Community Health Assessment 2008-2009

North Eastman Health Association Inc.
Association de santé du Nord-Est inc

Working Together to Create a Healthy North Eastman
January 26, 2010

I am very pleased to provide you with a copy of our Region’s 2008/09 Community Health Assessment.

This Assessment report is a valuable reference tool that provides a wealth of information in identifying the health status of our population and the health services that we are currently providing. This information will be used extensively in the coming year as we prepare our strategic plan for the next five years.

I would like to acknowledge the following staff members who have worked diligently in conducting the Community Health Assessment and preparing the report:

- Suzanne Dick, Projects Coordinator – Quality & Organizational Development
- Dr. Bunmi Fatoye, Medical Officer of Health
- Judy Coleman, VP - Programs & Services
- Janice Walker, Community Health Assessment Assistant

A dedicated team of staff members from North Eastman also assisted in conducting the assessment activities through surveys, focus groups and other community meetings. Many community leaders provided support in identifying key contacts for the community consultation sessions and we wish to express our appreciation to them. Thank you to everyone who had a part in the preparation of this informative report.

Sincerely,

James W. Hayes, MPA, CHE
Chief Executive Officer

JH/gw
The 2008-2009 Community Health Assessment (CHA) Report provides information on the health status and potential health needs of North Eastman (NE) residents. Similar reports have been developed in 1997 and 2003. The outline of this report follows a population health perspective highlighting a broad set of societal and individual factors that impact health. As you review the report, both provincial and district data is presented.

North Eastman saw an increase in population of 3.4% during the last five years. The majority of the increase was seen in the over 65 age group. A decrease occurred in the 0-19 age group. The Aboriginal population represent the largest cultural group accounting for 25% of the population. The majority of Aboriginal people live in Northern Remote and Blue Water districts. English remains the predominant language spoken at home. With the increasing number of elderly people we still observed a slight decrease in our dependency ratio.

Life expectancy increased in females with no change in males. Premature mortality rate decreased but there remains disparity between northern districts and the southern districts. In many of the indicators we observe that Northern Remote and or Blue Water suffer disproportionately poorer health indices versus Springfield reporting better indices.

The top causes of potential years of life lost (PYLL) are slightly different for males and females. Main causes include – injury, cancer, suicide and circulatory diseases. With any aging population, one expects to see an increase in diseases and conditions that are associated with aging. As a result we were not surprised to observe the increase in prevalence in arthritis and osteoporosis treatment.

Chronic diseases continue to be an area of concern all around the province as well as in NE. The rates of diseases such as diabetes significantly increased in both young and the old. Hypertension diagnosis is also increasing but stroke incidence and ischemic heart disease are decreasing. This may be attributed to better and improved screening and management.

Both intentional and unintentional injury rates for hospitalization and death have not changed significantly, however in children 0-19 years, the rate continues to be significantly higher compared to Manitoba overall.
Mental health diseases /illness remain an important health disease burden in the region; the reporting of high stress levels, number of people diagnosed with mental disorders, increase in anti depressant use, and follow up visits to physicians for a mental health problem and depression treatment prevalence. Suicide rates remain high in the region with the majority occurring in northern areas. In all these diseases, gender differences needs to be considered.

Smoking, use of alcohol, consumption of fruits and vegetables as well as participation in physical activity indicators vary across the region with some districts reporting better rates than others. Uptake on breast screening remains stable while that of cervical screening still requires better understanding. Lower percent of screens were noted more in the north of the region.

Over three-quarters of people live with a family. A high percentage of new mothers indicated they had no social support compared to Manitoba. Focus group participants raised concerns about vulnerable people (often seniors) who lived alone. In some districts, a lack of child care support was a major concern for working parents.

One third of residents felt their work was either ‘extremely stressful or quite a bit stressful.’ Sales and service occupations replaced management as one of the top three occupation types for males. The other top occupations were trades, transport and equipment operators. There was no change in female occupations: sales and services, business, finance and administration and social sciences, education and government services.

It is important to have access to clean air, potable water, affordable and safe housing and an environment that promotes social cohesion and safety. There is no one indicator that captures this. One quarter of children 12-19 years reported being exposed to second hand smoke. Approximately one third of the boil water advisories are in the north eastern area of Manitoba.

The rate of live births did not change in the region overall. Teen birth rates decreased but were still significantly higher than Manitoba rates. The northern districts had higher rates of births.

Infant mortality and child mortality rates appeared to decline, however child mortality rates are still significantly higher than Manitoba overall.
“Breastfeeding (BF) rates were significantly lower than Manitoba overall. Northern district’s BF initiation was the lowest contrary to what one would expect considering the cost of formula and the low income status of those living in these districts, whereas the southern districts such as Springfield were the highest. Is this a problem of lack of awareness or access to information that needs to be explored?

During 2007, NE had slightly lower immunization rates compared to Manitoba for ages 1, 2, 11 and 17 years. By age seven, NE saw an increase in completed immunizations compared to earlier years.

The numbers of children in foster care increased significantly and were significantly higher than Manitoba overall. Northern Remote and Blue Water had a significant increase in children in foster care, the highest of all districts.

Health status improves with educational attainment. There was a decline in high school completion from 77% to 72%. In addition, across all age groups a higher percent of residents did not have a diploma/degree/certificate compared to Manitoba.

Males continue to make more money than females except in Northern Remote where females had a higher median income. Lower life expectancy, higher injury deaths, suicides, diabetes, heart attacks, strokes, substance abuse and schizophrenia occurred more in lower income areas of North Eastman and rural Manitoba.

There were more single people who were below the low income cut-off compared with families. In North Eastman, 10% of housing owners, and 30% of tenants spent more than 30% of their income on shelter.

Health care services include: acute care, long-term care and community services such as primary health care, public health, mental health and home care. NE has the second fewest number of hospital beds per 1,000 population compared to other regional health authorities (RHAs).

The number of visits to our emergency rooms has not changed over the past few years. Approximately one half of patients occupy hospital beds in Winnipeg and in other RHAs. There has been an overall increase in the number of hospital beds in NE being utilized by patients who require non acute health care. Hospital discharge rates decreased but were significantly higher than Manitoba.
There was a decrease in the number of ambulatory care sensitive (ACS) conditions admitted to hospital; however NE’s rates were significantly higher than Manitoba. ACS conditions are chronic diseases e.g. diabetes and high blood pressure that are usually managed by community health services.

Emergency medical service (ambulance) call volumes continue to increase annually.

During 2004/05-2005/06 NE had the longest median wait time for personal care home (PCH) admission at 22.9 weeks compared with other regional health authorities. NE has the lowest number of PCH beds per 1,000 population over the age of 75 years compared with other regional health authorities. With an aging population and increase in chronic illness such as dementia, PCHs will continue to admit more complex cases in both the physical and psychosocial care domains.

There has been little to no change in the percent of residents who visited a physician; however the average number of visits to any physician increased slightly. More residents accessed general and family physician care within their own health districts. Almost three quarters of NE residents sought care from the same physician. This is important as there is growing evidence that care given by the same caregiver is known to improve client’s health status and chronic disease outcomes.

As you study and review the findings in this report we hope you will find it useful in your program or organization.

If you have any questions please call NEHA’s Corporate Office in Pinawa and you will be directed to the appropriate person:

Phone: 1-204-753-2012
Toll free – 1-877-753-2012

The complete report is available on the NEHA website @ http://www.neha.mb.ca.
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February 2010

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**Executive Summary**

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Section I
INTRODUCTION
Chapter 1- How to Use the Report
Welcome to the ‘North Eastman Health Association Inc. (NEHA) 2008-2009 Community Health Assessment (CHA).’ This is the third CHA report since regionalization.

The NEHA CHA 2008-2009 Report is descriptive, not explanatory, addressing the ‘who’ ‘what’ and ‘where’ of a population’s health. Population health refers to “…health outcomes and their distribution in the population.”¹ The ‘why’ and ‘how’ of analysis requires the collective wisdom of partners, community and NEHA staff.

The report’s organizational framework is written within the context of the ‘determinants of health.’ “The health status of individuals and the population is influenced by the complex interaction of a wide range of determinants over the life course. Differences in health status result from the combination and interaction of health determinants and give rise to health disparities between individuals and among various segments of the population.”²

Diagram 1-1 Determinants of Health Influencing Health Status
WHAT IS A COMMUNITY HEALTH ASSESSMENT (CHA)?

A CHA is provincially undertaken every five years by each Regional Health Authority (RHA) in Manitoba. It is mandated by legislation under ‘Duties of Regional Health Authority…23(2) (b)’. A CHA identifies and measures the health status of the population (not individuals). It is dynamic, ongoing and is undertaken to identify health priorities and facilitate collaborative action planning directed at improving the community’s health status and quality of life.

PURPOSE OF A COMMUNITY HEALTH ASSESSMENT

The purpose of a CHA is to “…collect, analyze and present information so that the health of the population can be understood and improved and that health services can be planned according to the evidence.”

GOALS OF NEHA’s COMMUNITY HEALTH ASSESSMENT

- Understand the health of North Eastman residents.
- To be responsive to local issues.
- To plan health services informed by evidence.
- To track changes over time.
NEHA RESPONDS TO 2003-2004 CHA REPORT

The following is a list of some of the initiatives that arose since the 2003-2004 CHA.\(^7\)

Health Status - Strategic Priority - Health Care Outcomes

“North Eastman Health Association provides health care and services that enable all individuals, families and communities to pursue optimum health. Assistance is available to isolated and socio-economically disadvantaged communities to develop health programs and to improve health status.”\(^8\)

- Established and maintained a Regional Intersectoral Suicide Prevention working group.
- Mental Health Team has partnered with Aboriginal /Northern communities to provide education sessions and service provision on and off reserve.
- Nurse Practitioners have provided Primary Care services to Black River and Hollow Water First Nation.
- Participated in the development of a proposal for transitional/emergency housing in the region.
- Increased education regarding prevention, treatment and management of sexually transmitted diseases.
- In each health district there is an established Chronic Disease Prevention and Management Care Team which focus primarily on diabetes and heart disease. The teams provide prevention and health promotion information, screening clinics at community events and self management prevention and education.
- Increased immunization rates and breastfeeding initiation and duration rates through enhancements to the Public Health Nursing program.

Access to Services - Strategic Priority - Systems

“All residents have access to a full spectrum of integrated basic health services available within the Region through a seamless single point of entry. Residents have timely access to services required but not available in the Region.”\(^9\)

- Cancer Care program established at Pinawa Hospital.
- Disaster Preparedness Plan developed and initiated.
- Regional Infection Prevention & Control Program established to ensure best practices are maintained.
- Fall Management Program developed and implemented in Long Term Care.
- Enhancements to Information Technology systems in the region.
- Pinawa Hospital redevelopment to improve functionality of space and upgrade mechanical systems.
- Regional Pharmacy System developed.
- Protocol for response to sexual assault developed - can now offer this service within the region.
- Strengthened Emergency Medical Services (EMS) services by initiating the transition of the service from a casual workforce to a full or part time workforce.
- Reduced waiting list for Dialysis Services in the region.
• Increased supports for seniors living in the community by adding five additional supportive housing suites in Beausejour.
• Extending lifestyles programming to clients living in group settings – 13 in Beausejour, 38 in Lac Du Bonnet, 12 in Pine Falls.
• Worked with community partners to explore options and develop senior housing options and supports.
• There is enhanced access to Health Links / Info Santé for clients living in rural Manitoba through provincial funding.
• Strengthened the Home Care services by addition of a Staff Development Coordinator, Resource Coordinator and Case Coordinator.
• Strengthened Mental Health Services by the addition of Community Mental Health Services Worker, Intake/Urgent Care Worker, Resource Coordinator, Social Worker and Clinical Psychologist (recruitment in progress).
• Spiritual Care Coordinator hired for the region.
• Increased Audiology services and reduced wait time.

Healthy Lifestyles- Strategic Priority - Community Health

“North Eastman Health Association, as an integrated health system, provides leadership in the development of healthy communities through health promotion and education and through partnership with other human services providers and community stakeholders.”

• Developed partnership with Hollow Water First Nation for Public Health Nursing services.
• Developed Diabetes Education Resource Website in partnership with Manitoba Telehealth.
• Renovations and upgrades to Whitemouth and Oakbank Primary Health Care Centres.
• Regular articles in local newspapers regarding wellness ‘Ask Your Primary Health Care Provider’.
• Springfield Wellness Coalition created a Wellness Resource Centre in Oakbank.
• Increased education to elderly clients in the community on fall prevention, bathtub safety and stair safety.
• Developed drop-in centre based in Beausejour for clients with mental health and/or addictions issues.
• Developed a ‘Chronic Disease Risk Factor Screening Tool’ and implemented in all NE’s health districts.
• Many health promotion activities throughout the region: smoking cessation, healthy diets, ‘Get Better Together’, chronic disease prevention initiatives.
• Increased Cervical Screening clinics in ‘under-screened communities (Pine Falls, Hollow Water, Black River and Whitemouth).
• ‘Prevention of Alcohol and Risk Related Trauma in Youth (PARTY) Program’ ran successfully in Whitemouth.
Healthy and Productive Staff - Strategic Priority - Workplace

“North Eastman Health Association, as a health system, is a healthy and productive environment for people to work in. Trust, confidence, safe and supportive work places, a commitment to excellence and effective service delivery characterize this environment.”

- Recruitment strategies such as a video that showcases North Eastman and offering education bursaries for nurses in return for service agreement.
- Increase education/training opportunities for staff – Cardiopulmonary Resuscitation (CPR), Advanced Cardiac Life Support, Trauma Nursing, feeding and swallowing training, Suicide Intervention Training, Critical Incident Stress Management, dementia care etc.
- Regional Ethics Committee established and Ethics Education for staff.
- Workplace Safety and Health program has developed and implemented many policies and processes to address areas of potential risk or concern for our staff.
- Hired an Occupational Health Nurse and have implemented a Disability Management Program for injured workers.
- Developed a regional resource library.

CHA PROCESS

The 2008-2009 CHA process began with a work plan developed in March 2008. The plan divided our CHA into three phases.

**CHA 2008-09 Project Phase Milestone Summary**

Milestones refer to significant events that have been accomplished toward the CHA’s completion.

**PHASE I – Project Preparation**
- Formation of CHA Steering - Committee & Terms of Reference
- Authorize the CHA Charter

**PHASE II - CHA Project Activation**

**COMMUNITY HEALTH ASSESSMENT:**
- CHA Work Plan implementation
- CHA Advisory Team Formation & Role
- CHA Awareness Strategy
- CHA Data Collection with gaps identified - Quantitative
- Qualitative data collected – Partner Interviews, Focus Groups including key informant interviews.
- Validation Survey & results

**REPORT**
- Data reviewed
- Analysis of data completed
- Report written
- Report reviewed
- Report approved
- Delivery of Report

**PHASE III - Post CHA Project**
- Promote awareness of NEHA CHA Report 2008-2009 with NEHA board, partners, public, staff.
- Revise Work Plan for use as a historical record of the process.
- Evaluate assessment process.
The following committees and work teams were formed.

- **CHA Steering Committee** - advised the process.

- **CHA Advisory Team** – selected tasks were assigned to this team in particular to assist with consultation questions and recruit focus group participants.
  - **CHA Advisory Team Working Groups**
    - District consultations including First Nation communities
    - CHA Awareness
    - CHA Review

  *Refer to Appendix A. CHA Process.*

### Community Consultations

Consultation with community members is an integral part of any CHA process. The following is a brief overview of these consultations.

**Partner Interviews**

Partner interviews were conducted by members of the CHA Advisory Team in June 2008.

The purpose of consulting with partners was to:

- review selected data to determine possible insights into the outcomes in order to determine focus group questions,
- network about possible focus group target population and provide names of tentative focus group participants,
- inform them about the current CHA.

A total of 47 single partner interviews and five partner groups were interviewed (21), a grand total of 68 people. Partners were also given the opportunity to address health issues that they felt were important to them.
Focus Groups

The focus groups had a specific theme i.e. ‘mental health and illness.’ During the information gathering process, it was found that there was a considerable ‘burden’ of mental health and illness issues arising both quantitatively and when talking with partners and NEHA staff.

There were two sets of focus groups, one for all NEHA residents in the fall of 2008 and one in the spring 2009 specifically targeting Francophones in NE. The latter focus group was provincially organized. There were a total of 86 participants. Focus groups were held in every district.

Key Informant Interviews

Key informant participants were identified by virtue of their leadership position in the community and who may have been excluded from focus groups. There was representation from all districts.

Refer to Appendix B. NEHA Community Consultation Methodology & Questions

VALIDATION SURVEY

A Validation Survey was conducted to determine if the perceptions of the public were similar to what some of the indicators were telling us. There was a focus on chronic disease indicators.

Refer to Section VI Validation Survey for details.

PUTTING EVIDENCE INTO PRACTICE

The intended use of the CHA Report is as important as its creation. The information contained in this report will help to:

• raise awareness and understanding of our community’s health status,
• guide policy, program development and prioritization of services,
• determine if the current organizational board ends are still responsive to our population’s needs,
• provide information for resource allocation decisions.

This report is a public document. Our goal is to ensure it reaches a wide audience including partners, community leaders, the public and NEHA staff.

The complete report is available on the NEHA website @ www.neha.mb.ca.

Refer to Appendix C. Acknowledgements.
REFERENCES


7. List prepared by Judy Coleman, VP Programs and Services, NEHA. April 2008.

8. NEHA Annual Report 2008-2009


This chapter highlights information that will be helpful when reading and interpreting the indicators.

Information in this report has been collected to correspond with the geographical boundaries of North Eastman (NE) region and health districts. Information, where available, is provided at the district level to reflect the diversity of NE region.

An **EXECUTIVE SUMMARY** accompanies the report and is meant to preview the main points of the report in a nontechnical way.¹

The **TABLE OF CONTENTS** provides details of the report contents. Each Section is numbered separately e.g. Section 4 -3 refers to page 3 within Section 4.

There are eight **REPORT SECTIONS** and an **APPENDIX**.

**Section I** – Introduces reader to the report, purpose, NEHA responses to previous CHA, CHA process, primary sources of information, and pointers on how to use the report.

**Sections II to V** reflects major health dimensions based on Manitoba Health and Healthy Living’s CHA Indicator Framework and the determinants of health. Each section or chapter follows the same format:

◊ **Begins with a preamble** that introduces the reader to the section and/or chapter. This provides the reader with some background information and an explanation as to why the indicator is important to the population’s health status. Abbreviations are spelled out initially within all sections or chapters.

◊ **Indicators** follow next and are “…single measure[s] that captures a key dimension of health...”² characteristics of a population.

Indicators may be formatted as tables or figures and numbered separately within each section or chapter. The first number represents the section, the second number if present would represent the chapter number and the last number would represent the table or figure number. For example a table located in Section IV Chapter 4 would be numbered Table 4-4-3 or a figure located in Section V would be numbered Figure 5-9. Definitions may accompany the table or figure. More complete definitions are found in **Appendix D. Acronyms and Definitions**.
When Information is used from Manitoba Centre for Health Policy (MCHP) reports, we use the same legend and definitions in our table and figures.3

1 = indicates that in the first time period, the areas rates were statistically different from Manitoba average.

2 = indicates that in the second time period, the areas rates were statistically different from Manitoba average.

t = indicates that for that area, the change in rates from time period one to time period two was significant.

s = indicates that the results were suppressed due to small numbers.

Results less than 6 are suppressed.

The following legend is used when looking at mortality rates for those with and without a particular disease.4

y = area’s rate for those with [a particular disease] was statistically different from Manitoba’s average with the disease.

n = area’s rate for those without [a particular disease] was statistically different from Manitoba average without [a particular disease].

d = the difference between groups is statistically significant for that area.

s = indicates suppressed rates due to small numbers.

Beside each table and figure there is a brief narrative. Where available information is described at the provincial, regional and district level.

Information from focus groups, partner interviews and a validation survey may also be included either with the indicator or in the discussion.

Refer to Appendix E. Indicator Location and Definitions

◊ Section or Chapter Discussion pulls together indicator results with the evidence from the literature. The literature provides background to assist with the understanding of the information.

◊ Section or Chapter Summary – this pulls the information together. The reader is encouraged to return to the section contents for details.

◊ Picture credits – The person taking the picture is acknowledged as well as the location and date. The person submitting the picture was asked to ensure that permission was obtained if it included people.

◊ References

Section VI Validation Survey – A Validation survey was conducted to determine if the perceptions of the public were similar to what some of the indicators were telling us. There was a focus on chronic disease indicators.
Section VII lists the report’s ‘Key Findings’ as a quick review of the results on the health status of NE residents.


APPENDICES
A. CHA Process
B. Community Consultations- Methodology and Questions
C. Acknowledgments
D. Acronyms & Definitions
E. Indicator Location and Definitions
F. Validation Survey Results

WHEN REVIEWING THE INDICATORS

- Comparing indicator information from a variety of sources must be done with caution.

- Many indicators are age and/or sex adjusted to the Manitoba population so that the indicator can be fairly compared between RHAs and districts with different population composition.5

- North Eastman (NE) region is diverse. Information at the district level may look very different from the Manitoba or North Eastman average.

- Prevalence refers to people with a particular disease whereas incidence refers to ‘new’ cases of the disease being reported on.

- Dates, rates, targeted populations may vary as well as time periods for each indicator. Each indicator needs to be looked at independently and within the context of other supporting information.

- ‘Mid’ geographical area refers to Parkland, Interlake and North Eastman.

- Significant is a term used to let you know that the findings are not due to chance. Statistical significant testing is done to determine how much confidence to put in the rates. If the difference is statistically significant then the change is large enough to be confident that it is not just due to chance. Findings that are not statistically significant are also important, but the results may be due to fluctuations in numbers or small populations.6

- Time period (s) refer to the time described within the indicator. Often there are two time periods referred to as the ‘first’ or ‘former’ time period and the more current time period referred to as the ‘latter’ time period.
“Crude rates or ‘numbers’ of events are “…useful in providing a realistic assessment of the disease burden for the population in a given region, which may inform health care planning.”7

‘Other Reports’ refers to other information on the same subject as the indicator being discussed. It offers another perspective e.g. a different target group, or time frame or a slight change in the definition of the measurement.

‘NEHA stories’ are inserted inside a ‘box’ throughout the report to provide insight on what is happening from an operational perspective.

Any changes to source documents after November 16, 2009 have not been included.

LIST OF PRIMARY INDICATOR SOURCES

This is not a comprehensive list, but the most frequently used data sources. It outlines some background information and important points to keep in mind as the reader reviews any indicators that use these sources. The reader is asked to go to the original report for complete details.

Fransoo, R. et al. (2009) Manitoba (MB) RHA Indicators Atlas. Manitoba Centre for Health Policy (MCHP). September. There are 105 indicators that look at information from the province, region and district levels.

- Disease prevalence (who has the disease) is based on “…virtually every person living in Manitoba…reflects where people live, not where they received services.”8

- Income quintile data is …based on the average household income of the small census area... [in] Urban (Winnipeg and Brandon) and Rural areas.”9

- Diseases are reported by who gets ‘treated’ therefore relies on various billing or coding reports for example physician claims billing or hospital coding abstracts.10

The cancer mortality statistics may be underestimated as only the first cause of
death is reported to CancerCare Manitoba. Data from CancerCare Manitoba was combined because of small numbers and reported as: Northern Manitoba, Mid/central Manitoba (North Eastman, Interlake and Parkland) and South Manitoba.11

MHHL ensured that data from the 2001 & 2006 Census Data from Statistics Canada, matches our geographic boundaries.12

North Eastman Health Association Inc. (NEHA) Internal Data
Information comes from financial reports and program / service strategic or operational indicators.


The cycles are combined, but not all of the same cycles are combined in all indicators.

The data is based on surveys conducted by Statistics Canada of a “…sample of Manitobans selected to be representative of the provincial community-dwelling population, but excluded residents living in First Nation communities.” 13

This report discusses various health indicators and provides policy implications.


Sixty-three percent of students in Grades 6-12 participated in the survey in June 2007 from nineteen NE schools. Their age span was from 11 to 18 years.

Of these students, 49% were female and 50% male (1% did not indicate gender). Nineteen schools out of approximately 22 schools14 were represented and were: Anola School, Berens River School, Centennial School, École Dugald School, École St. Georges, Edward Schreyer School, F.W Gilbert School, Gillis School, Grafton Colony School, Heartland Colony School, Pinawa Secondary School, Powerview School, Reynolds Elementary, San Antonio School (Bissett), Springfield Collegiate, Springfield Middle School, Wanipigow School, Whiteshell Colony School, and Whitemouth School.15
The information from MIMS is derived from four provider sources: public health nurse (off reserve), physician, First Nation / Tribal Council (all providers on reserve) and all other providers e.g. facilities', primary care providers, pharmacies and other unknown sources. The data is linked to the MHHL Registry to determine the client’s region of residence.

**MHHL. Healthy Child Manitoba. School Readiness Using Early Development Instrument (EDI) 2005/06 & 2006/07**

All children enrolled in a classroom are assessed for school readiness using the Early Development Instrument (EDI). Those excluded are children with too few responses or with special needs.

The EDI Tool measures child readiness for school in five domains:

- Physical health and wellbeing
- Social competence
- Emotional maturity
- Language and cognitive development
- Communication and general knowledge

**In Motion Research Committee (2007) – in motion Survey. The Health, Leisure & Human Performance Research Institute-University of Manitoba February 6.**

Survey measures day-to-day activities such as household chores, yard, or shopping while the CCHSC survey does not. In NE there were 406 completed adult surveys. Rural Manitoba is described as ‘outside of Winnipeg’ or ‘Manitoba health regions’.

**Limitations - Adult**

- Respondents may have had the tendency to over-estimate their activity levels or perceived intensity.
- Those respondents who declined being surveyed may have been less physically active.
- The time of the survey might have influenced the amount of physical activity for example in the spring there might be increased activity such as yard work, cycling, walking compared to winter.


**Canadian Alliance on Mental Illness and Mental Health (2007) Mental Health Literacy in Canada: Phase One Report Mental Health Literacy Project. May.**

This survey’s purpose was to “…investigate the knowledge, beliefs and understanding that Canadians have about mental illness and mental health...”

This is a self-reported study looking at substance use in school-aged youth, impaired driving prevalence and attitudes to substance use and abuse conducted in the fall of 2007.

Limitation
- A higher proportion of schools declined participation in this study compared to the one done in 2004.


The Public Health Program aims to screen all families with newborns for 39 risk factors associated with poor child outcomes using the Families First Screening Form. 18 The results of the screen help to identify children and families at risk; directs families to appropriate resources; and tracks risk factors over time.

- Of the questions asked, there was considerable variability as to answer what question. Some questions for example on domestic violence the “Public health nurses are instructed not to ask about partner violence when both partners are present.” 19


The data set was obtained from: M. Calden, Information Officer, Manitoba East District. It is for the calendar year and is reported by detachment offices.

Limitations
- Detachment office boundaries do not follow our health district boundaries, so there may be under or over reporting.

- The figures used in this report are reported cases to the RCMP. This does not mean that for all the reported cases there was a person charged with the offense. Similarly some of the persons charged with the offense may have been cleared.

- Unlike most sources used, RCMP crime stat reports the case offense and number. The person related to the event may or may not be a person who lives in NE region.

- Crude numbers were used and this might be affected by a detachment population e.g. an influx of summer visitors or one detachment may have higher or lower populations compared with another.
COMMUNITY CONSULTATIONS

Partner Interviews, Focus Groups, Key informant interviews

Community consultation results may be located with the indicator or in the discussion area of the section or chapter. An icon is used to alert the reader to this information as shown above. Refer to Appendix B. Community Consultation Methodology & Questions

DETERMINANTS OF HEALTH

The ‘determinants of health’ include a wide range of personal, social, economic and environmental factors that influence the health status of individuals and communities. If a particular determinant of health is the focus of a section or chapter, it will be defined by the following illustration:

If there are any questions please call NEHA’s Corporate Office in Pinawa you will be directed to the appropriate person:

1-204-753-2012
Toll Free- 1-877-753-2012
REFERENCES

14 Email from D. Viel, Director PHC to S. Dick November 20, 2009 Entitled: youth survey re: wording question for clarification.
Section II

NORTH EASTMAN GEOGRAPHY & POPULATION CHARACTERISTICS
This section discusses North Eastman’s (NE’s) geographic boundaries and highlights some geographical and population attributes. Understanding characteristics of our population assists us in anticipating our program and service needs as our population changes.

**GEOGRAPHY**

“The [NE] Region…extends east to the Ontario border, north to the 53rd parallel, west to Lake Winnipeg and the Rural Municipality of St. Clements, and south slightly beyond the Trans-Canada Highway. The population…more than doubles in the summer with vacationers and cottage owners enjoying the Whiteshell, Nopiming and Atikaki Provincial Parks and resort communities.

Approximately, one-third of the Region is accessible only by air, water or a winter road system. This area is home to the large Aboriginal population of North Eastman. The districts of Springfield and Brokenhead enjoy a close proximity to the City of Winnipeg and residents of these communities can easily commute to the city for employment.”

Diagram 2-1 North Eastman Health Districts

“The economy of the Region is diverse and includes farming, mining, forestry, and hydroelectric power. Recreation and tourism have a significant role in the economy with a highly developed network of seasonal recreational activities including snowmobiling and boating. There are a large number of seasonal and all-season cottages. The tourism and recreational activity has a direct impact on the demand for health care services in the Region.”

“There is significant diversity across the Region both in terms of economic status and culture.”

North Eastman is divided into six health districts. These health districts include: Iron Rose, Springfield, Winnipeg River, Brokenhead, Blue Water and Northern Remote.
NE’s general population makes up 3.4% of Manitoba’s total population. This proportion has not changed since the last CHA in 2003. In June 2008 there were a total of 40,994 people living within the geographical boundaries of NE, compared with 39,644 persons in June 2003: an increase of 1,350. All districts experienced a slight increase in population except for Iron Rose.

Table 2-1 Communities Within North Eastman Region’s Health Districts

<table>
<thead>
<tr>
<th>WINNIPEG RIVER</th>
<th>BROKENHEAD</th>
<th>SPRINGFIELD</th>
<th>IRON ROSE</th>
<th>BLUE WATER</th>
<th>NORTHERN REMOTE</th>
</tr>
</thead>
</table>

Source for Population Districts:

Sources for communities:
- Penny Brown – June 27, 2003 – for MUNICIPAL numbers & postal codes shown in brackets or caps.
The greatest increases appear to be occurring in the 45+ age group for both males and females.

Table 2-2 NE Population Age Categories

<table>
<thead>
<tr>
<th>NE Age Categories</th>
<th>0-19</th>
<th>20-64</th>
<th>65-75+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>11,361</td>
<td>23,944</td>
<td>5,689</td>
<td>40,994</td>
</tr>
<tr>
<td>Percent of total population 2008</td>
<td>27.7%</td>
<td>58.4%</td>
<td>13.8%</td>
<td>100%</td>
</tr>
<tr>
<td>2003</td>
<td>11,649</td>
<td>22,980</td>
<td>5,015</td>
<td>39,644</td>
</tr>
<tr>
<td>Percent of total population 2003</td>
<td>29.4%</td>
<td>57.9%</td>
<td>12.7%</td>
<td>100%</td>
</tr>
<tr>
<td>Numerical Change from 2003 &amp; 2008</td>
<td>288 decrease</td>
<td>964 increase</td>
<td>674 increase</td>
<td>1,350</td>
</tr>
<tr>
<td>Percent of rate change within age categories and total rate percent change</td>
<td>-5.78%</td>
<td>+0.86%</td>
<td>+8.7%</td>
<td>+3.4%</td>
</tr>
</tbody>
</table>


In the five year period between Community Health Assessments (CHAs), the rate of change between 2003 and 2008 population was 5.78% decrease in young people aged 0-19 years, a slight increase of 0.86% in people between 20-64 years and a larger increase of 8.6% in the over 65 year group. NE experienced a positive growth between 2003 and 2008 of 3.4%.

\[0-19 = 27.7\% - 29.4\% = -1.7\% \text{ (subtract)} 0.0578 \times 100 = -5.78\%; \quad 20-64 = 58.4\% - 57.9\% = 0.5\% / 57.9\% = 0.0086 \times 100 = +0.86\%; \quad 65-75+ = 12.7\% - 13.8\% = 1.1\% / 12.7\% = 0.0086 \times 100 = +8.7\%; \quad \text{total} = 39.644 - 40.994 = -1,350 / 39.644 \times 100 = +3.4\%\]
Diagram 2-2 NE Population Variance from June 2003 to June 2008

The increase in population by age is illustrated in this diagram, especially evident in the older population.

Figure 2-2 NE Population Numbers by District and Age Category 2008

In 2008 in NE there were 20,842 males and 20,152 females.

Springfield has the largest population compared with our other health districts in all age categories, followed by Blue Water and Brokenhead.

Springfield, Blue Water and Brokenhead respectively had the highest number of 0-19 year olds.

Winnipeg River, followed by Springfield, and Brokenhead had the highest 65+ population.
As a percent of the districts total population:

Northern Remote has the largest percent (48%) in the 0-19 age group followed by Blue Water (32%) and Springfield (27%).

Springfield has the highest percent of residents (62%) within the 20-64 age group followed by Brokenhead (60%), Iron Rose and Winnipeg River at 58%.

Persons over 65 years make up 13.9% of NE population in 2008. Winnipeg River has the highest percent of 65+ (24%) followed by Iron Rose (17%) and Brokenhead (16%). Northern Remote has the least number of seniors (4%).

Aboriginal Population

Aboriginal people are defined as “Those persons who reported identifying with at least one Aboriginal group e.g. (North American Indian, Métis or Inuit) and/or who reported being a Treaty Indian or a Registered Indian and/or those who were members of an Indian Band or First Nation”.

Aboriginal population counts vary depending upon the source used. For this report and for consistency, self reported census information was used to identify Aboriginal populations.
Figure 2-4 Aboriginal Population

NE has a higher proportion of Aboriginal people compared with Manitoba overall at 25%. The majority of Aboriginal people reside in Northern Remote followed by Blue Water. The Aboriginal population was stable for the two time periods. Northern Remote had the largest decrease of 6%.

The proportion of Aboriginal people who identified themselves as such within Manitoba regional health authorities (RHA’s) varied from the northern regions: Burntwood (76%), Churchill (56%) and NOR-MAN (50%) to as low as Brandon and South Eastman at 9% during the 2006 census. ⁹

Francophone Population

In Manitoba, “…over 46,000 speak French as their mother tongue and nearly 104,000 Manitobans (9%) are bilingual. Two-thirds of Franco-Manitobans live in the city of Winnipeg, while the other third live in rural villages or municipalities. In rural Manitoba, the majority of Francophone’s live in villages and parishes founded by Francophones.” ¹⁰

Table 2-3 Francophones in NE & Manitoba

<table>
<thead>
<tr>
<th>Location</th>
<th>Number (n) with French as a Mother Tongue *</th>
<th>Percentage (%) of Provincial Total</th>
<th>Number (n) Bilingual**</th>
<th>Percentage (%) of Provincial Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>1,355</td>
<td>2.9%</td>
<td>3,130</td>
<td>3.0%</td>
</tr>
<tr>
<td>Manitoba</td>
<td>46,585</td>
<td>100.0%</td>
<td>103,525</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

* This group includes people who indicated speaking only French and those who indicated speaking English and French.
** Bilingual individuals are those who know both official languages, i.e., English and French.

Languages Spoken Most Often at Home 2001 & 2006 Census

During 2001 (88%) and 2006 (92%), English was the official language spoken most often in the homes of NE residents, followed by French at 1%. There was also a 1% increase in French language spoken in Iron Rose in 2006.

In NE in 2006, 6% of the population identified speaking a non-official language at home. Non-official languages spoken in the home increased in all locations except in Brokenhead where there was no change. Northern Remote reported 26% of residents speaking a non official language in 2001 and by 2006 this increased to 32%.

Those who indicated speaking a non-official language in the home increased from 1% in 2001 to 4% in 2006. A possible explanation for the increase in non-official languages is the migration of new immigrants to some districts. NEHA staff have observed an influx of German migrants to Springfield.

Population Projections

Diagram 2-3 Projected Population for NE 2006-2036

It is anticipated that over the next 30 years, for both males and females there will be an

- increase in:
  - 0-51 year olds
  - 65 to 90+ year olds

- decrease in:
  - 55-64 year olds

The largest increase is expected to occur in the 70+ age group.
Population growth is determined by natural increase (difference between birth and death) and net migration. The projected growth in NE is largely attributed to net migration rather than by natural increase.

**Geographic Attributes**

Table 2-4 Urban Population

<table>
<thead>
<tr>
<th>Urban/Rural Proportion</th>
<th>1996 Census</th>
<th>2001 Census</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Urban</td>
<td>Rural</td>
</tr>
<tr>
<td>Canada</td>
<td>77.9%</td>
<td>22.1%</td>
</tr>
<tr>
<td>Manitoba</td>
<td>71.8%</td>
<td>28.2%</td>
</tr>
<tr>
<td>North Eastman</td>
<td>14.5%</td>
<td>85.5%</td>
</tr>
</tbody>
</table>

Definition: This is the percentage of population living in an urban area defined as a minimum of 1,000 population with a density of 400 people per square kilometre. This allows researchers to compare regions with similar proportions of urban/rural characteristics.  


There appears to have been a slight increase in NE’s urban population in 2001. NE had the lowest percentage of urban dwellers compared with other regional health authorities excluding Churchill during 2001. NE had the lowest percentage of urban dwellers compared with other regional health authorities excluding Churchill during 2001.

There was no 2006 census data for this indicator.

**Population Density**

Population density measures the number of people per square kilometre using the formula: the total population divided by the land area (km²). In 2006, Springfield had the most people per square kilometre, compared with our other health districts. Northern Remote and Iron Rose had the least number of people per square kilometre.
Population Attributes

Table 2-5 Internal Migrant Mobility for 1996, 2001, 2006

<table>
<thead>
<tr>
<th>Location</th>
<th>1 year before the time of the census</th>
<th>5 years before the time of the census</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manitoba</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>North Eastman</td>
<td>6%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Definition: Percentage of population that lived in a different Canadian municipality.


There appears to be little movement of people between different municipalities either within Manitoba or within NE during the time periods described.

Figure 2-5 Internal / External Migration 2001 & 2006

There was a slight increase in internal migration of people from other census regions in Canada in all the health districts between 2001 and 2006.

There was little to no external migration movement in NE between the two time periods. This is expected to change as noted in the population projection discussions earlier.
Figure 2-6 Lone Parent Families

NE had fewer lone parent families compared with Manitoba.

Northern Remote, followed by Blue Water had the highest percentage of lone parent families compared to our other health districts and Manitoba.

Figure 2-7 Dependency Ratio

Dependency ratios declined for both North Eastman and Manitoba for the three census years reviewed. In 2006 NE’s dependency ratio was slightly higher than Manitoba.

There was an increase in this ratio in Winnipeg River and Blue Water health districts. Although Northern Remote’s dependency ratio decreased it was higher than our other health districts.

Springfield had the lowest dependency ratio compared with our other health districts for all three years.

When we look at the labour force participation rate during the 2006 census Northern Remote had the lowest labour force participation rate for both males (54%) and females (45%). Conversely Springfield had the highest 79% (males) and 69% (females) followed by Brokenhead at 71% (males) and 56% (females) and Iron Rose 69% (males) and 65% (females).17

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17 Number of ‘Families’ from living arrangement census data 2006 & number of lone parent families from lone parent data 2006. MHHL. RHA Profile Document June 2009. There was no equivalent 2001 information to compare.
The changes that are occurring to our population are not unique to North Eastman. Population changes, particularly increases, affect consumption of natural resources and contribute to pollution. In NE these particular effects are modified by the low density of our population. Effects associated with dependency, for example, are more profound. This affects the sustainability of government supported programs such as health care.

NE covers a large geographic area with population density classified as ‘rural’ and this classification is not anticipated to change. This has implications on access to services, for example, determining the best location for new capital projects, response times by our emergency medical services or resource allocation. Refer to Section V Health Care System for detailed discussion on health indicators.

Population projections, although useful for planning, require close monitoring for accuracy. NE is projecting an increase in the younger and older populations. Canada’s population shows a similar trend to NE, i.e. a slow growth in population, primarily due to immigration rather than a natural increase.

In NE, between 2003 and 2008 we have seen a population growth of 8.7% in the 65 years and older age group.

During the 2006 census, the dependency ratio decreased in NE and all health districts except for Winnipeg River and Blue Water. Northern Remote had the highest dependency ratio of all our health districts, and is showing a decline. The dependency ratio is an important indicator as it predicts populations with high dependencies either in the young (0-14 years) or elderly (65+ years). Higher dependency ratios may place an undue burden socially and/or economically on those who are working and inadvertently put additional demands on health services. People who are working contribute to the gross domestic product (GDP) and in turn the GDP supports many Canadian public services such as pensions and health services. As the population ages, there will be fewer people working, creating a higher dependency ratio, less people working to contribute to GDP, with the potential for society being unable to sustain public services as we know them today.

With a growing older population projected and a decrease in those working, there may be implications in sustaining the type of health services we provide today. The challenge will be to determine the most effective way to provide care that meets the needs of our population. In Canada, discussions are being held on how to mitigate the effects of demographic changes, in particular an increasing age dependent population.
Poverty has the potential to negatively affect people no matter their background, occupation, or ethnic origins. Throughout this report, we have highlighted many illnesses and other determinants of health that are known to be negatively affected by low income.

Poverty is recognized as a major result of lone parent or one parent families (OPFs) in fact “…over half of women who bear children alone, not only create poverty (as do their children’s father), but come from poverty…Poverty, discrimination, segregation and lack of supportive social policies that would help the working poor are the structural or systemic causes of OPF…” In NE, we see that Northern Remote (8.7%) and Blue Water (7.9%) had the highest percent of lone parent families compared to our other health districts and was higher than the Manitoba average.

Refer to the discussion on teen births and OPF’s, Section IV Chapter 5.

During 2006 census it was reported that of all lone parent families in NE, 75% compared to 81% in Manitoba, were led by females. These percentages were similar to the 2001 census.

A 2006 Public Health Agency of Canada study “…found that single parents or those who were unattached were more likely than those who were with a partner or spouse to report fair or poor mental health.”

Populations are constantly changing due to in and out migration and for this reason it is important to track not only language trends, but other cultural changes occurring in our region to ensure we are sensitive to the changing needs of our clients. The NE census data 2001 and 2006 did not demonstrate a lot of movement in this area.

