to have an impact on health. The major health issues in the Winnipeg Health Region are:

- Chronic Diseases:
 - Cancer
 - Cardiovascular disease
 - Diabetes
- Infant and maternal health
- Injury
- Mental health
- Obesity
- Respiratory illnesses, including tuberculosis
- Sexually transmitted infections

The WHR's unique combination of demographic characteristics and health determinants influences the health outcomes in this region. For many of these, the WHR is comparable to Canada and Manitoba. It is also important to note that there may be other determinants that were not measured at the regional level, which may further affect the health issues of the region. For example, personal health practices, such as physical activity levels and nutritional practices.

Demographic characteristics and health determinants that add to the uniqueness of the region include:

- An ageing population: a large proportion of the population is 65 years of age and older
- Low levels of social support for senior citizens: many live alone
- A high proportion of single parent families
- Extremely high poverty levels in some smaller geographies
- An ethnically diverse population that includes a substantial Aboriginal population
- A growing immigrant population

Underlying population health issues in the WHR were found by examining the relationships between the health status, determinants of health and demographic indicators. The two dominant factors were found to be:

- Low Socio-Economic Status Health Factor
- Older Adult Chronic Disease Factor

In order to build a population health profile for the Winnipeg Health Region, this report has examined many indicators in the following areas: population characteristics, health outcomes, and determinants of health. The profile highlights key health issues in the Winnipeg Health Region. This identifies many opportunities to improve the health of the population. The report can be used to support dialogue, decision-making and planning efforts in the region.

Notes to the Reader:

- ✎ It is important to note that the overall health issues identified at the regional level are equally important to the smaller geographies within the Winnipeg Health Region.
- ✎ The reader is directed to the individual population health profiles for the community areas and populations of special interest for further information on the health issues affecting these subpopulations.