Culture and language is the foundation of any ethnic group and has an impact on our ability to understand the context by which people make decisions and how one shares and communicates information.

Language Services in NEHA

NEHA strives to communicate to our clients where they can access multi-lingual services, for example, translators are currently available who speak several Aboriginal dialects, French and German.

It is projected by 2017 that “…one in five Canadians will be a visible minority…increasingly, Canadian immigrants are from Asian and Middle Eastern Countries; however, Chinese and South Asian immigrants remain the largest minority groups.” Net migration is projected to drive increases in population within NE.
SECTION SUMMARY

North Eastman’s (NE) population has grown from 39,644 in 2003 to 40,994 in 2008; a 3.4% increase. The projected growth in population will be from net migration.

The number of children 0-19 years has decreased. Similar to trends in other areas of Canada, and Manitoba, there was an increase in residents over 65 years. Springfield, Blue Water and Brokenhead districts had the largest number of people in all age groups. Winnipeg River, Springfield and Brokenhead had the highest number of residents 65 years and over. Northern Remote had the largest percent of their population in the 0-19 age range. The Aboriginal population has not changed between 2001 and 2006. Northern Remote (91%) and Blue Water (58%) had the highest number of Aboriginal people in 2006.

Most people spoke English in the home. Six percent of the population spoke a non-official language at home; this increased between 2001 and 2006. The dependency ratio decreased slightly. This is an important measure, as higher dependency ratios may place an undue burden socially or economically on those who are working. There were fewer lone parent families in NE compared with Manitoba. Northern Remote and Blue Water had the highest percent of lone parent families. Some lone parents have been identified as having added pressures in the area of poverty and as lacking social support networks.
REFERENCES

Section III

POPULATION HEALTH STATUS
This section will report on the following broad areas of health status.

### HEALTH STATUS

<table>
<thead>
<tr>
<th>Functional Status</th>
<th>Well-Being</th>
<th>Health Conditions</th>
<th>Deaths Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Levels of human function are associated with the consequences of diseases, disorder, injury and other health conditions. They include body function/structure (impairment), activities (activity limitations), and participation (restrictions in participation. International Classification of Functioning and Disability (ICIDH-2, Beta 2 Version).</em></td>
<td><em>Broad measures of the physical, mental and social well-being of individuals.</em></td>
<td><em>Alterations or attributes of the health status of an individual which may lead to distress, interference with daily activities, or contact with health services; it may be a disease (acute or chronic), disorder, injury or trauma, or reflect other health related states such as pregnancy, aging, stress, congenital anomaly, or genetic predisposition. (World Health Organization (WHO)).</em></td>
<td><em>A range of age-specific and condition specific mortality rates, as well as derived indicators e.g. life expectancy and potential years of life lost.</em></td>
</tr>
</tbody>
</table>

Illnesses of any kind may lead to distress, interference with daily activities, and bring a person or family into contact with health care services. The determinants of health often influence disease trajectories and affect how we manage chronic health conditions. For example, there is a myriad of evidence that poor social and economic circumstances affect health throughout life and “…in some circumstances genetic endowment appears to predispose certain individuals to particular disease or health problems.” Although there may be a genetic predisposition to disease that we cannot change, many chronic diseases we know can be controlled with diet, exercise, nutrition, stress modification, medication and regular monitoring.

“In the next 10-15 years, the loss of health and life in every region of the world…will be greater from non-communicable or chronic diseases, such as heart disease, cancer, and diabetes, than from infectious and parasitic diseases.” In the 60 year and over age group, the global burden of non-communicable disease represents over 87% in all countries irrespective of their income levels. As life expectancy rises the question we want to ask is “Are we living healthier as well as longer lives…?”

“Mental health and physical health are fundamentally linked. People living with a serious mental illness are at higher risk for experiencing a wide range of chronic physical conditions. Conversely, people living with chronic physical health conditions experience depression and anxiety at twice the rate of the general population.” We know that “…people living with mental illnesses often face higher rates of poverty, unemployment, lack of stable housing and social isolation…” contributing to their vulnerability of developing chronic illnesses.

Both adult and child health conditions are reviewed in this section.
**FUNCTIONAL STATUS**

Health status of the population is not only measured by a diagnosis of an illness, but how a person feels e.g. an individual may have a chronic illness, but it is well controlled and they are able to function normally i.e. able to work, do various activities that other people their age are able to do who may not have an illness. Functional health is a good predictor of residents who may have ongoing health care needs.

Figure 3-1 Self Rated Health

In NE, 58.3% of residents felt that they were in excellent or very good health. Similar rates were found in Manitoba residents overall (60.7%).

Within the districts there were some variations. Health districts reporting their health status as excellent or very good in order of highest to lowest: Springfield (62%), Winnipeg River (58.5%), Brokenhead (54.3%), Iron Rose (53%) and Blue Water (49.5%).

Figure 3-2 Functional Physical Health from Physical Functioning Scale

Functional status captures eight dimensions of functioning in the population over 12 years: vision, hearing, speech, mobility, dexterity, feelings, cognition and pain. This graph looks at the percentage of residents who received a 100% score in eight dimensions.

North Eastman’s score was slightly lower than Manitoba’s.

Iron Rose had the highest score, and Blue Water scored the least.
DEATHS (Mortality)

Table 3-1 Life Expectancy – Females & Males 1996-2000 & 2001-2005

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Rose</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Springfield</td>
<td>83.9</td>
<td>79.0</td>
<td>83.3</td>
<td>79.4</td>
</tr>
<tr>
<td>Winnipeg River</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brokenhead</td>
<td>77.6</td>
<td>74.3</td>
<td>83.4</td>
<td>74.6</td>
</tr>
<tr>
<td>Blue Water</td>
<td>78.2</td>
<td>74.6</td>
<td>79.4</td>
<td>76.1</td>
</tr>
<tr>
<td>Northern Remote</td>
<td>69.8</td>
<td>61.7</td>
<td>67.3</td>
<td>63.9</td>
</tr>
<tr>
<td>North Eastman</td>
<td>79.7</td>
<td>75.0</td>
<td>81.3</td>
<td>75.4</td>
</tr>
<tr>
<td>Manitoba</td>
<td>81.0</td>
<td>75.6</td>
<td>81.5</td>
<td>76.3</td>
</tr>
</tbody>
</table>

Source: Fransoo, R. et al (2009) Figure 3.5.1 & 3.5.2 & 3.6.1 & 3.6.2. Manitoba RHA Indicators Atlas, Manitoba Centre for Health Policy.

Life expectancy significantly increased for females in NE and Manitoba. There was a slight increase for males in NE and in Manitoba.

Springfield residents had significantly higher life expectancy than Manitoba. Northern Remote males not only had the lowest life expectancy than Manitoba, NE and our health districts, but also had the highest premature mortality rates (PMR). There was a strong relationship for both rural and urban Manitobans showing that life expectancy was shorter for residents living in lower income areas.

Figure 3-3 Premature Mortality Rate (PMR)

In Manitoba there was a decline in PMR. North Eastman saw a significant drop in PMR during the second time period.

All our health districts saw a drop in PMR except for Northern Remote which increased, but not significantly. Northern Remote had a significantly higher PMR than Manitoba.

Springfield had a significantly lower PMR when compared with Manitoba for both time periods. Blue Water had the second highest PMR compared with our other Health districts in NE.
Cancer, circulatory diseases and injuries were the leading causes for premature death between 2001-2005 for both the mid geographical area (NE, Interlake and Parkland) and Manitoba.

There was no regional or district data.

NE’s PYLL appears to be higher than Manitoba’s rate, but was not significant.

Northern Remote’s PYLL was significantly higher than Manitoba for both time periods.

Northern Remote followed by Blue Water had the highest PYLL rate compared with other NE districts.
Cancer, circulatory diseases and injuries were the leading cause of PYLL for both males and females in Manitoba.

In NE leading causes varied:

- **Males** - injury, suicide, circulatory and cancers. All disease categories except for respiratory was higher in NE than Manitoba.

- **Females** - cancer, injury, suicide and circulatory diseases. All causes were higher than Manitoba except for respiratory (lower) and circulatory (similar).

In North Eastman:

**Circulatory diseases** were the leading cause of all deaths in males and females and appear to be decreasing.

**Cancer** deaths were the second leading cause of death. Rates were similar for both males and females and remained consistent over the 3 five year periods.
**External causes** (includes injuries, poisoning and certain other consequences of external causes \(^{15}\)) were the third leading cause of death for all time periods. Males experienced a higher percentage of injuries, compared with females.

**Endocrine / nutritional** deaths increased during the last time period for both males and females. Diabetes is included in this category.

**Respiratory** – Males and females had similar rates; however the percentage difference between males and females decreased during the latter time period.

**All other causes** - females had a higher percentage of deaths than males in this category for all time periods.

### HEALTH CONDITIONS

#### Cancer

**Cancer Morbidity (Illnesses)**

Figure 3-8 All Cancer Prevalence (with disease) 2000-2005

Cancer appears to be increasing slightly for both males and females in Manitoba and NE between 2000 and 2005. The only exception was a slight decrease in prevalence for NE males during 2005. NE males appear to have higher cancer prevalence than Manitoba except for 2004 and 2005. It was difficult to identify a trend due to the variability between male and female cancer prevalence.

Cancer prevalence is an important measure of the cost of cancer to individuals, families and the health care system overall. Cancer survivors require careful monitoring for many years.\(^{16}\) Historically, cancer rates were lower among First Nation women in Manitoba, but now First Nations women are close to that of other Manitoba women.\(^{17}\)
When all cancers were aggregated, new cancer rates in NE were similar to Manitoba rates.

NE and Manitoba males had higher cancer incidence rates for both time periods compared with females.

In NE, breast and cervical cancers appear to be increasing.

Prostate cancer appears to be declining.

Prostate cancer for males and breast cancer for females were the two leading causes of cancers in NE.
In North Eastman:

- Colorectal cancer in both males and females had decreased.
- Melanoma had decreased in males but appears to be increasing in females, surpassing the Manitoba rate.
- Lung cancer increased in males and had not changed in females, in the latter time period.

Pinawa Community Cancer Program Survey

Cancer clients attending the Pinawa Community Cancer Clinic in July 2008 were asked to fill out a survey. Five surveys were returned. Feedback as follows:

- “The services we are receiving at Pinawa Cancer Care is excellent and we very much appreciate not having to travel back and forth to Winnipeg for treatments.”
- “One of the largest assets for having this rural cancer care unit is the convenience that it provides to our community.”
- “…the mileage to Pinawa is approximately 60 kms as opposed to 225 kms to Winnipeg which is a difference of 165 kms.”
- “We are extremely lucky to have these rural units and that they are taking care of a lot of people very efficiently.”

Focus Group participants speak about the new cancer treatment centre:

- “…Pinawa ‘cancer department’ – beautiful, well needed, well accepted by the community…” (Winnipeg River).
- “Cancer care in Pinawa is a positive thing for the area and the people.” (Iron Rose).
Cancer Mortality (Deaths)

Figure 3-13 PYLL Cancer – NE & Manitoba – Females & Males

Potential Years Life Lost - Cancer - Standardized 2002-2006

In Manitoba PYLL from cancer remained fairly consistent over the five years reviewed. There was considerable variability between males and females in NE. Males showed an increase for the first 3 years, then a variable decrease. Females showed a decline initially with a slight increase in 2006. We know that breast and cervical cancer diagnosis appears to be increasing in NE women. The good news is all cancer survival rates increased as described next.

Cancer Survival

Cancer survival addresses the ability of the health care system’s effectiveness of cancer treatment by measuring the patient’s probability of survival for selected cancers. Mid refers to the Manitoba geographical region that includes North Eastman, Parkland and Interlake. Cancer survival is measured as ‘relative survival’ i.e. compares the survival experience of individuals with cancer to individuals without. The ratio percent is the relative survival. 18

Figure 3-14 All Cancer Survival

When all cancers were combined, Manitoba and the mid geographic area survival rate increased initially then plateaued.
Breast cancer survivals increased.  Prostate cancer survival increased initially then plateaued.

Lung cancer survival follows a similar pattern for both males and females. Survival rates were below 25%, with a slight increase during 2000-2004.

Colorectal cancer survival was variable, but generally increased to almost 60% for both males and females.

Other Report:

For mid geographical area of Manitoba, cancer survival for five years 2000 - 2005:

Melanoma – For both males and females there was a survival high of 93.7% in 2000, to a low of 85.1% in 2003 to the most recent percent of 87.1% in 2005.

Cervix- There was a range of survival from 35.8% in 2000 to the highest survival yet of 69.1% in 2005.
**Arthritis**

**Arthritis Morbidity**

Figure 3-18 Arthritis Treatment Prevalence

Arthritis in NE was significantly higher than Manitoba during the latter time period.

Northern Remote and Springfield appeared to have the lowest rates of arthritis.

Blue Water was significantly higher than Manitoba for both time periods.

Arthritis rates were similar between time periods for all areas.

Figure 3-19a Knee Replacement Surgery

![Knee Replacement Rates - Adjusted - Aged 40+](image)

Both knee and hip replacements significantly increased in Manitoba overall.

In NE, **knee replacements** increased significantly in Winnipeg River and Springfield, and to a lesser degree in Iron Rose and Brokenhead. There was no change in rates in Blue Water.

**Hip replacements** increased slightly in NE and in Springfield, Winnipeg River and Iron Rose, but not significantly. Rates for both these procedures were suppressed in Northern Remote indicating low numbers.
Osteoporosis

Osteoporosis Morbidity (Illness)

Figure 3-20 Osteoporosis Treatment Prevalence

Osteoporosis cases are on the rise, possibly due to increased uptake of bone density testing due to improved awareness by physicians and clients.

NE had significantly lower rates than Manitoba. This may reflect access issues to bone density testing sites.

Blue Water, Northern Remote and Iron Rose respectively had the highest percent of osteoporosis.

The percent of people with osteoporosis may be underreported as only diagnosed cases are presented.

Osteoporosis was one of the few diseases where there wasn’t a significant relationship between income level and prevalence.²⁰

Diabetes

Diabetes Morbidity (Illness)

Figure 3-21 Diabetes Treatment Prevalence

NE had significantly higher diabetes cases compared with Manitoba.

Northern Remote significantly surpasses Manitoba as does the following health districts in order of highest prevalence: Blue Water, Brokenhead, Iron Rose and Winnipeg River.

Springfield rates increased, but had lower cases of diabetes compared with Manitoba and NE overall.
Table 3-2 Crude - Diabetes Prevalence, Adults Diagnosed with Diabetes Aged 19+ Years

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>2,051</td>
<td>2,922</td>
</tr>
<tr>
<td>Manitoba</td>
<td>56,246</td>
<td>75,017</td>
</tr>
</tbody>
</table>


The number of residents in NE with diabetes increased.

Table 3-3 Diabetes Prevalence for All Ages 1 Year and Older – 2005/06

<table>
<thead>
<tr>
<th>Location</th>
<th>Total Cases</th>
<th>Crude Rate (%)</th>
<th>Age Adjusted Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>3,017</td>
<td>7.5%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Manitoba</td>
<td>76,608</td>
<td>6.4%</td>
<td>5.5%</td>
</tr>
</tbody>
</table>


NE had higher adjusted rates of diabetes illness compared with Manitoba.

Health conditions known to be higher in people with diabetes compared to people without diabetes include: death, hospital visits due to lower limb amputations, chronic kidney diseases, circulatory system diseases, physician and hospital days.21

Table 3-4 Chronic Kidney Disease Average Rates for Residents with Diabetes - 20 Years and Older 1999/2000 to 2003/04

<table>
<thead>
<tr>
<th>Location</th>
<th>Crude Rate per 1,000</th>
<th>Age Adjusted Rate per 1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>12.3</td>
<td>6.7</td>
</tr>
<tr>
<td>Manitoba</td>
<td>14.2</td>
<td>8.0</td>
</tr>
</tbody>
</table>


NE had slightly lower rates of chronic kidney disease compared with Manitoba.
Amputation rates were significantly higher in NE, Northern Remote and Blue Water compared with Manitoba.

There appears to be an association between higher rates of amputations (due to diabetes) in less healthy areas of the province. In NE, our highest amputation rates occurred in Northern Remote and Blue Water districts.

There appears to be a decline in amputations in NE overall.

Data is limited to three districts. In Blue Water and Northern Remote there was a decline, which could indicate improved diabetes management and care.

Matching Clients Chronic Disease Treatments with Lifestyle

The staff of our Chronic Disease Prevention and Management teams strives to help people learn about their disease and support them in their quest for improved self management. Most of the clients we see have diabetes, but our program is expanding and now also includes heart health.

One example of the type of support we give to our clients is helping them incorporate new therapies into their daily schedule. The new extended long acting types of insulin closely mimic the body’s ability to provide a steady supply of insulin over a 24 hour period, resulting in consistent blood glucose levels, leading to improved well being and quality of life. This allowed us to work with one client, a long distance truck driver. By initiating the use of this type of insulin, he was able to significantly improve his blood glucose control. While on the road he continues to monitor is blood sugars.

We try and match our client’s chronic disease treatment with their work and lifestyle schedules, improving the quality of their health and wellbeing.

Comparing ‘Death Rates for People With & Without a Disease’ - This indicator looked at the population who had the disease versus people who did not within the five years reviewed; then identified the death rates for these two groups comparing ‘cumulative’ death rates from all causes. It was found that the results for all the diseases using this indicator, that the death rate was virtually higher for persons with the disease than without.

Diabetes Mortality (Deaths)

Figure 3-24 Comparing Death Rates for People With & Without Diabetes

In Manitoba, NE and our health districts people with diabetes had consistently higher death rates than those who did not have diabetes.

Of all the diseases using this indicator (hypertension, arthritis, respiratory disease, diabetes, ischemic heart disease, osteoporosis and cumulative mental disorders) diabetes showed the greatest difference i.e. double the mortality rate for those with diabetes compared with those without.

Respiratory

If the disease isn’t specified, respiratory diseases reported by Fransoo, R. et al include the following: asthma, acute bronchitis, chronic bronchitis, bronchitis not specified, emphysema, or chronic airway obstruction.

Respiratory Morbidity (Illnesses)

Figure 3-25 Respiratory Morbidity

NE’s respiratory illness rates were similar to Manitoba.

Northern Remote and Springfield rates were significantly lower than Manitoba for the second time period.

Blue Water and Springfield had a significant decrease during the latter time period.

Blue Water, followed by Brokenhead, Iron Rose and Winnipeg River were significantly higher than Manitoba overall during the second time period.

Brokenhead, Iron Rose and Winnipeg River had a significant increase during the second time period.
NE asthma prevalence appears to be similar to Manitoba for both males and females.

Comparing NE Health District rates of asthma disease:
- There appears to be similar rates in Iron Rose, Springfield and Winnipeg River for both males and females.
- There appears to be higher rates for females in Brokenhead, Blue Water and Northern Remote.
- Brokenhead had the largest number of cases.
- Blue Water appears to be showing a progressive increase.

Other Report:
The crude number of ALL asthma from April 2007 to March 31, 2009:
North Eastman = 2,531 (61.7/1,000)
Manitoba = 70,623 (58.9/1,000)

NE asthma prevalence was similar to Manitoba’s rate.

Rates increased in Brokenhead and Iron Rose. Brokenhead had the highest asthma prevalence among our health districts.

Springfield and Northern Remote rates were significantly lower than Manitoba overall during the latter time period.

Although chronic conditions are not common in children, asthma is one of the more frequent conditions. Asthma has increased dramatically in the Western world. Manitoba has not seen a significant change in asthma prevalence in children aged 5-19 years for the two time periods.
Table 3-5 Crude Number of Children Diagnosed with Asthma- Aged 5-19 Years

<table>
<thead>
<tr>
<th>Location</th>
<th>1999/2000-2000/01</th>
<th>2004/05-2005/06</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>1,230</td>
<td>1,113</td>
</tr>
<tr>
<td>Manitoba</td>
<td>34,056</td>
<td>34,269</td>
</tr>
</tbody>
</table>

Asthma diagnosis in children in NE appears to be declining.

In rural Manitoba, asthma prevalence for children living in higher income areas was higher than for children living in lower income areas.\(^{28}\)

**Respiratory Mortality (Deaths)**

Figure 3-29 Potential Years of Life Lost – Respiratory

Manitoba rates were consistently higher for both males and females compared with NE; with the exception of NE females having surpassed Manitoba females during 2003.

By 2006 female rates were the same at 1.2 per 1,000 in NE and Manitoba however unlike Manitoba, NE female PYLL showed an increase between 2005 and 2006.

Figure 3-30 Death Rates for People with & without Total Respiratory Morbidity (TRM)

In Manitoba, NE and our health districts people with respiratory illnesses had consistently higher death rates than those who did not have a respiratory disease.

The difference in mortality between the two groups was significant in Winnipeg River and Blue Water.
Circulatory

Circulatory Morbidity (Illnesses)

Figure 3-31 Hypertension Treatment Prevalence

Hypertension appears to have increased in Manitoba, NE, and in all health districts.

Northern Remote, Blue Water and Brokenhead respectively have the highest hypertension treatment prevalence for 2005/06.

Figure 3-32 Acute Myocardial Infarction (AMI) Rates- Death or Hospitalization

Provincially and in NE there was a significant decrease in AMI deaths and hospitalizations during the latter time period.

Our health districts changed little or declined between time periods. A significant decline was observed in Blue Water.

During the latter time period, Winnipeg River and Northern Remote had the lowest rate of deaths and hospitalizations due to AMI. Iron Rose increased slightly, having the highest rate of AMI compared to our other health districts followed by Blue Water, Springfield and Brokenhead.

Source: Fransoo, R. et al (2009) Figure 4.7.1 & 4.7.2 MB:RHA Indicators Atlas 2009, MCHP.
Figure 3-33 Acute Myocardial Infarction (AMI) Patients Receiving Beta-Blockers

There is strong evidence (unless medically contraindicated) to support beta blockers being prescribed at discharge as a component of AMI Care. 29

Manitoba and NE had similar rates as well as significant increases in physicians ordering beta-blockers within 4 months of an AMI event.

All districts experienced increases in the use of beta-blockers with a significant increase observed in Brokenhead and Winnipeg River.

Figure 3-34 Patients Receiving Beta Blockers at Discharge – NEHA Acute Care Facilities May 2006 to January 2008

For all patients who met the criteria for beta blocker prescriptions on discharge:

- Beausejour Hospital had all patients discharged on beta blockers. Beausejour Hospital had implemented the beta blocker prescription at discharge before joining the ‘Safer Healthcare Now’ initiative.

- Pine Falls Hospital had an increase in beta blocker prescriptions.

- Pinawa Hospital had a decrease in beta blocker prescriptions. The percent represents 3 patients, of which 2 did have the beta blocker prescription on discharge.
ACUTE CARE - Post AMI Care - Beta - Blockers

The NEHA Acute Care Program joined the Safer HealthCare Now! AMI initiative June 2007.

Following the implementation of the seven components of care for AMI, the program conducted retrospective audits on all seven components of care. Using AMI protocol audits tools, it was found that post AMI implementation of the care components was more consistent at all sites after education on the components and the evidence for use. Two interventions: administering thrombolytics within 30 minutes of hospital arrival or initiation of percutaneous coronary intervention (PCI) within 90 minutes of hospital arrival were more difficult to implement due to resources (diagnostics) that may not be available within this time frame either due to timely diagnostic availability or transfer time to a tertiary care hospital outside of NE.

With respect to beta blocker prescriptions at discharge all acute care sites evaluated the uptake of this care for all patients in which it wasn’t contraindicated. Refer to Figure 3-34 Patients Receiving Beta Blockers at Discharge – NEHA Acute Care Facilities May 2006 to January 2008.

The plan is to continue to monitor post AMI patients for implementation of the AMI Protocol through audit tools. A standard chest pain care map and data set is currently being trialed at Beausejour Hospital in 2009.


Figure 3-35 Ischemic Heart Disease Treatment Prevalence

<table>
<thead>
<tr>
<th>Region</th>
<th>1996/97</th>
<th>2000/01</th>
<th>2001/02</th>
<th>2005/06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Rose</td>
<td>6.5%</td>
<td>8.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Springfield</td>
<td>5.1%</td>
<td>6.5%</td>
<td>6.8%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Winnipeg River</td>
<td></td>
<td></td>
<td>6.9%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Brokenhead</td>
<td>13.6%</td>
<td>13.4%</td>
<td>13.1%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Blue Water</td>
<td>2.8%</td>
<td>7.8%</td>
<td>10.8%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Northern Remote</td>
<td>4.0%</td>
<td>7.8%</td>
<td>7.8%</td>
<td>8.5%</td>
</tr>
<tr>
<td>North Eastman</td>
<td>8.0%</td>
<td>8.5%</td>
<td>8.0%</td>
<td></td>
</tr>
<tr>
<td>Manitoba (1,2)</td>
<td>6.0%</td>
<td>6.0%</td>
<td>6.0%</td>
<td>8.0%</td>
</tr>
</tbody>
</table>

Source: Fransoo, R. et al (2009) Figure 4.5.1 & 4.5.2 NEHA Indicators Atlas 2008, MCHP.

NE had significantly fewer cases of ischemic heart disease compared with Manitoba.

Springfield and Brokenhead showed a significant decline during the latter time period.

Blue Water had the highest percent of cases and was significantly higher than Manitoba, followed by Northern Remote and Iron Rose.
NE’s stroke incident rates showed a significant decrease but were significantly higher than Manitoba during both time periods.

We saw this decline also within our health districts with the exception of Northern Remote where the rate did not change significantly and remained the highest among our health districts.

By screening for blood pressure and initiating management, we can potentially decrease the number of stroke events. We saw earlier that hypertension prevalence increased in all NE and NE districts during the same time period.

Table 3-6 Causes of Hospitalization by Number of Cases -2007/08

There were similar patterns of hospital use by both Manitoba and North Eastman during 2007/08.

Refer to Section V for more details on hospital usage.
Circulatory Mortality (Deaths)

Figure 3-37 Years of Life Lost - Circulatory

Manitoba and NE males had higher PYLL rates compared with females.

Circulatory disease PYLL rates appear to be increasing in males in NE.

There was some variability among NE females who had a lower overall rate compared with NE males.

Females had rates that were similar or in some cases slightly higher compared with Manitoba females.

Figure 3-38 Death Rates with/without Hypertension

In Manitoba, NE and our health districts people with hypertension had consistently higher death rates than those who did not have hypertension.

The only exception was people living in Northern Remote where the death rate for people without hypertension appears to be higher than people with hypertension.

Death rates for people with and without hypertension were significantly higher compared with Manitoba.

Injuries

This section explores intentional (suicides, self inflicted) and unintentional injuries (accidental) in NE and Manitoba. Unless specified, injury data will include both categories.

Injury causing death information reported by Fransoo R. et al (2009) excludes misadventures, reactions, complications or adverse effects of medical, surgical or pharmaceutical treatments.30

Injury Hospitalizations

As with injury deaths, there are different causes of injury hospitalizations depending upon the age.

Table 3-7 Manitoba Causes of Injury Hospitalization by Age - 2000-2006 31

<table>
<thead>
<tr>
<th>Leading Causes of Injury Hospitalizations by Age Category:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 1</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>Fall</td>
</tr>
<tr>
<td>Assault</td>
</tr>
<tr>
<td>Suffocation/Choking</td>
</tr>
<tr>
<td>Natural Environmental</td>
</tr>
</tbody>
</table>

Summary of Injury Hospitalizations in Manitoba: 32

Between 2000-2006 circulatory diseases, followed by injury and mental and behavioural disorders both tied for the second leading cause of hospitalization.

- **Falls** decreased during 2000-2006 compared with 1993-1999, but were the leading reason for injury hospitalization for all age groups except 15-24 year olds. Falls were considerably higher for people over 55 years and in particular those over 85 years.

- **Assaults and self inflicted** injuries, although decreasing, were prevalent for those under age 55 years (except for 1-14 age group); especially those aged 15-24 years.

- **Pedal / cyclist / other injuries** (although decreasing in children 1-14 years) was the third reason for hospitalization.

- **Suffocation, choking, and fire** decreased substantially in infants less than one year.
Table 3-8 North Eastman Causes of Injury Hospitalization

<table>
<thead>
<tr>
<th>Injuries</th>
<th>Rate per 100,000</th>
<th>1993-1999</th>
<th>2000-2006</th>
<th>2000-2006 comparisons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>450.4</td>
<td>411.0</td>
<td>Decreased, higher in females</td>
<td></td>
</tr>
<tr>
<td>Assaults</td>
<td>132.6</td>
<td>109.9</td>
<td>Decreased, higher in males</td>
<td></td>
</tr>
<tr>
<td>Self Inflicted</td>
<td>110.1</td>
<td>96.2</td>
<td>Decreased, higher in females</td>
<td></td>
</tr>
<tr>
<td>Motor Vehicle/Traffic</td>
<td>146.5</td>
<td>92.9</td>
<td>Decrease, higher in males</td>
<td></td>
</tr>
<tr>
<td>Other Land Transportation / Other</td>
<td>40.9</td>
<td>49.0</td>
<td>Increased, higher in males</td>
<td></td>
</tr>
</tbody>
</table>


- Accidental falls prevail across both time periods as the most frequent cause for injury hospitalization and holds true for Manitoba as well. Falls in Manitoba were also the leading reason for injury hospitalization in all age groups except for 15-24 years when assaults were the leading reason for hospitalization between 2000-2006. 33

- Assaults were the second highest cause for injury hospitalization in NE compared to motor vehicle traffic in Manitoba especially in the over 55 year olds.

Table 3-9 Crude Injury Hospitalization Per Year 1996 to 2006

<table>
<thead>
<tr>
<th>Per Year</th>
<th>1996/97-2000/01</th>
<th>2001/02-2005/06</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>405</td>
<td>369</td>
</tr>
<tr>
<td>Manitoba</td>
<td>10,435</td>
<td>9,906</td>
</tr>
</tbody>
</table>


Injury hospitalizations appear to be decreasing in both NE and Manitoba.
Figure 3-40 Percent of Injury Hospitalization / Total Hospitalizations

Manitoba and NE female hospitalization percentages were the same and did not change between time periods reviewed.

Males had a higher percent of hospitalizations than with females and appear to have decreased during the latter time period in NE.

Figure 3-41 Injury Hospitalization in Children

- Although injuries have shown a decline during the second time period in NE, our regional rate was significantly higher during the second time period compared with Manitoba’s rate.

- Springfield’s injury hospitalization rates increased, although was lower than other health districts, and significantly lower than Manitoba.

- Blue Water and Northern Remote districts had significantly higher injury hospitalization rates compared with Manitoba.
Emergency Medical Services [EMS] Team’s
INJURY PREVENTION EDUCATION

The North Eastman Health Association EMS program participates in several events to raise the awareness of EMS within the communities we serve. This has been achieved by our involvement in various national awareness initiatives such as

- EMS Week
- Farm Safety Week
- Safe Kids Week
- Community specific programs
  - School Safety and injury prevention education
  - Max the Medic appearances at schools and public events
  - Parades, Fishing Derbies, MS Walk for Dogs (Bird’s Hill Park),
  - Sporting events (triathlons, hockey games, etc)
  - Remembrance Day Ceremonies, -Kids of Steel (bicycle safety), Folk Fest in Bird’s Hill Park, Regional Bike Medic Program,
  - and Operation Christmas Child with other regions.

- PARTY (Prevent Alcohol and Risk Related Trauma in Youth) Program, Fall prevention and Bathub Safety in conjunction with other NEHA programs,
- Car seat inspection clinics in partnership with the RCMP and Manitoba Public Insurance,
- Infant/child choking training and awareness sessions,
- Education on when to call 911 (elementary school in Lac du Bonnet), First Aid Outdoor education (Grade 6 – Oakbank school),
- CPR & First Aid training and education in several schools in the Sunrise School Division.

Source: Email from Jay Ferens email to S. Dick August 6, 2009, Entitled RE: EMS story for CHA follow up.
Table 3-11 Farm Injuries- Self Reported 2006

<table>
<thead>
<tr>
<th>Location</th>
<th>Self-Reported Total Number of Injuries</th>
<th>Injury to Operators</th>
<th>Injury to Other Family Members</th>
<th>Injury to Other Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Rose</td>
<td>17</td>
<td>11</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Springfield</td>
<td>17</td>
<td>15</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Winnipeg River (s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brokenhead</td>
<td>18</td>
<td>15</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Blue Water (s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Remote</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Eastman</td>
<td>57</td>
<td>52</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Manitoba</td>
<td>1,298</td>
<td>1,152</td>
<td>182</td>
<td>72</td>
</tr>
</tbody>
</table>


Injury Mortality (Deaths)

Figure 3-43 Unintentional (accidental) Injury Deaths by Male/Female (excludes suicide)

NE males and females had consistently higher unintentional injury deaths than Manitoba.

The rates for both males and females were quite variable during the five years reviewed.

During 2002, (65/100,000) and 2006 (75/100,000) females in NE had higher unintentional injury rates compared with NE males.

During 2003, 2004, 2005 female injury rates were between 30/100,000 and 40/100,000.
Figure 3-44 Unintentional Injury Deaths – 4 Year Averages - 1992 to 2006 (excludes suicide)

Manitoba and NE males had higher injury death rates compared with females for all time periods. NE females had higher rates than Manitoba for the latter time period. Rates showed a gradual increase with the highest rates occurring during 2002-2006. NE female rates were consistently lower than NE males for all time periods. NE male rates appear to be increasing and were consistently higher than Manitoba.

Figure 3-45 PYLL – Injury 2002-2006

For all years observed, NE had a higher PYLL for injury than Manitoba for both males and females. Within NE and in particular 2005, males had consistently higher PYLL than females.
NE all causes of injury death rates were not significantly different than Manitoba's.

All NE health districts were not significantly different than Manitoba except for Northern Remote where there was a significant difference of 4.0/1000 compared with Manitoba at 0.5/1000 between 2001-2005. Northern Remote had the highest rate for PYLL injury compared with our other health districts.

We know that patterns of injury death were different for men and women i.e. “...women who died as the result of injuries were most likely to die due to falls...while men were most likely to die as the result of suicide...” 34

Causes of Injury Death

Causes of injury deaths often differ depending upon the age, gender and location (urban/rural) of the person.

In Canada the leading causes of injury deaths during 2004 were 35

• suicide
• motor vehicle crashes
• falls
• other unintentional injuries
• poisoning
Table 3-12 Manitoba Causes of Injury Deaths by Age 2000-2006

There are different causes of injury death depending upon the age of the person.

**Leading Causes of Injury Death by Age Category**

<table>
<thead>
<tr>
<th>Under 1</th>
<th>1-14</th>
<th>15-24</th>
<th>25-54</th>
<th>55-74</th>
<th>75-84</th>
<th>85+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suffocation/Choking</td>
<td>Suicide</td>
<td>Motor Vehicle Traffic</td>
<td>Suicide</td>
<td>Suicide</td>
<td>Fall</td>
<td>Fall</td>
</tr>
<tr>
<td>Assault</td>
<td>Motor Vehicle Traffic</td>
<td>Suicide</td>
<td>Motor Vehicle Traffic</td>
<td>Fall</td>
<td>Motor Vehicle Traffic</td>
<td>Suffocation/Choking</td>
</tr>
<tr>
<td>Drowning</td>
<td>Drowning</td>
<td>Assault</td>
<td>Poisoning</td>
<td>Motor Vehicle Traffic</td>
<td>Suicide</td>
<td>Motor Vehicle Traffic</td>
</tr>
<tr>
<td>Fire</td>
<td>Suffocation/Choking</td>
<td>Suffocation/Choking</td>
<td>Assault</td>
<td>Poisoning</td>
<td>Suffocation/Choking</td>
<td>Suicide</td>
</tr>
<tr>
<td></td>
<td>Assault</td>
<td>Other Land Transport</td>
<td>Other Land Transport</td>
<td>Fire</td>
<td>Natural Environmental</td>
<td>Poisoning</td>
</tr>
</tbody>
</table>

**Summary of Injury Death Manitoba**

- **Suicide and assault** were leading cause of injury death for people less than 54 years. Compared with 1993-1999 suicides have increased in particular for young people between 15-24 years, but decreased for older Manitobans, especially over 85 years.

- **Fall** deaths occurred primarily in older adults, and continue to increase at a rate of over ten times higher than any other injury death, especially in the over 85 year olds.

- **Motor vehicle traffic** deaths decreased, but remain a frequent cause of death in all age groups except under one.

- **Suffocation/choking** were the leading cause of death in children under one.

- **Poisoning** is a concern as there was a substantial increase in 2000-2006 compared with 1993-1999. Deaths doubled for those aged 25-54, tripled for those 55-75 years, and over 85 years.

Table 3-13 NE Causes of Injury Deaths

<table>
<thead>
<tr>
<th>Rate per 100,000</th>
<th>1993-1999</th>
<th>2000-2006</th>
<th>2000-2006 comparisons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicide</td>
<td>18.0</td>
<td>29.2</td>
<td>Increased, higher in males</td>
</tr>
<tr>
<td>Motor Vehicle Accidents (Mass )</td>
<td>14.6</td>
<td>16.2</td>
<td>Increased, higher in females</td>
</tr>
<tr>
<td>Other Land Transportation</td>
<td>2.6</td>
<td>6.5</td>
<td>Increased, higher in males</td>
</tr>
<tr>
<td>Falls</td>
<td>2.6</td>
<td>6.5</td>
<td>Increased, higher in females</td>
</tr>
<tr>
<td>Assaults</td>
<td>4.5</td>
<td>6.1</td>
<td>Increased, higher in males</td>
</tr>
</tbody>
</table>


- **PYLL due to suicide** was the highest in NE for both males and females between 2000-2006, indicating that this event occurred predominantly among people less than 75 years.

- **Motor vehicle deaths** increased slightly, and had the second highest PYLL between 2000-2006. Death as an occupant was the most frequent cause for both males and females.

- **Land transportation vehicles and fall** deaths doubled compared with the previous time period.
Off Road Vehicle - Accidents / Deaths - Crude Rates 2006-2008

Oakbank detachment followed by Powerview detachment had the highest number of ‘off road accidents/deaths.’

‘Other land transportation vehicles’ was the third highest cause of injury deaths in NE between 2000-2006 and appears to be increasing. 40
In NE there was a slight decline in injury deaths during the second time period. Children in NE experienced significantly higher injury death rates in both time periods compared with Manitoba. There was no district level information.

Only Burntwood RHA’s child injury death rates were higher than NE during this time period.

There appears to be a slight increase in the number of NE’s injury deaths.

Motor vehicle and self inflicted deaths remain the two leading causes of death for both time periods.

Older adolescents and males tend to have higher injury death rates. The self-inflicted deaths increased from 21% between 1996-2000 to 27% between 2001-05.

There was no regional or district level information for children.
**Mental Health/Illness**

**Mental health** is “…the capacity of each and all of us to feel, think and act in ways that enhance our ability to enjoy life and deal with the challenges that we face…The determinants of mental health go well beyond individual attitudes, beliefs and behaviours: the family, the community, the school and workplace environments all contribute to mental health.” 43 Mental well-being is critical to our overall health44 affecting our physical, spiritual and emotional health.

**Mental illness** is “…a biological condition of the brain that causes alterations in thinking, mood or behaviour (or some combination thereof) associated with significant distress and impaired functioning. Mental illness affects approximately 20% of Canadians during their lifetime. Supportive community, education and workplace environments facilitate recovery.”45

Quantitative evidence from a variety of indicators, and qualitative evidence from discussions with our staff and partners prompted the 2008-2009 CHA to focus our community consultations around the complex issue of mental health and illness.

**Self Rated Indicators**

Figure 3-51 General Mental Health Scale – Adjusted – Age 12+

This indicator measures mental health on a scale from 0 -100. Questions were asked of survey participants. A score was tabulated, the higher the number, the better the participant reported their mental health being. Statistics Canada placed participant’s score into three categories: High which reflects the best mental health, medium and low.

Manitoba and NE had similar scores; almost half of responses fell within the ‘high’ category.

All districts except for Winnipeg River reported having the highest percent within the ‘high’ category.

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**Figure 3-51 General Mental Health Scale – Adjusted – Age 12+**

_CCHS Cycle combined 2003 & 2005_
**Figure 3-52 Self Perceived Life Stress**

The participant question that measures life stress was “Thinking about the amount of stress in your life, would you say that most days are: not at all stressful, not very stressful, a bit stressful, quite a bit stressful, or extremely stressful?”

Compared with Manitoba, NE residents reported higher levels of life stress.

Springfield (28.2%) followed by Iron Rose at 21.9% and Brokenhead 21.2% self-reported the highest percent of life stress.

**Figure 3-53 Self Rated Life Satisfaction**

The participant question that measures life satisfaction was “How satisfied are you with your life in general: very satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied, or very dissatisfied?”

NE residents reported slightly higher percent of ‘very satisfied’ life satisfaction compared with Manitoba.

Winnipeg River residents reported being the most satisfied with life. Iron Rose residents reported one of the lowest ‘very satisfied’ scores compared with our other health districts.
**Other Reports**

**NE Youth Health Survey 2008** surveyed children in Grades 6-12 in 19 schools surveyed in June 2007 were asked questions related to well-being. The following information was extracted from this survey:

- 75% of students reported that they strongly agreed or agreed that they felt close to people in the school.
- 74% of students strongly agreed or agreed that they felt part of the school.
- 67% of students strongly agreed or agreed that they were happy to be at the school.
- 74% of students strongly agreed or agreed that they felt safe in their school.
- 34% of students reported that they felt hopeless in the past 12 months.\(^48\)

These responses indicated that there were approximately 20-25% of students surveyed that didn’t feel connected and 34% of students felt hopeless within the year prior to the survey.

**Mental Illness Conditions**

**Figure 3-54 Cumulative Mental Health Disorders** (includes: depression, anxiety disorder, substance abuse, and schizophrenia and personality disorder)

NE had a significant increase in cumulative mental disorders for the latter time period but was lower than Manitoba.

The percentage of cumulative disorders increased in all health districts during the second time period. Blue Water, followed by Brokenhead and Iron Rose had the highest percentage of cumulative mental health disorders compared with our other health districts.

**Figure 3-55 Treatment Prevalence Depression – Aged 10+**

NE had significantly lower rates of treatment for depression than Manitoba overall, yet significantly increased during the latter time period.

NE, Manitoba, and all health districts showed an increase during the second time period.

There were significant increases in Iron Rose followed by Brokenhead, Winnipeg River, and Blue Water over time.

Blue Water and Brokenhead had the highest treatment prevalence of depression compared with our other health districts. The low rates in Northern Remote may be attributable to under diagnosing and access issues.
Other Reports

_Families First_ - Between 2003 to 2006 maternal crude depression rates in NE women with newborns was 14% while Manitoba’s rate was 12.6%.49

Adults

Figure 3-56 Treatment Prevalence Anxiety Disorders – Aged 10+

NE had a significantly lower percentage of anxiety disorder prevalence compared with Manitoba during the second time period.

Iron Rose, Springfield and Northern Remote had an increase in the percent of anxiety disorder treatments during the second time period.

All districts had significantly lower percentages of anxiety disorder treatment when compared with Manitoba during the second time period.

Winnipeg River and Blue Water showed significant decreases during the second time period.

Figure 3-57 Maternal Depression & Anxiety 2003-2005

In new mothers, when depression and anxiety were combined, we see that NE and Manitoba rates were similar.

Blue Water had the highest percentage of women who reported depression and anxiety.

Children – 0-19 Years

Anxiety disorders are among the most common mental health conditions in childhood. In NE, there was a significant increase from approximately 4.0 /1,000 in 2000/01 to 5.7/1,000 in 2005/06 in children prescribed at least one anxiolytic medication. Manitoba also increased significantly the anxiolytic medication during the same time period from 5.0/1,000 to 6.1/1,000.50
There was no difference in NE’s prevalence for both time periods.

Regionally and in most districts we see significantly lower rates of residents being treated for personality disorders when compared with Manitoba.

Winnipeg River had a significant increase during the second time period.

NE had significantly lower treatment prevalence for schizophrenia compared with Manitoba for both time periods.

All health districts (except Northern Remote) were significantly lower than Manitoba. Prevalence rates increased, but not significantly in all health districts; except for Winnipeg River.

Northern Remote, Blue Water and Brokenhead had the highest prevalence for schizophrenia.

Among rural and urban Manitoba, schizophrenia prevalence was higher among residents in lower income areas. 51
Figure 3-60 Treatment Prevalence for Dementia – Aged 55+

NE’s prevalence rate during the second time period was significantly lower than the Manitoba rate.

Dementia increased slightly in Iron Rose. A decrease occurred in all other health districts.

None of the changes occurring between the two time periods were significant.

The following table reports the crude numbers for mental illnesses in order to capture the actual disease burden of these mental illnesses.

### Table 3-16 Summaries of Mental Illness Crude Numbers

<table>
<thead>
<tr>
<th>Crude Numbers for Period Observed</th>
<th>North Eastman 1996/97-2000/01</th>
<th>North Eastman 2001/02-2005/06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative – 10+ Years</td>
<td>7,132</td>
<td>8,073</td>
</tr>
<tr>
<td>Depression – 10+ Years</td>
<td>5,385</td>
<td>6,547</td>
</tr>
<tr>
<td>Schizophrenia- 10+ Years</td>
<td>169</td>
<td>192</td>
</tr>
<tr>
<td>Anxiety – 10+ Years</td>
<td>1,955</td>
<td>1,907</td>
</tr>
<tr>
<td>Personality Disorders – 10+ Years</td>
<td>159</td>
<td>168</td>
</tr>
<tr>
<td>Dementia – 55+ Years</td>
<td>601</td>
<td>630</td>
</tr>
</tbody>
</table>

All mental illnesses appear to be increasing during the second time period, except for anxiety.

**Mortality Indicators**

Figure 3-61 Comparing Death Rates for People With & Without Cumulative Mental Illness During 2001/02-2005/06

Cumulative mental illness disorders include: depression, anxiety, substance abuse, personality disorders, and schizophrenia.

People with cumulative mental illnesses had significantly higher deaths compared with those without.

Northern Remote, although decreasing had the highest percentage of deaths for both time periods compared with our other health districts.

Figure 3-62 Potential Years of Life Lost (PYLL) - Suicide – 2002-2006

NE had a higher rate of PYLL due to suicide compared with Manitoba for all years examined for both males and females.

NE males have the highest rates of PYLL due to suicide compared to NE females and Manitoba males and females.
Figure 3-63 Suicide Rate Comparing NE and Manitoba- Ages 10+

NE’s suicide rate was significantly higher than Manitoba’s for both time periods.

Suicides contributed to the high rates of all injury mortalities in NE.52

![Suicide Rates (adjusted) - Age 10+](image)

Source: Fransoo, R. et al (2009) Figure 3.10.1 MB RHA Indicators Atlas 2009. MCHP.

Figure 3-64 Crude Suicide Rates in North Eastman – Age 10+

The crude suicide rate in NE and all districts changed little between the two time periods, except for Northern Remote where there was a slight increase.

Crude suicide rates were the highest in Northern Remote for both time periods. This represents 21 suicides out of 50 during 1996 to 2000 and 28 out of 51 during 2001 to 2005.53

![Suicide Rates in North Eastman Health Districts - Crude - Age 10+](image)

Table 3-17 Number of Suicides- Crude Numbers Observed Per Year: 1996-2005

<table>
<thead>
<tr>
<th>Per Year</th>
<th>1996-2000</th>
<th>2001-2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>10</td>
<td>10.2</td>
</tr>
<tr>
<td>Manitoba</td>
<td>141</td>
<td>158.6</td>
</tr>
</tbody>
</table>

Focus group and key informant participants did not discuss suicide in depth. The following circumstances were identified by participants to be associated with suicide events: isolation, poverty, lack of coping skills, a family history of suicide, and lack of employment, culture breakdown, or a serious life circumstance.

Suicide was identified as a concern by many Blue Water focus group participants.

- Suicide survivors need someone to talk to “…maybe even a month or a year later and there is nowhere for him to go…” (Blue Water)
Medication Use

Both Manitoba and NE showed a significant increase in antidepressant use during the second time period.

In all districts, antidepressant use significantly increased.

Brokenhead had the highest use of antidepressants followed by Iron Rose and Blue Water. This corresponds with depression treatment prevalence for 2001/02 to 2005/06 where Blue Water had the highest prevalence of depression, followed by Brokenhead and Iron Rose.

Springfield and in particular Northern Remote’s antidepressant use was significantly less than Manitoba’s for both time periods.

Antidepressant prescription follow-up by health providers is very important because mental illness is a predisposing factor for suicide.54 Although this indicator is limited to physician billing, the follow-up of patients who are newly placed on antidepressants, appears to be increasing particularly in Iron Rose.
Figure 3-67 Benzodiazepine Use in Community – Age 75 Years +

Benzodiazepine prescriptions significantly increased during the latter time period in Manitoba. NE’s prescription rate for Benzodiazepine was significantly lower than Manitoba.

There were non significant increases in Iron Rose, Winnipeg River, Brokenhead and Springfield during the latter time period.

Springfield and Brokenhead rates were significantly lower than Manitoba overall for both time periods.

Northern Remote’s rate was suppressed.

Focus group participants offered some opinions on prescription drugs:

- Too much medication is prescribed – including anti-depressants: “...they are so easy to give out ... a lot of pills and that affects a lot of people... People that you thought that they didn’t use this kind of stuff, to get high... the young people are very attracted to what they see is going on, and they try it...” (Blue Water)

- “Elderly need help with medications – maybe vision problems, or don’t understand interactions or purpose of meds.” (Blue Water)

Children

Figure 3-68 Children on Antidepressants 0-19 Years

NE was not significantly different than Manitoba.

Prescriptions in children appear to be declining. Brokenhead was the one exception where there was a significant increase with rates significantly higher than Manitoba.
Figure 3-69 Children on the Antidepressant Selective Serotonin Reuptake Inhibitor (SSRI)

Children With At Least One SSRI Prescription - 10-19 Years

<table>
<thead>
<tr>
<th>Area of Residence</th>
<th>Female 2000/01</th>
<th>Male 2000/01</th>
<th>Female 2005/06</th>
<th>Male 2005/06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Rose (s)</td>
<td>12.4</td>
<td>12.4</td>
<td>14.6</td>
<td>14.6</td>
</tr>
<tr>
<td>Springfield</td>
<td>28.9</td>
<td>28.9</td>
<td>19.4</td>
<td>19.4</td>
</tr>
<tr>
<td>Winnipeg River (t)</td>
<td>11.9</td>
<td>11.9</td>
<td>13.6</td>
<td>13.6</td>
</tr>
<tr>
<td>Brokenhead (2)</td>
<td>31.1</td>
<td>31.1</td>
<td>9.8</td>
<td>9.8</td>
</tr>
<tr>
<td>Blue Water</td>
<td>14.3</td>
<td>14.3</td>
<td>14.2</td>
<td>14.2</td>
</tr>
<tr>
<td>Northern Remote (s)</td>
<td>14.2</td>
<td>14.2</td>
<td>17.1</td>
<td>17.1</td>
</tr>
<tr>
<td>North Eastman</td>
<td></td>
<td></td>
<td>12.4</td>
<td>12.4</td>
</tr>
<tr>
<td>Manitoba (t)</td>
<td></td>
<td></td>
<td>14.5</td>
<td>14.5</td>
</tr>
</tbody>
</table>


NE had slightly lower rates of SSRI prescriptions than Manitoba.

Brokenhead had a significant increase in use and was significantly higher than Manitoba during the second time period.

Winnipeg River significantly decreased during the second time period.

Utilization Indicators for Mental Illness

Table 3-18 Medical Separations (physician coding the reason for the visit) for Mental Illness – Age standardized 2003/04 – 2007/08

<table>
<thead>
<tr>
<th>Area of Residence</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>2,582.0 per 1,000 visits</td>
<td>1,408.3 per 1,000 visits</td>
</tr>
</tbody>
</table>


Females in NE had the third and males had the fourth highest number of medical separation rates coded for mental illness compared with other Manitoba regional health authorities for the same time period. 55

Table 3-19 Hospital Separations (discharges) for Mental Illness – Age standardized - 2003/04 – 2007/08

<table>
<thead>
<tr>
<th>Area of Residence</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>31.6 per 1,000 visits</td>
<td>26.4 per 1,000 visits</td>
</tr>
</tbody>
</table>


Both females and males in NE had the third lowest hospital discharge rate for mental illness when compared with other Manitoba regional health authorities for the same time period. 56
Figure 3-70 NEHA Mental Health Program Active Case Files – 2005/06 to 2008/09

An ‘active file’ is anyone who has contact with a Mental Health worker. This may include files open several years ago, but as long as they are being seen regularly (i.e. at least once every 3 months), they are considered ACTIVE.57

The majority of cases seen by mental health workers in NE were adults.

Adult, child and adolescent cases appears to be showing a decline.

Elderly cases were stable over time.
Many of the health conditions discussed in this section are described as being 'chronic.' Chronic diseases are "...long-lasting or recurrent. The term chronic describes the course of the disease, or its rate of onset and development... Many chronic diseases require chronic care management for effective long-term treatment." 58 The most common chronic diseases are cardiovascular disease, diabetes, cancer, respiratory: chronic obstructive pulmonary disease (COPD), asthma and mental illness (including depression, stress and anxiety). 59

The following graph depicts the relationship between risk factors, conditions and common disease end-points:

"Chronic diseases share common risk factors and conditions. While some risk factors, such as our age, sex, and our genetic make-up, cannot be changed, many behavioural risk factors can be modified, as well as a number of intermediate biological factors including hypertension, being overweight, and hyperlipidemia and glucose intolerance. Societal, economic, and physical conditions influence and shape behaviour and indirectly affect other biological factors. The recognition of these common risk factors and conditions is the conceptual basis for an integrated approach to chronic disease." 61

Canadians with a chronic physical condition have twice the likelihood of experiencing a mood or anxiety disorder compared to the population who don’t have a chronic physical condition. 62 Diabetes, cardiovascular disease and arthritis are associated with a higher prevalence of depression. 63 "Prolonged stress can lead to depression as well as physical health problems, such as suppressed immune function, autoimmune disorders, heart disease, diabetes and obesity." 64
Low income (indicators are detailed in Section IV, Chapter 7) influences all aspects of our health and wellbeing. The results from a Manitoba Centre for Health Policy report in 2009 showed “…a strong connection between socioeconomic status and health status. Residents of lower income areas have higher mortality rates and higher prevalence of physical and mental illness.” The following provides a summary of health conditions that were found to have a statistical relationship between residents living in lower income areas in rural Manitoba:

- STRONG RELATIONSHIP between residents living in lower income, rural areas and a lower life expectancy, and higher prevalence of: injury deaths and suicide and of these illnesses: diabetes, ischemic heart disease, acute myocardial infarction, stroke, diabetes amputations, substance abuse, and schizophrenia.

- MODEST RELATIONSHIP between residents living in lower income, rural areas and the prevalence of hypertension and arthritis.

- NO RELATIONSHIP between residents living in lower income, rural areas and the prevalence of these illnesses: respiratory disease, osteoporosis, depression, anxiety, dementia and cumulative mental disorders indicator (which measures all of the following: depression, anxiety, substance abuse, personality disorders, or schizophrenia).

Premature Mortality Rate (PMR) is a robust indicator that measures the overall health status of a region or district and strongly influences the potential need for health services. In NE between 1996 and 2005, Iron Rose marginally surpassed Springfield as having the overall best health status, a change in ranking from the previous Community Health Assessment (CHA). Northern Remote had the highest PMR and has the poorest health status of all our districts using this measure.

PYLL rates provide insight into whether deaths are premature i.e. under 75 years of age. PYLL is used to measure the impact of events such as accidents, illnesses or chronic conditions and is often used as a measure of evaluating health system performance and disparity. In NE region we see evidence of variability associated with numerous health determinants when we are able to look at information at the health district level. One example is when we review all deaths that occurred between 2001-2005, we note that Northern Remote health district had the highest PYLL rate compared with all our health districts at 255.2/1,000. This was higher than NE at 66.1/1,000 and significantly higher than Manitoba’s overall rate of 50.9/1,000.

Self-rated health indicators reflect the overall health status of individuals. “Studies indicate that when individuals rate their health in response to this question, they tap into information that has important predictive powers relating to chronic disease incidence, functional decline and ultimately survival.” This measure lacks credibility by some because it is not verifiable; however, consistently across regional health authorities “Self-rated health was highest in regions with lower PMRs and lowest in regions with higher PMRs.” In NE, and in particular in Blue Water and Northern Remote, this indicator was likely underreported due to excluding First Nation communities in the data source. Fifty-eight percent of NE residents felt that they were in excellent or good health. There was considerable variability among our health districts, but confirmed that self-rated health ranked closely to the PMR ranking adding credibility to this indicator.
It frequently takes many years to develop cancer, and cancer often increases with age, making a link between exposure and disease is challenging. In order to reduce cancer risk it is important to practice primary prevention behaviours such as not smoking, reduce exposures to other carcinogens, consuming diets high in fruits and vegetables, and participating in regular exercise. Primary prevention focuses on early detection such as taking advantage of screening programs. As we see in NE, cancer morbidity varies with colorectal cancer and prostate cancer declining, but lung, breast, cervical and skin cancer (in women only) appears to be increasing. Smoking rates in NE were similar to Manitoba, with considerable variability among our health districts. “Consistent with the international results…low income women in Manitoba were significantly more likely to have been diagnosed with cancer both of the lung and of the cervix...The connection between income and smoking, a leading cause of lung cancer, has been well documented.”

It was found that higher income women were being screened for cervical cancer (Pap Smear). Between 1998/99-2000/01 NE had a 67.8% cervical screening rate for women between 18-69 years. During 2003-04 – 2005/06 we saw a significant decrease in screening to 64%, significantly lower than the Manitoba average at 69.2%. Between April 2006 and March 2009 NE had slightly higher cervical screening rates (544.7/1,000) than Manitoba at 543.8/1,000 in women 15 years and older.

Breast cancer incidences appear to be increasing. Survival rates also appear to be increasing, possibly attributable to early detection for example by residents accessing the mobile breast screening clinics. Overall in NE we had a 59% screening rate between 2005-2009 for women 50-69 years. The target is 70% in this age group. Several NE communities surpassed the 70% target.

Refer to Section IV, Chapter 1 for detailed discussion about lifestyle choices and screening information.

A cancer treatment centre is now located at Pinawa Hospital, new since the last CHA. This has helped eliminate some of the ‘stressors’ raised by many focus group participants in previous CHAs associated with time and expenses (fuel, accommodation, parking) when treatment was only available in Winnipeg.

Focus group participants spoke about travel for health services outside of their community.

- “I don’t drive and my family is working all day so what am I to do?” (Iron Rose)
- “Single moms without transportation...” [has access implications]. (Brokenhead)
- “From Pine Falls to Beausejour is far to go for counselling, especially when one is under stress and has family, work... to deal with.” (Blue Water)

Arthritis and rheumatism are very debilitating diseases and depending upon the severity affects an individual’s mobility and quality of life. Contributing factors for arthritis include non-modifiable hereditary factors such as female hormones as well as modifiable risk factors e.g. joint injury or overuse and excess weight. “Physical activity generally reduces the risk of hip/knee osteoarthritis, especially among women...Arthritis is associated with
psychological impacts, including depression, particularly among individuals who have lost functional capacity or the ability to carry out their role in work or home…emotional distress increases with decreasing functional ability, increasing pain…” 78  “In comparison with other chronic degenerative diseases, arthritis affects a relatively large proportion of women under age 65.” 79  In NE residents over 19 years, there was a significantly higher arthritis rate compared with Manitoba between 2004/05 and 2005/06.

“Arthritis or rheumatism is the most common chronic condition diagnosed among Aboriginal women.” 80  This was not evident in NE’s data when we review arthritis rates in Northern Remote (11.8%), a district where the population is predominantly Aboriginal. This rate was significantly lower than the Manitoba’s rate of 20.2% between 2004/05 & 2005/06. This might be attributable to under-diagnosing.

Supporting the need to coordinate mental and physical health care services, it is known that people with arthritis are more likely to report having a mental health visit.81

Replacement of joints e.g. hips and knees can be effective in relieving pain, improving function for not only people with arthritis but other injuries. Obesity can be another reason why joint surgery is necessary.82  In Canada these surgeries are rising annually and this trend is expected to continue. Knee replacement has increased by 83% in Canada between 1998-1999 to 2007-2008 and was higher in women (93%) compared with men (72%) over the past 10 years.83  In NE we saw a 2.3/1,000 to 3.2/1,000 increase in people over 40 years having knee replacements between 1996/97 - 2001/02 - 2005/06.  Hip replacement in Canada saw a 24% increase from 1998-1999 to 2007-2008. Males (65.3 years) tended to have surgery earlier than females (69.2 years). 84

Diabetes is a serious chronic condition. Type 1 diabetes usually develops in young people and Type 2 usually develops in adulthood. Type 2 diabetes can typically be managed successfully by diet, controlling body weight and being physically active, as well as with medication in some cases. Manitobans compared to other Canadians were more likely to be diagnosed with diabetes, making it a serious and growing health concern in Manitoba.85

Diabetes not only reduces life expectancy, but may cause various disabilities e.g. lower limb amputations …and acquired blindness.36  In NE we see that lower limb amputations were significantly higher compared with Manitoba overall, but appears to be declining. There is evidence that First Nation Manitobans had the highest rates of amputations, as well as the lowest consult rates (measured as access to specialist care).87  Although decreasing, Northern Remote district in NE had significantly higher lower limb amputations compared with Manitoba between 2001/02 -2005/06.

Long term affects of diabetes include heart disease, blindness, kidney failure, and lower limb amputations. These complications incur medical costs that are two to three times higher than those without diabetes.88  Prevention, early diagnosis, management are all important initiatives (as with any chronic disease) that can not only prolong life, but enhance the quality of life. Risk factors for diabetes can occur in individuals with a family history of diabetes, those with hypertension, or elevated blood cholesterol, overweight or
obese (either alone or combined with physical inactivity) and income inadequacy. These factors may be targeted by diabetes prevention programs.

“Diabetes rates are significantly elevated among people with mental illnesses…both depression and schizophrenia are risk factors for the development of Type 2 diabetes due to their impact on the body’s resistance to insulin.” People with diabetes are more likely to be hospitalized, diagnosed with depression, and use home care services. First Nation populations are more likely diagnosed with diabetes; the cause being multifactorial. The reason for high rates in this population is not well understood, but First Nation ancestry appears to be a risk factor… [First Nation] Women are often diagnosed during a reproductive visit to a health provider.

“Diabetic women are significantly more likely to have coronary heart disease and adverse outcomes of acute myocardial infarction than are men and non-diabetic women…and women…who develop gestational diabetes,…have increased risk for developing overt diabetes in later life and in turn, are at greater risk of heart disease…”

As with many other diseases in Manitoba, there is a significant association between diabetes prevalence in rural children as socioeconomic status declines. “Diabetes prevalence values were related to PMR, with lower prevalence values in healthier areas, and higher prevalence values in less healthy areas.”

The Canadian Diabetes Association recommends that “diabetes programs and service should be culturally appropriate, community based and respectful of age, gender and socioeconomic conditions.”

Asthma affects Canadians of all ages. Asthma in children is considered a chronic condition, accounting for considerable health burden. In Canada “…approximately 8% of Canadians 12 and older have been diagnosed with asthma by a health professional…Adult females have higher rates of asthma diagnosis and hospitalization than males.” The prevalence of asthma has increased over the past few decades in the Western part of the world. Asthma increases were not evident during the five year time periods reviewed in NE and Manitoba overall, however NE’s asthma rates were at 12% during 2004/05-2005/06. Provincially it was noted that there were lower prevalence rates of asthma in rural areas, and lower income areas, which might be related to diagnostic issues, rather than true disease prevalence. The reason suggested is “…asthma prevalence may be confounded by ‘diagnostic exchange’ with bronchitis …total respiratory morbidity may be a better indicator of respiratory disease burden in the population than prevalence of individual diseases.” People with serious mental health conditions have a significantly higher likelihood for developing respiratory conditions such as asthma.

Cardiovascular disease (CVD) is the leading cause of death for Canadian and Manitoban men and women and the major cause of hospitalizations for men, second only to women (pregnancy and childbirth is ranked first). Monitoring rates over time assists in the evaluation of prevention and treatment programs that are in place.

Some people have genetic characteristics that increase their risk of heart attack, but for most of us, it is often preventable through healthy lifestyle practices such as: eating a well-balanced diet, being active, and not smoking. In Canada over the last 5 years
(2003-2004 to 2007-2008) there was a 13% decrease in hospitalized AMI events. In Manitoba and NE we also have seen a significant decrease in AMI deaths and hospitalizations during 1996/97-2000/01 and 2001/02 -2005/06.

In Manitoba’s mid geographic area (NE, Parkland, Interlake) circulatory diseases as a cause of hospitalization ranked first at 15.6% in 2000/01 decreasing to 14% of in 2005/06, compared with Manitoba’s top cause i.e. pregnancy and birth 15.4% during the former and 15.6% during the latter time period. Risk factors include both sex and gender; for women advancing age, cigarette smoking and diabetes and for both sexes hypertension, overweight, physical inactivity. In Canada, women with depression are 80% more likely to experience heart disease than women without depression…attributed to both biological and social factors.

“It is estimated that 42% of Canadians with high blood pressure (hypertension) and approximately 50% of women with ischemic heart disease are undiagnosed.” Because hypertension is often asymptomatic, there is an important connection between physician visits and diagnosing hypertension.

We know that chronic diseases require monitoring to ensure improved health outcomes and quality of health. Refer to Section V Health System for further discussion on ambulatory care sensitive condition (ACSC) hospitalization rates, which is a measure of the management and treatment of chronic illnesses such as diabetes, asthma, high blood pressure, congestive heart failure. “Optimizing management and treatment of ACSCs in the community can potentially contribute to both improved health outcomes and more efficient resource utilization.”

“Stroke is one of the most sudden and devastating illnesses that can totally change the life of an individual and their family within seconds. It is a highly preventable and treatable disease with the interventions currently available. If stroke prevention and care are not well organized…there is a significant cost to the health care system and to the quality of life of stroke survivors.” “Stroke and other cerebrovascular diseases are the third leading cause of mortality in Canada, causing about 15,000 deaths every year.”

“People with serious mental illnesses often experience high blood pressure and elevated levels of stress hormones and adrenaline which increase the heart rate…[compounded with] other risk factors for heart disease such as poor nutrition, lack of access to preventive health screenings and obesity…people with mental illnesses have up to three times greater likelihood of having a stroke…depression often follows a stroke.”

It is important to monitor for stroke events in order to determine if our efforts to prevent strokes from occurring are successful. Canada experienced a 14% decrease in hospitalized stroke events in people over 20 years of aged during 2003-2004 to 2007-2008. In NE we have reason to be optimistic as the hospitalized stroke events appear to be declining, however our rates remain significantly higher than the Manitoba average. Lower rates might be attributed to the higher number of hypertensive (risk factor for stroke event) residents being diagnosed and subsequently managed. On June 15, 2009 MHHL informed the province about new funding for stroke prevention initiatives. This includes measures to strengthen stroke prevention, support, coordinated care, education, and
funding for stroke coordinators at Heart & Stroke Foundation Manitoba and in health regions.\textsuperscript{117}

NEHA does not have the diagnostic equipment necessary to determine the type or severity of a stroke. NE clients who have had symptoms of a stroke or transient ischemic attack (TIA) can be referred for assessment to these specialized stroke clinics:

- Winnipeg - Health Science Centre
- St. Boniface General Hospital
- Steinbach - Bethesda Hospital.

It is important to address chronic diseases through a broad socioeconomic strategy taking into account age, income, care giving supports required (by understanding familial responsibilities and the availability of formal home care and other available supports), addressing knowledge gaps and the availability of appropriate and accessible housing due to functional limitations.\textsuperscript{118}

**Linkage between three chronic disease risk factors and selected health conditions:**

Potential health risks related to being \textbf{overweight} are associated with hypertension, heart disease, cerebrovascular disease (CVD) and diabetes. In Canada being overweight or obese is prevalent, more common among men than women, and increases with age. There appears to be a relationship in women who are overweight or obese and poverty. This may be attributable to difficulty accessing or affording high quality food. Having said this, some studies found the prevalence of obesity among middle and upper income households for women and among highest income levels for men. Women who are obese are more likely to suffer from depression.\textsuperscript{119}

\begin{itemize}
\item When overweight and obese were combined in residents over 18 years, NE's rate was 59.4% and Manitoba was 56%.\textsuperscript{120}
\item In NE, there were approximately 22% of children (12-19 years) compared with 23.7% in Manitoba who were overweight or obese.\textsuperscript{121}
\end{itemize}

**Physical inactivity** is not considered the most important risk factor, but is described as the “most prevalent modifiable risk factor.”\textsuperscript{122} The health effects of physical activity are many including reducing body weight, improving serum lipids, blood pressure and diabetes.\textsuperscript{123} “Many studies suggest that women are more likely to be sedentary than men.”\textsuperscript{124}

\begin{itemize}
\item In NE (74%) of adults compared with Manitoba (70%) met the Health Canada Physical Activity Guide (PAG) guidelines.\textsuperscript{125}
\item Significantly more NE children aged 12-19 years (61.2%) compared with 44% of Manitoba children reported that they were physically active.\textsuperscript{126}
\item It was found that physical activity steadily declined from Grade 6 at 67% to 38% in Grade 12 in NE school children, surveyed in June 2007. Males were consistently more physically active than females.\textsuperscript{127}
\end{itemize}
Smoking is recognized as the most important modifiable risk factor for CVD. The difference between smoking behaviour in men and women no longer exists as it once did.\textsuperscript{128} The reported reasons for smoking vary between the sexes. Women “to cope with psycho-social issues…women may also receive less social support for quitting… [further] “women are more physiologically susceptible to nicotine addictions…” \textsuperscript{129} It is also known that people with mental illnesses have high smoking rates.\textsuperscript{130}

- NE residents aged 12 years and older reported smoking rates the same as Manitoba’s at 22.7% between 2001 to 2005. Winnipeg River (29.7%), Brokenhead (28.1%) and Blue Water (27.4%) respectively had the highest smoking rates in our health districts.\textsuperscript{131}

Refer to Section IV – Chapter 1 for more detail on chronic disease risk factors.

Injuries place a significant burden on individuals, families and the health system. Often there are predictable patterns associated with the most common types of injuries and who is injured, making injury events preventable. Understanding these patterns and creating resources is critical to decreasing injury events and improving the health status of NE residents.

By examining injury data we can identify key areas of regional concern, in order to determine priorities for prevention strategies. This information is vital in order to create strategies and set priorities under the evidence-based decision-making model. This model allows for a systematic approach to applying best available evidence (data) to evaluate options and decision-making in clinical, management and policy settings. Injuries tend to follow the socioeconomic gradient i.e. higher injury rates occur in lower socioeconomic status populations.\textsuperscript{132}

For Manitoba and in NE we see that:

- Manitoba injury deaths during 2002-2005 were 0.5/1,000, slightly higher than the national average during 2004 at 0.43 /1,000 residents.\textsuperscript{133}

- Between 2003 and 2006 NE males had consistently higher rates of unintentional deaths compared to females until we reach 2006 where females (75/100,000) surpassed males (63/100,000) in NE.\textsuperscript{134}

- In Manitoba there was a strong relationship between injury deaths for residents from urban and rural lower income areas.\textsuperscript{135}

- In Manitoba, “…women are more likely than men to be hospitalized as the result of falls; men are more likely than women to die as the result of having fallen.”\textsuperscript{136}

- Injuries account for 7% of male and 5% of female hospitalizations.\textsuperscript{137}

Injuries are the most common causes of death in Manitoba children between 1-19 years of age. The causes of injury vary depending upon the age of the child. In children injuries are also the most common reason for hospitalization. There is a strong correlation between low socioeconomic status and higher injury rates. In younger children there are less injuries and they are due to falls. For older adolescents in Manitoba, motor vehicle
collisions and self inflicted injuries are the most predominant cause. Adolescent males tend to have the highest rate of injuries.\textsuperscript{138}

- In Manitoba between 2000 and 2006 for 10 to 19 year olds, the most frequent types of injuries were self inflicted followed by motor vehicle injuries.\textsuperscript{139}
- There were more reports of injury deaths in children reported in rural compared with urban areas.\textsuperscript{140}

**Accidental falls** was the predominant reason for injury hospitalizations in Manitoba as well as in NE. Between 2000-2006; NE women at 445.4/100,000 were more likely to be hospitalized for falls compared with men at 377.9/100,000.\textsuperscript{141} First Nation females were 1.5 times more likely to die of injuries compared with non First Nation females.\textsuperscript{142}

**Hip fractures** and subsequent complications may result in death, or reduced independence and quality of life. “About 10 to 20\% of people die within six months, 50\% are unable to walk without assistance and 25\% require care at home for a long time.”\textsuperscript{143} Prevention of hip fractures is critical, and in Canada it appears that hip fractures are on the decline in people over the age of 65 from 612/100,000 hospital events during 1998-1999 to 486/100,000 events during 2007-2008 (excludes Quebec). Manitoba’s hip fracture event is also declining to approximately 490/100,000 during 2007/08.\textsuperscript{144} More women over 65 years fracture their hips compared to men.

**Mental Health**

In order for the CHA to provide a more in-depth ‘story’ about how mental well-being influences the health and productivity of our residents, our community consultations focused on mental well-being. A focus group was conducted nationally by the Canadian Alliance on Mental Illness and Mental Health (CAMIMH) on mental health literacy during 2005-2007.\textsuperscript{145} Although we didn’t ask identical questions, question themes were alike. Our focus group participants had similar responses to many questions as shown throughout the discussion.

**Diagram 3-2 Ojibway Medicine Wheel**

Mental health [wellness] refers to a balance in all aspects of life: social, physical, spiritual, economic and mental. Reaching and keeping this balance is a learning process and an individual life long journey.\textsuperscript{146} First Nation people describe mental health as “… a lifelong journey to achieve wellness and balance of body, mind and spirit. Mental wellness includes self-esteem, personal dignity, cultural identity and connectedness in the presence of a harmonious physical, emotional, mental and spiritual wellness.”\textsuperscript{147} First Nation’s, history,
culture, traditions, spirituality and identity are all critical to well-being and positive mental health. Without these foundations, well-being and good health cannot be attained. The Medicine Wheel from the Ojibway (or Anishinaabe) perspective is shown here.\textsuperscript{148}

The following summary describes comments from our consultations on the topic of mental health/wellness.

\textit{Focus group} participants were able to articulate through examples the connection between mind/body/spirit. Most participants in all health districts felt that mental health is more than a medical definition. It is what you are doing, work, producing, feeling good about yourself… looking after our overall well-being through exercises, sharing our personal feelings….to a trusted person…giving back what you received on a daily basis.

This understanding has important protective benefits for mental and physical health. “Raising public awareness about the connections between stress, depression and chronic disease represents a good opportunity for intersectoral collaboration, which is itself integral to effective health promotion.”\textsuperscript{149}

All \textit{Key Informants} interviewed described factors that they felt influenced mental health e.g. genetics, social environments, physical health and having family support. Mental health is complex with many life events and situations influencing our mental health. For example:

- \textit{individual factors} such as easy temperament, good coping style and optimism,
- \textit{family factors} such as supportive caring parents, secure and stable family, a positive school climate, and sense of belonging,
- \textit{life events} such as a partner or significant others, economic security, good physical health,
- \textit{community and culture} - a sense of connectiveness, access to support services, cultural identity and ethnic pride.\textsuperscript{150}

\textit{Focus group participants} indicated that \textbf{attitude} influenced an individual’s mental health. Participants noted that external factors, while may be beyond an individual’s control also impacts on attitude. External effects could be mitigated by the individual’s choices and response to daily events. Having a purpose, staying positive, and contributing (giving to others) were frequently mentioned as benefiting one’s mental health.

Some general attitudes that were mentioned by many participants as important in order to achieve ‘good mental health’ were:

- Having a good outlook [on life]. (Iron Rose)
- Being able to adapt [to situation]. (Winnipeg River)
- [Knowing] how you perceive, react, interpret things in the world. (Brokenhead)
- Keeping positive, helping others. (Blue Water)
Key informants indicated that past life events (negative and positive) and whether one was able to cope presently depended upon ones attitude, personal situation, whether there was community supports in place and adaptation skills of the person. Geographical isolation was also identified as potentially (but not always if there were other supports) having a negative influence on mental health.

We know that there are protective factors that decrease the risk for a mental health crisis or suicide such as: a resilient personality, tolerance for frustration, self control, good social supports, a sense of humour and having at least one good relationship.  

The ability to cope was commonly cited in association with good mental health. Focus group participants reported that coping skills and mechanisms could be learned and practiced. Participants noted that mental health can also be affected by physical factors such as genetics, chemicals in the body, diet and stress. Focus group participants identified a number of factors over which individuals have varying levels of control including their environment, life circumstances, and various stresses. Environmental influences ranged from weather to the health care system and the media. Collective and personal history includes all of a person’s experience and most significantly, traumatic events.

The Mental Health Literacy project focus group discussions with Aboriginal Canadians had similar responses as did some Blue Water participants: “The experience of colonization, oppression and abuse, and loss of cultural continuity have left a legacy of historical trauma for Indigenous people in Canada, and this continues to influence mental health.”

Focus group participants identified similar thoughts.

- “Aboriginal people have experienced... post traumatic stress disorder ... like people who go to war, they can’t process the event... there’s a lot we have to do with our mental health that includes looking at our history...mental health defines the quality of life we have...” (Blue Water).

The Life Satisfaction Survey is a “Subjective measure of life satisfaction that assesses the extent to which individuals give a favourable evaluation to the overall quality of their life.” Approximately one-third of NE residents felt they were very satisfied with their life. Iron Rose district were the healthiest of all our districts as measured by PMR; however self rated themselves as being the second lowest in life satisfaction.

Winnipeg River, Springfield and Blue Water reported the highest levels of life stress compared with our other health districts. Brokenhead reported the lowest life stress.
Focus group participants indicated that communities can support good mental health by providing opportunities for physical and social activities, and offering services and an environment that contributes to an individuals’ feeling of safety and security. Having services to turn to for help is important and participants noted that having a good health care system with follow-up supports, and a good response from emergency services, help people to feel secure.

Some participants also noted the need for creative and intellectual stimulation. Seniors’ groups, churches and Healthy Baby / Baby First Programs and Alcoholics Anonymous (AA) were examples cited.

General community issues related to mental health included the lack of individual involvement in the community for example difficulty finding volunteers and less community connectedness than in the past.

Many participants identified a lack of parental involvement, both in the community and at the family level, as key factors related to the lack of program opportunities for youth and to the relative disengagement of youth in general.

Child and youth related programming needs, as well as community dynamics were also discussed. Personal responsibility for change and improvement was highlighted.

Being connected in school is “…an important predictor of academic performance, positive career trajectory and a clear protective factor against a range of problem behaviours.” Our youth told us how connected they felt to their schools in a survey conducted in June 2007. The majority of youth did feel connected; however, there were approximately 20-25% of students in Grades 6-12 who did not feel this way and another 34% who indicated that they had feelings of hopelessness sometime during the year previous to the study. We know that “…school environments that foster resilience and focus on asset development, protective factors and social connectedness, reduce the risk of health-related problems and support the healthy growth and development of children and youth.”

Mental Illness

A diagnosis of mental illness will touch one in five Canadians during their lifetime. Mental illness is complex and is characterized by “…alterations in thinking, mood or behaviour (or some combination thereof) associated with significant distress and impaired functioning. The symptoms of mental illness vary from mild to severe, depending on the type of mental illness, the individual, the family and the socio-economic environment.”

Except for anxiety disorders, we see that there has been an overall increase in mental illnesses reported e.g. depression, schizophrenia, personality disorders and dementia during 2001/02-2005/06 in NE and in Manitoba. This can be interpreted positively in that people are accessing health services, and have the opportunity to receive care, treatment and counselling. Having a mental illness can negatively affect people i.e. depending upon the severity can “…alter our hormonal balances and sleep cycles, while many psychiatric
medications have side-effects ranging from weight gain to irregular heart rhythms…creating an increased vulnerability to a range of physical conditions."\textsuperscript{158}

Unlike many physical illnesses “…the prevalence of mental illness is not directly related to general health status of residents at the RHA level (using premature mortality rates).”\textsuperscript{159} In rural RHAs, there was not as consistent a relationship between some mental illnesses and income.\textsuperscript{160}

The following themes were raised consistently by many participants on mental illness and health services.

- need for more awareness of mental health services available,
- education about mental health issues particularly in the schools,
- more physician training about managing clients with mental health issues as well as awareness of services, and
- managing the challenges around stigma and privacy especially in small communities.

When we look at mental and physical health conditions we know that the more mental illnesses a person has, the more likely they will have a premature death.\textsuperscript{161}

The loss of people to suicide impacts not only the family, but friends and the community at large.

*Predisposing risks for suicide* include mental illness, abuse, loss of a loved one early in life, family history of suicide, or a long-term difficult relationship. “Almost all people who kill themselves have a mental illness…they often abuse drugs or alcohol.”\textsuperscript{162}

“Individual characteristics that increased likelihood of suicide- being male, being older, residing in a lower income neighbourhood and having physical and mental health problems (especially mental illness). Geographical characteristics that decreased the likelihood of suicide, after controlling for all other factors –living in the South or in the most healthy area of Winnipeg.”\textsuperscript{163}

“Individual characteristics that increased the likelihood of suicide attempts- “being female, being younger (this is particularly a factor for females since female rates are higher in the young, but become similar to male rates in the mid-to older adult range), residing in lower income neighbourhoods, and having both physical and mental health problems (especially mental illness).”\textsuperscript{164}

*Focus group participants* recognized that personal behaviours and choices could positively or negatively affect one’s mental health. In response to a query regarding mental health concerns, discussions revealed that the use, abuse and addiction to prescription medications, illicit drugs, alcohol and gaming were felt to be widespread concerns in NE communities. Co-occurrence with mental health disorders was noted and participants acknowledged that while the potential for an inter-relationship exists, it is not a certainty in all cases. NE’s adjusted suicide rate was significantly higher than Manitoba’s for two time periods 1996-2000 and 2001-2005.\textsuperscript{165} We see at the district level (Figure 3-64) for the same time period, Northern Remote had the highest \textit{crude} rate of suicide.
compared with our other health districts. From the literature we know that suicide rates are much higher in many Aboriginal communities compared to suicide rates in the general population.166 “The experiences of colonization, oppression and abuse, and loss of cultural continuity have left a legacy of historical trauma for Indigenous people in Canada, and this continues to influence mental health.”167 As discussed earlier, injury mortality (suicide is included) for all ages and causes in the years 2001-2005 and was particularly high in Northern Remote (a predominantly Aboriginal population) at 4.1/1,000 and was significantly higher than Manitoba’s rate of 0.5/1,000.168

The following quotes represent participant perceptions about suicide and suicide rates:

- One participant observed that Springfield had high suicide rates. (Springfield)
- “suicide rates a concern….” (Blue Water)
- One participant sought, but was unable to attain support for a suicidal child. (Blue Water)

Some suggestions by partners and community focus group participants to decrease suicide included the need to be pro-active in preventing suicide, more suicide awareness programs in schools, on mental health in general and suicide in particular and information on where to get help.

- Suggestion “…early intervention programs to identify those at risk of suicide and offer preventive support.” (Brokenhead)

“In Canada, depression is now the third leading reason for physician office visits, after hypertension and diabetes…those most likely to receive treatment for depression were women aged 40-50…”169 Those who experience depression also experience three times as many chronic physical conditions as the general population.170

There are several reasons why there are a higher number of women treated for depression than men for example

- women more commonly seek medical care than men,
- men may feel they must handle their feelings on their own and may use other coping behaviours such as heavy alcohol consumption.171

A 2007 Canadian study found that “……depression was about four times as common among those who had been separated, divorced or single following a relationship, with men being at a greater risk for depression than women.”172

Between 2001/02-2005/06 depression significantly increased from 15.4% to 17.8% in NE for people aged 10 and over.173 Depression is one risk factor for suicide. NE experienced significantly more suicides (0.29/1,000) compared with Manitoba at 0.16/1,000 between 2001-2005.174 Given this, it is important that client’s depression and other mental illnesses are not only diagnosed, but monitored, ideally by the same health practitioner. This point was emphasized in two articles on screening and patients with schizophrenia.175

Similar to what we are seeing in NE and Manitoba, antidepressant medication prescriptions have also increased in Canada. These findings must be reviewed with caution as these medications are not only used to treat depression but also used to treat...
other conditions such as chronic pain. Rural Manitoba children prescribed antidepressants during 2005/06 tended to be from higher income areas. This association appears to be present in some NE districts e.g. Springfield (97%) and Brokenhead (96%) had the highest percent of economic families over the low income cut-off. We saw that Brokenhead had the highest and Springfield the third highest number of children on antidepressants compared with other districts.

Selected serotonin reuptake inhibitors (SSRIs), also antidepressants are prescribed primarily for “… clinical depression. SSRIs are frequently prescribed for anxiety disorders, such as social anxiety, panic disorders, obsessive–compulsive disorder (OCD), eating disorders, chronic pain and occasionally, for posttraumatic stress disorder (PTSD).” In rural Manitoba there was a significant trend toward higher levels of income and higher SSRI prescription use. Females were almost twice as often prescribed SSRIs than males. A warning released in 2004, demonstrated a potential increased risk for suicide associated with antidepressants especially in children and youth. Despite this warning, in NE we did not see a change in SSRI antidepressant prescriptions. In Manitoba there was a significant decrease. For the latter time period 2005/06 NE at 14.3/1,000 had similar rates compared with Manitoba at 14.5/100. The CAMIMH survey found that the “…the majority of those surveyed agreed that medications like anti-depressants could be helpful for people with mental health problems [60%], a majority also agreed that medications treat only the symptoms and not the underlying cause of mental health problems…[55%]”

“Benzodiazepines are a family of prescription drugs that are used mainly to relieve anxiety and to help people sleep. These are sedative drugs, which reduce activity in certain parts of your brain, resulting in a calming effect.” The concerns with using these type of drugs in the elderly are related to increased risk of falls and fractures as well as confusion, withdrawal from others and possible dependency. Although NE rates of benzodiazepine use was significantly lower than the Manitoba average and we cannot link benzodiazepine use with falls in Manitoba, we know that falls is an area of concern, when we look at our injury data. Prescriptions for benzodiazepines are a risk factor we can modify. In the Manitoba mid geographic area (NE, Parkland, Interlake) accidental falls was the most common cause for hospitalization at 39.8% during 1996/97 to 2000/01 and 43.4% during 2001/02-2005/06. Women who died of injuries were most likely to die as a result of a fall.

Dementia is increasing in Canada. Approximately 500,000 Canadians are living with Alzheimer's disease or a related dementia. Of this number, more than 71,000 (14%) were under the age of 65, and approximately 50,000 (10%) were under the age of 60. Women make up 72 per cent of Canadians with Alzheimer's disease. It is projected that within five years, an additional 250,000 Canadians could develop Alzheimer's disease or a related dementia.

Dementia requires complex care and is multi-faceted from social needs to acute and long term physical care, by informal and formal caregivers. It is anticipated that the increase in our elderly population, will increase the cases of dementia, placing significant stress on families and health care resources.
Focus group participants were able to identify an array of service options e.g. Mental health worker, public health nurses, faith based professionals e.g. minister/priest; Child & Family Services, wellness facilitators, home care case coordinators, school staff or relatives, friends.

- All groups identified the family doctor as a source of support and/or referral.
- Some participants mentioned they would go to Winnipeg or Selkirk. (Blue Water).

Key informants added

- 24 Hour Help Line. (Springfield and Brokenhead).

Those with mental illness and/or their families experience unique barriers when accessing mental health care or participating in community groups. Access issues in this population “…range from the impact of poverty on the ability to afford transportation for medical appointments to systemic barriers … less likely to receive preventive health checks…Short appointment times are often not sufficient to discuss mental or emotional health for people with complex chronic health needs…mental illness and physical conditions share many symptoms…”.

Focus group participants indicated that most barriers to accessing programs and services that promote good mental health were cost, transportation, childcare issues and the lack of privacy because of the small size of communities. The effects of having a mental health condition as well as society’s negative stereotypes associated with people who have a mental disorder (stigma) could preclude a person from seeking help.

- “Time of program is offered (during day) and availability of childcare” is a barrier. (Winnipeg River)
- People don’t have time to participate in whatever programs you might have --- running to work, running to take their kids to various activities. (Iron Rose)
- Getting a timely appointment was a challenge. (Brokenhead and Blue Water)
- Difficult to navigate system. (Springfield)
- “…especially men, they’re not going to come forward and say ’I need to speak to someone’…” (Blue Water)
- “…going to the front desk, needing to speak with someone, … and you’ve gone to school with that receptionist… huge block there.” (Springfield)
"From Pine Falls to Beausejour is far to go for counselling, especially when one is under stress and has family, work … also to deal with.” (Blue Water)

"…counsellor (mental health) was very booked up.” (Iron Rose)

"There is good access to a counsellor who would visit school for child’s needs. (Brokenhead)

"…adult and child MH worker…only came as far as Pine Falls. It isn’t as easy to [to travel] Pine Falls…” (Blue Water)

"There are workers here in Beausejour but overworked; need someone to talk to…” (Brokenhead)

"continuity of practitioner required so individuals feel comfortable discussing mental health issues.” (Winnipeg River)

The very conditions that might be improved with treatment and care are sometimes what stops people from accessing help for example: “someone with a panic disorder – does not want to attend a program.” (Brokenhead)

Stigma was raised in every health district by our focus group participants, key informants and partners as a concern and barrier.

"Younger people more likely to be open to getting help than older people who grew up when there was a greater degree of stigma.” (Blue Water).

"It’s still a taboo subject, in families, in communities, even amongst the professionals…” (Brokenhead)

"MH has a lot of stigma attached…that’s one reason people don’t want to talk about it; even if there’s a volunteer driver program (to overcome transportation barrier), do you want them to know you are seeking assistance for MH issue?” (Iron Rose)

Focus group participants (conducted by CAMIMH) strongly agreed that stigma and discrimination toward mental disorders remains problematic. Forty-two percent of participants say they would be uncomfortable revealing mental health problems to others. They differentiated stigma with more serious mental illness, and also included medical professionals’ attitude and workplace stigma if it was disclosed in the workplace.

Focus group participants in all health districts identified ways to augment programs and/or services to improve the mental health of their communities:

"… [need] a comprehensive, intensive program to address family violence, with components for adults and for children…working with all three parties: perpetrator, victim and children.” (Blue Water)

"anger management, self-help or other programs to help address community violence.” (Blue Water)

"…train the doctors to let them know what mental health supports do exist in the community.” (Blue Water)

[Would like to see] “…short education programs in the schools on specific topics e.g. autism, tourettes.” (Winnipeg River) “…”on mental health issues including suicide.” (Brokenhead)

"There are a lot of young people today that are stressed beyond their means and don’t have anyone to turn to, don’t know how to cope…don’t know how to survive on a meagre income and if those things were taught in the school from the time in grade 6 and to young adults…” (Iron Rose)
“...education is empowerment...blow open the doors and really just talk about mental health issues. It's still a taboo subject, in families, in communities, even amongst the professionals. The police don’t know what to do.....”(Brokenhead)

“Doctors need more information on addictions and how people become addicted and what happens after you are an addict......too many patients...they haven’t got the time...more concerned with physical health....” (Brokenhead)

“Not enough mental health workers...reduce transience of mental health workers...continuity is very important, takes time to develop trust.” (Winnipeg River)

“Broader support for people with FASD...don’t stop service at age 18.” (Blue Water)

“Awareness of how to help someone touched with a mental disorder-hard to know how to initiate conversation without intruding / offending.” (Springfield)

“How to support people struggling with mental health issues.” (Brokenhead)

“...need to publicize crisis numbers to kids.” (Springfield)

“We need counsellors here. A service where people can feel at ease.” (Blue Water)

Note: the context is related to the fact that many participants did not seem aware that there were mental health counsellors available.

Expand awareness of mental health issues and of the community resources that are currently available. (All district summary)

Overall participants felt that it was important to proactively address stigma by sharing information and normalizing discussions about mental health. Public education, programs targeted at healthcare and other professionals, and topical informative programs for youth would help ensure individuals could support each other or find help for themselves if ever needed.

Key informants added

“...increased staff and existing staff training.” (Blue Water)

“...greater awareness with up to date information, more research.” (Brokenhead)

“...positive messaging to reduce stigma.” (Winnipeg River)

“...best practices for all frontline workers refer to ‘personal wellness’ instead [of mental health].” (Springfield)

The ‘Families First Report’ concluded that “…mental health services are clearly required to support mothers with young children. Also interventions are needed to connect families to their communities and provide assistance with relationships…” given that 24% of families in Manitoba and 22.2% in NE identified three or more risk factors for poor child outcomes. In NE health districts 62.2% of families in Northern Remote and 41.9% in Blue Water identified three or more risk factors.192 “Continued support is recommended for Manitoba’s Early Childhood Development (ECD) strategy to improve the balance between risk factors and protective factors in the early childhood environment.”193
The majority (58.3%) of residents in NE reported being in excellent or very good health. The health of NE residents overall has shown an improvement; evident by a decrease in the premature mortality rate (PMR). PMR is considered the best single indicator of overall health status. Despite the regional decrease in PMR, Northern Remote and Blue Water suffer disproportionately poorer health status as shown by their PMR as well as in a number of other indicators compared with Iron Rose or Springfield for example.

Life expectancy for females significantly increased from 79.7 to 81.3 years between 1996-2000 and 2001-2005. Males did not experience any change, and remained at 75.4 years during 2001-2005.

Between 2002-2006, causes of potential years of life lost (PYLL) in NE were different for males and females:

- Males: injury, suicide, circulatory diseases and cancers.
- Females: cancer, injury suicide, circulatory diseases.

New stroke events decreased in people over age 40, except for Northern Remote where there was an increase. Heart attack deaths and hospitalizations decreased in all districts except for Iron Rose where there was a non significant increase.

The leading causes of newly diagnosed cancers during 2003/05 to 2000/02 were prostate cancer for males and breast cancer for females. Skin, breast and cervical cancer increased in females, as did lung cancer in males. Colorectal cancer appears to be decreasing.

Osteoporosis increased in residents over 50 years, diabetes in adults and children increased for both males and females, and high blood pressure increased. Respiratory illnesses and asthma have not changed in NE but rates were quite variable among our health districts.

The two leading causes of death for ALL age groups were due to circulatory disease, which appear to be decreasing and cancer where there was no change.

Falls, assaults, self inflicted injuries and motor vehicle accidents were the leading causes of injury hospitalizations. Fall injuries decreased, however falls were the leading reason for injury hospitalization. More females were hospitalized due to falls compared with males.

Between 2002 and 2006, all unintentional injury deaths (suicide was excluded) increased for both males and females. Injury deaths in children 0-19 years appear to have declined, however rates continue to be significantly higher compared to Manitoba.

Springfield followed by Iron Rose and Brokenhead, self reported the highest percent of life stress. Regionally, more females than males visited physicians or were hospitalized for mental illnesses. The treatment prevalence for all mental health disorders increased, except for anxiety disorders. The treatment for depression significantly increased, however the suicide rate has not changed and was significantly higher than Manitoba.
There was a significant increase in antidepressant prescriptions in Manitoba overall, in NE and in all our districts. NE’s adjusted suicide rate was significantly higher than Manitoba’s between 1996-2000 and 2001-2005. At the district level for the same time period, Northern Remote’s crude suicide rate was approximately eight times higher than our other health districts.

Mental health issues emerged as an important area of concern raised by many participants in community health assessment focus groups conducted in 1997, 2003, and 2008. Stress and feelings of isolation were common themes.
Picture Credits

Pg. 2 - Canadian Council on Social Development. Wellbeing Fact Sheet. Accessed May 14, 2009 @ www.ccsd.ca
Pg. 29 - Microsoft clip art.
Pg. 33 - Flower designed by P. Hayes and CHA Awareness Team.
Pg. 44 - Dr. Zeiler with patient. Beausejour Hospital. Spring 2009. Picture taken by:
Pg 52 - Resident at Whitemouth PCH. December 2008. Email from Debbie Mueller, Recreation Program, Whitemouth PCH to S. Dick Entitled: RE: September 17, 2009
Pg. 60 - Manitoba community walk advertisement for Mental Illness Awareness Week October 4-10, 2009.

REFERENCES

Health Policy. Winnipeg, MB November. Pg. 133-139
Health Policy. Winnipeg, MB Pg. 101-107
Health Policy. Winnipeg, MB Pg. 101-107
Women’s Health Centre of Excellence. Winnipeg, MB. Pg. 5-92
accessed @ http://cihi.ca.
[144] Statistics Canada & Canadian Institute for Health Information (2009) Figure 1: Hospitalized Hip Fracture Event Rates
& Figure 2 Hospitalized Hip Fracture Event Rates by Province, Canada. Health Indicators 2009. Ottawa, Ontario.
accessed @ http://cihi.ca. Pg. 53.
Mental Health Literacy Project. May.
[146] Canadian Mental Health Association web site @ www.manitoba.cmha.ca. Drop-down menu- ‘Your mental health’
Accessed May 12, 2009
[147] Excerpted from: First Nations – Mental Illness Awareness Week website @ www.miaw.ca/en/wellness/first-
[148] Excerpted from: First Nations – Mental Illness Awareness Week website @ www.miaw.ca/en/wellness/first-
Mental Health Literacy Project. May . Pg. 34.
[151] Health Canada (2009) Suicide Prevention. IT’S YOUR HEALTH Accessed April 14, 2009 @ http://www.hc-
sc.gc.ca/hl-vs/iyh-vsv/index-eng.php. Pg. 2
Mental Health Literacy Project. May . Pg. 34
Mental Health Literacy Project. May. Pg. 16
[158] Canadian Mental Health Association (2008) Backgrounder: The Relationship between Mental Health, Mental Illness
and chronic Physical Conditions. December. Pg. 1 Accessed May 12, 2009 @ www.ontario.cmha.ca
the cumulative disorders group with those in the no disorders group. Patterns of Regional Mental Illness Disorder
Diagnoses and Service Use in Manitoba: A Population-Based Study. Manitoba Centre for Health Policy. Pg. 82-83.
at the Population Level. Pg. 145.
165 Fransoo, R. et al (2009) Figure 3.10.1. MB RHA Indicators Atlas 2009. MCHP.
166 Canadian Alliance on Mental Illness and Mental Health (2007) Mental Health Literacy in Canada: Phase One Report Mental Health Literacy Project. May. Pg. 34
167 Canadian Alliance on Mental Illness and Mental Health (2007) Mental Health Literacy in Canada: Phase One Report Mental Health Literacy Project. May. Pg. 34
173 Fransoo, R. et al (2009) Figure 5.2.1 MB RHA Indicators Atlas 2009. MCHP.
174 Fransoo, R. et al (2009) Figure 3.10.1. MB RHA Indicators Atlas 2009. MCHP. Pg. 78.
179 Brownell, M. et al (2008) Figure A 6.13 & Figure 6.10. Manitoba Child Health Atlas Update. Manitoba Centre for Health Policy. Winnipeg, MB November.
184 Centre for Addictions & Mental Health (2009) Do You know…Benzodiazepines. Accessed April 21, 2009 @ http://www.camh.net/About_Addiction_Mental_Health/Drug-and_Addiction_Information/...
186 Fransoo, R. et al. (2009) Figure 7.10. 4 a & 7.10.4 b. MB RHA Indicators Atlas 2009. MCHP.
195 Fransoo, R. et al (2009) Figure 3.10.1. MB RHA Indicators Atlas 2009. MCHP.
Section IV

DETERMINANTS OF HEALTH

Chapter 1- Lifestyle
Chapter 2- Social Support
Chapter 3- Employment
Chapter 4- Environment
Chapter 5- Early Child
Chapter 6- Education
Chapter 7- Income
The determinants of health encompass personal, social, economic and environmental factors. Differences in health status result from the combination and interaction of health determinants and give rise to health disparities between individuals and among various segments of the population. ¹

The following 11 health determinants are identified in the Canadian literature: ²

◊ Early Child Development ◊ Social & Physical Environments
◊ Education ◊ Social Support Networks
◊ Employment and Working Conditions ◊ Gender
◊ Income and Social Status ◊ Culture
◊ Biology and Genetic Endowment ◊ Health Care
◊ Lifestyle, Personal Health Practices & Coping Skills

Diagram 4-1 Estimated Impact of Determinants of Health on Health Outcomes ³

Estimated Impact of Determinants of Health on Health Outcomes

The social and economic environment has the greatest impact on health status compared with the other determinants of health.

Our focus group participants were able to identify areas that encompass the many facets of the determinants of health as they explored their understanding and perceptions about mental health issues in their community.

When the participants described how they promoted their own mental health, participants referred to all the determinants of health to conceptualize ‘mental mental health and well-being and illness.’

Participants emphasized the importance of maintaining family, social and community connections, balancing work, home, creative and spiritual pursuits, getting good rest and a good diet. Exercise was listed as an approach to promote mental health and an important component of mental health maintenance, and to boost personal self esteem and as a management strategy to ward off depression. Avoiding drug and alcohol abuse and managing stress were also listed as important in a lifestyle that supports good mental health.

- “social activities are just as important as physical activities,” (Winnipeg River)
- “Stay active, connected, involved, positive, doing things you enjoy; “A lot of satisfaction is derived from supporting the community.” (Iron Rose)
- Physical activity, socialization – we need to be more connected. “(l)n today’s society … TV and home computers disconnect us. ”(W)e have a lot of commuters…a lot of activities that keep people home…so people don’t know each other...” (Brokenhead).
- Balance work life; get good rest / good sleep; de-stress, yoga; keep active; exercise. (Springfield)
- “…You need to be physically healthy, physically involved in the community, need to be busy…good nutrition… housing… enough sleep…it’s all tied together, to just isolate it is almost ridiculous.” (Blue Water).

This section will examine selected health determinant indicators in seven separate chapters. The Health Care determinant is discussed in Section V Health Care System.

<table>
<thead>
<tr>
<th>DETERMINANTS OF HEALTH 4</th>
<th>[CHA Manitoba Framework in italics]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>Lifestyle, Personal Health Practices and Coping Skills</td>
<td>Social Support Networks</td>
</tr>
<tr>
<td>Health Behaviours</td>
<td>Personal Resources</td>
</tr>
</tbody>
</table>

Determinants of culture, gender, biology and genetic factors are implied throughout all sections of this report.
REFERENCES


Health behaviours are those behaviours that influence a person’s health status in some way. These behaviours could have a positive or potentially negative effect on one’s physical, mental or spiritual well-being.

This chapter highlights how lifestyle choices impacts on our physical and mental wellbeing. As lifestyle practices are reviewed, we will illustrate how positive choices can improve our quality of life.

Canadian Community Health Survey (CCHS) – The reader is reminded that district level information is often small, therefore should be reviewed with caution. In this data set, First Nation communities were not surveyed, therefore Blue Water district is likely underreported and Northern Remote district was suppressed.

North Eastman (NE) Youth Health Survey December 2008 – This survey was conducted in June 2007 in 19 NE schools. Overall 63% of students in Grades 6-12 participated. The percentages reported reflect the percent of students who participated in the survey, not the total number of students enrolled in Grades 6-12.

Note: Depending upon the report, Grade 9-12 may also be referred to as Senior 1-4.

RCMP Statistics – Detachment boundaries only roughly correspond to our health district boundaries. These are crude numbers, therefore subject to population number variances. Events are those reported within the detachment boundaries. The person involved may or may not live within the detachment.

Refer to Section 1 - Chapter 1 for a detailed discussion on CHA Report primary sources and limitations.
Dietary Practices / Eating Habits

Figure 4-1-1 Average Daily Fruit & Vegetable Servings

The goal is to eat at least 5 or more servings of fruits and vegetables per day.

Adults

The majority of adults in Manitoba, NE and our health districts eat less than 4 servings of fruits and vegetables per day.

Winnipeg River had the highest intake of over 5 fruits and vegetables at 41% and Brokenhead had the lowest at 30%.

Children

- **CCHS cycles 2001, 2003, 2004** reported that approximately 33% of NE children aged 12-19 years consumed 5+ servings of fruits and vegetables daily. Manitoba children’s consumption rate was 31.8%.

Other Reports:

- **NE Youth Health Survey** – NE children in Grades 6-12 self reported that only 10% eat 5 or more fruits and vegetables a day.

While the age groups were similar in both reports (CCHS and NE Youth Survey) there was considerable difference in what was reported. The overall message is that children are not consuming the targeted 5+ fruits and vegetables / day.

**Focus group participants** noted that

- School lunches lack fruit and include lots of processed food “…we’re going to have huge, huge problems in health…the way…kids are eating these days.” (Iron Rose)

- “Better restaurant menu options – high cost of better foods prevents folks from ordering them.” (Brokenhead)

**Our partners** identified the following causes for low consumption of fruits and vegetables:

- Fast food type of diet, parental influences and children role modeling regarding food choices, lack of awareness/knowledge, lower income prevents purchasing healthier foods, cultural influences, and accessibility. (Collation of all health district responses).

- Eating out practices e.g. fast food diet and restaurant portions too large. (Blue Water)

Partners offered some solutions for increasing healthy diets for example: increase awareness of importance of healthy diet in schools, and promote planting gardens.
Body Weight

Body Mass Index is measured by taking the weight in kilograms and dividing by the square of a person’s height in meters.⁴

Adults

Figure 4-2-2 Adult - Body Mass Index (BMI)

Thirty-eight percent of NE residents over 12 years were overweight compared to 35% of Manitobans.

Winnipeg River had the highest percent of overweight residents at 46.8% followed by Brokenhead at 44.5% and Blue Water at 40%.

Springfield had the highest reported under/normal weight residents at 49.3%.

BMI increases with age for Canadian women.⁵

Children⁶

Figure 4-2-3 Child Crude Percent Body Mass Index (BMI) - 2001-2005 – Aged 12-19 Years

Approximate percentage of children who were:

- Manitoba - Normal or under weight - 76 %, Overweight - 14% and Obese - 6.8%
- North Eastman - Normal or underweight - 77%, Overweight - 16% and Obese - suppressed

Manitoba and NE had similar percentages of children in all categories except for obese, where NE children were suppressed.


Other Reports:

- **NE Health Youth Survey**
  - Sixty-three percent of NE children in Grades 6-12 self reported that 62% of males and 65% females were within a healthy weight.
  - There were 17% of males and 12% of females who were overweight.

When asked about their perception of weight, 24% of males and 33% of females felt that they were overweight. As shown this was over the calculated overweight percent.

**Physical Activity**

*Canada’s Physical Activity Guideline (PAG)* is the national reference for physical activity. PAG recommends getting 60 minutes of light activity every day, progressing to 30-60 minutes of *moderate* activity or 20-30 minutes of *vigorous* activity 4 times a week.

### Adults

Table 4-2-1 Adults- 18+ Years- Activity Levels - 2005

<table>
<thead>
<tr>
<th>Adults 18 Years and Over</th>
<th>Does not meet PAG</th>
<th>Meets PAG with light activities</th>
<th>Meets PAG with moderate activities</th>
<th>Meets PAG with vigorous activities</th>
<th>TOTAL % YES PAG</th>
<th>Do you exercise regularly % YES</th>
<th>IF EXERCISES REGULARLY Have you been exercising regularly for the last 6 months? % YES</th>
<th>IF DOESN’T EXERCISE REGULARLY, Do you intend to start regular exercise? % YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>26.1%</td>
<td>11.4%</td>
<td>46.1%</td>
<td>16.3%</td>
<td>73.8%</td>
<td>66.7%</td>
<td>90.7%</td>
<td>57.4%</td>
</tr>
<tr>
<td>Manitoba</td>
<td>30.5%</td>
<td>13%</td>
<td>36.3%</td>
<td>20.2%</td>
<td>69.5%</td>
<td>67.9%</td>
<td>84.7%</td>
<td>57.9%</td>
</tr>
</tbody>
</table>


Table 4-2-2 Adults – Activity Level by Age and Gender - 2005

<table>
<thead>
<tr>
<th>Does not meet PAG</th>
<th>18-34 Years</th>
<th>35-49 Years</th>
<th>50-64 Years</th>
<th>65+Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>North Eastman</td>
<td>16.2%</td>
<td>6.3%</td>
<td>28.4%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Manitoba</td>
<td>28.0%</td>
<td>20.9%</td>
<td>29.5%</td>
<td>29.4%</td>
</tr>
</tbody>
</table>

Source: In Motion Research Committee (2007) – in motion Survey. Section 1 Manitoba Adult Data. Section 2 Manitoba & Winnipeg Children’s and Teen’s Data Health, Leisure & Human Performance Research Institute-University of Manitoba. February 6. Pg. 103C

In NE 74% of adults compared with 70% of Manitobans met PAG guidelines. The majority of participants indicated an intensity level of moderate. Males in all age groups were more apt to meet PAG recommendations. In NE this gender gap continued until age 65+ where activity levels were similar.
The following adult information comes from ‘in motion’ data set surveyed April 28-June 30, 2005:

- As participants age, especially over 65 years, those who met PAG’s basic requirements increased for women and decreased for men in NE and Manitoba.

- Yard and housework were the main types of activity for both NE and Manitoba adults.

- NE (96%) surpasses Manitoba (50.7%) when it comes to ‘other leisure activities’ such as walking and gardening.

- Both males and females indicate that activity reduces disease however; older men and women were less likely than younger men and women to agree that ‘physical activity reduces the risk of disease’.

- The major barriers cited why adults (especially younger adults) did not participate in activities were ‘other commitments’ e.g. work, kids, family, volunteering. The more people worked, the more commitment, motivation, and lifestyle were identified as barriers. For older individuals, physical or health issues were cited as barriers. From those surveyed, it was found that people with less education and/or lower income reported less physical activity.

Other Report:

Table 4-2-3 Total Physical Activity Levels (Work, Leisure, Travel)

<table>
<thead>
<tr>
<th></th>
<th>Active</th>
<th>Moderate</th>
<th>Inactive</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aged 15-75 years- adjusted</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>19.3%</td>
<td>37.5%</td>
<td>43.2%</td>
</tr>
<tr>
<td>Male</td>
<td>44.3%</td>
<td>32.1%</td>
<td>23.7%</td>
</tr>
<tr>
<td><strong>North Eastman</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>19.8%</td>
<td>35.2%</td>
<td>45.1%</td>
</tr>
<tr>
<td>Male</td>
<td>39.1%</td>
<td>32.8%</td>
<td>28.1%</td>
</tr>
</tbody>
</table>

Bold = significant differences between males and females


Overall NE males appeared to be slightly more active than Manitoba males. There appeared to be little differences between NE and Manitoba female activity levels.

Children

Children’s physical activity level is more difficult to measure. ‘In motion study’ included the PAG recommendations as the primary target benchmark (at least 60 minutes of moderate physical activity daily and 30 minutes of vigorous physical activity daily) but also included a measure that would determine how many children could be considered sufficiently active for their health. This required a calculation referred to as KKD (kilocalories per kilogram). KKD calculates the amount of energy used on average per day (KKD). The recommended amount of activity is at least 6 KKD.
The following children and teen information comes from the ‘In Motion’ data set surveyed April 28-June 30, 2005:

- A few as 10% of Manitoba children and teens get the amount of exercise recommended by Health Canada’s PAG, while less than 50% meet KKD recommendations.\(^{17}\)

- In Manitoba, 94% of parents believe that their children and 82% of parents believe that their teens were getting regular exercise. In fact, less than 10% of children and 8% of teens meet PAG’s 90 minute goal.\(^{18}\)

- Males were more likely to meet PAG and KKD goals than females. Activity levels drop from childhood to teens.\(^{19}\)

- The predominant barrier to activity cited by Manitoba children was ‘other commitments’ e.g. schoolwork. Almost none of the youth surveyed felt that computers, video games and TV kept them from exercising.\(^{20}\)

- Manitoba teens appear to understand the benefits of physical activity in reducing chronic diseases especially heart disease.\(^{21}\)

- Of those surveyed only 15% of children aged 5-12 years and 18% of teens indicated that they had a chronic health problem at the time of the survey.\(^{22}\)

Other Reports:

- CCHS information combining 4 cycles 2001, 2003, 2004, 2005 for those aged 12-19 year olds found that significantly more NE children (61.2%) compared with 44% of Manitoba children were found to be physically active. Male children (53.7%) were more likely to be active than female children (34.5%) in Manitoba.\(^{23}\)

- NE Health Youth Survey – those surveyed in 2007 were asked how much activity they do. It was found that physical activity steadily declined from 67% in Grade 6 to 38% in Grade 12. Males were consistently more physically active than females.\(^{24}\)

Most Focus group participants in all health districts recognized the benefits of exercise not only as a way of improving their physical health, but also as a way to relieve stress. Some participants also indicated that access to and costs of some activities were barriers in participating in formal activities. Formal activities refer to coordinated, planned team activity programs that usually cost money to participate. It was not clear if participants also recognized day to day tasks such as household chores and gardening could also be considered as exercise activities.

- Programs go up to age 6 years, between 6 and 12 there is nothing, and parents feel dropped at that point. Concern for teens, it’s difficult to engage and to maintain mental health in this group; travel distances and financial aspects are a deterrent to youth participation in sports. (Winnipeg River)

- “Nothing here [Oakbank for kids] in the winter time if you’re not playing hockey…” (Springfield)

- No (or little) programming offered in Victoria Beach area – most notably in off-season…should let youth take some responsibility for planning. (Blue Water)

- No programming in Pine Falls…suggest merging activities offered in surrounding areas…Focus is on younger children. (Blue Water)
Big gap in programming (Black River) for ages 18-35. (Blue Water)

“Have to drive from Lac du Bonnet to Selkirk for girls’ dance class – lots can’t afford the drive [time and money], stressful for young families.” (Winnipeg River)

“Low income would also affect kids too, not only seniors. My husband has always said that playing hockey is a rich man’s sport now. Some kids just can’t afford to do some of the sports or participate in activities with a high cost.” (Brokenhead)

“…One’s sitting home watching TV because parents can’t afford the fees or the equipment…” (Winnipeg River)

Families restricted from participation by lack of means. (Iron Rose)

“TV and computers take away from doing other more positive activities; [this] reduces ‘people contact’. “ (Winnipeg River).

Our partners identified the following causes for inactivity levels such as:

Cost especially for structured / formal exercise programs, not conducive to all socio-economic levels, access related to long distances. (All health districts)

The fun is taken out of physical education [in schools], more sedentary activities, parents want others to organize. (Blue Water)

Poor weather – more difficult to be physically active. (Iron Rose)

Partners offered some solutions for example: more volunteers and parental involvement, public money spent on activities that are affordable for all families, exercise programs for ALL age groups.

Substance Use- Smoking

Adults

Figure 4-2-4 Smoking Rates Age 12 +

Manitoba and NE report similar smoking rates.

Winnipeg River followed by Brokenhead and Blue Water had the highest smoking rates compared with our other health districts, and were also higher than Manitoba’s rate.
Children

- **CCHS Cycles 1.1 to 3.1 (2001, 2003, 2004, 2005)** aged 12-19 - Adjusted - Self reported *non-smoking* rates for children who smoked less than 100 cigarettes in their lifetime was 85% in Manitoba and in North Eastman approximately 87%. Smoking rate differences between males and females was not significant.  

- **NE Health Youth Survey** - NE children who self reported that they were either an occasional, daily or total smoker
  - Grades 6 - 8 - 21% smoked
  - Grades 9 - 12 - 46% smoked.
  - Of those in Grade 12 - 12% of males and 19% of females smoked.
  - Peers and family members are both influential in youth decisions as to whether they will start or continue to smoke. Thirty-two percent of youth indicated that they get cigarettes from their friends. For those who smoked, 21% of males and 15% of females indicated that they had no plans to quit.

- **Alcohol & Other Drugs: Students in Manitoba 2007** - students were asked if they had smoked in the past year
  - Grades 7 to Senior 4 - 20%. Just over 40% of smokers had their first cigarette by age 12.

Table 4-2-4 Smoking during Pregnancy – NE Health Districts 2003-2006 (Crude)

<table>
<thead>
<tr>
<th>Location</th>
<th>Iron Rose</th>
<th>Springfield</th>
<th>Winnipeg River</th>
<th>Brokenhead</th>
<th>Blue Water</th>
<th>Northern Remote</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE Health Districts</td>
<td>suppressed</td>
<td>10.5%</td>
<td>23.7%</td>
<td>22.8%</td>
<td>49.1%</td>
<td>65.8%</td>
</tr>
</tbody>
</table>

Smoking during pregnancy decreased over time, however when the 4 years were combined, NE had 22.3% of women screened that smoked during pregnancy. Manitoba had 21%. There was considerable variability within our districts.

**Focus Group** participants in all health districts were able to link smoking with chronic diseases such as lung cancer and cardiac disease.

- “I’m a smoker. I get the cold … that’s my lifestyle choice.” (Brokenhead)

Our *partners* identified the following reason for smoking

- Stress, young people smoke to fit in, businesses continue to sell to underage kids, smoking is part of Beausejour culture and is acceptable, family history. (Brokenhead)
Substance Use – Alcohol

Adults

Figure 4-2-5 Rates of Binge Drinking

Binge drinking refers to 5 or more drinks on one occasion.\(^{28}\)

Just over one half of residents in NE and Manitoba reported ‘never’ binge drinking.

Winnipeg River followed by Blue Water and Brokenhead had the highest percentage of self reported rates of binge drinking more than 12 times a year.

“There appears to be a relationship between health status and binge drinking: in areas of less healthy populations, [where] a higher proportion of residents reported more frequent binge drinking.”\(^{29}\)

It is difficult to determine if this relationship is occurring in NE due to the instability of these numbers at the district level. Blue Water has the second lowest PMR rate and considered one of the least healthy of all our health districts. Refer to Section III for discussion on PMR and health status.

Youth

Table 4-2-5 Adolescent Alcohol Consumption by RHA, Manitoba

<table>
<thead>
<tr>
<th></th>
<th>North Eastman</th>
<th>Manitoba</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adolescents 12-15 years **</td>
<td>approximately 25%</td>
<td>24.1%</td>
</tr>
<tr>
<td>Adolescents 16-19 Years **</td>
<td>approximately 82%</td>
<td>77.8%</td>
</tr>
</tbody>
</table>


In Manitoba, according to CCHS combined years 2001-2005, older (16-19 years) adolescent females (77.1%) and males (78.4%) consumed alcohol within the year of reporting. Females were more likely to drink less than once per week (59.7%) compared with males (50.5%).\(^{30}\)

Other Reports:

- **NE Health Youth Survey** – Of the 42% of students who responded the survey in grade 6 to 12 who indicated consuming at least one drink of alcohol during the past 30 days of the survey, the following indicates the percent in these grades: \(^{31}\)
  - Grade 6 - 14%
  - Grade 9 - 48%
  - Grade 12 - 77%


\(^{29}\) Some rates are highly variable and to be interpreted with caution.


- Alcohol & Other Drugs: Students in Manitoba 2007-64.8% of students had consumed alcohol at least once in their lifetime compared with 54.8% of students who drank alcohol within the past year of the survey. It was found that “The percentage of students who have used alcohol increases by approximately 10% per grade.”

Table 4-2-6 Alcohol Use During Pregnancy – Manitoba & North Eastman

<table>
<thead>
<tr>
<th>FAMILIES FIRST SCREENING TOOL - 4 YEARS COMBINED - 2003-2006 [1]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manitoba</strong></td>
</tr>
<tr>
<td>12.9%</td>
</tr>
</tbody>
</table>

Note: Alcohol question changed

<table>
<thead>
<tr>
<th>January 2007 to June 2008 [2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.2%</td>
</tr>
</tbody>
</table>

In Manitoba (2007-2008)
- 81.8% stopped using alcohol once they knew they were pregnant
- 9.1% - reduced alcohol consumption
- 8.9% - continued using alcohol during pregnancy
- 0.2% - increased

North Eastman's rate of alcohol during pregnancy was significantly lower than the Manitoba's rate when the four years were combined. The alcohol question in the tool was modified in 2007-2008 with a subsequent difference in reported alcohol usage. Once mothers found out they were pregnant a notable decrease was seen, however of concern is the continued alcohol use in the remainder of the pregnant women.

Table 4-2-7 Alcohol Use during Pregnancy – North Eastman Districts 2003-2006 (Crude)

<table>
<thead>
<tr>
<th>NE Health Districts</th>
<th>Iron Rose</th>
<th>Springfield</th>
<th>Winnipeg River</th>
<th>Brokenhead</th>
<th>Blue Water</th>
<th>Northern Remote</th>
</tr>
</thead>
<tbody>
<tr>
<td>suppressed</td>
<td>3.3%</td>
<td>13.9%</td>
<td>6.9%</td>
<td>14.4%</td>
<td>suppressed</td>
<td></td>
</tr>
</tbody>
</table>


There was considerable variability within our districts: Blue Water followed by Winnipeg River had the highest rates of alcohol use during pregnancy.

Fetal alcohol spectrum disorder (FASD) is an umbrella term for several diagnosis that describe the spectrum of ethanol teratogenesis in man, a condition that is potentially preventable and has far reaching implications to society as a whole. Because of the challenges with diagnosis especially in adults, we have only estimated numbers. Rates will vary depending upon the ethnicity, culture and region of Canada being studied.

Table 4-2-8 Incidence Estimate of FAS & FASD

<table>
<thead>
<tr>
<th>World Wide</th>
<th>Canada ~ 2004 to 2007</th>
<th>United States – 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.9 and 3-5 per 1000 births [1]</td>
<td>1-3 and 3-9 per 1000 births [1]</td>
<td>0.2-2.0 per 1000 births</td>
</tr>
<tr>
<td>-Dependent upon the population</td>
<td>-Dependent upon the population [1]</td>
<td>Based on excessive alcohol use in pregnancy, varies from population to population. [2]</td>
</tr>
</tbody>
</table>

Other Substance Use Indicators

Figure 4-2-6 Substance Abuse Disorder – Aged 10+

This indicator refers to people diagnosed with a substance abuse disorder.

There was a significant decrease in the number of people with substance abuse disorders in Manitoba and NE during the latter time period.

Iron Rose, Brokenhead and Springfield rates were significantly lower than Manitoba for the second time period.

Blue Water and Northern Remote districts were significantly higher compared with Manitoba.

Table 4-2-9 Substance Abuse – Crude – aged 10+

Crude Numbers for Period Observed

<table>
<thead>
<tr>
<th></th>
<th>1996-97-2000/01</th>
<th>2001/02-2005/06</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>1,784</td>
<td>1,681</td>
</tr>
<tr>
<td>Manitoba</td>
<td>57,175</td>
<td>53,996</td>
</tr>
</tbody>
</table>


There was a decrease in the number of cases diagnosed in Manitoba and NE during the latter time period.

Figure 4-2-7 Drug Enforcement Offences – RCMP – 2006, 2007, 2008

The numbers of drug enforcement offences were highest in the Powerview and Oakbank detachment areas. Substance abuse offences increased in all detachments except for Falcon Beach.

As shown earlier, substance abuse disorders were the highest in Blue Water, Northern Remote followed by Winnipeg River.

Refer to Section I for information on data boundaries and limitations.
Other Reports:

- **NE Health Youth Survey** – 17% of all students self reported that they had used illegal drugs (marijuana, cocaine, heroin, ecstasy etc) in the 30 days prior to the survey. The percentage of students that indicated that they used illegal drugs rose from 23% in Grade 9 to 29% in Grade 12. Seventeen percent had used illegal drugs e.g. marijuana, cocaine, heroin, methamphetamines, ecstasy, steroid pills/shots or sniffed glue in the past 30 days. As with alcohol, drug use increased with each grade:
  - Grade 6 – 3%
  - Grade 9 – 23%
  - Grade 12 – 29%. There was little difference in illegal drug use between Grades 10 to 12.

- **Alcohol & Other Drugs: Students in Manitoba 2007**
  - **Cannabis** was the most frequently used drug among Manitoba students excluding alcohol. One quarter of all students in the 2007 student survey in grades 7 through senior 4 had used cannabis in their lifetime. Most of these students (22%) used cannabis within the last year. There didn't appear to be a difference between male or female use. Most of the users in the past year (70%) smoked a few times a month or less. There is a jump (similar to alcohol use) in the move to high school. This could be due to the drug being more accessible in high school.
  - **Hash** was used by just over 8% of students in the 12 months prior to the survey.
  - **Ecstasy** use appears to have increased in 2007 to 4% of students compared to 2% in 2004. Nearly 7% of students in Senior 3 and 4 had used ecstasy in the past year compared to 3% in 2004. Reports from other student surveys in other provinces found that ecstasy use also appears to be increasing.

- **Families First Screening Drug Use During Pregnancy** – NE health districts 2003-2006. This indicator refers to the use of illegal drugs and excludes use of non-teratogenic prescription drugs, alcohol and smoking during pregnancy. Drug use decreased over time. When the four years were combined, the crude rate for NE was 3.5% while Manitoba's rate was 4.2%. District level information was suppressed.

**Other Risk Taking Behaviours**

**Driving & Drug Consumption and Dangerous Operation of a Vehicle**

*Alcohol & Other Drugs: Students in Manitoba 2007* found that:

- 7% of students reported having drunk two or more drinks of alcohol and then drove a vehicle within an hour.
- 5.5% of students had used cannabis and then drove a vehicle within an hour.
- Nearly 40% of students had been in a car with a driver who had been drinking and 22% of students had been in a car where the driver had been using cannabis. The question did not ask the amount used.
- A handful of students felt drinking and driving were acceptable, however one in five students agreed to the statement that “there’s nothing wrong with smoking cannabis and driving.”
Figure 4-2-8 Impaired Operation of a Motor Vehicle, Vessel, Aircraft or Railway Equipment – RCMP – Crude

**Impaired Operation - Crude 2006-2008**

![Graph showing impaired operation cases by detachment](image)

**Figure 4-2-9 Dangerous Operation of Vehicle – RCMP – Crude**

Dangerous operation of vehicle offences appears to be decreasing in all detachment areas.

As indicated in Section III, motor vehicle accidents (MVA’s) were the second highest cause of injury deaths in NE, the second leading cause of injury hospitalization in Manitoba and the fourth cause in NE.

**Seat Belt Use**

“When properly worn, seat belt use reduces the severity of injury in patients involved in motor vehicle crashes.”

Deaths more than doubled for people who did not wear seat belts compared with those who did. It is estimated that millions of dollars are spent caring for patients who do not use seat belts. In Canada between 1984 -2004 it was found that “as passenger car driver seat belt use increased, driver fatalities decreased.” During 2006/07 there was a 92.5% seat belt use; Manitoba ranked 8th highest at 89.1% compared to other provinces and territories.
Sexual Behaviour & Adolescents

Table 4-2-10 Adolescents 15-19 Years who DID NOT have Sexual Intercourse by RHA – CCHS 2003 & 2005

<table>
<thead>
<tr>
<th>Category</th>
<th>North Eastman</th>
<th>Manitoba</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Sexual Activity</td>
<td>Approximately 56% *</td>
<td>58%</td>
</tr>
<tr>
<td>Average age if yes</td>
<td>16 years</td>
<td>15.9 Years</td>
</tr>
</tbody>
</table>

* NE rates are highly variable, use with caution.

Source: Brownell, M. et al (2008) Figure 11.8. Adolescents Who Have NOT had Sexual Intercourse & Figure 11.9 Average Age of First Sexual Intercourse by RHA. Manitoba Child Atlas Update. Winnipeg, MB: Manitoba Centre for Health Policy, November. Pg. 299 & 301.)

There were no differences between male and female sexual behaviour in this age group, in either category described above. 45

Sexually Transmitted Infections

Gonorrhoea cases were higher and chlamydia cases were lower in males compared to females in both NE and Manitoba.
There were more Manitoba and NE males newly diagnosed with HIV than females.

Other Report:

- **MHHL. (2007) Statistical Update on HIV/AIDS** – In Manitoba during 2007, there were 82 newly diagnosed cases of HIV. There were more male than female cases reported both in Manitoba and in NE. Females represented 25% of all HIV cases reported since 1985. When we compare 1985-1995 and 1996-2007 we see that the proportion of newly diagnosed HIV cases in females almost quadrupled. In Manitoba, the majority of HIV cases in males and females were 20-39 years old.

Table 4-2-11 Crude Number of Individuals Testing HIV Antibody Positive in NE & Manitoba

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0</td>
<td>2</td>
<td>21</td>
<td>23</td>
</tr>
<tr>
<td>Female</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Manitoba</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>51</td>
<td>55</td>
<td>1,000</td>
<td>1,106</td>
</tr>
<tr>
<td>Female</td>
<td>30</td>
<td>27</td>
<td>314</td>
<td>371</td>
</tr>
</tbody>
</table>

The crude number of HIV new laboratory confirmed cases remain relatively low in NE.
These numbers were generated by positive laboratory tests of reportable diseases to public health nurses.

There continues to be an increasing number of chlamydia cases.

Gonorrhoea cases were variable with a slow increase in 2005 and 2006, a decline in 2007 with another slight increase in 2008 and 2009.

The highest numbers of chlamydia cases were reported to Beausejour (Brokenhead) and Oakbank (Springfield) public health offices. 48

The highest numbers of gonorrhoea cases were reported to the Oakbank (Springfield) office and to nurses working in Northern Remote area. 49
Vaccines/Medications

Refer to Section IV Chapter 5- Early Child Development for discussion on childhood vaccines.

Adult Pneumococcal Immunizations in NE

The Pneumococcal vaccine is targeted to children under 2 years, people with high risk groups i.e. seniors over 65 years, people living in a chronic care facility and those with high risk health problems. Those in these eligible groups are recommended to have one dose, therefore the cumulative data reflects all years recorded in MIMS.

Table 4-2-12 Pneumococcal Vaccine 2007 and Cumulative

<table>
<thead>
<tr>
<th>Location</th>
<th>Pneumococcal Vaccines [&lt; 65 years]</th>
<th>Pneumococcal Vaccines [&gt; 65 years]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number 2007</td>
<td>Rate / 100 2007</td>
</tr>
<tr>
<td>North Eastman</td>
<td>136</td>
<td>0.4</td>
</tr>
<tr>
<td>Manitoba</td>
<td>4,359</td>
<td>0.4</td>
</tr>
</tbody>
</table>


There is over 60% of NE and Manitoba residents over the age of 65 years vaccinated.

There is evidence that residents age 65 and over who live in rural areas of Manitoba and live in lower income areas were less likely to be vaccinated.

Influenza Immunizations in NE for residents over 65 years

Crude numbers and rates for seasonal flu vaccine administered using Manitoba Immunization Monitoring System (MIMS) administrative data set NE residents over 65 years over 3 years:

- 2005 – 3,399 61.6/100
- 2006 – 3,099 55.0/100
- 2007 – 3,126 54.1/100

Seasonal flu vaccine uptake for this age group appears to be stable in North Eastman region during the latter two years.

Figure 4-2-15 Antibiotic Use in Children

There was a significant decrease in antibiotic use in Manitoba and NE.

Only Winnipeg River showed a non-significant increase in antibiotic use during the second time period.

Note: There was likely under reporting of prescriptions especially in Northern Remote as only physician codes were used in the data set.

Screening

Figure 4-2-16 Breast Cancer Screening (Mammography)

Breast Screening - Adjusted - Aged 50 - 69 Years

[Graph showing breast screening participation rates for different districts and years.]

Source: Francoo, R. et al (2009) Figure 11.3.1 & 11.3.2 MB RHAs Indicators Atlas 2009: MDIP

Figure 4-2-17 Breast Screening Targeted Participation 50-59 Years 2005-2009

The screening target is 70% of women 50-69 years of age every 2 years.

Although the percentage did not demonstrate an increase, there were 175 additional women screened in the latter time period. 54

In 2008/09 the largest improvements were in Berens River, Bloodvein and Popular River, all communities located in Northern Remote district. 55

The communities of:

- Pinawa (Winnipeg River) and St. Georges met the target of 70% women screened.
- Belair, Traverse Bay (Blue Water), Seven Sisters Falls, Rennie & Whitemouth (Iron Rose) and Lac du Bonnet (Winnipeg River) all had a rate of 65% or more. 56

Other Report:

- MHHL April 2007-March 2008- Mammography Screening Report – all ages – In NE there was a total of 3,128 patients screened or a rate of 214.3/1,000. Compared to each district, Winnipeg River had the highest rate of screening at 319/1,000 and Northern Remote had the least at 107.5/1,000. Most of the screening occurred between ages 50-69 years. Manitoba’s rate for the same time period was 163.8/1,000. 57
In Manitoba overall cervical cancer testing was stable during the two time periods.

There appears to be a decline in the number of cervical screens occurring throughout NE. The decline was significant in NE, Northern Remote and Springfield districts.

Northern Remote and Blue Water have significantly fewer screens when compared with Manitoba during the latter time period and have the lowest percent when compared within our health districts.

Testing may be underestimated as many RHAs have specially trained nurses performing these tests. Nurse practitioner claims could be recorded in the administrative data used.\(^6\)

Other Report:

- **MHHL April 2006-March 2009** - For women 15 years and over in NE there was a total of 8,690 patients screened or a rate of 544.7/1,000. When each district is reviewed Springfield had the highest rate of screening at 646.8/1,000 and Northern Remote had the lowest at 218.3/1,000. Manitoba’s rate for the same time period was 543.8/1,000. In this report a cervical screen is defined as one physician claim over a three year period.\(^5\)

It has been shown that women in lower income areas in rural and urban Manitoba have lower Pap test rates compared with women in higher income areas.\(^6\) In our region Northern Remote had the lowest percentage of pap tests compared to our other health districts.

Refer to Section III for a discussion on cancer rates.
PERSONAL BEHAVIOURS

There is growing recognition that personal health choices we make are influenced by the socioeconomic environments in which we live, learn, work and play.\(^{61}\)

*Focus group* participants were able to make the connection between *lifestyle, activity choices and mental health* and linked the following behaviours with chronic disease: excessive drinking and smoking, poor nutrition, obesity, lack of exercise, exposure to chemicals/toxins/plastics, and stress. They recognized this list although not comprehensive raises the need for individuals to take responsibility for their own health. They did recognize that there are factors beyond an individual or community’s control. Participants also discussed the stressful effects of chronic disease places on the mental health of one’s family and the importance prevention and supports have in ameliorating this stress.

*Key informants* in all health districts were aware of the connection between lifestyle choices and mental health, but felt that not all people were aware of the linkage between chronic diseases and lifestyle choices.

- “Prevention work is more effective than crisis prevention.” (Brokenhead)
- “People need to take responsibility for their health.” (Blue Water)
- Chronic disease is [more often] associated with the elderly; youth [feel they] are invincible. People are too apathetic regarding chronic disease. (Brokenhead).

The literature abounds with the fact that *healthy eating* choices contributes to the prevention of:

- obesity
- hypertension, heart disease and stroke
- diabetes
- respiratory diseases
- orthopedic conditions such as arthritis, joint and back problems
- certain mental health issues.\(^{62}\)

“…there is evidence linking breast cancer and nutrition, suggesting that a diet high in fat is one of the factors that increase a women’s risk of developing breast cancer.”\(^{63}\)

**Food costs** in rural and northern communities are affected by smaller market size, transportation distances and spoilage and loss.

**Food security** a multidimensional concept that includes: food quantity, quality, accessibility and cultural norms\(^{64}\) is an important factor in a family’s ability to make healthier food choices. One of the responses to food insecurity is food banks. As of November 2008, there were 48 rural food banks operating in Manitoba.\(^{65}\) Currently there
are three food banks operating in NE. Since the last CHA, a new food bank opened in Springfield.

Refer to Section IV, Chapter 2 Social Support Networks for a discussion on food insecurity and Food Banks in NE. “Insufficient income is the single most important variable influencing hunger in Canada.”

Body mass index (BMI) is an international measurement standard that links weight to height placing the person into four weight ranges: underweight, acceptable (normal) or overweight and obese. BMI does not directly measure body fat or composition. Health Canada guidelines have recommended measuring waistline to better distinguish excess fat from muscle weight. This measure was done in the later CCHS surveys.

Obesity is on the rise in Canada. To manage this “…it is estimated that over 70% of Canadian women are dieting, and up to 3% will be affected by an eating disorder in their lifetime.” The desire to have a lower body weight in Canadian culture, affects women’s perceptions and self worth e.g. women express more dissatisfaction with their body weight and engage in more weight loss activities than men. A serious misconception is that thinness is more important than health. As previously mentioned from the NE Youth Survey conducted in 2007, a higher percent of female and male students reported that they felt they were overweight than who actually were as measured by BMI calculation. We know that…‘body image’ dissatisfaction is a strong precursor to emotional problems, unhealthy nutrition habits and in extreme cases, to eating disorders.”

“Canadian research has found that overweight and obesity rates are strongly related to nutritional intake and leisure time activities.” “Respondents who had a high income reported greater consumption of fruits, vegetables, meats and alternatives.”

Nationally 33% of women have an unhealthy body weight when they reach adulthood and by the time they are 45 years and older this increases to 60%. The prevalence of overweight men exceeds that for women in all age categories.

“Poor nutrition can lead to both an increase or lowered body weight, decreased body strength, lower resistance to infection, and poorer quality of life. Low body weight or rapid weight loss among elderly women for instance is associated with hip fractures, reduced autonomy, and early institutionalization. Overweight and obesity are also signs of poor nutrition…”

There have been numerous research studies concluding that there is an association between sedentary behaviours and obesity among children and adolescents. A recent Canadian study (2008) looked at adults between 20-64 years using the CCHS data on three indicators: obesity, leisure-time activity and fruit and vegetable consumption. They concluded that among Canadian men and women surveyed the “odds of being obese increased as weekly hours of television viewing rose…associations between time spent watching television and obesity were independent of leisure-time physical activity and diet.”

The economic burden associated with physical inactivity is considerable e.g. “… [a] 10% increase in the proportion of Canadians who are physically active could save $150...
million annually in health care costs for coronary heart disease, stroke, type 2 diabetes, colon cancer, breast cancer and osteoporosis.\(^{77}\)

“People who engage in active living tend to outlive people who are physically inactive...benefits include higher levels of self-esteem, improved cognitive performance, and helps maintain a healthy body weight ...”\(^{78}\)

Physical activity also lowers the risk of:
- hypertension, coronary heart disease, and premature mortality
- anxiety and stress
- colon cancer and type 2 diabetes by as much as 50%
- osteoporosis and related fractures in women - weight - bearing exercises e.g. walking
- depression, disturbed sleep and loneliness especially among women. \(^{79}\)

In NE, poorer nutrition, inactivity, over weight and obesity may have contributed as risk factors to the following outcomes:

- **Osteoporosis** prevalence for those over 50 years increased significantly in both NE and Manitoba. This significant increase also occurred in Blue Water, Winnipeg River, Iron Rose and Brokenhead during 2002/04 -2005/06.

- **Diabetes** is increasing significantly in Canada, Manitoba and NE in both children and adults. During 2003/04 – 2005/06 ALL our health districts except for Springfield (increased but not significantly) had a significant increase in diabetes prevalence for those over age 19 years, most notably Northern Remote and Blue Water, both surpassing the Manitoba rates.

- During 2005/06 ALL our health districts except for Iron Rose (increased but not significantly) had a significant increase in **hypertension** prevalence for those over age 19 years, most notably Northern Remote, Blue Water, and Brokenhead surpassed the Manitoba rates.

- **Ischemic heart disease** prevalence in Blue Water was significantly higher than Manitoba during 2001/02 - 2005/06. Northern Remote also increased but not significantly. We know that an estimated 42% of Canadians with hypertension are undiagnosed. \(^{80}\)

Differences between age group activity is often associated with where a person is in their life, for example “Middle aged men and women have less leisure-time than younger men and women do due to work and family commitments, and older men and women experience more health problems, which can lead to lower levels of activity.” \(^{81}\)

In Canada it appears that adolescents (12 -19 years) **smoking** rates are decreasing. Manitoba’s youth take their first cigarette at an average age of 14 years. In North Eastman it is slightly less, at about 13 years of age. Initiation rates are not significantly different between males and females. \(^{82}\)
There has been a trend toward a decrease in smoking prevalence especially in men. Men and women who smoked (aged 15 + years) in Manitoba:

- 2005 - 23% men and 22% women
- 2006 - 22% men and 18% women

In NE we see that there were 22.7% of residents who reported that they were current smokers between 2001 and 2005.

There was also a decline in smoking among Canadian teens and young adults. Women living in the northern most regions were more likely to smoke than women living in southern regions of Manitoba.

“Drinking alcohol is accepted in Manitoba as normal social behaviour for adults…but it is also a socially stigmatized behaviour, particularly for women and pregnant women.”

Given this, women may be less likely to divulge their actual drinking behaviours.

“Men are more likely to engage in heavy drinking than are women…” “Alcohol is the most common substance used by women and is on the rise in Canada …over the past decade… heavy drinking is associated with harmful consequences, including both health and social harms….”

We do not have a breakdown for gender and alcohol use, but as noted earlier, there was no significant differences in ‘binge drinking’ rates between NE, our health districts and Manitoba’s rate for people 12 years and older. When binge drinking categories ‘less than and more than 12 times a year’ were combined, Winnipeg River (48%), followed by Brokenhead (47%) and Blue Water (46%) had the highest percent of self reported rates for binge drinking. The proportion of binge drinking and never drinking in these health districts were almost identical.

Alcohol use during pregnancy is highly prevalent in Canada, as well as Manitoba. Risk factors for prenatal alcohol exposure have a societal component and may include:

- lower education level
- custody changes
- lower socioeconomic status
- paternal drinking and drug use at the time of pregnancy
- reduced access to prenatal and post natal care
- inadequate nutrition, stress, social and physical abuse, neglect.

Combining 2003 to 2006, mothers with newborns reporting alcohol consumption during their pregnancy was about 4% less in NE than in Manitoba. Life long risks to the newborn in the form of FAS disorder include:

- “…secondary disabilities for all ages
- mental health problems
- disrupted school experience
- trouble with law, confinement
- inappropriate sexual behaviour
- alcohol and drug problems
• 3 additional secondary disabilities that were exclusive to adults
• dependent living
• problems with employment
• problems with parenting."\(^{92}\)

**Alcohol** is considered the drug of choice among students and as students get older their frequency of drinking increases.\(^{93}\) “Number of teens who drink has not increased in the last decade, the amount they drink is increasing…no differences between young women and men in this trend…The concern is not only the direct health consequences of heavy drinking, but the associated social behaviours that increase morbidity and mortality risks, such as unprotected sex, violence, or driving drunk.”\(^{94}\) Students surveyed in 2007 in grades 6-12 in NE, 42% reported having taken at least one drink of alcohol within 30 days prior to the survey. The percent of students taking at least one drink increased with each grade from 14% to 77% in grade 12.\(^{95}\)

Parents play a role in influencing their children’s drinking behaviours. It was found in a 2007 Manitoba survey one in four students; under age 18 years reported that their parents got them alcohol.\(^{96}\) There were also a fairly high percentage of students, primarily females, who stole alcohol from home. Students were also obtaining alcohol through:
• friends
• siblings
• buying the alcohol themselves (primarily males) or
• using a fake identification (17%).\(^{97}\)

In a 2007 Manitoba student survey it was found that binge drinking (5+ drinks on one occasion) was reported as a common activity among students who reported drinking in the previous year. In Senior 3 and 4 nearly 60% of those who reported having at least five drinks at one time, 20% reported having 10 drinks at one time. Males were twice as likely as females to drink this amount.\(^{98}\)

Of concern is that in 2007, 16.7% of pregnant women in NE reported using alcohol.\(^{99}\)

Manitoba student’s attitude toward **substance use** in 2007 indicated that:\(^{100}\)
• 12.4% of drinkers in the past year used alcohol to cope with problems
• 30% of all students think using alcohol is an acceptable way to relax
• 2/3 of all students surveyed considered alcohol as dangerous as other drugs.

Impaired operation of a vehicle offense (all ages) from an RCMP report was variable among detachments, but between 2006 and 2008, the highest number of offenses was reported by the Powerview detachment.

**Focus Group participants** in Winnipeg River and Brokenhead felt there was a link between alcohol use and chronic diseases such as liver disease.

  o “People make poor choices when under the influence of drugs or alcohol.” (Blue Water)
In Canada, cannabis and cocaine or crack cocaine are the most common **illicit drugs** used. Because illicit drug use is not socially sanctioned and illegal there is likely an under reporting of this measure. A sampling limitation for CCHS is that it did not survey homeless or institutionalized populations who are thought to have a high rate of drug use.\(^{101}\)

Although the gender gap seems to be narrowing, men are more likely to use, and have a dependency on illicit drugs and to die of related drug use causes.\(^{102}\)

Substance abuse was not strongly related to premature mortality rate (PMR) at the regional health authority level. The prevalence of substance abuse was higher among residents living in lower income areas in both urban and rural Manitoba.\(^{103}\)

Illicit drug use is also associated with suicides and HIV/AIDS due to injection drug use. “Substance misuse also co-exists with mental disorders, though it is not clear which comes first…”\(^{104}\) “…research has shown that as much as two thirds of women with substance misuse problems have concurrent mental health problems, such as depression, post-traumatic stress disorder, panic disorder and / or eating disorder.”\(^{105}\)

Some focus group participants felt that there was a correlation between substance use and suicide and other mental illnesses. **Refer to Section III for more detailed discussion on suicide.**

**Focus group participants**, in response to a query regarding mental health concerns, revealed that the use, abuse and addiction to prescription medications, illicit drugs, alcohol and gaming was a participant concern in all NE districts. Co-occurrence with mental health disorders was noted and participants acknowledged that while this potential for an inter-relationship exists, it is not a certainty in all cases.

- Drugs, alcohol among school aged population specifically 12 - 18 “Huge drug culture.” (Winnipeg River)
- Addictions a major concern – teens with drugs. (Brokenhead)
- Gambling a “huge problem” – “you say you’re with people, but you’re not with people…a lot of people are using that as a place to go” – seniors have the time, loneliness. (Brokenhead)
- “…some people have moved to addictions to hide the pain of abuses… others are addicted as a young person… not just chemicals, gambling as well.” (Blue Water)
- Drug / alcohol use condoned by parents who use with their children – education/awareness needed. (Blue Water)
- Substance abuse is more of an issue than smoking. (Winnipeg River)

**Smoking** is linked to many illnesses and is the main risk factor for lung cancer and an important factor for cardio vascular disease (CVD) and respiratory diseases. Women who smoke and take oral contraceptives are especially at risk to heart disease. Smoking can also affect fertility, menopause and menstrual problems. “Pregnant women who smoke have higher risks of miscarriage, still-born babies, premature birth, low birth weight babies and babies who die of Sudden Infant Death Syndrome…higher rates of cancer of the cervix and osteoporosis.”\(^{106}\)
As reported in Section III of this report, some health conditions that could be affected by smoking in NE:

- **Respiratory illness** was similar in NE compared with Manitoba. At the health district level both Blue Water and Brokenhead had significantly higher rates of respiratory illness than the Manitoba average, with significant increases during 2005/06.

- During 2003/04-2005/06 **osteoporosis** rates significantly increased in NE. Increases occurred in Blue Water, Winnipeg River, Iron Rose and Brokenhead.

- **Lung cancer** has been increasing for males and remained the same for females during 2003/04 in NE.

- There was a significant decline in the number of **cervical screens** occurring throughout NE during 2003/04 -2005/06 in women aged 18-69 years. Northern Remote and Blue Water have significantly fewer screens when compared with Manitoba and have the lowest percent of screens when compared with our other health districts during 2003/04 -2005/06. A more recent report that looked at women 15 years and older indicated that NE had slightly higher rates of screening between April 2006 and March 2009 compared with Manitoba.

NE residents who self-reported current smoking rates were the same as Manitoba’s at 22.7% for those aged 12 years and older between 2001 to 2005. Winnipeg River (29.7%), Brokenhead (28.1%) and Blue Water (27.4%) had the highest smoking rates. Blue Water was under reported and Northern Remote was suppressed.

Smoking is known to occur in high risk groups e.g. “Women in lower income groups are more likely to smoke, as many as 72% of women who are lone parents smoke and divorced women, women with low-status jobs, those who are unemployed or have low levels of education have greater risks. The risk that pregnant women may smoke tobacco increases if a woman is young, has lower levels of education, resides in low-income neighbourhoods, and is unmarried.”

**Sexually transmitted infections** (STIs) are common and may have long term consequences especially for women. STIs affect sexual and reproductive health causing pelvic inflammatory disease, infertility, ectopic pregnancies and cervical cancers. STI rates represent only those individuals who have been tested, therefore are likely to be under reported.

Chlamydia is on the rise. Donnor et al feels that women’s higher rates compared with men may be due to their greater contact with the health care system and are more likely to show symptoms.

There has been a re-emergence of gonorrhea since 1997 in Manitoba that cannot be explained by better surveillance or testing alone. Gonorrhea reflects unsafe sexual practices, which also can contribute to the spread of HIV / AIDS. In NE we saw an increase in 2005, compared with earlier years. Subsequent years were variable.
In Manitoba “…comparing the 1985-1995 time period to the 1996-2007 time period the proportion of newly diagnosed HIV cases that are female has almost quadrupled. Between 1996 and 2007, females accounted for a third of all new HIV cases…The majority of cases, both male and female were between the ages of 20-39 years.” 116

STI strategies must include preventing sexual violence and abuse against women, as well as targeting at risk groups e.g. “…young women, street involved youth, Aboriginal women, refugee and immigrant women from HIV endemic regions or developing nations.” 117

Manitoba and NE antibiotic prescriptions in children significantly decreased during 2005/06 compared to 2001/02.118 Children in the 1-4 age category were prescribed the highest number of antibiotics compared with all children.119

There are concerns about over prescribing antibiotics due to developing drug resistant organisms. Practice guidelines for prescribing antibiotics are more rigorous. This indicator as well as NEHA’s internal surveillance system provides practitioners with one measure by which to review prescribing practices. NEHA’s infection prevention and control surveillance system in acute and long term care identifies patients or residents living in personal care homes (PCHs) with antibiotic resistant organisms, methicillin resistant staphylococcus aureus (MRSA) in particular. Antibiotic resistant organisms are reportable in Manitoba and are on the rise.

The following are the reported cases of MRSA (includes federal and provincial jurisdictions)120

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manitoba</td>
<td>1,695</td>
<td>2,112</td>
<td>2,501</td>
</tr>
<tr>
<td>NE</td>
<td>26</td>
<td>42</td>
<td>35</td>
</tr>
</tbody>
</table>

Breast screening is an important strategy in the early detection of breast cancer. Although our rates in NE haven’t changed between 2005 and 2009, we know that the mobile breast screening clinic has made it possible for more women to easily access screening clinics.

A recent Manitoba study looked at factors associated with women between 50-69 years, who had at least one mammogram in the two – year period studied 2002/03-2003/04. The study concluded that there was no difference in mammography screening uptake whether a woman had or did not have a diagnosis of schizophrenia.

Two factors were related to screening uptake:

- **accessibility** to mobile screening clinics and

- **continuity of care** was the strongest predictor for women with schizophrenia to have a mammogram.121
Cervical screening is an important strategy in the early detection of cervical cancer. NE cervical cancer screens decreased significantly compared with Manitoba in 2003/04-2005/06, but as noted all women having a Pap test may not have been captured in the data set used. Using another data set between April 2006 and March 2009, NE had a slightly higher screening rate than Manitoba.

A recent Manitoba study looked at factors associated with having a Papanicolaou (Pap) test five years previous to December 31, 2002, by women aged 18-69 years. It was found that women were less likely to have a pap test if they:

- were diagnosed with schizophrenia,
- lived in rural areas and were from low-income areas and
- were 50 years of age and older. \(^{122}\)

Higher rates of pap tests occurred in women who had “…good continuity of care (defined if at least 50% of ambulatory physician visits within 2001/02-2002/03 to the same general physician or family physician) … no matter what the income level or whether a woman has a diagnosis of schizophrenia.”\(^{123}\)

Compared with our other health districts, we see that people who live in our two healthiest districts (according to the PMR indicator) Iron Rose and Springfield:

- ate more fruits & vegetables (includes Winnipeg River)
- smoked less cigarettes
- had higher percentage of normal / underweight residents
- had the highest number of residents who never binge drink
- had lower prevalence of substance abuse disorders
- had highest breast screening (includes Winnipeg River)
- had one of the highest cervical screening rates.
CHAPTER SUMMARY

Incorporating healthy behaviours into an individual, family or community’s lifestyle is challenging. Focus group participants were able to make the connection between lifestyle, activity choices and mental health; linking the following behaviours with chronic disease: excessive drinking and smoking, poor nutrition, obesity, lack of exercise, exposure to chemicals/toxins/plastics and stress. They recognized this list although not comprehensive, raises the need for individuals to take responsibility for their own health.

Obesity is a growing concern in Canada as well as in NE. Consumption of fruits and vegetables is lower than recommended, 38% of adults are overweight, and only 74% meet the activity guidelines set out by Health Canada.

There were still 22.7% of the population over 12 years who smoke. Winnipeg River residents had the highest smoking rates (29.7%) and Iron Rose had the least (18.4%).

Over one third of residents over 12 years reported binge drinking (drinking 5 or more alcoholic drinks at one time). A survey conducted in 2007 in NE indicated that 42% of students in Grades 6-12 reported consuming at least one drink of alcohol within the 30 days before the survey. New mothers reported a decrease in alcohol use between 2003 and 2006 during pregnancy, however there was still 9% of new mothers in NE who used alcohol during pregnancy.

In response to a query regarding mental health concerns, most focus group participants in all districts felt that the use, abuse and addiction to prescription medications, illicit drugs, alcohol and gaming were prevalent and of concern.

Substance abuse significantly declined between 2001/02 and 2005/06. CHA focus group participants in 1997, 2003 and 2008 expressed concerns with regard to drug abuse, especially among youth.

There was no change in breast cancer screening rates in women aged 50-69 years during 1998/99-2000/01 and 2003/04-2005/06. Winnipeg River had the highest breast screening rate, while Northern Remote had the lowest screening rate.

Between April 2006 and March 2009, NE had a slightly higher cervical cancer screening rate of 544.7/1,000 compared with Manitoba at 543.8/1,000.
REFERENCES


9 In Motion Research Committee (2007) – in motion Survey. Appendix C – Table 2C- % of adults who do not meet PAG, by age and gender. The Health, Leisure & Human Performance Research Institute-University of Manitoba. February 6. Pg.103C.


14 In Motion Research Committee (2007) – in motion Survey. Section 1 Manitoba Adult Data. Section 2 Manitoba & Winnipeg Children’s and Teen’s Data Health, Leisure & Human Performance Research Institute-University of Manitoba. February 6. Pg.26M.


48 Email from Dr. B. Fatoye to S. Dick Entitled STI Yearly Stats. April 16, 2009.

49 Email from Dr. B. Fatoye to S. Dick Entitled STI Yearly Stats. April 16, 2009.


The health effects of social relationships may be as important as established risk factors such as smoking, physical activity, obesity and high blood pressure.\(^2\)

**Social support** is described as “…that assistance available to individuals and groups from within communities which can provide a buffer against adverse life events and living conditions and can provide a positive resource for enhancing the quality of life.”\(^3\)
Social Supports

Figure 4-2-1 Living Arrangements

Over three quarters of people live in a dwelling with family members i.e. married or common law or same sex couples and or with children or lone parents. 4

Manitoba, NE and all health districts experienced a slight decrease in the percent of people who lived with families during 2006 compared with 2001.

Table 4-2-2 Marital Status – 2001 & 2006 Aged 15 +

<table>
<thead>
<tr>
<th>Location</th>
<th>Never legally married (single)</th>
<th>Legally Married (and not separated)</th>
<th>Separated (but still legally married)</th>
<th>Divorced</th>
<th>Widowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Rose</td>
<td>24%</td>
<td>27%</td>
<td>61%</td>
<td>57%</td>
<td>3%</td>
</tr>
<tr>
<td>Springfield</td>
<td>24%</td>
<td>26%</td>
<td>65%</td>
<td>63%</td>
<td>2%</td>
</tr>
<tr>
<td>Winnipeg River</td>
<td>21%</td>
<td>19%</td>
<td>64%</td>
<td>65%</td>
<td>2%</td>
</tr>
<tr>
<td>Brokenhead</td>
<td>23%</td>
<td>24%</td>
<td>59%</td>
<td>58%</td>
<td>3%</td>
</tr>
<tr>
<td>Blue Water</td>
<td>35%</td>
<td>33%</td>
<td>50%</td>
<td>51%</td>
<td>3%</td>
</tr>
<tr>
<td>Northern Remote</td>
<td>52%</td>
<td>55%</td>
<td>36%</td>
<td>32%</td>
<td>4%</td>
</tr>
<tr>
<td>North Eastman</td>
<td>27%</td>
<td>28%</td>
<td>59%</td>
<td>57%</td>
<td>2%</td>
</tr>
<tr>
<td>Manitoba</td>
<td>32%</td>
<td>33%</td>
<td>52%</td>
<td>50%</td>
<td>3%</td>
</tr>
</tbody>
</table>

NE had a higher percentage of married people compared with Manitoba; however, the difference was not significant.

Except for Winnipeg River, there was a slight increase in the number of married people according to the 2006 census in Manitoba, NE and in our health districts. Northern Remote had the lowest percentage of married residents for both time periods. Springfield had the highest percentage of married people followed by Winnipeg River and Iron Rose.

Northern Remote reported just over half of their residents as single, the highest percentage of single people for both time periods. When reviewed with the living arrangement information above, we might assume that many of those who are single were likely living with a family, as this district reported 88% of their population living with a family.
Social Isolation

This indicator refers to mothers who indicated no social support. Social isolation may be due to culture, language or geography.\(^6\)

In NE, using the Families First Screening Form, families surveyed with newborns between 2003 and 2006 who indicated ‘no social support’ ranged from 11.6% in 2004 to a low of 8.4% a trend that appears to be declining. When the 4 years were combined, the rate of social isolation in NE was 9.7%, significantly higher than Manitoba’s rate of 5.2%. There were 41.1% of new mothers in Blue Water who indicated no social support. Other health district rates were suppressed due to low numbers.\(^7\)

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## Community Supports

### Table 4-2-2 Licensed Child Care Spaces — Aged 0-12 Years

<table>
<thead>
<tr>
<th>Crude Rate per 1,000 Children</th>
<th>2001</th>
<th>2006</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Rose</td>
<td>64</td>
<td>49</td>
<td>125.96</td>
</tr>
<tr>
<td>Springfield</td>
<td>166</td>
<td>214</td>
<td>113.05</td>
</tr>
<tr>
<td>Winnipeg River</td>
<td>148</td>
<td>126</td>
<td>216.12</td>
</tr>
<tr>
<td>Brokenhead</td>
<td>85</td>
<td>177</td>
<td>164.65</td>
</tr>
<tr>
<td>Blue Water</td>
<td>73</td>
<td>80</td>
<td>45.25</td>
</tr>
<tr>
<td>Northern Remote</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
</tr>
<tr>
<td>North Eastman</td>
<td>536</td>
<td>646</td>
<td>94.11</td>
</tr>
</tbody>
</table>

Source: Jennifer Schultz, Email to S. Dick March 16, 2009 entitled: Request for numbers from Child Atlas

There was an increase in the number of licensed child care spaces in NE.

Springfield and Brokenhead had the highest increase in child care spaces and space per capita.

Child care spaces per capita appear to have remained essentially the same in Iron Rose, Winnipeg River and Blue Water.

### Table 4-2-3 Manitoba Farm Rural Stress Line (MFRSL) North Eastman Region Clients Served

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td></td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

Issues Identified:
- relationships, anger, anxiety, financial, housing
- relationships, child welfare, domestic abuse
- relationships, exit, isolation/loneliness financial,

* NE MFRSL Call Update - January 1 – June 29, 2009 = 6.

Source: Email from L. Brackenreed, MFRSL, Entitled: Calls regarding Recession and H1N1 to J. Walker, June 29, 2009

The number of calls from NE residents was stable during the three years reported.

### Table 4-2-4 Crisis Stabilization Unit and the Mobile Crisis Unit. North Eastman Region Clients

<table>
<thead>
<tr>
<th>Type of Service*</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crisis Stabilization Unit – Provides short-term, intensive care and treatment to adults or older adolescents in psychosocial crisis, who require specialized services in the community, but do not require hospitalization.</td>
<td>69</td>
<td>46</td>
<td>58</td>
</tr>
<tr>
<td>Mobile Crisis Unit – A community based after-hours service to assist adults and older adolescents experiencing a mental health crisis.</td>
<td>182</td>
<td>147</td>
<td>146</td>
</tr>
</tbody>
</table>

Source: C. McKinley, Interlake Regional Health Authority (IRHA) Mental Health Crisis Services to J. Walker email entitled: Request for Information March 12, 2009.

More females than males accessed services during the three years. The numbers fluctuated, but were fairly consistent with a three year average for the Crisis Stabilization Unit (93) and Mobile Crisis Unit (245).
Food Banks in North Eastman

There are three food banks in operation in NE, the most recent opened in Springfield in 2008.

From discussions with local food bank volunteers, the food bank offers food supplementation to families who may access the services once or twice a month.

**The Springfield Food Bank- Opened in February 2008 in Anola.**

- Initiated by the Rural Municipality of Springfield supported by the Reeve and Councilors.
- Operated by volunteers.
- Service is available to residents of the RM of Springfield and may receive groceries every two weeks.
- February 2008 to March 2009 - **30 families served to date.** This includes a considerable number of school children who have their breakfast, lunch and snacks supplemented by items received at the food bank.

**The Lac du Bonnet and Area Food Bank – Opened October 1, 2001**

- Formed through the joint effort of the Lac du Bonnet Lions Club and the Lac du Bonnet Knights of Columbus.
- Volunteer operated (approximately 65).
- Food and funds are donated, along with ‘in kind’ contributions such as shelving and freezers.
- Clients may receive groceries twice per calendar month.
- Serves 13 communities that fall within the town and RM of Lac du Bonnet, LGD of Pinawa, Great Falls, Powerview-Pine Falls, Sagkeeng First Nation, Black River First Nation, Hollow Water First Nation, Whitemouth, and Seven Sisters) in the immediate area of Lac du Bonnet.

The number of clients accessing the food bank appears to be decreasing.
Beausejour and Area Food Bank * - Opened on August 13, 1991 in Beausejour 10

- Currently located at 730 Park Avenue in Beausejour.
- Operated by approximately 25 volunteers.
- Donations of food are ongoing and include organized food drives by community organizations.

Table 4-2-5 Beausejour Food Bank Visits – 2008

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Visits in 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Visits by adults</td>
<td>889</td>
</tr>
<tr>
<td></td>
<td>249 of above visits were people with disabilities.</td>
</tr>
<tr>
<td>Total number of visits by children &lt; 18 years</td>
<td>641</td>
</tr>
<tr>
<td>Total number of visits by families</td>
<td>129</td>
</tr>
</tbody>
</table>

* client numbers were only available for 2008 at time of writing.


Figure 4-2-4 Food Bank Clients in Canada 2008 & 2009

Food Bank Clients in Canada 2008 & 2009

The use of food banks did not change significantly from 2008 and 2009. Single persons using food bank increased slightly.

SOCIAL SUPPORT

Research shows that having social supports and feeling part of one's community are powerful protective factors against the effects of stress on health.¹¹

“Social isolation and exclusion are associated with increased rates of premature death and poorer chances of survival after a heart attack…[and] more likely to experience less well-being, more depression, a greater risk of pregnancy complications and higher levels of disability from chronic diseases…bad close relationships can lead to poor mental and physical health…Poverty can contribute to social exclusion and isolation.” ¹²

Mothers with newborns were asked about social isolation. Mothers who indicated ‘no social support’ (this may be due to culture, language or geography) had decreased over the four years reviewed. When the years 2003 to 2006 were combined, the rate of social isolation for NE mothers with newborns was 9.7%, significantly higher than Manitoba’s rate of 5.2%. In Blue Water, 41.1% of mothers felt they had no social support.¹³ Social support enhances positive mental health. Through our life span social support may change, therefore it is important for health practitioners to continuously monitor this indicator when clients are seen.

Over 85% of residents in NE live with a family and 57% of the population was legally married during 2006. This doesn't speak to the quality of the family unit. The following are felt to be positive protective factors that could influence whether a person will develop mental health problems within a family unit:

- supportive caring parents
- family harmony
- secure and stable
- small size
- more than two years between siblings
- responsibility within the family (for child or adult)
- a supportive relationship with other adult (for a child or adult)
- have strong family norms and morality. ¹⁴

The above are all protective factors that are needed to buffer people from mental health problems and disorders.

“Social support networks are commonly associated with improved mental health...lack of these supports has been shown to be correlated with a diminished ability to develop and maintain healthy peer relationships…”¹⁵
Support Services to Seniors

Support Services to Seniors are community developed, community owned and operated, and are tailored to the needs of the community. The target group serviced is seniors over 65 years and also persons with disabilities. The majority of clients are residents over 80 years of age.

A Community Resource Coordinator is responsible for coordinating volunteers and Fee-For-Service providers to help maintain independence in the community. Services may include information and referral, assistance with form completion, transportation, Victoria Lifeline, E.R.I.K. (Emergency Response Information Kit), daily telephone reassurance / friendly visiting, escort services, home repair, light/heavy house cleaning and laundry assistance, yard work and snow removal.

Presently there are six Services to Seniors offices throughout North Eastman.

According to monthly statistics submitted to NEHA, senior’s requests for programs and services increase every year. Volunteer recruitment is becoming increasingly difficult, especially during the winter months when more senior volunteers relocate to warmer locales. Support Services to Seniors are investing time into coordinating programs such as pole walking and computer classes, recognizing that exercise and information are key to healthy aging.

There were mixed feelings about the viability of their community:

- “Community is dying…Will I have access to service as I age e.g. grocery store, gas station?” (Whitemouth in Iron Rose)
- Shortage of activities for middle age people. (Victoria Beach in Blue Water)

Some participants were more optimistic

- “I think the area is going to expand.” (Whitemouth in Iron Rose)
When Focus Group participants were asked to identify general community issues related to mental health. Many discussed the lack of individual involvement in the community and the difficulty in finding volunteers. Some felt there was a less community cohesion than in the past. Many participants specifically identified a lack of parental involvement both at the community and family level. These were key factors related to the lack of program opportunities for youth and to the relative disengagement of youth in general.

All Key informants interviewed in all health districts identified social supports e.g. family, friends, work satisfaction, sense of belonging, as influencing mental health.

Some of our partners felt that more supports in the area of parenting skills and parents as role models would greatly assist family supports. One partner felt that there was a disconnection between current community life and the traditional way of life that has affected entire generations. This was emphasized in focus groups with Aboriginal participants. Refer to Section III- mental health indicators for a more in-depth discussion.

Participants from our consultations supported the literature on the importance of social support to physical, mental and spiritual well-being.

Between 2001 and 2006, licensed day cares increased in Springfield and Brokenhead, with no change in the other health districts. “High quality child care is associated with positive outcomes in preschoolers, especially in the areas of language and cognitive development, with particular benefits found for children at risk of poor cognitive development, such as those from low socioeconomic status families.”

Some Focus Group participants in all districts except Springfield (not voiced during discussions) that there was insufficient day care spaces. Many felt that this contributed to parental stress.

- Not enough child care available in Lac du Bonnet – stressor for parents. (Winnipeg River)
- Would like to see a “Daycare Coordinator who maintains lists of available spots with licensed providers.” (Brokenhead)

Child care spaces have evolved largely in response to need based on parental employment rather that childhood enrichment. “High quality child care is associated with positive outcomes in preschoolers, especially in the areas of language and cognitive development, with particular benefits found for children at risk of poor cognitive development, such as those from low socioeconomic status families.” The number of NE’s child care spaces in 2006 was approximately 98/1,000 children aged 0-12 years. NE had the fifth highest number of spaces compared with other regional health authorities in Manitoba.
The two crisis lines (Table 4-2-3 Manitoba Farm Rural Stress Line and Table 4-2-4 Crisis Stabilization Unit and Mobile Crisis Unit) appeared to be stable during the reporting years.

During 2008 and into 2009 there were two global crisis occurring i.e. a financial recession globally and in Canada and since April 2009, a global H1N1 influenza pandemic, originally named 'swine flu.' These events could potentially have an impact on residents, but in particular farmers. We wanted to follow up to determine if the Manitoba Farm Rural Stress Line had increased calls from farmers and if the causes could be attributed to these events. As shown in Table 4-2-3, there was a small increase in calls in NE for the first 6 months of 2009.

General comments from L. Brackenreed were as follows related to ALL Manitoba stress line calls:

“Regarding H1N1 [related to the early name ‘Swine Flu’ pandemic], there hasn't been any direct calls concerning this. As for the recession it is a big part of the rural and farm calls as it affects lives in so many ways. I'm actually surprised with the calls stating they can't afford to feed themselves. Often the payments come first especially if it means losing the home farm.”

Food insecurity is a multidimensional concept and occurs at the individual and household levels. Food securing concepts may be associated with:

a) **Food quantity** in terms of insufficient food intakes among individuals and insufficient or depleted food supply at the household level.

b) **Food quality** concerns at the individual level are associated with intake patterns perceived to be nutritionally inadequate. At the household level food quality relates to the use of foods deemed unsuitable or of inferior quality.

c) **Food insecurity** is linked to feelings of deprivation or lack of choice. At the household level food insecurity is linked with an uncertainty or insecurity about the adequacy and sustainability of food supplies.

d) **Social and cultural norms** at the individual level could include disruptions in the usual pattern of eating. At the household level the social dimension is manifested in behaviours to acquire food in ways that deviate from social norms.

Food insecurity causes a need for individuals and families to access alternate resources such as a food bank. When food banks initially opened in 1981 in Canada, they were seen as a temporary solution to a short term problem. Food banks are still open and almost half are located in rural Canada, with 90% of the increase occurring in rural Canada. In Canada, as of March 2009, 50.8% of total food bank users were on social assistance and 11% were employed. A further 51.9% of rural users were in market rented housing situations.
CHAPTER SUMMARY

Having supportive family, friends and community enhances health status and well-being and provides a buffer during adverse life events. Focus group participants felt that cultivating and seeking social support networks was important to a person’s mental health and well-being.

Over three-quarters of people in NE live with a family according to the 2006 census; decreasing slightly from 2001. There were slightly more married people in 2006 living in NE. Springfield had the highest percent of married people, while Northern Remote had the least. North Eastman reported a higher percent of new mothers who indicated that they had no social support. Focus group participants in 1997, 2003 and 2008 raised concerns about vulnerable people (often seniors) who lived alone. In some districts they also identified that a lack of child care support was a major concern for working parents. Child care spaces in NE increased in Springfield and Brokenhead but remained the same in other districts.

The number of calls made to the Manitoba Farm and Rural Stress Line, the Crisis Stabilization Unit and Mobile Crisis Unit from NE residents did not appear to have changed noticeably over the past three years.
REFERENCES


3 Canadian Alliance on Mental Illness and Mental Health (2007) Mental Health Literacy in Canada: Phase One Report Mental Health Literacy Project. May. Pg. 55


5 MHHL (2009) Families First. NE RHA. Results from the Families First Screening Form Prevalence Rates of Risk Factors for Poor Child Outcomes -2003-2006. Pg. 19


9 Email from: Board of Directors Lac du Bonnet & Area Food Bank Entitled: Information re Lac du Bonnet & Area Food Bank to J.Walker February 17, 2009.

10 Email from: S. Mackenzie Entitled: Food Bank Info to J.Walker April 9, 2009.


19 Brownell, M et al (2008) Figure 9.1 Chapter 9: Community & Social Services. Manitoba Child Health Atlas Update. Manitoba Centre for Health Policy. Winnipeg, MB November. Pg. 246
20 Email from L. Brackenreed, MFRSL, Entitled: Calls regarding Recession and H1N1 to J.Walker, June 29, 2009
This chapter looks at the work environment from the perspective of being employed (or not), the work place environment and associated risks. The three primary factors that influence workplace health are illustrated in the diagram below.

Diagram 4-3-1 Factors Influencing Workplace Health

a) **Environment** (physical and social) which include home or work environment such as the quality of the equipment, type of work, responsibilities of the work, relationships at work and at home.

The leading risk factor identified in this area was injuries.³

b) **Personal Resources** such as a sense of control or influence and support.

The leading risk factors identified in this area include: overworking, work schedules, absenteeism, job insecurity and precarious employment, job strain and bullying.⁴

c) **Health practices** such as physical activity, smoking, drinking, sleeping and eating habits as well as the use of medication and other drugs.

The leading risk factors identified in this area include co-worker and supervisor support, decision latitude (authority or lack of authority to make decisions), stress, psychological disorders and anxiety, and burnout.⁵
Figure 4-3-1 Self Perceived Work Stress

Manitoba and NE residents perceived similar levels of work stress in all categories.

Twenty-eight percent of NE residents reported ‘high’ levels of work stress compared to 24.7% who reported ‘high’ levels of life stress. Those districts reporting ‘high’ levels of work stress were Springfield, followed by Brokenhead and Winnipeg River. Districts reporting ‘high life stress’ were Springfield (28.2%), Iron Rose (21.9%) and Brokenhead (21.2%).

Medium work stress was reported in all districts with the highest percent in Brokenhead, followed by Winnipeg River then Blue Water.

Note: CCHS information may be under reported in Blue Water and most people in Northern Remote were not surveyed.

Table 4-3-1 North Eastman Health Association Inc. (NEHA) Employee Assistant Program (EAP) Summary Utilization

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>6.1%</td>
<td>5.8%</td>
<td>7.7%</td>
<td>8.1%</td>
<td>8.5%</td>
<td>7.8%</td>
</tr>
</tbody>
</table>


The number of staff and families using the EAP service has been relatively stable throughout the 6 years.

Number of NEHA staff or family users 2008:
- 58 employees (increase of 19 employees from 2007)
- 29 spouse / dependents seen for assessment.

Leading reasons for visits 2008:
- 59.1% (6.6% increase from 2007) had difficulty with stress,
- 24.4% (increase of 5.4% from 2007) were seen for marital issues.
Employment and Job Creation from Canadian and Manitoban Perspective

- Since the summer of 2008, there has been a downturn in the Canadian (and global) economy, which has negatively affected employment in certain industries. During the first three months of 2009 in Canada, employment fell in almost all industries, especially in manufacturing and construction. During March-June 2009 employment increased in most service industries, stabilized in construction but continued to decline in manufacturing. There were also losses in business, building and other support services in June 2009. 

- As of June 2009, employment in Canada remained well below its October 2008 peak, with a notable downward trend in the last three months. June's employment gains were in information, culture and recreation (+26,000), finance, insurance, real estate and leasing (+21,000). 

- During the past five years Manitoba has “…consistently maintained one of the lowest unemployment rates in the country.” In 2008 Manitoba the unemployment rate decreased from 4.4% to 4.2%, a record low and was “…the third lowest unemployment rate and added 10,200 jobs to its economy.”

- Over the past five years “Manitoba’s rate of job creation over the last five years was the lowest of all the jurisdictions (provinces) at 6.4%.”

- As of May 8, 2009, Manitoba and Saskatchewan were the only provinces where employment changed little since October 2008. In April 2009, these two provinces posted the lowest unemployment rates in Canada, at 4.6% in Saskatchewan and 5.0% in Manitoba. There was little change by June 2009.

- In June 2009, employment in Canada for youths aged 15 to 24 fell by 33,000, pushing the unemployment rate up a full percentage point to 15.9%, the highest rate in 11 years. Since peaking last October, employment among youth has fallen the fastest of all age groups, down 6.4%.

- In June 2009, employment in Canada among workers aged 55 and over increased by 33,000. Since last October 2008, employment growth has been steady for older workers (+78,000 or +2.9%), particularly among women. Older workers were the only age group that has added to their numbers since the start of the economic downturn.

Income Assistance

In NE, the percentage of children aged 0-17 years, in families receiving income assistance between 1999/2000-2000/01 and 2004/05-2005/06 was similar at 5.1% and 5.3%. NE has significantly fewer children receiving income assistance than Manitoba (13.3%) during the latter time period.

Between 2004/05 -2005/06 over 90% of youth 18 and 19 years of age in Manitoba receiving income assistance were:

- single parents (42%);
- single employable (32.7%) and
- disability cases (22%).

There was no significant change in youth in NE aged 18-19 years receiving income assistance between 1999/2000-2000/01 and 2004/05-2005/06. Youth in NE receiving income assistance was significantly lower at approximately 3%, compared to Manitoba at 9.1%. 
Occupations

Table 4-3-2 Occupations Males / Females 2006

<table>
<thead>
<tr>
<th>Males Age 15+</th>
<th>Females Age 15+</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOP OCCUPATIONS</strong></td>
<td><strong>TOP OCCUPATIONS</strong></td>
</tr>
<tr>
<td>- Trades, Transportation, &amp; Equipment Operators</td>
<td>- Manitoba, NE &amp; ALL health districts</td>
</tr>
<tr>
<td></td>
<td>- Sales &amp; Service</td>
</tr>
<tr>
<td></td>
<td>- Business, Finance &amp; Administration (Springfield)</td>
</tr>
<tr>
<td>- Manitoba, NE &amp; ALL health districts</td>
<td>- Manitoba, NE &amp; all health districts except Springfield</td>
</tr>
<tr>
<td>- Trains, Transportation, &amp; Equipment Operators</td>
<td>- Springfield</td>
</tr>
<tr>
<td><strong>2nd HIGHEST RANKING OCCUPATIONS</strong></td>
<td><strong>2nd HIGHEST RANKING OCCUPATIONS</strong></td>
</tr>
<tr>
<td>- Unique to Primary Industry</td>
<td>- Manitoba, NE, all districts except Iron Rose.</td>
</tr>
<tr>
<td>- Sales &amp; Service</td>
<td>- Business, Finance &amp; Administration</td>
</tr>
<tr>
<td>- Unique to Primary Industry</td>
<td>- Sales &amp; Service</td>
</tr>
<tr>
<td>- Unique to Primary Industry</td>
<td>- Social Science, Education, Government Service, Religion</td>
</tr>
<tr>
<td>- Management</td>
<td>- Manitoba, NE, all districts except Iron Rose.</td>
</tr>
<tr>
<td>- Manitoba, NE, Brokenhead, Bluewater</td>
<td>- Iron Rose</td>
</tr>
<tr>
<td>- Iron Rose, Springfield and also tied for 3rd in Manitoba.</td>
<td>- Northern Remote</td>
</tr>
<tr>
<td><strong>3rd HIGHEST RANKING OCCUPATIONS</strong></td>
<td><strong>3rd HIGHEST RANKING OCCUPATIONS</strong></td>
</tr>
<tr>
<td>- Unique to Primary Industry</td>
<td>- Manitoba, NE, Springfield, Winnipeg River, Bluewater</td>
</tr>
<tr>
<td>- Management</td>
<td>- Social Science, Education, Government Service &amp; Religion</td>
</tr>
<tr>
<td>- Manitoba, NE, Brokenhead, Bluewater</td>
<td>- Health occupations</td>
</tr>
<tr>
<td>- Iron Rose, Springfield and also tied for 3rd in Manitoba.</td>
<td>- Unique to Primary Industry rank third</td>
</tr>
<tr>
<td>- Health occupations</td>
<td>- Brokenhead</td>
</tr>
<tr>
<td>- Unique to Primary Industry</td>
<td>- Iron Rose.</td>
</tr>
</tbody>
</table>


In NE in 2006 sales and service occupations replaced management occupations as one of the top three occupation types for males. NE females had no change in the top three occupations in 2006 compared with 2001 census.22

When we review other indicators we see possible associations between occupations and the following:

- **Workers Compensation Board (WCB) fatalities by occupation** - The top three occupations that had the most fatalities in Manitoba between 2000-2007 were: tradesperson (30%), truck drivers (14%) and farmers (13%).23 These occupations were also the leading occupations for males in NE according to the 2006 census.24

- **Income levels** – Springfield had the highest median income for unattached individuals and household incomes and Northern Remote had the least compared with our other districts.25

- **Education levels for aged 25-64 Years** - Springfield had the highest percent of residents with a high school diploma and Northern Remote had the lowest.26

- **Work injuries**- In Canada care aides have the highest musculoskeletal injuries due to transfer and repositioning patients in every health care setting.27 In NEHA musculoskeletal injuries were the leading cause of workplace injuries. Health care aides were included in the top categories of workers injured.28

- **Working conditions - stress** – self reported stress was highest in Springfield and lowest in Blue Water. Northern Remote was suppressed.
Workplace Fatalities & Injuries – Manitoba

The Workers Compensation Board (WCB)'s data set for 2000-2007 includes “…injuries which the WCB was notified about and that were accepted by the WCB, or fatalities that were adjudicated in a particular year.” WCB includes occupational diseases defined as “… a disease arising out of and in the course of employment and resulting from causes and conditions; peculiar to or characteristic of a particular trade or occupation; or peculiar to the particular employment; but does not include an ordinary disease of life; and stress, other than an acute reaction to a traumatic event.”

Fatalities

In Manitoba, in 2007 there were 30 acute hazard fatalities (deaths occurring immediately or soon after injury) and 12 occupational fatalities (death occurs months or years post exposure from asbestos, toxic fumes).

Injury Fatalities 2000-2007

The top three occupations that had the most fatalities were: tradesperson (30%), truck drivers (14%) and farmers (13%).

Occupational Fatalities 2000-2007

Between 2000-2007 the following crude numbers of accepted occupational diseases by WCB were: mesothelioma (51); other cancers (24); asbestosis (16); heart injury (11) and other disease (11) for a total of 113.

Injuries

In Manitoba the time loss injury rate dropped 25% from 5.6/100 workers in 2000 to 4.2/100 workers in 2007.

Young men aged 20-24 years were at higher risk for workplace injuries. Their time loss injury rates declined by 39% from 9.7/100 in 2000 to 5.9/100 in 2007.

A musculoskeletal injury affects muscles, tendons, ligaments, joints and soft tissue e.g. strains, sprains. These injuries usually occur from improper or inadequate workplace design or processes. These injuries increased from 53.3% of time loss in 2000, to 62.2% in 2007. The health care sector has the largest proportion; almost 80% of their injuries were these types. In NEHA, musculoskeletal injuries were also the primary cause of time loss injury claims.

In Manitoba, full time female employee time loss injuries were consistently less than males during 2007 in all ages. These injuries consistently declined from 2000 to 2007 in the 20-54 age categories and remained the same in the 55 year old category at 2.9/100 for 2000 and 2007.

In Manitoba, the top five ‘time loss’ injuries by injury or illness did not changed between 2000 to 2007:

- Sprains, strains and tears
- Surface wounds, bruises
- Open wounds
- Other traumatic injuries & disorders
- Fractures, dislocations
Workplace Injuries – North Eastman Health Association Inc.

Figure 4-3-2 NEHA Number of Staff Time Loss WCB Claims

Between 2007/08 to 2008/09 the major types of injuries were strains and sprains (musculoskeletal), with back and shoulder injuries being the primary type of injury.

A reduction in back injuries occurred during this time period. This was attributed to mandatory transfer and mobility training, access to appropriate equipment and policy enforcement.

The category of employee most frequently reporting injuries (a workers compensation board notice of injury form was filed, but the staff member did not necessarily require time loss from work) were:

- Emergency Medical Service (EMS) Workers;
- Health Care Aides particularly in long term care and
- Food, Housekeeping and Laundry staff.\(^{40}\)

The heavy nature of the work required in these occupations may explain the higher injury rate.\(^{41}\)
Health status improves with higher income. Income usually comes from employment or pension benefits. Income alone will not improve health status if employment conditions negatively affect health for example workplace stress, safety, control in the workplace, work hours, pay equity and unpaid work.

**Work stress** has increased over the past two decades and is now considered one of the key problems facing organizations. “Workplace stress can cause emotional, cognitive, behavioural and physiological reactions, with detrimental consequences for health.”

Types of stress

- **Time at work** - A major trend occurring in the workplace over the past decade is that Canadians spend *more time at work*. This has been observed in all job groups and all sectors.

- **Unpaid overtime** has almost doubled, indicating that employees cannot get their work done during regular hours.

- **Balancing paid work and other responsibilities** such as child and elder care, and home chores.

Work stress is not only a health issue, but also an economic problem for many people and organizations. In a study conducted in 180 Canadian organizations during 2002-03, the main cause of short-term and long-term disability claims was due to psychological disorders. In NEHA, for example, the Employee Assistance Program during 2008 identified ‘stress’ as the leading reason for counselling.

**Working outside the home** has benefits for women in particular, as it provides increased social contact and self esteem. To have this positive influence there must be a balance between paid and unpaid work (household responsibilities, care of children and elders), the number of children, and whether there was a spouse or partner that assists with the social or financial resources, were critical factors in reducing stress. Time constraints or pressures were cited by some women who have children and work full time, regardless of whether they were single or living with a partner or spouse. This could be due to the time spent on unpaid work compared to men or the fact that more single mothers were working outside the home. Child care was commonly seen as mainly a woman’s responsibility; however, increasingly men are sharing this responsibility.

The downturn in the global economy and Canadian economy occurring during 2008 and 2009 has the potential to impact on those residents actively looking for work and / or are affected by layoffs. Having said this, there is room for optimism in Manitoba as it is one of only three provinces that experienced stability and consistent growth over the last ten years and this stability may “…be a key asset in buffering the effects of recession…”
Manitoba has a diversified economy which has served residents well “…during the current period of economic turmoil, insulating it [Manitoba] from any drastic job losses…” 54 Being employed goes a long way in determining one’s quality of life, but does not necessarily mean better health if the working conditions have a negative effect on health for example job insecurity, inadequate wages, lack of control, overwork, and/or harassment. Although the economic recession that began in 2008 has had an impact on employment rates in some Canadian provinces, Manitoba is in a good position to buffer the economic recession, as it is “…projected to be the only province likely to experience economic growth in 2009…suggests that the province’s labour market will continue to be relatively vibrant.”55 “Unemployed people have been shown to suffer from a disproportionate share of health problems including depression, other forms of morbidity [illness] and reduce life expectancy.”56

“While the wage gap has slowly narrowed over time, women still earn lower wages than men…”57 In 2008 “…Manitoba’s female to male wage ratio increased by 0.1% to reach 0.882, maintaining the province’s hold on its first place position for pay equality. The national average declined by 0.2%.”58

People with higher education are also more likely to be employed.59 Workplace participation for women may be delayed or they may never enter the labour force due to their role in family care giving (children and aging family members). This may be a choice or an inability to find child care. In 2008 Manitoba had the lowest labour force educational attainment compared with other provinces.60 NE had lower high school completion at 71.5% during 2005/06 compared with Manitoba at 77.7%.61

Families that require income assistance to meet basic personal and family needs are considered to be in an ‘at risk’ group for poorer health outcomes as well as behavioural and emotional difficulties and poorer academic performance in adolescents.62 There was a lower percent of NE children who lived in families or youth receiving income assistance compared to Manitoba average.63
CHAPTER SUMMARY

The health risks associated with this determinant of health include the workplace (environment) and conditions of work (personal resources) and the impact of being under or not employed.

Manitoba (27.6%) and NE (28.2%) residents felt their work was either extremely stressful or caused them quite a bit of stress. Brokenhead, Winnipeg River and Springfield residents self-reported the highest levels of 'medium and high' workplace stress.

There was no change in the percent of children (0-17 years) receiving income assistance, as well as no significant change in youth (18-19 years) receiving income assistance.

Sales and service occupations replaced management as one of the top three occupation types for males. The other top occupations were trades, transport and equipment operators. The top occupations for males were also the occupations the Workplace Compensation Board (WCB) cited with the most workplace fatalities in Manitoba. There was no change in female occupations being sales and services, business, finance and administration and social sciences, education and government services.
REFERENCES

6 Fransoo, R. et al (2009) Figure 14.5.1 MB RHA Indicators Atlas 2009. MCHP.  
7 Fransoo, R. et al (2009) Figure 14.5.2 MB RHA Indicators Atlas 2009. MCHP.  
17 Brownell, M et al (2008) Figure 9.3 and A 9.3. Chapter 9: Community & Social Services. Manitoba Child Health Atlas Update. Manitoba Centre for Health Policy. Winnipeg, MB November Pg.249-250  
28 Email from Karen Bernauer, Occupational Health Nurse to S. Dick. July 24, 2009 Entitled: WCB story for CHA.
30 Workers Compensation Board of Manitoba web site: Occupational Disease. Section 44.20. Accessed November 9, 2009 @ http://www.wcb.mb.ca/about_wcb/policy_manual/s40_benefits_administration/occupaton...
33 Email from Karen Bernauer, Occupational Health Nurse to S. Dick. July 24, 2009 Entitled: WCB story for CHA.
36 Email from Karen Bernauer, Occupational Health Nurse to S. Dick. July 24, 2009 Entitled: WCB story for CHA.
37 Email from Karen Bernauer, Occupational Health Nurse to S. Dick. July 24, 2009 Entitled: WCB story for CHA.
61 Brownell, M. et al. (2008) Appendix Table A8.5 and Figure 8.12 High School Completion Rates by RHA. Manitoba Child Atlas Update. MCHP.
63 Brownell, M et al (2008) Figure 9.3 and A 9.3. Chapter 9: Community & Social Services. Manitoba Child Health Atlas Update. Manitoba Centre for Health Policy. Winnipeg, MB November Pg.249-250
Environmental factors encompass a wide range of issues and are often difficult to measure. We have regulations in place for many environmental factors such as: food processing, manufacturing products, sewage disposal, water testing and air quality related to pollution, home building products and road safety standards.

A variety of illnesses arise from environmental risks including: respiratory diseases, skin or eye problems, gastro-intestinal, various infections, cancer, cardiovascular disease, mental disorders and poisoning.

In this report we have discussed the linkages between all the health determinants and how they influence our physical, emotional, and spiritual health. The following diagram links the physical environment with personal behaviours and their influence on our physical and mental health.

Diagram 4-4-1 Linking Residential Environments to Cardiovascular Disease (CVD) Risks

This chapter describes indicators related to the social and physical environment.
Water

Water quality is monitored and regulated by the Manitoba Water Stewardship department. Using water quality standards, objectives and guidelines they monitor groundwater for its suitability for household consumption in about 50 sites and over 200 bodies of water on a routine basis. The Water Quality Index compares a variety of water quality parameters against established standards and is a useful indicator of how water quality changes over time and has been stable since 1991 to 2006 in Manitoba. Manitoba's public water supply systems service approximately 80% of residents (others use private wells or live in communities that are under federal jurisdiction e.g. First Nations). The purpose is to ensure that drinking water is safe in order to “…minimize the risk to public health through consuming water that may contain: bacteria, virus or protozoa that may cause illness and; chemical contaminates which may cause negative health outcomes such as increased risk of cancer.”

Boil Water Advisories- September 26, 2009

Manitoba = 74 North East & North Eastern area = 35

These were primarily campgrounds and other seasonal facilities and less frequently, treatment plants, co-operative water systems and occasionally schools.

- Private Wells & Septic Field Advisory:
  
  Manitoba = 8 NE =1 (Elma- issued September 16, 2004.)

- Compromised/Contaminated Ground Water Advisory


Regional Drinking Water Officers work cooperatively with owners of systems under boil water advisories, support is given for treatment upgrades and/or the acquisition of an alternate source of potable water in the interim.

Boil water advisories are issued for microbiological contamination, system failure and operational deficiencies.

Water System Upgrades

Tyndall/Garson – there is a state-of-the-art reverse osmosis (RO) water system and a complete sewer system. One plant serves both communities and residents within the community boundaries. However, approximately 50 eligible properties within the boundaries chose not to hook up to this new system and the ‘compromised ground water’ advisory (and subsequently, boil water) apply to this group.
Anola – there is a treatment plant in the RM of Springfield. A regular water system for the community of Anola was completed about 2007. This also includes a low-pressure sewer system. Both systems serve only properties in the immediate town area of Anola. All other properties have private water/septic service, hence the ‘contaminated ground water’ advisory.  

Elma – the boil water advisory for the community of Elma is due to the concentration and proximity of septic fields. A new regional water treatment plant is in the works for the RM of Whitemouth. With the predicted receipt of additional funding, plans are to extend the service to Elma.

Dental Health and Water Fluoridation

There is credible evidence to support the use of water fluoridation as an effective method at safe optimal levels as a means of preventing tooth decay by 20% to 40%.

Figure 4-4-1 Hospital Based Dental Extractions

This is a measure of severe early childhood tooth decay. These rates may under estimate severe tooth decay as it does not include extractions occurring in dental offices.

NE had the fourth leading rate of dental extractions compared with other Manitoba health regions. Burntwood, Norman and Churchill regions had higher extractions than NE for both time periods.

Dental extractions in NE significantly increased and were significantly higher compared to the Manitoba average.
Air Quality

“Air quality in Manitoba is generally good, with the exception of local issues relating to industrial sources or vehicle emissions. Manitoba relies heavily on clean hydro-electricity, so its per capita carbon dioxide (CO2) emissions are lower than those of the other two Prairie provinces.”14

“Asthma, lung cancer, cardiovascular disease, allergies and many other human health problems have been linked to poor air quality. In the environment, decreased species biodiversity and vegetation productivity have been found.”15

In NE lung cancer appears to be increasing in males with no change in females between 2002-20002 and 2003-2006. This pattern was different for Manitoba overall, where lung cancers decreased for males and increased for females. In 2003-2006 incident rates were higher in NE males and lower in NE females compared with Manitoba.16

NE’s respiratory illness rates were similar to Manitoba between 2000/01 and 2005/06. Blue Water and Brokenhead had significantly higher rates compared with Manitoba average. Iron Rose and Winnipeg River significantly increased the percent of respiratory illnesses during the second time period and were higher than the Manitoba average. Springfield and Northern Remote’s respiratory illnesses decreased and were significantly lower than Manitoba.17

In NE, residents with asthma was similar to Manitoba between 2002/03 and 2006/07. In our health districts there was considerable variability i.e. Brokenhead appears to have the highest number of cases. Blue Water’s asthma cases increased each year reported.18

Table 4-4-1 Second Hand Smoke Exposure at Home- Ages 12-19 years

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>24% [view with caution as variable]</td>
<td>26.8%</td>
</tr>
</tbody>
</table>

Source: Brownell, M. et al (2008) Figure 10.7 CCHSC Combined Cycles 1.2.1 & 3.1) Second Hand Smoke exposure at Home Ages 12-19 years. by RHA. Manitoba Child Health Atlas Update. Winnipeg, MB: Manitoba Centre for Health Policy, November

Second hand smoke is a self reported indicator. There was at least one-quarter of the population in NE aged 12-19 years that reported being exposed to second hand smoke.

Children are especially vulnerable to second hand smoke and it is linked to “…sudden infant death syndrome, respiratory illnesses including asthma, and middle ear disease…”19

NE and Manitoba had similar smoking rates as reported by CCHS survey participants during 2001, 2003 and 2005. Winnipeg River, Brokenhead and Blue Water had the highest smoking rates compared with our other health districts and were higher than the Manitoba average.20
Adequate Housing

Housing requirements that meet the needs of NE residents are many and varied for example low cost housing, housing that is accessible for a variety of disabilities, transitional, or supportive housing.

The following is a list of housing that focuses on seniors in NE.

Table 4-4-2 Elderly Persons’ Housing in North Eastman – February 2009

<table>
<thead>
<tr>
<th>Location</th>
<th>Name of Facility</th>
<th># of units</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brokenhead</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beausejour</td>
<td>Burgoyne Station</td>
<td>20</td>
<td>Private</td>
</tr>
<tr>
<td>Beausejour</td>
<td>Lions Lodge</td>
<td>20</td>
<td>Lion’s Lodge Inc. Beausejour Lion’s Club</td>
</tr>
<tr>
<td>Beausejour</td>
<td>Twin Maples</td>
<td>15</td>
<td>Manitoba Housing</td>
</tr>
<tr>
<td>Beausejour</td>
<td>South Haven</td>
<td>18</td>
<td>Manitoba Housing</td>
</tr>
<tr>
<td>Beausejour</td>
<td>Armstrong Manor</td>
<td>22</td>
<td>Manitoba Housing</td>
</tr>
<tr>
<td>Beausejour</td>
<td>Stony Plains Terrace</td>
<td>30</td>
<td>NEHA</td>
</tr>
<tr>
<td>Tyndall</td>
<td>Tyndall Manor</td>
<td>12</td>
<td>Manitoba Housing</td>
</tr>
<tr>
<td>Garson</td>
<td>Limestone Villa</td>
<td>12</td>
<td>Manitoba Housing</td>
</tr>
<tr>
<td>Springfield</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anola</td>
<td>Sunrise Lodge</td>
<td>12</td>
<td>Sunrise Lodge Inc.</td>
</tr>
<tr>
<td>Dugald</td>
<td>Evergreen Lodge</td>
<td>10</td>
<td>RM of Springfield</td>
</tr>
<tr>
<td>Cooks Creek</td>
<td>Pleasant View Lodge</td>
<td>10</td>
<td>RM of Springfield</td>
</tr>
<tr>
<td>Oakbank</td>
<td>Kin Place</td>
<td>14</td>
<td>Oakbank-Springfield Kinsmen Senior Citizen’s Complex Inc.</td>
</tr>
<tr>
<td>Oakbank</td>
<td>Oaks North (Seniors condominium)</td>
<td>14</td>
<td>Private</td>
</tr>
<tr>
<td>Winnipeg River</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lac du Bonnet</td>
<td>Bonny Vista Lodge</td>
<td>38</td>
<td>Manitoba Housing</td>
</tr>
<tr>
<td>Lac du Bonnet</td>
<td>Parkview Place</td>
<td>11</td>
<td>Private</td>
</tr>
<tr>
<td>Lac du Bonnet</td>
<td>Park Manor</td>
<td>12</td>
<td>Private</td>
</tr>
<tr>
<td>Blue Water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Georges</td>
<td>Foyer Chateauguay</td>
<td>15</td>
<td>Manitoba Housing</td>
</tr>
<tr>
<td>St. Georges</td>
<td>55+ Condominium</td>
<td>9</td>
<td>Private</td>
</tr>
<tr>
<td>Powerview</td>
<td>Winnipeg River Manor</td>
<td>16</td>
<td>Private</td>
</tr>
<tr>
<td>Pine Falls</td>
<td>Pineview Lodge</td>
<td>17</td>
<td>Pineview Lodge Inc.</td>
</tr>
<tr>
<td>Iron Rose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whitewater</td>
<td>Riverbend Manor</td>
<td>12</td>
<td>Manitoba Housing</td>
</tr>
<tr>
<td>Hadashville</td>
<td>4 units designated to 55+</td>
<td>4</td>
<td>Manitoba Housing</td>
</tr>
<tr>
<td>Prawda</td>
<td>2 of 8 units designated to</td>
<td>2</td>
<td>Community Housing Managers of Manitoba</td>
</tr>
<tr>
<td></td>
<td>seniors</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Provided by Manitoba Health as cited to Grace Honke, Manager Senior Support Programs February 2009.

North Eastman Health Association Inc (NEHA) continues to support communities who are considering or are moving forward in building a Supportive Housing option for seniors in their area. In addition, NEHA is working with various NE communities to understand and offer support for all housing options for residents including the elderly, clients with mental health issues and disabilities.
**SOCIAL and PHYSICAL ENVIRONMENT**

Clean air, water and soil are vital to our health.\(^{21}\) Having a sense of belonging, or attachment to a community, strong cultural identity and ethnic pride, access to support services and community/cultural norms against violence are potential protective factors that influence the development of mental health problems and disorders in individuals.\(^{22}\)

The majority of the NE’s **water systems** are small public and semi-public systems. In the 1970’s Prairie Farm Rehabilitation Administration and Manitoba Water Services Board assisted residents in constructing most of the public systems. Manitoba has 400 public water systems. There are 73 registered public water supplies in NE.\(^{23}\)

A number of NE public water systems rely on surface water as the source and therefore require treatment. Such systems may be more vulnerable to microbial contamination than more sophisticated water systems, so operators must be vigilant in their disinfectant applications and water quality monitoring. In the longer term, there is the potential for turbidity and trihalomethane (THM) levels that exceed Canadian Drinking Water Guidelines. Potable water systems utilizing surface water as their source require specific treatment for the removal of crypto/gardia and to reduce turbidity and THM levels.\(^{24}\)

The Nutrient Management Regulation was the first regulation to be passed under The Water Protection Act. The purpose of the regulation is to protect water quality by encouraging responsible nutrient planning, regulating the application of materials containing nutrients and restricting the development of certain types of facilities in environmentally sensitive areas.\(^{25}\)

Adding **fluoride** to water is a municipal responsibility. Standards for fluoridation of water systems are set federally and provincially. In Canada 45.1% of the total population has access to fluoridated water. Manitoba has the third highest provincial percentage of community water fluoridation rates at 69.7% in 2007. The advantage of adding fluoride to water systems is that it benefits all members of a community regardless of age, socioeconomic status, education or employment.\(^{26}\)

Although fluoridation in drinking water is the most effective preventive tool for reducing tooth decay other products may have fluoride e.g. toothpastes and mouth rinses. There is also fluoride supplementation and professional applications.\(^{27}\) In 1993 a study done in Manitoba reported that a northern Manitoba community without fluoridated water had on average 82% more decay per child than children in the south with fluoridated water.\(^{28}\) Manitoba regions where dental hospital extractions in children 0-5 years were the highest in 2001/02-2005/06 were in Burntwood (68/1,000); Nor-Man (49.3/1,000); Churchill (33.7/1,000) and North Eastman (26.3/1,000).\(^{29}\)
Air pollution can be detrimental to people with existing illnesses such as: asthma, chronic obstructive pulmonary disease (chronic bronchitis, emphysema) or lung cancer, cardiovascular conditions such as angina, previous heart attack, and congestive heart failure or heart rhythm problems. Young children, due to their body-weight, are also sensitive to air pollution, as they often inhale more air than adults. The elderly are also considered in the risk groups due to weaker lungs, heart and defense systems. All of us could be at risk if air pollution levels are elevated, especially people participating in outdoor activities.30

Air Quality Health Index (AQHI)31 is used to provide the public with an indication of air quality in certain areas, how clean or polluted air might be and subsequent health effects might be associated with it. In Manitoba the AQHI is only available for the Winnipeg area.32

The AQHI is measured on a scale ranging from 1-10+. The AQHI index values are also grouped into health risk categories as shown below. These categories help to identify level of risk.

- 1-3 Low health risk
- 4-6 Moderate health risk
- 7-10 High health risk
- 10+ Very high health risk

Two areas of potential air pollution in Manitoba which could affect residents of North Eastman:33

a) Metal smelters emitting

- Sulphur dioxide (SO₂) and mercury- Metal smelters (located in Flin Flon and Thompson) are known to be significant emitters. Other sources of SO₂ - Cement plants, pulp and paper mills, off-road diesel vehicles.34 SO₂ “…can cause adverse effects on respiratory systems of humans and animals, and damage to vegetation.”35

- Mercury - Sources in Canada can be “…attributed to waste incineration, coal combustion, base metal smelting, and the chlor-alkali industry.”36 High levels of mercury exposure can cause severe problems immediately, but low level exposure is the greater risk to mothers and babies as it can cause brain and central nervous system damage, and can also affect the kidneys and lungs. It is also known to affect learning ability and neuro-development in children.37
b) Emissions from intensive livestock operations (ILOs), a growing concern in Manitoba.\textsuperscript{38}  
[animal husbandry is located throughout North Eastman]

- Ammonia (NH\textsubscript{3}) is a gas generated from livestock waste management and fertilizer production. NH\textsubscript{3} is poisonous if inhaled, irritating to eyes, nose and throat in lesser amounts. When ammonia combines in the atmosphere it forms fine particulate matter (PM) which is known to have harmful effects on health and the environment.\textsuperscript{39}

- Particulate matter (PM) other sources include smokestacks in elector power plants or recently tilled fields subject to wind erosion. Ninety-four percent of total PM is due to paved and unpaved roads, construction, agriculture, forest fires etc. Depending upon the size of the PM, it can aggravate cardiac and respiratory diseases such as asthma, bronchitis and emphysema.\textsuperscript{40}

Feeling and living in \textbf{safe communities} is vital for overall health maintenance and is another aspect of this health determinant. Royal Canadian Mounted Police (RCMP) criminal offense categories were selected to support a particular point or indicator being discussed in this report. The location and category of information is as follows:

\textbf{Section III - Injuries} – RCMP report on:
- traffic and off road vehicle – fatalities and accident numbers
- dangerous operation of a vehicle
- crimes against the person

\textbf{Section IV – Chapter 1} - RCMP report on:
- drug enforcement
- impaired operation related
- seatbelt offense

\begin{figure}[h]
\begin{center}
\includegraphics[width=\textwidth]{Aging_in_Place_Housing_Options_for_Older_NE_Residents.png}
\end{center}
\caption{Aging in Place - Housing Options for Older NE Residents.}
\end{figure}

It isn’t always easy for seniors and their families to determine what solution will work best for them. Although the family home may be full of memories, it may also feel empty, leading to isolation, depression and even malnutrition.

Manitoba’s Aging in Place Initiative provides alternative, supported housing options for seniors. NE has successfully implemented the Supports to Seniors in Group Living program at Sunrise Lodge in the town of Anola, Stony Plains Terrace, Beausejour, Bonivista Lodge, Lac du Bonnet and is currently implementing its fourth program at Foyer Chateauguay in St. George.

Also part of the Aging in Place Initiative is the Supportive Housing Program. Currently NEHA has 17 supportive housing units in Beausejour. We have been actively working with community partners in the Pinawa area and in the Springfield area, and remain optimistic that additional supportive housing units will be available to these NE residents in the near future.

The following are Focus Group participant feedback related to safety/violence:

\begin{itemize}
  \item “It’s a safe town [Whitemouth]. Not many problems regarding criminal activity…” (Iron Rose)
  \item “Verbal and physical aggression – at the sports arena, on the playground- bullying at school. There are some programs in place to address, but it’s a big thing in this community.” (Brokenhead)
  \item [Youth gangs] “It’s like they found a family.” (Blue Water)
  \item Concern rose regarding “Violence in the home, the violence the children witness…” (Blue Water)
\end{itemize}
In 2008, there appears to be a higher number of offenses related to crimes against persons in the Powerview and Northern Remote detachments, compared with other detachments. Refer to Section III, Injuries for detailed discussion.

In Manitoba, men appeared to be two to three times more likely to be assaulted causing hospitalization or death. Women are more likely to experience intimate relationship violence and sexual violence. Donner et al describes a 2004 General Social Survey where 8% of women in Manitoba experienced at least one incident of physical or sexual violence in the five years preceding the study. This increased to 21% when abuse included emotional and financial factors. Aboriginal women were at particular risk.41

Housing/shelter is a basic human need and essential to good health. Housing needs to be safe, affordable and suitable. Poor housing could compromise health due to “…physical chemical, biological and structural hazards, vermin (insects and rodents), toxins and toxic waste…contributes to asthma and other respiratory diseases, chronic disease…” 42

To be affordable, housing should not cost residents more than 33% of their household income.43

In NE during the 2006 census, there was an increase in the number of tenants spending more than 30% of their income on shelter, compared to 2001.44

Refer to Section IV, Chapter 7 for a discussion related to housing affordability.

The following Focus Group participant feedback related to housing:

- Senior housing “…where they can have pets would be a positive contribution to mental health.” (Winnipeg River)
- “…[Need] housing options for different lifestyles and stages.” (Springfield)
- “Personal care homes, seniors homes, supported housing, assisted living where individuals function better and do not have to leave the comfort and social supports of home community.” (Springfield)
- “Lack of housing options impacts mental well-being of both caregivers and person needing care.” (Springfield)
- [Need] Starter housing…affordable options for young people. (Springfield)
CHAPTER SUMMARY

Public water supply is monitored and regulated by the Manitoba Water Stewardship department. During focus group discussions, water quality both at the individual and community level was raised as a health concern. As of September 24, 2009 there were 74 boil water advisories in Manitoba; 35 of these occurred in NE and Eastern Manitoba.

Water fluoridation is a public health strategy to prevent tooth decay. NE dental extractions (26.3/1,000) were increasing and were significantly higher than Manitoba (14.2/1,000) in children 0-5 years.

Poor air quality increases the risk for many respiratory illnesses. At least one quarter of children 12 -19 years reported being exposed to second hand smoke.

Housing is a basic human need and essential to good health. Focus group participants, particularly in Springfield, indicated that it was important to have a variety of housing options e.g. starter housing for young people and transitional housing for older people, so they do not have to leave their community.
REFERENCES


7. M Betsill, Drinking Water Officer Email to J Walker entitled: NEHA CHA report-water quality January 13, 2009


17. Fransoo, R. et al (2009) Figure 4.3.1 & 4.3.2. MB RHA Indicators Atlas. MCHP.


The early years involves significant brain development and ‘sets the stage’ for later success in all aspects of life. The family and surrounding environment is very influential to a child’s development.2

Children and youth live in the same highly complex world that adults do. Some children live with more limited opportunities for example: “…children with disabilities, Aboriginal children, poor children, recent immigrants and visible minority youth face obstacles on many fronts.”3

This chapter focuses on information pertaining to prenatal and early childhood issues.

Births & Birth Weights

Figure 4-5-1 Newborns NE 2006/07 & 2007/08

In NE there was a total of

- 494 live newborns 2006/07
- 500 live newborns 2007/08

During 2006/07 the majority of newborns were females 259, compared with 235 males.

During 2007/08 the majority of newborns were males 259, compared with 241 females.

Location of highest number of live births 4

<table>
<thead>
<tr>
<th></th>
<th>2006/07</th>
<th>2007/08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue Water</td>
<td>146</td>
<td>158</td>
</tr>
<tr>
<td>Springfield</td>
<td>124</td>
<td>110</td>
</tr>
<tr>
<td>Northern Remote</td>
<td>94</td>
<td>103</td>
</tr>
</tbody>
</table>

Source: HMHL Health Information Management Disks - Feb 2008 & Apr 2009.
Figure 4-5-2 Teen Live Birth Rates – Aged 15-19 Years

Teen live birth rates in NE decreased significantly during the second time period, but remain significantly higher than the Manitoba rate for both time periods.

Northern Remote and Blue Water had the highest number of teen births. Both districts were significantly higher than the Manitoba average, but significantly declined during the second time period.

Note: Adolescents under 15 years were not included in this figure as their numbers were very low, and the pattern of results were similar to that found for the 15 to 19 year-olds.

Table 4-5-1 Crude Number of Teen Pregnancies and Births During Five Year Period

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>97.8</td>
<td>65.8</td>
<td>81.4</td>
<td>53</td>
</tr>
</tbody>
</table>


Figure 4-5-3 Pre-term Births

NE had slightly more pre-term births than Manitoba.

Blue Water followed by Northern Remote had the highest rate of pre-term births.

The lowest pre-term birth rate in NE occurred in Winnipeg River.
During 2002/03 – 2006/07 the percentage of high birth weight rates in NE was slightly higher than Manitoba.

Northern Remote and Blue Water had the highest percent of high birth weights compared to our other health districts during the same time period.

Table 4-5-2 Crude Number of High Birth Weights > 4,000 grams

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>81</td>
<td>83</td>
<td>94</td>
<td>78</td>
<td>73</td>
<td>83</td>
</tr>
</tbody>
</table>


“High birth weight was found to be associated with increased risk of Type 2 diabetes in later life to the same extent as low birth weight.”6

Table 4-5-3 Crude Number of Low Birth Weights < 2500 grams

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman</td>
<td>18</td>
<td>18</td>
<td>20</td>
<td>26</td>
<td>34</td>
<td>23</td>
</tr>
</tbody>
</table>

**Mortality**

Figure 4-5-6 Infant Mortality (0-1 Year)

Infant mortality declined during the latter time period. There were no significant differences between NE and Manitoba rates.

During 2001 to 2005 the top 3 causes for *infant mortality* in Manitoba were:  
- Congenital abnormalities – 30%
- Short gestation / low birth weight – 13%
- Complications of labour – 8%

Figure 4-5-7 Child Mortality (1-19 Years)

NE’s *child* mortality rates decreased during the second time period, but remains significantly higher than the Manitoba average.

Manitoba children aged 1-19 years between 2001-2005, the leading causes of death were  
- injury (62%)  
- ‘other’ at 8%,  
- neoplasms (7%) and  
- congenital anomalies (5%).

Between 2000-2006 *injury* deaths were due to:  
- Under 1 – suffocation 21.3/100,000  
- 1-14 years – suicide 2.4/100,000  
- 15-24 years – motor vehicle accident (MVA) 17.7/100,000.

*Refer to Section III for a discussion about injuries.*
Health Behaviours

Figure 4-5-8 Breastfeeding Initiation Rates

NE’s Breastfeeding (BF) initiation rates were significantly lower than Manitoba.

Northern Remote and Blue Water had the lowest rates; both were significantly lower than Manitoba.

Springfield and Iron Rose were significantly higher than the Manitoba for both time periods.

There were no significant changes when we compare the two time periods.

![Breastfeeding Initiation - All Ages of Mothers - Adjusted](image)

During 2007, NE had slightly lower immunization rates compared to Manitoba for ages 1, 2, 11 and 17 years. Age 2 is a vaccination milestone; ideally all vaccines scheduled for this age are given.

By age 7 NE immunization rates surpassed Manitoba overall.
Figure 4-5-10 Completed Immunization – Comparing First Nation and Non-First Nation Children - All Ages During 2007

<table>
<thead>
<tr>
<th>Age 1</th>
<th>Age 2</th>
<th>Age 7</th>
<th>Age 11</th>
<th>Age 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate per 100 children with complete immunization First Nation - MB</td>
<td>63.8</td>
<td>41.7</td>
<td>54.1</td>
<td>29.8</td>
</tr>
<tr>
<td>Rate per 100 children with complete immunization First Nation - NE</td>
<td>61.3</td>
<td>42.4</td>
<td>52.4</td>
<td>39.4</td>
</tr>
<tr>
<td>Rate per 100 children with complete immunization Non First Nation - MB</td>
<td>78.4</td>
<td>61.5</td>
<td>70.8</td>
<td>57.6</td>
</tr>
<tr>
<td>Rate per 100 children with complete immunization Non First Nation - NE</td>
<td>78.2</td>
<td>55.2</td>
<td>79.7</td>
<td>62</td>
</tr>
<tr>
<td>Rate per 100 children with complete immunization ALL Children - MB</td>
<td>76.1</td>
<td>58.5</td>
<td>68.6</td>
<td>54.4</td>
</tr>
<tr>
<td>Rate per 100 children with complete immunization ALL Children - NE</td>
<td>72.3</td>
<td>51.5</td>
<td>72.3</td>
<td>50.5</td>
</tr>
</tbody>
</table>

Note: First Nation declaration is voluntary

During 2007, NE had slightly lower immunization rates compared to Manitoba for ages 1, 2, 11 and 17 years, at age 7 NE immunization rates surpassed Manitoba.

In 2007, First Nation children in NE had similar completed immunization rates to other First Nation children across Manitoba.

When First Nation children's immunization rates were compared with non-First Nation children we see consistently lower rates in all age groups.
The following indicators allow us to review immunization status at the district level during two important childhood growth and development milestones.

**Figure 4-5-11 Percentage of Completed Recommended Immunization at Age 2**

At age 2, NE has significantly fewer children immunized compared with Manitoba. This percent is decreasing.

All districts had a decrease in rates except for Iron Rose and Northern Remote.

Springfield had a significant decrease. Blue Water and Northern Remote rates were significantly less than Manitoba overall.

**Figure 4-5-12 Percentage of Completed Recommended Immunization at Age 7**

There was a significant increase in completed immunizations by age 7 in NE compared to earlier years.

Our health districts also saw an increase in rates, in particular Northern Remote showing a significant increase compared with the earlier birth cohort. Springfield’s rates were the highest of all our health districts and were significantly higher than the Manitoba rate. Northern Remote and Blue Water had the lowest rates compared to our other health districts; however they were not considered significantly different than Manitoba for the second birth cohort.
Services & Procedures

Figure 4-5-13 Tonsillectomy / Adenoidectomy (T/A)

NE’s T/A’s were similar to Manitoba.

There was little variation among the health districts with one exception. Winnipeg River showed a significant increase during the second time period, and was significantly higher than the Manitoba rate. A possible explanation was the small numbers reported or the fact that Winnipeg River had experienced a significant increase in total respiratory illnesses for all ages from 11.6% during 2005/06 to 13.3% in 2000/01. This rate was significantly higher than Manitoba (11.6%) for the latter time period. 10

Brownell et al (2008) suggests that because of the significant regional variations in Manitoba, there still may be “…clinical uncertainty with respect to this surgical procedure.”11

Figure 4-5-14 Caesarean (C-) Section

For both time periods NE had significantly lower C-sections than Manitoba overall.

C-sections showed an increase in Springfield, Winnipeg River, Brokenhead and a significant increase occurred in Northern Remote district during the second time period.

All health districts had lower rates than Manitoba, Blue Water being significantly lower than Manitoba.
NE rates of 52.6% in 1996/97-2000/01 and 49.1% in 2001/02-2005/06 show a decrease but were significantly higher than the Manitoba rate of 34.9% during the second time period.

Blue Water had the only increase and was significantly higher than Manitoba for the second time period. VBACs were highest in Northern Remote, significantly higher than Manitoba overall, however a decrease occurred during the second time period.12

Vaginal births after a C-Section is considered an important indicator in reducing unnecessary C-Sections “…[vaginal births] tend to carry lower health risks to the mother and require shorter hospital stays than C-Sections.” 13

Families & Parenting

Families First Program Risk Factor Information

The Families First Screening Form is a screen used as an interview tool with mothers with newborns in Manitoba in order to identify risk factors associated with poor child outcomes. The interview form measures biological, social and demographic risks for 39 indicators. The resulting information is collated at the regional and district level (only if there were over 10 responses to a question). Due to lower numbers, interpretations at the health district level are to be viewed with caution.14

Note: Family First Screening Form indicator results have been inserted throughout theCHA Report. Only those pertaining to this chapter are reported here.

Table 4-5-4 Family First Screening Form Demographics

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Number of births</td>
<td>282</td>
<td>280</td>
<td>280</td>
<td>301</td>
<td>1143</td>
</tr>
<tr>
<td>Number of Baby First Screens Completed (% of total)</td>
<td>271 (96%)</td>
<td>274 (98%)</td>
<td>260 (92.9%)</td>
<td>282 (93.7%)</td>
<td>1087 (95%)</td>
</tr>
</tbody>
</table>

Table 4-5-5 NEHA NE Family First Form Demographics

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of post-partums *excludes Aboriginal population using federal services.</td>
<td>286</td>
<td>274</td>
<td>304</td>
<td>323</td>
<td>294</td>
</tr>
<tr>
<td>Number of Baby First Screens completed with &gt; 3+ risk factors who potentially qualify for Family First. *Non participators were families who used a midwife, Aboriginal population</td>
<td>56</td>
<td>27</td>
<td>63</td>
<td>72</td>
<td>67</td>
</tr>
<tr>
<td>Number of in depth surveys conducted with families &gt; 25+ risk factors &amp; offered program.</td>
<td>32</td>
<td>18</td>
<td>25</td>
<td>44</td>
<td>36</td>
</tr>
<tr>
<td>Number of families that enrolled in Baby First Program %= in depth surveys conducted &amp; number enrolled in program.</td>
<td>27 (84.3%)</td>
<td>21 *</td>
<td>24 (96%)</td>
<td>34 (77.2%)</td>
<td>32 (88.9%)</td>
</tr>
</tbody>
</table>

The number of screens with over three risk factors increased in the latter years as did the number of in depth surveys conducted. It appears a good proportion of families enrolled in the program.

The following risk indicators speak to the combined years 2003 to 2006 using MHHL results (not NEHA data):¹⁵

- **Three or more risk factors** identified on the Families First Screening Form increased over time in NE, but not significantly. When the four years were combined NE (22.5%) had a lower percent of families with three or more risk factors compared with Manitoba (24.4%). At the health district level Northern Remote had the highest percent of three or more risk factors (62.2%), followed by Blue Water (41.9%). The other districts respectively were: Iron Rose (20%), Winnipeg River (19.7%), Brokenhead (15.3%) and Springfield (9.1%).

- **Infections Transmitted in Utero** (e.g. rubella, AIDS, toxoplasmosis, cytomegalovirus). Rates increased over time. When the four years were combined NE (1.6%) was statistically higher than Manitoba (0.7%). District level information was suppressed.

- **Lone parents** (refers to mothers who identify themselves as the sole primary care giver for their child). This rate was stable for the 4 years reviewed. When the four years were combined the rate of lone parents for NE (9.3%) was statistically lower than Manitoba’s rate (12.8%). At the district level we see that Northern Remote’s rate was 51.5% and Blue Water’s rate was 26.7%, both higher than the NE and Manitoba rate. The other health district rates were suppressed.

- **Child Protection File** (refers to mother or father’s involvement with Child and Family Services for child protection services related to suspected or substantiated abuse of other children). Risk factor rates were decreasing over time. When the four years were combined, NE (5.2%) was significantly higher than Manitoba (4.9%). District level information was suppressed.

- **Maternal Child Abuse History** (mother’s self-reported history of child-abuse). This risk factor decreased over time. When the four years were combined, the rate for NE (4.0%) was statistically lower than Manitoba (6.5%). District level information was suppressed.

---


Children in care in Manitoba and NE significantly increased during the latter time period. NE had significantly more children in care than Manitoba. When NE was compared with other RHAs it had the third highest percent of children in care. All health districts except for Blue Water and Northern Remote had lower numbers of children in care compared with Manitoba overall.

Northern Remote had the highest percent of children in care among our health districts. There was a significant increase in Blue Water in the number of children in care during the latter time period. Both these districts were significantly higher for both time periods when compared to Manitoba overall.

Note: Brownell et al (2008) explains that there may be limitation in the data affecting rates in that children in care served by Aboriginal Agencies will be under counted especially during the first time period due to staff turnover, system restructuring and changes in occurrences of child maltreatment.
EARLY CHILD DEVELOPMENT

“The effect of prenatal and early childhood experiences on subsequent health, well-being, coping skills and competence is very powerful. Children born in low-income families are more likely than those born to high-income families to have low birth weights, to eat less nutritious food, and to have more difficulty in school.”\textsuperscript{18}

“Infant mortality rate (IMR) is a long-established measure of child health as well as the well-being of a society.” IMR is known to measure “…the health status and health care of a population, the effectiveness of preventive care and the attention paid to maternal and child health, as well as broader social factors such as maternal education, smoking and relative deprivation…Among developed countries, an IMR of less than 4.0 per 1,000 is considered exceptionally good.”\textsuperscript{19} NE’s most recent IMR was 8.6/1,000; Manitoba’s was 6.7/1,000.

Infant and child mortality is strongly linked to socioeconomic factors. In Manitoba “infant mortality is almost (and in some cases greater than) two times higher in the lowest compared to the highest income quintile areas… child mortality rates ….increasing as income decreased…higher rates of child deaths in rural compared to urban areas.”\textsuperscript{20} The Family First Screening form identifies socioeconomic factors as a potential risk for poor child outcomes.

One research report argues that there is a crisis in maternity care in Canada which is more than a shortage of maternity care providers but includes “the loss of local maternity care services in many rural and northern communities and the resulting need for women to travel farther to give birth.” This centralization of care contributes to the view that birth is a medical crisis rather than a normal life event. To modify this it is thought that “Birth centres provide a safe alternative to hospital birth for both rural and urban women when they are well-integrated into the larger maternity care system…the Women’s Health Clinic in Winnipeg and the Winnipeg Regional Health Authority (WRHA) are developing the criteria for a birth centre in Winnipeg.”\textsuperscript{21} NEHA is currently looking at the feasibility of having midwives located in NE.

Midwifery service was raised by a few focus group participants. For them, there were mixed reactions about having this service e.g. some felt it was important and others expressed concern about the risk associated with the travel distances should a need for medical help arise. Participants described personal experiences associated with hospital deliveries and subsequent complications. It was seen as positive for the baby’s health to be near a centre that offered quick access to treatment.

- Midwifery – good to deliver babies in home community, also noted benefits of hospital birth to address complications… need for ready access to medical supports. (Blue Water)

There has been an overall statistical decrease in both the number of pregnancies and births in NE region. There was considerable variability among our health districts, with
the highest pregnancy and birth rates in Blue Water and Northern Remote districts compared with our other districts.

The Canadian teenage birth rate in 2004 was 13.6/1,000, less than half of the Manitoba rate of 30.1/1,000 during 2001/02 to 2005/06. Some causes for teenage pregnancies identified among unmarried teens might include “…sexually active siblings, coerced sex and sexual precociousness, deficient parenting and … antisocial characteristics.” It is also known that “…for young, disadvantaged women, having a baby may be the only form of social status to which they can look forward: motherhood provides an important source of satisfaction.”

The two NE districts that had the highest rate of teenage births (15-19 years) comparing 2001/02—2005/06:

<table>
<thead>
<tr>
<th>District</th>
<th>1996/07-2000/01</th>
<th>2001/02—2005/06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Remote</td>
<td>170.1/1,000</td>
<td>129.0/1,000</td>
</tr>
<tr>
<td>Blue Water</td>
<td>90.6/1,000</td>
<td>80.4/1,000</td>
</tr>
<tr>
<td>North Eastman</td>
<td>45.6/1,000</td>
<td>35.9/1,000</td>
</tr>
<tr>
<td>Manitoba</td>
<td>36.2/1,000</td>
<td>30.1/1,000</td>
</tr>
</tbody>
</table>

Aboriginal population by 2006 census indicates that Northern Remote has 91% and Blue Water 58% Aboriginal ancestry. There is a trend for First Nation women “…to have their children when they are younger than non-First Nation women…It is unclear whether the trend toward delayed first birth, which exists in the general population, will become more prevalent among First Nation women in the future.”

Although the birth rates are declining we are not yet seeing rates that are similar to Manitoba for either health district. It appears that youth who do pursue education and expect to find a good job after graduation are generally motivated to avoid early pregnancy.

There is a vast body of research that speaks to subsequent risks for teen mothers who keep their baby. These mothers are at greater risk for poorer health and educational outcomes when compared with older mothers giving birth. Further, there is a correlation between lower income and teens becoming pregnant. Teen mothers often have the challenge of being one-parent families (OPF). If the one parent family is a teen, they face innumerable social issues because they have “…accumulated fewer assets such as higher education, work experience and a good income…Because of lower salaries and higher unemployment rates, OPFs rarely are able to accumulate financial (assets) that could cushion a period of unemployment or illness…” All these factors increases the health risk for both the child and mother.

Poverty is considered the major cause of OPFs headed by an unmarried woman. In NE, Northern Remote (8.7%) followed by Blue Water (7.9%) had the highest percentage of lone parent families compared to our other health districts, both higher than Manitoba overall. The Family First survey identified that 9.3% of new mothers in NE reported being lone parents between 2003-2006. This was significantly lower compared with Manitoba at 12.8%. New mothers in lone parent families were as high as 51.6% in Northern Remote and Blue Water at 26.7% during the same combined time period. Other health district rates were low enough to be suppressed. Both these districts have significantly higher than the Manitoba average of teen births. If these teen mothers are
Family Health Services in North Eastman Health Association Inc. (NEHA)

All programs related to Family Health—prenatal, postnatal, child health, adolescent health and parental / adult health are available across the region. The components of all programs include assessment, education, counselling, support and referral.

Public Health Nurses work with individuals, families, groups and communities in a variety of settings: homes, schools, workplace, or the community at large. The goal of each of the programs is to promote optimal well-being to attain a high level of health and wellness. While the services are available across the region, they may vary from district to district.

There are numerous other services offered to families in NE by other government and non-governmental agencies.

Refer to NEHA’s web site for Family Health Programs @ http://www.neha.mb.ca

“Higher unemployment and lone-parent family rates and lower rates of high school graduation are associated with poorer health and social outcomes for children.”33 When we review some risk factors associated with lone parents, we see that new mothers with less than high school education between 2003-2006 in NE was higher (22.6%) than Manitoba (21.6%). At the health district level we see the highest percent of new mothers with less than high school education occurred in Northern Remote (82.1%), followed by Iron Rose (43.8%) and Blue Water (32.1%) during the same time period.34

Rates of new mothers who were on social assistance or income support decreased over time in NE (12.9%) compared with Manitoba (17.7%) during 2003-2006. When we look at the health districts we observe that Northern Remote’s rate was 73.1%, followed by Blue Water at 43.1% and Winnipeg River at 11.2%. The other health districts were low enough to suppress.35 These risk factors point to potential negative incomes for any family, but there appears to be a higher percent of families living in Northern Remote and Blue Water districts that fall into these risk factors i.e. lone parent families, less than high school education and families on social assistance or income support.

Parenting issues were one of many everyday stresses viewed by our focus group participants.

- “Age and stage of life – mom dealing with kids or with elderly or unwell parents can experience depression, anxiety, and feelings of being overwhelmed...” (Springfield)
- “It was hard with a new baby, being out of town, felt very isolated...” (Springfield)
- “People don’t want to sacrifice their time to help their families or to help themselves.” “More parental involvement is needed - input and participation.” “…offer something and a lot of them don’t come unless they have to.” “Parents have to be involved if they want to see their kids doing good in anything...” (Blue Water)
- “…sometimes (teens) just want to feel wanted and are searching for love…and even some of the parents don’t understand (love).” “…they think that condoning everything their child does is like love…” (Blue Water)
Some **key informants** identified lack of parenting skills as a concern especially in Blue Water and Springfield districts.

**Partners** comment on parenting
- Unhealthy parents raise unhealthy children. (Springfield)
- Lack of parental guidance. (Winnipeg River)

Some **focus group** participants discussed their concerns about teens and teen pregnancies:
- Teen pregnancies are an issue - some related to substance use/abuse, Fetal Alcohol Spectrum Disorder (FASD) concerns. Some babies of teen moms being raised by grandparents...creating family stress... (Blue Water)
- “A lot of it (teen sexual activity) has to do with parents condoning what their kids are doing; they smoke up with them…” (Blue Water)

**Preterm births** or births occurring before 37 weeks gestation are an important determinant of fetal and infant mortality. In NE preterm births increased, but not significantly, however in Manitoba, preterm births increased significantly between 1996/97 to 2000/01 from 7.2% to 7.7% during 2001/02-2005/06. An increase was also noted in Canada from 6.6% in 1991 to 7.6% in 2000. Due to additional complications for these babies, this trend requires monitoring. **Small for gestational age** (low birth weight) is an indicator of fetal growth restriction and a marker for increased fetal and infant mortality as well as morbidity risks. **Large for gestational age** (high birth weight) is a marker for increased birth complications and infant morbidity.

A recent study released by the Canadian Institute for Health Information (CIHI) suggests that in Canada and throughout North America, there has been an overall decline in small for gestational size babies, but an increase in preterm babies. The reasons given for this increase in preterm babies was delayed child bearing, use of reproductive techniques and biological factors such as mothers diagnosed with hypertension and/or diabetes, both of whom were up to six times more likely to deliver a preterm baby compared to women without these conditions. The cause for underweight babies was more strongly associated with social factors e.g. mothers living in low-income neighbourhoods were 30% more likely to have underweight babies. Smoking was also a cause of underweight babies.

**Immunization** is considered a primary preventive care activity and arguably the single most important public health achievement in preventing infectious diseases and subsequent deaths. The earlier the vaccines are given to infants, the earlier immunity and disease protection is achieved. By age two ideally all recommended immunizations have been given. This is the age where children are in contact with other children, especially if they are in daycare, and could more easily contract preventable communicable diseases for which there are vaccines. We see in NE that at age two we have significantly lower completed immunizations compared to Manitoba. Most districts have also decreased their rates, Springfield in particular decreased significantly. One reason immunizations are lower before age 7 is that parents do not necessarily follow the vaccination age recommendations. As shown by the data, by the time the child has reached seven years of age they have ‘caught up’ with their vaccination series.
Focus Group participants were asked their thoughts on immunizations. Participants were generally supportive of standard childhood immunizations, but some voiced concerns about potential negative side effects and reported choosing not to have their children immunized. Participants felt the choice was for parents to make and noted the need for credible information. Based on their own experience and that of their friends and family, there was mixed response to ‘flu shots.

- Issue is complex and can be confusing, “I am just torn.” (Winnipeg River)
- Would like to see immunization clinics for family as well as seniors at new (Traverse Bay) Wellness Centre. (Blue Water)

Key informants commented about immunizations in all health districts except for Springfield, and generally were in favour of immunizations, but felt there was a need to monitor research on vaccination side effects.

- “Agree with childhood immunizations.” (Iron Rose)

There are data limitations in that immunization rates rely upon medical claims from physicians including shadow billing from non fee-for-service practitioners, as well as other health providers. This could result in under-estimating immunization rates.

NE’s Public Health Program aggressively notifies parents with reminder letters and phone calls. Immunization coverage is a regional priority.

Breastfeeding can reduce “…ear infections, atopic dermatitis, gastrointestinal infections, lower respiratory tract infections, the development of asthma and leukemia…as well as decreased infant hospitalizations independent of the effects of family income.”41

Breastfeeding initiation rates are higher among rural or urban women living in high income areas, compared with the lowest income areas of Manitoba.42

Breastfeeding (BF) Initiatives in North Eastman Health Association Inc.

It is important that mothers in NE continue to be supported in their breastfeeding efforts.

Primary Health Care (PHC) Program - BF is discussed and encouraged during client contacts by health practitioners. PHC partners with Wings of Power in Blue Water. Wings of Power is a CPNP (Canadian Prenatal Nutrition Program) site which strongly encourages breastfeeding and offers food supplements to mothers who breast feed.


Public Health (PH) Program - BF and lactation are taught prenatally through home visits and healthy baby drop in groups and of course our prenatal classes. BF tools have been put together and have been given to all PHNs, NPs and MDs in the region to help assess and help with breastfeeding obstacles. There is a class dedicated to BF during the prenatal class sessions.

NE has a lactation consultant who provides updates and education for public health nurses and Families First home visitors to ensure we keep current. Healthy Baby and Healthy Baby drop-in events offer a strong focus on breastfeeding. Dietitians and public health nurses attend the drop-ins that are coordinated by the Healthy Baby / Families First outreach workers. As per World Health Organization’s (WHO) code, formula is not promoted. We celebrate World Breastfeeding Week by putting up poster boards in the Primary Health Centres and community.

**Children in care** are those children removed from their families of origin and placed in the care of another adult(s) due to concerns such as abuse and neglect, illness, death or conflict in their family, disability or emotional problems.43

The societal trend toward diminished value placed on adoption, on the social acceptability of single mothers, coupled with children in impoverished families with housing difficulties has increased the demand for foster parents and group homes.44 This is observed in Manitoba and NE by the significant increases in foster care. Northern Remote followed by Blue Water not only significantly increased, but both districts were significantly higher than the Manitoba rate.

**Injury hospitalization for children 0-17 years in care** compared to children not in care was considerably higher. Of particular note were hospitalizations due to self-inflicted injuries (over 11 times higher for children in care) and violence by others (almost 10 times higher for children in care) during 2001/02-2003/04.45 In NE, children aged 0-19 years hospitalized for injuries, although declining, during 2001/02-2005/06 was significantly higher than Manitoba. During the same time period, Northern Remote health district followed by Blue Water had the highest injury hospitalization rates and both were significantly higher than the Manitoba rate.46

An apt conclusion for this chapter and one made by the 'Families First Report' indicated that “…interventions are needed to connect families to their communities and provide assistance with relationships. Given that 24% of families [in Manitoba and 22.2% in NE, and higher yet in Northern Remote and Blue Water] have three or more risk factors [for poorer child outcomes] continued support is recommended for Manitoba’s Early Childhood Development (ECD) Strategy to improve the balance between risk factors and protective factors in the early childhood environment.”47
CHAPTER SUMMARY

The early years have a powerful effect on our future wellbeing. The infant mortality rate appears to be declining as does the child mortality rate, however the child mortality rate in NE was significantly higher than Manitoba overall.

The number of live births did not change over time. NE (12.3/1,000) and Manitoba (12.6/1,000) had similar rates of live births, however there was considerable variation among the districts; e.g. Northern Remote (31.5/1,000) and Blue Water (19.2/1,000) had the highest rate of live births.

Amongst teens 15-19 years, there was a significant decrease in live births; however the rate of teen births was significantly higher than in Manitoba. The highest rate of teen births occurred in Northern Remote and Blue Water; however, a decrease occurred in both these districts.

Babies born too soon or pre-term may not be as healthy as babies born at gestation. Of all births in NE 8.6% were pre-term compared with 7.9% in Manitoba.

Breastfeeding is known to have protective effects for the newborn. There was no change in NE breastfeeding (BF) initiation rates over time. NE’s rates were significantly lower than Manitoba. Northern Remote and Blue Water’s BF initiation was the lowest, where Iron Rose and Springfield’s BF rates were the highest.

During 2007, NE had slightly lower immunization rates compared to Manitoba for ages 1, 2, 11 and 17 years. By age seven, NE ‘caught up’; having higher immunization rates compared to Manitoba overall.

The number of NE children in foster care increased significantly from 4.1% between 1998/99-2000/01 to 5.4% during 2001/02-2003/04 and was significantly higher than Manitoba at 3.0% and 3.3% for both time periods. Northern Remote and Blue Water had a significant increase in children in foster care; the highest of all districts.
REFERENCES


10 Fransoo, R. et al (2009) Figure 4.3.1 & 4.3.2. MB RHA Indicators Atlas 2009. MCHP.


12 Brownell, M. et al (2008) Chapter 3: Perinatal Health. Figure 3.11 & Appendix Figure A.3.36. Manitoba Child Health Atlas Update. Manitoba Centre for Health Policy. Winnipeg, MB November Pg. 42.

13 Brownell, M. et al (2008) Chapter 3: Perinatal Health. Figure 3.11 & Appendix Figure A.3.36. Manitoba Child Health Atlas Update. Manitoba Centre for Health Policy. Winnipeg, MB November Pg. 42.


Education is closely linked to socioeconomic status. Effective education for children and lifelong learning for adults contributes to the health and prosperity of individuals. We know those individuals “with less education are more likely to face low-paying and uncertain jobs, higher risks of occupational injury and a less rewarding work life.”

Education often provides the ability for people to increase their sense of control and mastery over life circumstances. The promotion of lifelong learning is an important component in effective population health strategy.

“Literacy is the basis for the well-being of individuals, families, and the whole province. The ability to read, write and perform basic math has an impact well beyond those skills. Low literacy is, on the surface, an invisible handicap. Its effects, however, are not. Investing in literacy makes economic, social and political sense/cents.”
**Education**

Figure 4-6-1 Children in NE & Manitoba ‘not ready’ for school

<table>
<thead>
<tr>
<th></th>
<th>2005/06 North Eastman</th>
<th>2006/07 North Eastman</th>
<th>2005/06 Manitoba</th>
<th>2006/07 Manitoba</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical health &amp; well-being</td>
<td>10.0%</td>
<td>12.2%</td>
<td>11.6%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Social competency</td>
<td>13.8%</td>
<td>10.9%</td>
<td>11.2%</td>
<td>29.1%</td>
</tr>
<tr>
<td>Emotional maturity</td>
<td>11.6%</td>
<td>10.9%</td>
<td>11.1%</td>
<td>28.3%</td>
</tr>
<tr>
<td>Language &amp; thinking skills</td>
<td>12.8%</td>
<td>11.0%</td>
<td>11.0%</td>
<td>27.7%</td>
</tr>
<tr>
<td>Communication skills &amp; general knowledge</td>
<td>13.6%</td>
<td>11.2%</td>
<td>13.5%</td>
<td>14.6%</td>
</tr>
<tr>
<td>% not ready in one or more areas</td>
<td>31.0%</td>
<td>15.2%</td>
<td>29.1%</td>
<td>13.5%</td>
</tr>
<tr>
<td>% not ready in two or more areas</td>
<td>11.2%</td>
<td>10.9%</td>
<td>11.2%</td>
<td>29.1%</td>
</tr>
</tbody>
</table>


NE is similar to Manitoba in all school readiness domains. Approximately one-third of NE children were not ready in one domain, and approximately one-sixth of children were not ready in two or more domains. Physical health and well-being and emotional maturity were the only two domains that did not improve from the earlier time period. The percent of children ‘not ready’ for school remained fairly stable for the two time periods reviewed.

Figure 4-6-2 Average Early Development Instrument (EDI) Score in Five Developmental Areas.

EDI score is out of a possible 10 (higher the better the development) and uses the same domains as previously reviewed in school readiness.

NE and Manitoba children overall scored similarly for both time periods. Approximately two-thirds of children scored higher than 7.0.

Children in both NE and Manitoba scored the least in emotional maturity and communication skills and general knowledge.

School Retention

School retention measures the percentage of students who are held back a year due to academic or adjustment difficulties.\(^5\)

Figure 4-6-3 School Retention – Kindergarten to Grade 8 - 1997/98 to 2005/06

In NE we see that there was a significant decline of students being held back, from 7.2% during the first time period to 3.7%

Retention rates in NE were significantly higher compared with Manitoba.

Northern Remote followed by Blue Water had the highest retention rates for both time periods. A significant decline occurred during the latter period.

Other health districts dropped significantly and all were lower than Manitoba.

It is known that for both urban and rural areas between 1997/98-2001/02 and 2001/02 - 2005/06 retention rates increased as area level of income decreases.\(^6\)

Figure 4-6-4 Grade 3 – No School Changes – 1997-2006

NE experienced a significant increase in the percent of students who experienced no school change, a positive finding, indicating an increase in school stability for younger students.

The health districts have all remained the same or have shown an increase in this indicator. Brokenhead had significant increase when compared with the earlier time period.
As noted in Section II, there is anecdotal evidence that Springfield is experiencing an increase in immigrants to the area which could be one explanation for the increase in enrollment. Our other health districts show fairly consistent student enrollment.

Table 4-6-2 High School Completion in NE

<table>
<thead>
<tr>
<th>Note: Excludes Band operated schools</th>
<th>2002/03</th>
<th>2005/06</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Adjusted %</td>
</tr>
<tr>
<td>North Eastman(1)</td>
<td>374</td>
<td>76.80%</td>
</tr>
<tr>
<td>Manitoba</td>
<td></td>
<td>74.30%</td>
</tr>
</tbody>
</table>


Although the actual number of students completing high school increased, NE saw a non-significant decline in the percentage of students completing high school during the second time period.
<table>
<thead>
<tr>
<th>Health District</th>
<th>Name of High School</th>
<th>Number of Students Registered in Grade 12</th>
<th>Number of students graduated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numbers not available</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Springfield</td>
<td>Springfield Collegiate</td>
<td>202, 184, 178</td>
<td>166 (82%), 142 (77%)</td>
</tr>
<tr>
<td>Brokenhead</td>
<td>Edward Schreyer</td>
<td>75, 97, 96</td>
<td>Numbers not available at time of writing</td>
</tr>
<tr>
<td>Winnipeg River</td>
<td>Lac du Bonnet Sr. School</td>
<td>40, 31, 47</td>
<td>Numbers not available at time of writing</td>
</tr>
<tr>
<td>Pinawa Secondary</td>
<td></td>
<td>24, 31, 22</td>
<td>20 (83%), 31 (100%)</td>
</tr>
<tr>
<td>Iron Rose</td>
<td>Whitemouth</td>
<td>27, 16, 19</td>
<td>27 (100%), 16 (100%)</td>
</tr>
<tr>
<td>Blue Water</td>
<td>Powerview</td>
<td>38, 31, 37</td>
<td>Numbers not available at time of writing</td>
</tr>
<tr>
<td>Frontier Schools</td>
<td>Wanipigow</td>
<td>12, 12, 17</td>
<td>9 (75%), 10 (83%)</td>
</tr>
</tbody>
</table>

Sources: Email from D. Lamoureux, Executive Assistant, Sunrise School Division Entitled: Student/School Numbers in Sunrise School Division to J. Walker December 18, 2009
Email from F. Morrisseau, Secretary to the Chief Superintendent, Frontier SD Entitled: Frontier School Division-Student Numbers to J. Walker February 9, 2009
Email from C. Findley, Finance Officer, School District of Whiteshell Entitled: Query-Number of Students and Graduated Students to J. Walker January 16, 2009
Emails from D. van Damme, Student Records, Springfield Collegiate Entitled: NEHA Request for Information to J. Walker January 5, 2009
Email from D. Sawka, Secretary, Whitemouth School Entitled: Graduate Totals to J. Walker December 19, 2008
Grade 12 Student Numbers Relayed to J. Walker March 18, 2009 by D. Lamoureux, Executive Assistant, Sunrise School Division

Pinawa Secondary and Wanipigow High School increased their percentage of students who graduated. Whitemouth stayed the same at 100%. Springfield Collegiate experienced a decrease in graduates from 82% to 77% during 2007/08.
The pattern of education attainment varied between age groupings.

**Figure 4-6-5 Education Level Age 15-24 Years – 2006**

There were more NE residents (60%) with no certificate/diploma/degree compared with Manitoba. This is not unexpected given the age cohort i.e. high school graduation is usually at 17-18 years and any post secondary education attainment is usually after 18 years, with possible exception of the trades.

NE had fewer residents with a high school diploma (30%) compared with Manitoba (36%).

Springfield had the highest percent of residents with a high school diploma at 40% while Northern Remote had the lowest percent of residents at 10%, followed by Brokenhead 25% and Winnipeg River 27%.

In the 25-64 age group, we are seeing more residents having either a high school diploma or completing some form of post secondary education.

There were more people without a certificate/diploma or degree in NE at 28% compared with Manitoba at 20%. There were slightly fewer people with a high school diploma in NE 24% compared with Manitoba at 25%.

There were more residents with trades and other education compared to the 15-24 year age group. This is consistent across the health districts with the highest number of residents with trades located in Winnipeg River at 20% and lowest in Northern Remote at 5%.

**Figure 4-6-6 Education Level – 2006 – Aged 25-64 Years**

There was a higher percentage of older NE residents (48%) without a certificate / diploma or degree compared with Manitoba (46%).

Northern Remote (69%), followed by Iron Rose (65%) and Brokenhead residents (62%) who did not have a certificate/diploma or degree.

Winnipeg River had the highest percent of trades (16%), while Springfield and Winnipeg River had the highest level of ‘other’ education.
Other Report

- **Families First** - Using the Families First Screening Form surveying mothers with newborns between 2003-2006, reported that mothers with less than high school education had increased over time. NE’s rate when combining all 4 years was 22.6% while Manitoba was 21.6%. When we look at the health districts, the top three districts with the highest number of mothers with less than high school education were as follows: Northern Remote at 82.1%, Iron Rose at 43.8% and Blue Water at 32.1%.

**Literacy**

The following information is provided from a *Manitoba* perspective:

- 2006 Census - Number of Manitoba adults aged 20-64 with less than Grade 12 was 138,130 or 20.5% of working age adults, a reduction of over 40,000 people since the previous census.
- The number of adults in many Manitoba Aboriginal communities with less than Grade 9 education ranged between 40% and 70%.
- 42% of Canadians were weak readers (2003 census).
- In Manitoba the number of adults in the lowest literacy level (level 1) was almost 25% lower than the national average.

**Literacy Trends in Manitoba**

- The elderly who tended to be the lowest educated are passing away, youths are staying in school longer.
- Youths are generally better educated than ever before.
- The dropout rate has significantly improved over the past decade.
- Adults are returning to school to Adult Learning Centres and other upgrading programs in unprecedented numbers.

<table>
<thead>
<tr>
<th>Average Proficiency in prose literacy. * 16-65 Years</th>
<th>Level 1 (lowest)</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4/5 (highest)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manitoba</td>
<td>18.2%</td>
<td>28.1%</td>
<td>37.2%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Canada</td>
<td>14.6%</td>
<td>27.3%</td>
<td>38.6%</td>
<td>19.5%</td>
</tr>
</tbody>
</table>

* Prose literacy refers to: “The knowledge & skills needed to understand and use information from texts, including editorials, news stories, brochures, and instructional manuals.”

As of 2003, just short of half of Manitobans 16-65 years (46.3%) had not reached prose literacy (Levels 3, 4), which is the level required to read and use most health brochures and instructions.
EDUCATION and LITERACY

People with higher levels of education have better job opportunities and income security. Canadians with low literacy skills are more likely to be unemployed and poor, to suffer poorer health and to die earlier than Canadians with high levels of literacy.11

Education and literacy are not synonymous terms. “Education level gives a 90% indication of literacy level. It takes approximately 12 years of education for a child to reach literacy level three – the level that most daily communications and transitions occur.”12

Literacy and education levels are used as predictors of one’s ability for economic success.

It is important to monitor pre-school readiness and early development as a predictor of future school success and retention. NE children’s school readiness and early development scores were similar to Manitoba. Demographically in 2008 there were 8,885 NE children in the 5-19 year age range.13 Population projections for NE show a trend toward population growth by migration rather than by births. Refer to Section II for this discussion. This has potential implications on school ‘readiness’ and ‘early development’ especially in the communication and language domains.

We know that high school graduation provides individuals with further opportunities, but no longer guarantees employment success in today’s society.14 “The lack of a high school diploma remains a significant predictor of negative outcomes: lower earnings, higher rates of unemployment, poorer health, higher rates of reliance on social assistance and higher rates of teen motherhood.”15 As shown in NE health districts, Northern Remote followed by Blue Water, consistently rank lower than our other health districts in education indicators. Northern Remote’s over 65+ population had 12% of the population finishing high school as reported in 2006 census, compared with 10% in both earlier age groups: 15-24 and 24-64 years. The reason could be related to parents’ feelings about education, “The legacy of residential schooling created devastating and negative perceptions about formal education…”16

“Young mothers are less likely to complete high school, and as a result they and their children are more likely to experience unemployment, low wages and poverty, and the subsequent detrimental effects on their health.”17 In Section IV, Chapter 5 we see that NE teen pregnancy rates have decreased, however both Northern Remote and Blue Water’s rates were significantly higher than Manitoba’s and were the highest compared to NE’s other districts.
The results of low literacy include:

- “People with low literacy skills have difficulty understanding such vital information as prescriptions, food safety tips, and baby formula directions.

- People with low literacy smoke more, have poorer nutrition, and exercise less.

- Children whose parents are jobless and did not graduate high school are five times less likely to graduate than children with employed parents who completed grade 12.”¹⁸

In 2003, “… 42% of Canadians between 16 and 65 years do not have the minimum literacy skills required to cope with the complex demands of everyday life and work… in Manitoba, senior women were most likely to have the lowest levels of literacy, compared with younger women and compared with men of the same age.”¹⁹ This has changed somewhat, as there is evidence to suggest that literacy increases with educational attainment and overall women in particular have increased their education levels during the past few decades.²⁰

School retention rates or the percentage of students who are held back a year dropped significantly between time periods in Manitoba, NE and in all our districts. School retention is known to be a contentious issue, and the changes we see could be the result of a paradigm shift by educators. Current research seems to indicate that there are no more benefits for retaining students versus promoting them to the next grade, in fact students that have been retained are “…more likely to drop out of school than their non-retained peers…”²¹

Frequent school changes are associated with students who have more difficulty with social relationships, as well as higher retention rates. School changes are markers for lone-parent families and lower socio-economic status; all associated with poorer school performance.²² Positive trends occurred in NE whereby all health districts had an increase in student stability. Of particular note, in Brokenhead, where there was a significant increase from 23.4% during 1997/98-2000/01 to 90.4% in 2002/03-2005/06 with no school changes.

Low literacy is associated with poorer health and well-being and with an inability to understand and interpret health-related information. This in turn translates into health risks “…low birth weights, teen pregnancies, injuries and accidents….diabetes, cardiovascular disease and rheumatoid arthritis…”²³ Because we are lacking health district information, it is difficult to make correlations between these indicators and education. The fact that there were significant increases in school stability across the region in the Grade 3 population will potentially modify any negative findings in socio-economic status in the future.

Literacy levels have implications on the material that organizations distribute and in particular, to the reading level of clients when offered verbal or written instructions. This is particularly true when a client is managing a chronic illness where the management extends over many years. “Diabetes patients rely on a number of tools to manage their disease and prevent serious health problems. For patients with low literacy, it’s as though they have received the tool kit, but not the operating instructions.”²⁴
CHAPTER SUMMARY

Health status improves with educational attainment. There was a significant increase from 75% to 87% of students in Grade 3 who did not change schools. There was a decline in high school completion, from 76.8% in 2002/03 to 71.5% in 2005/06, while Manitoba overall significantly increased to 77.7%.

Educational achievement is not only measured by a high school diploma, but other lifelong learning through certificates and other diplomas or degrees. Across all age groups, residents did not fare as well as Manitoba overall; e.g. in 2006, 60% of NE residents aged 15-24 did not have a diploma / degree / certificate compared to 48% in Manitoba, 28% of NE residents aged 25-64 in did not have a diploma / degree / certificate compared to 20% in Manitoba and 48% of NE residents aged 65+ did not have a diploma /degree /certificate compared to 46% in Manitoba.
REFERENCES

There is strong and growing evidence that higher social and economic status is associated with better health. In fact, these two factors seem to be one of the most important determinants of health. “The healthiest populations are those in societies which are prosperous and have an equitable distribution of wealth.”

Median measures were used where available, as median measurements eliminates the extreme highs and lows that averaging includes.

Diagram 4-7-1 NE Income Quintile – Using 2001 Census Data

This diagram illustrates the distribution of rural income quintiles based on 20% of population groups’ average household income surveyed during the 2001 census dissemination areas.

It is important to note that average household income patterns changed within the health districts in 2006 compared with 2001. Refer to Figure 4-7-3 this chapter for this indicator.

Springfield had the highest average household income for both 2006 and 2001 followed by:

- Blue Water (Winnipeg River in 2001)
- Winnipeg River (Brokenhead 2001)
- Brokenhead (Blue Water 2001)
- Iron Rose for both 2006 and 2001
- Northern Remote for both 2006 and 2001

Notes:

- Average household income was used to be able to compare current census data with the diagram.
- NE’s health district boundaries are approximate in this diagram.
Income- Individual

Median individual income refers to the individual income value which divides the individual income distribution into two halves, i.e. the incomes of one-half of individuals are below the median value, while those of the other are above the median.\(^5\)

Figure 4-7-1 Median Income of Individuals

Median income in NE appears to be slightly less for females and similar for males compared with Manitoba.

Males have higher median incomes compared with females both provincially and in NE.

Income has seen a gradual increase for both males and females during the three census years reviewed.

Figure 4-7-2 Median Individual Income Males & Females - 2001 & 2006

NE females had lower median incomes compared with Manitoba for both time periods. NE males had similar income levels as Manitoba males.

Males overall had higher median incomes compared with females. All incomes increased in 2006 compared with 2001 except for males in Northern Remote, where there was a slight decrease in median income.

Females living in Iron Rose, followed by Brokenhead and Blue Water had higher median incomes, while males living in Brokenhead, Blue Water and Iron Rose had higher median incomes.

Springfield, followed by Winnipeg River had the highest median income, while Northern Remote had the least for both time periods.
Income – Household

Figure 4-7-3 Average Household Income

Average refers to “The weighted mean total household income (pre-tax, post-transfer) in the year prior to census and is the sum of the total incomes of all members of that household.”

Average household incomes appear to have increased over the two time periods.

NE appears to have a slightly higher average household income than Manitoba.

Springfield had the highest average household income for both 2006 and 2001 followed by:
- Blue Water (Winnipeg River in 2001)
- Winnipeg River (Brokenhead 2001)
- Brokenhead (Blue Water 2001)
- Iron Rose for both 2006 and 2001
- Northern Remote for both 2006 and 2001.

Figure 4-7-4 Median Household Income

Median: “The household income value which divides the household income distribution into two halves, i.e. the incomes of one half of households are below the median value, while those of the other are above the median…The total income of a household is the sum of the total incomes of all members of that household.”

Median household income appears to have increased over the two time periods.

NE’s median household income was higher than the Manitoba average for both time periods.

During 2006, Springfield had the highest median income, followed by Winnipeg River, Brokenhead, Blue Water, Iron Rose, and Northern Remote.
Economic / Financial Security

_Economic or financial security_ is broadly defined as “...the condition of having stable income or other resources to support a standard of living now and in the foreseeable future.”

“Standard of living is generally measured by standards such as real (i.e. inflation adjusted) income per person and poverty rate...It is the ease by which people living in a time or place are able to satisfy their wants.”

In this report we have used two measures:

- **Low Income Rate** - This rate is calculated for the year prior to the census. It is defined as the percentage of the population “in economic families and unattached individuals with incomes below the Statistics Canada low income cut-off (LICO). The cut-offs represent levels of income where people spend disproportionate amounts of money for food, shelter, and clothing. LICO's are based on family and community size; cut-offs are updated to account for changes in the consumer price index. This is a widely used measure of socio-economic status. Higher income is associated with better health.”

  - _Low income cut-offs (LICO)_ “more commonly known as Canada’s ‘unofficial’ poverty lines—are established by Statistics Canada... LICO's indicate the level of income at which a family may be in “straitened circumstances” because it spends a greater proportion of its income – 20 percentage points more – on necessities of food, shelter and clothing than does the average family of similar size...Statistics Canada does not refer to the LICO's as poverty lines, although they concede that LICO's identify “those who are substantially worse off than the average.”

  - _Economic family_- “The economic family concept requires only that family members be related by blood, marriage, common-law or adoption. By contrast, the census family concept requires that family members be either a male or female spouse, a male or female common-law partner, a male or female lone parent, or a child with a parent present. The concept of economic family may therefore refer to a larger group of persons than does the census family concept. For example, a widowed mother living with her married son and daughter-in-law would be treated as a person not in a census family. That same person would, however, be counted as a member of an economic family along with her son and daughter-in-law. Two or more related census families living together also constitute one economic family as, for example, a man and his wife living with their married son and daughter-in-law. Two or more brothers or sisters living together, apart from their parents, will form an economic family, but not a census family, since they do not meet the requirements for the latter. All census family persons are economic family persons. For 2006, foster children are considered economic family members.”

  - _Unattached individuals_ – “Persons not in a Census Family are termed ‘Non-family Persons’; persons not in an Economic Family aged 15+ are termed ‘Unattached Individuals’.”

  - _Private household_ refers to “a person or a group of persons (other than foreign residents) who occupy a private dwelling and do not have a usual place of residence elsewhere in Canada.”

- **Housing Affordability** - “Percentage of the population who reported spending 30% or more of their household income on shelter costs.”
Figure 4-7-5 Low Income Rate for Unattached Individuals

For those aged 15 years and over who were unattached there appeared to be more unattached individuals living below the median income in NE, than with people living in an economic family.

NE had 15% fewer unattached individuals with lower income than Manitoba.

In NE, low income in unattached individuals declined in all health districts except for Winnipeg River where there was a 6% increase. This decline implies improved income security.

Those health districts having the highest percent of low income for unattached individuals in 2006 were: Brokenhead (29%), Winnipeg River (27%), Northern Remote (27%), and Iron Rose (22%).

Figure 4-7-6 Low Income Rate for Economic Families

NE had a 3% decrease in the number of low income economic families and was lower than the Manitoba average. In 2006 all health districts decreased except for Iron Rose, where there was a slight increase of 1%.

Northern Remote had the highest percent of low income economic families than other districts at 13%, and was similar to Manitoba at 12%. The districts that had the lowest income by economic family were: Northern Remote (13%), Iron Rose (9%) and Blue Water (8%).

Depending upon the category described, there was some variability within the health districts. Unattached individuals as a group appear to have had the highest percentage of low income during 2006. The majority of these people lived in Brokenhead. Of potential concern is the increasing percent of low income for unattached individuals that occurred in Winnipeg River in 2006.
Other Report

- **Families First** - Using the Families First Screening Form surveying mothers with newborns between 2003 – 2006, report on mothers who were either on social assistance or income support or who reported financial difficulties i.e. insufficient monies available to meet basic needs after meeting financial commitments. NE’s rate when combining all four years was 12.9%, while Manitoba’s rate was 17.7%, a statistically significant difference. When we look at the health districts, three districts were reported: Northern Remote at 73.1%; Blue Water at 43.1% and Winnipeg River 11.2%. The other districts were suppressed.  

Table 4-7-1 Housing Affordability

<table>
<thead>
<tr>
<th>Location</th>
<th>Tenant spending 30% or more of income on shelter</th>
<th>Owner spending 30% or more of income on shelter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Rose</td>
<td>0%</td>
<td>17%</td>
</tr>
<tr>
<td>Springfield</td>
<td>28%</td>
<td>13%</td>
</tr>
<tr>
<td>Winnipeg River</td>
<td>35%</td>
<td>33%</td>
</tr>
<tr>
<td>Brokenhead</td>
<td>29%</td>
<td>44%</td>
</tr>
<tr>
<td>Blue Water</td>
<td>21%</td>
<td>33%</td>
</tr>
<tr>
<td>Northern Remote</td>
<td>19%</td>
<td>0%</td>
</tr>
<tr>
<td>North Eastman</td>
<td>28%</td>
<td>30%</td>
</tr>
<tr>
<td>Manitoba</td>
<td>37%</td>
<td>35%</td>
</tr>
</tbody>
</table>


There appeared to be a higher proportion of tenants who spent more than 30% of their income on shelter than owners in NE and in our districts. The number of owners who spent 30% or more on shelter was similar for both NE and Manitoba.

In Brokenhead and Iron Rose there appeared to be an increase in the percent of residents who were either tenants or owners who spent more than 30% of their income on shelter.

For tenants, there was a decrease in Springfield, Winnipeg River districts. Blue Water had an increase of 12% in residents who spent more than 30% of their income on shelter.

The more income spent on shelter, the less income available for other necessary items such as food and clothing.
INCOME AND SOCIAL STATUS

There was considerable variability between districts for most indicators and this holds true for income levels. Generally speaking, residents from lower income areas have higher mortality rates and higher physical and mental health illnesses. It is also known that they receive more health care services, especially hospital care.\textsuperscript{17}

In 2005, Canada ranked 19\textsuperscript{th} globally at 14.9\% using an international child poverty index. Denmark had the lowest rate of child poverty at 2.4\%.\textsuperscript{18} Health is influenced by income i.e. there is evidence to indicate that there is poorer health in low income groups. In Canada, between years 1994 to 2003, income inequality increased.\textsuperscript{19}

NE appears to have similar median individual income levels and slightly higher median household income as Manitoba in 2006. Overall median individual income for males appears to be consistently higher than for females in Manitoba and NE. Springfield had the highest median income level, and was considered to be one of our healthiest districts based on the premature mortality rate (PMR) measure. Northern Remote had the lowest median income level overall and considered overall to be the least healthy district compared with other NE health districts according to PMR.

Table 4-7-2 Summary Percent of Residents Below Stats Canada Low Income Cut-off Rates 2006

<table>
<thead>
<tr>
<th></th>
<th>Unattached individuals</th>
<th>Economic Families</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NE (23%) had considerably fewer low income unattached individuals than Manitoba (38%)</td>
<td>NE (5%) had considerably fewer low income economic families than Manitoba (12%)</td>
</tr>
<tr>
<td>Brokenhead (29%);</td>
<td></td>
<td>Northern Remote (13%)</td>
</tr>
<tr>
<td>Winnipeg River and</td>
<td></td>
<td>Iron Rose (9%)</td>
</tr>
<tr>
<td>Northern Remote (27%)</td>
<td></td>
<td>Blue Water (8%)</td>
</tr>
<tr>
<td>Iron Rose (22%)</td>
<td></td>
<td>Winnipeg River (6%)</td>
</tr>
<tr>
<td>Blue Water (18%)</td>
<td></td>
<td>Brokenhead (4%)</td>
</tr>
<tr>
<td>Springfield (15%)</td>
<td></td>
<td>Springfield (3%)</td>
</tr>
</tbody>
</table>


Unattached individuals as a category appeared to have had the highest percent of low income during 2006. The majority of these people appeared to live in Brokenhead.

Compared with our other health districts in 2006:

- There was a higher percent of low income for unattached individuals in Brokenhead, followed by Winnipeg River and Northern Remote.
- There was a higher percent of low income economic families in Northern Remote, followed by Iron Rose and Blue Water.
Iron Rose’s income ranking was unexpected, given that Iron Rose was considered our most healthy district based on PMR. This contradicts the generalization that in areas of lower income there is lower health status. Support networks buffer us from adverse life events and are considered vital to our health and well-being. Iron Rose ranked positively in this area for example:

- This district had the highest percent of two parent families with newborns who indicated that they had adequate social support between 2000 & 2002.
- Iron Rose also had the second lowest percent of lone parent families.
- Eighty seven percent of Iron Rose residents self rated their health in the good, very good and excellent categories, the second highest rating compared to our other health districts.

We might hypothesize that despite lower income levels generally, having supportive family and friends and feeling healthy were modifying factors that contributed to better health in Iron Rose.

Families that require income assistance to meet basic personal and family needs are considered an ‘at risk’ group for poorer health outcomes. Adolescents in income assisted families often experience more behavioral and emotional difficulties, and poorer academic performance. During 2004/05 to 2005/06 in NE, the percentage of children in families receiving income assistance aged 0-17 years per 100 children (adjusted) was 5.3%; significantly less than the Manitoba percent of 13.2%.

“Low income groups have more complex needs; while at the same time have less continuous and comprehensive health care which results in more usage of expensive services like hospitals.” Highest income groups often receive optimal primary health care services with more referrals to specialists widening the health disparity gap. In NE, we saw that Blue Water had the highest percentage of ambulatory visits to any physician, highest ambulatory physician consultation rates, the highest rate of acute hospitalizations for ambulatory sensitive conditions, and the second highest hospital separation rates (Northern Remote had the highest). Refer to Section V. Health System for a discussion on health system utilization.

The results from a Manitoba Centre for Health Policy report in 2009 showed “…a strong connection between socioeconomic status and health status. Residents of lower income areas have higher mortality rates and higher prevalence of physical and mental illness.”

The following provides a summary of health conditions that were found to have a statistical relationship between residents living in lower income areas in rural Manitoba:

- STRONG RELATIONSHIP between residents living in lower income, rural areas and a lower life expectancy, and higher prevalence of: injury deaths and suicide and of these illnesses: diabetes, ischemic heart disease, acute myocardial infarction, stroke, diabetes amputations, substance abuse, and schizophrenia.


MODEST RELATIONSHIP between residents living in lower income, rural areas
and the prevalence of hypertension and arthritis.



NO RELATIONSHIP between residents living in lower income, rural areas and the
prevalence of these illnesses: respiratory disease, osteoporosis, depression,
anxiety, dementia and cumulative mental disorders indicator (which measures all of the
following: depression, anxiety, substance abuse, personality disorders, or schizophrenia).

North Eastman Health Association Inc.– 2008-2009 Community Health Assessment
Income & Social Status
SECTION IV- CHAPTER 7 - 9


CHAPTER SUMMARY

Health status improves as income increases. Income levels for individuals appear to be increasing. Males consistently had higher income levels compared with females. Northern Remote residents had the lowest median individual income; however females earned more than males in 2006.

All household incomes appear to have increased. There was a lower percent of unattached residents and economic families below the low income cut-off, a measure for lower income from Statistics Canada.

There was a slight increase in the percent of tenants (30%), while owners had a slight decrease (10%) that spent more than 30% of their income on shelter.
REFERENCES

3 Edited from a scanned image from Burchill, C. (2005) Income Quintile Handout from MCHP.
13 BCstats website- Statistical Glossary @ http://www.bcstats.gov.bc.ca/glossary.asp#f1.
18 Canadian Council on Social Development (2006) the Progress of Canada's Children and Youth. Pg. 17
Section V
HEALTH CARE SYSTEM
Robert Pope's 'Hug'
‘Hug’ by Robert Pope. Accessed May 29, 2009 @
www.library.dal.ca/kellogg/about/Pope/hugfull.htm. Verbal permission was obtained by S. Dick, July 24, 2009 from William Pope at Pope Foundation contact number: 1-902-352-2110
The following selected indicators are contained in this section: Health System Performance (accessibility, safety, continuity of services and effectiveness) and Health System Characteristics (utilization and fiscal management).

“North Eastman Health Association (NEHA) is responsible for the planning and delivery of health services for the residents of the [North Eastman] Region.” First Nations and Inuit Health Branch (FNIHB) provides for, or supports, the delivery of community-based health programs on-reserve and in Inuit communities, as well as the provision of drug, dental and ancillary health services to First Nations and Inuit regardless of residence. The Branch also provides primary care services on-reserve in remote and isolated areas where provincial services are not readily available.

NEHA “… is an accredited comprehensive health system delivering care and services through an integrated network of community and facility based programs…Wherever possible, the priority for health service delivery is focused on community based services with an emphasis on supporting individuals, families and communities to maintain a high level of wellness.”

NEHA collects numerous strategic and operational indicators to assist in measuring and evaluating the health services delivered. Some of these indicators were included in this report to help complete the picture of health service delivery.

To improve readability and flow some of the indicators normally included in this section were moved to other sections of this report.
HEALTH SYSTEM PERFORMANCE

Accessibility – Acute Care

Figure 5-1 Hospital Beds per 1,000 Population

This is the number of beds in acute care hospitals divided by the population of the regional health authority (RHA). The actual number of beds ‘in use’ varies through the year. As shown later, not all beds are occupied by acute patients.

NE at 2.2 / 1,000 had the second fewest hospital beds per population when compared with other Manitoba RHAs in 2005/06.

The number of beds remained stable for both time periods in NE.

Figure 5-2 Residents Admitted by Hospital Location – 2000/01 & 2005/06

Of all hospital days used by NE residents, the following is the proportion of days that were used in NE, another RHA, in Winnipeg or in another provincial hospital.5

There was a slight increase in NE residents using Winnipeg and other RHA hospital beds during the second time period.

Residents of Burntwood, Interlake, NE, Churchill, South Eastman, Nor-Man and Central for the latter time period used a higher proportion of days in Winnipeg hospitals than did residents of other RHA’s, and Brandon, Assiniboine and Parkland residents received a lower proportion of their hospital days in Winnipeg.6
Figure 5-3 Regional Percent of Acute Care Days & Alternate Level of Care (ALC) Days – 2005/06 to 2008/09

ALC refers to a designation of care applied to a patient who has finished the acute phase of his/her treatment, but remains in an acute care bed.

All NEHA Hospitals- Total Days for Acute Care & Alternate Level of Care

The majority of patient days were used for acute care. There was no consistent trend of alternate level of care (ALC) patient days.

The highest percent of ALC days occurred during 2008/09.

Figure 5-4  NEHA Acute Care Facilities - Alternate Level of Care Days to Acute Care Days at Discharge 2005/06 to 2008/09

At discharge Beausejour Hospital had the highest percent of ALC days compared to the other hospitals in NE.

There was not a consistent trend for ALC days.

By 2008/09 Beausejour had the highest percent of ALC days followed by Pinawa and Pine Falls compared to the previous years.
### Accessibility – Long Term Care

The number of personal care home (PCH) beds in NE increased slightly by six beds from 190 beds to 196 beds.\(^7\)

In 2005/06 provincial PCH beds ranged from 165.2/1,000 in Brandon RHA to 89.9/1,000 in NE, based on 190 beds. NE has the lowest number of PCH beds per 1,000 population over aged 75 years compared with other Manitoba regional health authorities.\(^8\)

2005 populations varied in the over 75 years throughout rural RHA’s from as low as 15 in Churchill to a high of 7,260 in Assiniboine.\(^9\)

South Eastman had the closest number of over 75 + residents to NE at 2,920 in 2005 with a PCH bed rate of 115/1,000 in 2005/06.\(^10\)

In NE the population over 75+ years had increased from 2,113 in 2005 to 2,264 in 2008 resulting in a change in the proportion of PCH beds to 86.5 per 1,000 residents 75+ population.\(^11\)

### PCH Waiting Times

The NEHA Personal Care Home waiting lists are continually fluctuating and changing in response to the client needs as well as client priorities.

When paneled for Personal Care Home each client indicates their first second and third choice for placement. We prioritize our admission lists based on the client risk in the community, pressures on the NEHA acute care beds and the chronologic date of panel approval.

Because of our limited number of Personal Care Home beds clients will often accept placement in a NEHA PCH which was not their first choice or be admitted to hospital to await placement due to their current living situation being unsafe and very high risk for the client. These clients may then transfer to their first choice PCH once a bed becomes available.

NEHA has submitted a capital construction proposal to Manitoba Health & Healthy Living which would see a new 80 bed facility located in the town of Lac du Bonnet. This new PCH would provide an additional 50 beds as well as accommodating the existing 30 Lac du Bonnet PCH residents in a building more suited to current resident needs. Building the new 80 bed PCH in Lac du Bonnet provides a central location and meets the needs of four communities: Whitemouth, Pinawa, Powerview-Pine Falls and Lac du Bonnet, as well as Beausejour as needed. These communities are all located within a 30 minute drive.

Source: Email from Lorraine Dent-Prychun, Director of LTC to S. Dick Entitled: PCH story

### NEHA PCH Waiting Times

Wait times varied during the four years reviewed. Increases occurred during the latter time period at EGL, Kin Place, Sunnywood and Whiteworth personal care homes.

Even when the wait lists dropped at Lac du Bonnet PCH, there continues to be a 3.4 month wait for a bed.

For 2008-2009 the regional average PCH wait time was 7.1 months or approximately 28.5 weeks.

During 2004/05-2005/06 NE had the longest median wait time for PCH admission at 22.9 weeks per 1,000 residents over 75 years, compared to other RHAs and was significantly longer than Manitoba overall.\(^12\)
Accessibility – Physician Services

There is likely under estimating of physician contacts due to incomplete data by physicians working under payment schemes other than fee for service. Shadow billing is projected to be missing about one third of physician visits.\(^{13}\)

Figure 5-6 Use of Physicians

This indicator excludes in-patient hospitalization visits.

NE’s pattern of physician use did not change between the two time periods at 81.2%.

Health district patterns have not changed. Usage was highest in Blue Water, but not significantly different than Manitoba.

Northern Remote had the lowest visits.

In rural Manitoba, the proportion of residents seeing a physician at least once was lower for residents living in lower income areas.\(^{14}\)

Figure 5-7 Ambulatory Visit Rate

Ambulatory visits include almost all contacts with physicians (general, family practitioners and specialists and include office, walk-in clinics, home or nursing home visits, outpatient departments and some emergency room visits. Exclusions are services to patients admitted in hospital and visits for prenatal care.\(^{15}\)

Manitoba and NE both have similar number of visits to any physician.

Blue Water had the highest number of visits. Northern Remote had the least number of visits. This may be attributable to physician access, rather than not seeing any health care practitioner.

Visits significantly increased in Iron Rose, our healthiest district according to PMR. Springfield, the second healthiest district according to PMR had the second lowest number of physician visits. In the two districts that had significant increases in physician visits i.e. Iron Rose and Winnipeg River, Winnipeg River had the highest population of over 65 residents in 2008.\(^{16}\)
In November, 2008 the Springfield Home Care Team, in partnership with the physician team at Kin Place Primary Health Centre, embarked on a pilot Home Care Nursing Clinic.

The goal of this clinic was to provide nursing services to ambulatory home care clients, directly at the Primary Health Centre, rather than within the client’s own residence.

The pilot was a huge success and clients embraced the freedom of being able to establish an appointment time, receive the services they required, and then move on with their day.

This service has now become an ongoing service within the Kin Place Primary Health Centre and the home care team in the Lac du Bonnet area is working to implement a similar pilot Home Care Nursing Clinic in their Primary Health Centre.


Figure 5-8 Ambulatory Consultation Rates

Ambulatory consultation occurs when a physician refers a patient to another physician. This physician may be a specialist or surgeon. 

NE’s referral rates did not change over time and were similar to Manitoba.

Blue Water had the highest number of referrals for both time periods; however, had a significant decline during the latter time period. Northern Remote and Brokenhead had the least number of ambulatory consultations.
Location of Visits to General Practitioner (GP) or Family Practitioner (FP)

In NE during 2005/06 there was

- NE had a substantial change: 58.7% of visits took place within residents home health district in 2005/06 compared with 53.2% in 2000/01.19
- An overall decrease in residents going to other NE districts or to Winnipeg for GP or FP visits.
- Little change in residents going to another RHA.

This could indicate that there was an improvement in physician coverage within our health districts.

When we review the health districts comparing the changes to the latter time period we see a similar picture in our health districts i.e. in Springfield, Winnipeg River, Iron Rose had an increase in visits to GP’s or FP’s within their own health district and an overall decrease in residents going to Winnipeg.20

In Brokenhead and Blue Water there was a slight decrease in visits within the districts, with an increase occurring in Brokenhead to other RHAs and an increase in visits to Winnipeg in Blue Water.21

There were two notable changes:

- Springfield residents more than doubled the percent of GP/FP visits made within the district to 21.2% in 2005/06 from 10.0% in 2000/01; however the majority of residents were still accessing services in Winnipeg i.e. 58.8% in 2005/06.22

- In Northern Remote, in the earlier time period, more residents were accessing medical care in Winnipeg. During the latter time period there was an almost doubling of the number of visits from 28.6% in 2000/01 to 44.3% in 2005/06 within the district compared to 35.6% of the population who go to Winnipeg.23

Location of Visits to Specialists 24

Regionally there has been a slight decrease in specialist visits in NE between 2000/01 and 2005/06. Over 93% of residents access specialists in Winnipeg. The other specialist location is to other RHAs.

The above pattern of specialist visit locations was similar for all districts with the exception of Brokenhead (86.3%) and Northern Remote (88.6%) where there was a lower percentage accessing specialist in Winnipeg, but higher access to specialists in another RHA e.g. Brokenhead at 13.7% and Northern Remote at 8.1% during 2005/06.

Northern Remote had the highest percent of residents accessing specialists within their district at 8.9% during 2000/01. This decreased to 3.3% during 2005/06. Access to specialists within all other districts was less than 0.1%.
In NE residents have significantly fewer visits to specialists than Manitoba overall.

In all health districts, significantly fewer residents’ visit specialists compared with Manitoba except for Springfield where visits were similar to the Manitoba average during the latter time period.

Accessibility – Emergency Medical Services

The provincial target is to get an ambulance from its location to a call within 30 minutes, 90% of the time. Depending upon ambulance service needs to meet this target; ambulances can be re-assigned to different locations if an ambulance at one station is on a call.25

**Focus Group participant responses to EMS services:**

- “First Responder program…cuts response time…gives peace of mind.” (Springfield)

Safety

Offering flu vaccinations to staff has the potential to decrease absenteeism and protect their family and patients from getting ill from the influenza virus.

The number of flu vaccines administered to NEHA staff has not changed since 2003/04.

Staff flu vaccinations are under-reported because only Public Health (PH) Program immunizations were recorded here which excludes physician and other health practitioner immunizers.

According to the National Health Interview Survey in 2003 “…only 36% of health care workers are actually immunized against influenza each year.”26
**Continuity of Services**

Figure 5-11 Continuity of Care

Manitoba and NE were similar in that almost 70% of residents received care from the same physician during the two time periods.

Continuity of care significantly increased in Springfield and Brokenhead.

Brokenhead had the highest rate of continuity of care compared with all our health districts for both time periods.

There was a significant decrease in the continuity of care in Blue Water during 2005/06. This can be attributed to physician turn-over.

**Effectiveness**

**Acute Care**

Figure 5-12 Acute Hospitalization for Ambulatory Care Sensitive (ACS) Conditions *

“This is a group of 17 diseases/diagnoses including asthma, angina, gastroenteritis, and congestive heart failure etc” 27

NE had significantly higher rates of ACS condition hospitalizations compared with Manitoba. This was likely attributable to Blue Water and Northern Remote having significantly higher rates than Manitoba and our other health districts.

Of note is that despite the high rates, ACS conditions requiring hospitalization significantly declined in Blue Water during the latter time period.

Geographically there may be access issues in both Northern Remote and Blue Water which may contribute to the challenges in managing ACS conditions in the community.

Higher ACS condition rates for hospitalization and for physician visits occurred in lower income areas. 28 Northern Remote had the highest low income rate for unattached individuals, private households and economic families compared with NE and Manitoba. **Refer to Section IV Chapter 7 for more details.**
NE’s hysterectomy rates were higher than Manitoba.

Northern Remote had the highest rate of hysterectomies compared with Manitoba, NE and our other districts.

Misericordia Health Links Info Santé

Misericordia Health Links Info Santé is a province-wide telephone health information service, available 24 hours a day, 7 days a week. Registered Nurses offer health information. Callers are helped to decide if they need further health care follow up i.e. the nurse may recommend going to an emergency department or making an appointment with their doctor.29

The number of calls by females far exceeds that of males. The numbers of calls in NE increased between 2006 and 2007 for both females and males.

For NE residents during 2008:

The top 5 reasons for calls were:
- Abdominal pain / discomfort
- Medication question calls [adults]
- Vomiting [pediatric]
- Fever [pediatric]
- Cough [pediatric] and chest pain / discomfort

The top 3 recommendations during 2008 (excluding ‘other’) were 30
- Go to ER immediately = 21.9%
- See physician within 24-48 hours = 21.5%
- Provide home/self care = 21.4%

In Manitoba, there was no relationship between those who contacted Health Links and resident’s health status. In rural areas, there were fewer contacts from lower income than higher income areas.31
HEALTH SYSTEM CHARACTERISTICS

Utilization

Causes for Physician Visits

The causes are not collated by district but by mid geographic area which includes North Eastman, Interlake and Parkland. For both Manitoba and mid geographical region during 2000/01 and 2005/06 respiratory diseases were the leading cause for physician visits followed by circulatory diseases. Circulatory diseases as reported earlier were the leading causes of death in NE.

In Manitoba, ‘mental illness’ visits were the sixth reason for physician visits during 2000/01 increasing to third reason for visit during 2005/06. In the mid geographic region, mental illness moved from ninth to eighth place.

‘Endocrine & metabolism visits’ moved in Manitoba from the ‘other’ category to eighth reason for visit, and in the mid area from tenth to seventh reason for a visit. As shown in Section III, diabetes has increased in Manitoba and NE.

Table 5-1 Causes for Physician Visits – Ordered High to Lower

<table>
<thead>
<tr>
<th></th>
<th>Manitoba 2000/01</th>
<th>Mid 2000/01</th>
<th>Manitoba 2005/06</th>
<th>Mid 2005/06</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Respiratory</td>
<td>14%</td>
<td>Respiratory</td>
<td>14.6%</td>
</tr>
<tr>
<td>2</td>
<td>Circulatory</td>
<td>9.1%</td>
<td>Circulatory</td>
<td>10.8%</td>
</tr>
<tr>
<td>3</td>
<td>Musculoskeletal</td>
<td>8.5%</td>
<td>Musculoskeletal</td>
<td>9.2%</td>
</tr>
<tr>
<td>4</td>
<td>Nervous System</td>
<td>8.5%</td>
<td>Nervous System</td>
<td>8.0%</td>
</tr>
<tr>
<td>5</td>
<td>Ill defined *</td>
<td>8.4%</td>
<td>Ill defined *</td>
<td>7.9%</td>
</tr>
<tr>
<td>6</td>
<td>Mental illness</td>
<td>8.2%</td>
<td>Health Status &amp; Contact **</td>
<td>6.5%</td>
</tr>
<tr>
<td>7</td>
<td>Health Status &amp; Contact **</td>
<td>7.3%</td>
<td>Injury &amp; Poison</td>
<td>6.5%</td>
</tr>
<tr>
<td>8</td>
<td>Injury &amp; Poison</td>
<td>6.4%</td>
<td>Genitourinary &amp; Breast</td>
<td>6.5%</td>
</tr>
<tr>
<td>9</td>
<td>Genitourinary &amp; Breast</td>
<td>6.2%</td>
<td>Mental Illness</td>
<td>6.0%</td>
</tr>
<tr>
<td>10</td>
<td>Disorders of the Skin</td>
<td>5.3%</td>
<td>Endocrine &amp; Metabolism***</td>
<td>5.6%</td>
</tr>
<tr>
<td>Other</td>
<td>18.2%</td>
<td>Other</td>
<td>18.4%</td>
<td>Other</td>
</tr>
</tbody>
</table>

Source: Fransoo, R. et al (2009) Figure 6.9.1, 6.9.2, 6.9.5, 6.9.6. RHA Atlas, MCHP.
NEHA Acute Care Program

Figure 5-15 NEHA Acute Care Annual Occupancy Rates

Occupancy rates in Beausejour and Pine Falls Hospital remained stable during the three years reviewed.

Pinawa Hospital’s occupancy rate increased over the three years.

Almost one quarter of acute care bed days were occupied by patients requiring alternate levels of care. Refer to Figure 5-3 Total Days for Acute Care and Alternate Level of Care on Discharge.

![NEHA Acute Care Hospitals - Annual Occupancy Rate](image)


Figure 5-16 NEHA Acute Care Admissions

Admissions were fairly consistent in each facility during the four year period.

Pine Falls Hospital had the highest number of admissions.

As noted in Figures 5-18 and 5-19 Blue Water residents had the second highest short term and long term hospital stays when compared with other NE health districts.

![NEHA Acute Care Admissions- 4 Years- Crude](image)

Figure 5-17 Total Hospital Separation Rates [Includes all in-patients of at least 1 day and day surgery].

Separation includes discharges, transfers or death.

NE had significantly higher hospital separations for both time periods, when compared with Manitoba.

Northern Remote and Blue Water respectively had significantly higher separation rates compared with Manitoba and have the highest rates compared to our other health districts. Of note was the fact that Blue Water had a significant decrease, a positive trend which may indicate better health or health management of illnesses personally or in community health services.

Iron Rose had a significant increase in hospital separations during the second time period.

In both urban and rural Manitoba, residents residing in lower income areas had separation rates of almost 50% higher than those from higher income areas. This is consistent with many health conditions as noted in Section III.

Figure 5-18 Hospital Days – Short Stays- < 14 days

Although there was a decrease, NE residents had significantly higher short hospital stays compared to Manitoba for both time periods.

Northern Remote, Blue Water and Iron Rose had the highest numbers of residents using hospital services for short stays.

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Acute Care Patient / Family Feedback

Patient satisfaction surveys are placed on all patients bedside tables and patients are encouraged to complete them prior to or after discharge. The Surgical program has developed a new method where surveys are mailed to the patients post operatively and a self addressed stamped envelope is included. The response rate for this group is now 100%. The collection of the data has been standardized and has given us the ability to measure change over time. The comments that patients/families document are circulated to all departments who have been identified. Patient surveys are collected in all areas including In-patient, Emergency, Surgery, Dialysis and Cancer Care.

Source: Email from B. Neufeld, Director of Acute Care, to S. Dick entitled: Stories June 26, 2009
Figure 5-19 Hospital Days – Long Stays – 14 days or Over

NE residents tended to have lower rates of long stays in hospital compared to Manitoba residents overall.

The two least healthy districts (Northern Remote and Blue Water) as measured by PMR had the highest number of residents staying in hospital 14 days or over compared to other health districts.

The two healthiest districts (Springfield and Iron Rose) as measured by PMR had the fewest number of residents with long stay days when in hospital.

Figure 5-120 Emergency Room (ER) Visits

This indicator describes ER volumes, but not severity of illness or appropriateness. Triage levels of patients are captured in NEHA statistical reports.

Looking at the same facility over time, patient volumes did not change however between facilities there was considerable variability.

Pine Falls Hospital had the highest volume of patients compared to our other NE hospitals.

Figure 5-21 Number of Dialysis Visits – 2005/06 to 2008/09

Dialysis utilization at Pine Falls Health Complex is increasing.
NEHA Emergency Medical Services (EMS) Program

Figure 5-22 Ambulance Trips – Primary & Transfers

Pine Falls ambulance station had the highest volume of calls, with the number of dispatches remaining fairly stable throughout the four years. Beausejour ambulance station dispatched the second highest number of calls.

All ambulance station sites have shown an increase during the time period reviewed.

Table 5-2 NEHA EMS Inter-facility Transfers versus Primary Trips

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Interfacility Transfers</td>
<td>1,783</td>
<td>1,998</td>
<td>2,223</td>
</tr>
<tr>
<td>Primary Trips</td>
<td>1,703</td>
<td>1,943</td>
<td>2,317</td>
</tr>
</tbody>
</table>

There has been a consistent increase in both the number of primary (911) calls and inter-facility (transfer from one facility to another) calls over the last three years. There were a total of 599 more trips in 2008/09 compared to the previous year.

Table 5-3 NE Residents using Northern Patient Transportation Program (NPTP)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Trips - Elective</td>
<td>1,634</td>
<td>1,526</td>
<td>1,451</td>
<td>1,372</td>
</tr>
<tr>
<td>Trips - Emergency</td>
<td>49</td>
<td>25</td>
<td>42</td>
<td>35</td>
</tr>
</tbody>
</table>

There were considerable more elective trips compared with emergency trips.

The MHHL Northern Patient Transportation Program (NPTP) is designed to subsidize the cost of transportation required for residents of Manitoba located north of the 53rd parallel on the west side of Lake Winnipeg and 51st parallel east side of the lake. When ground travel is complicated by freeze up and thaw there are provisions for some isolated communities outside of these boundaries.33

NEHA Mental Health Program

Refer to Section III for mental health / illness information.
NEHA Home Care Program

Figure 5-23 Home Care New Cases

There was no change in NE’s overall number of new cases between the two time periods. NE had significantly fewer cases during the latter time period.

There was considerable variability among the health districts, with increases in new cases occurring in Northern Remote, Iron Rose and Blue Water, decreases occurring in Springfield, and no change in Winnipeg River and Brokenhead.

Figure 5-24 Home Care Open Cases

NE had significantly fewer open home care cases compared with Manitoba during the second time period.

Open Home Care cases did not change significantly during the two time periods.
When we review more recent information from NEHA’s home care reports we see that open cases increased in the home care program each year reviewed.

Manitoba and NE had similar lengths of home care cases in days. There was considerable variability within our health districts, with most districts increasing their average length of case days. Northern Remote’s cases were open for significantly shorter duration compared with Manitoba and other districts.

Focus Group participant responses to Home Care Services:

- “...good levels of home care.” (Springfield)
- “A big improvement in the last couple of years is home care for the elderly.” (Iron Rose)
- “Home Care…is excellent…very good workers.” (Springfield)
- “…more home care...” (Blue Water)
- “…area [Victoria Beach] needs accessible activity options for those with disability.” (Blue Water)
- “…help [is needed] for elders to understand medical system and their choices and options.” (Blue Water)
NEHA Long Term Care Program

Figure 5-27 Median Length of Stay All PCH Residents

NE had little change from 2.2 to 2.4 between time periods whereas Manitoba overall had a decline from 2.3 to 1.9.

In NE, Level 4 residents (most complex care) had a median length of stay of 0.7 years between 1999/00-2000/01. This increased to 1.11 years in 2004/05-2005/06.34

Table 5-4 NE PCH Level of Care on Admission – 75 Years +

<table>
<thead>
<tr>
<th>75 + years</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Eastman - 1999/00-2000/01</td>
<td>38.5%</td>
<td>51%</td>
<td>10.6%</td>
</tr>
<tr>
<td>North Eastman - 2004/05-2005/06</td>
<td>21.7%</td>
<td>66.3%</td>
<td>12%</td>
</tr>
</tbody>
</table>

There were no Level 1 residents. There was a considerable decrease in Level 2 which is the lightest care, with an increase in Levels 3 and 4, more complex care.

Level 4 residents require the most intense nursing care. Even though levels of care are no longer reported provincially, we expect that PCH’s will continue to admit more complex cases in both the physical and psychosocial care domains as illnesses such as dementia continue to increase. This has potential implications around resource allocation needs in Long Term Care, Home Care, Acute Care and Mental Health Programs.

Long Term Care Resident & Family Consultations

Surveys
An important part of the Long Term Care Program is the input of residents and family members. An annual survey is distributed and residents are assisted by volunteers who read and help with completion of forms.

In 2008 - 62% of the residents and 55% of family members completed the survey.
- Overall satisfaction with the Personal Care Home was indicated in 98% of family surveys and 98% of resident surveys. This compares with 95% of families and 81% of residents indicating overall satisfaction in 2007.

Comments resulted in these enhancements:
- recreation program such as computer access for residents and specific outings in the community.
- family volunteers were included in planning increased space and comfort for a family sitting area.

Family Meetings
Twice a year, family members are invited to attend a family information consultation meeting with the Director of Long Term Care, site Care Team Manager, Regional Recreation Coordinator and LTC Social Worker. These sessions have an educational component as well as discussion on program changes and goals. Families contribute great ideas which are discussed with staff. They work together with staff on projects such as a family room at a site, a pergola to provide shade for residents while outside and event planning and fundraising ideas.

Source: Email from Lorraine Dent-Prychun - to S.Dick. June 19, 2009 - LTC Stories Surveys
The number of admissions is linked to the number of deaths or transfers occurring within a PCH.

There was considerable variability in the number of admissions that occurred during the four years reviewed at Sunnywood, Kin Place and Whitemouth PCH.

Figure 5-28 NEHA PCH Numbers of Admissions – Excludes Respite

Respite provides a valuable service as it allows informal caregivers the ability to take a rest from care giving duties for a specific duration.

Respite increased at Whitemouth and decreased at East Gate Lodge and Kin Place during 2008/09.

The PCH care team works with the home care team to develop a respite list and schedule for respite admissions.

Due to the number of panelled patients at Beausejour Hospital, EGL decreased the number of respite admissions during the latter time period.35

Focus Group participant feedback related to Long Term Care Services:

- "lack of respite for caretaking spouse ‘very mentally challenging.’“ (Blue Water)
- Lac du Bonnet Personal Care Home short of space. (Winnipeg River)
Public Health Program

“Public Health exists to enhance the health and social well being of North Eastman residents by enabling individuals, families and communities to promote health, prevent illness, postpone disability and cope positively with existing disabilities. Programs that fall within Public Health include: Public Health Nursing, Health Promotion, Audiology, Community Development and Mobilization and Communicable Disease Control.”

Focus Group participant responses to Public Health Services:

- “[PHN’s] are exemplary, we should be very happy that we’ve got them and we should use them.” (Brokenhead)
- “Maybe we should address parenting…prenatal nutrition for mother and child and after birth, parenting skills, biggest responsibility at home…programming for parents of 12 years plus…” (Brokenhead)
- “The community is now getting Public Health (PH) Nurses to schools for issues more than immunization.” (Springfield)

NEHA Primary Health Care Program

The Primary Health Care Program officially came into being between the first and second community health assessments (CHA). During the first CHA, community feedback clearly voiced their desire to have alternate ways to access health services other than through a physician. The primary health care program has expanded since then, and operates within all five health districts. A new primary health care centre will be built in Powerview - Pine Falls. The centre will include both traditional Aboriginal healing practices and modern medicine.

One of the areas of growth has been the utilization of nurse practitioners located in Springfield, Brokenhead, Winnipeg River and Blue Water (Black River and Hollow Water).

Focus Group participant responses to primary health care services:

- “Being able to get appropriate supports or treatment…peace of mind, feeling that you’re being cared for…” (Springfield)
- “More nurse practitioners needed because difficult to get a physician appointment.” (Winnipeg River)
**High Profile Procedures**

These procedures are deemed ‘high profile’ because they “…are often talked about in the media. Cardiac catheterization, angioplasty, and coronary artery bypass graft surgery are the prominent heart procedure indicators. Also included are rates for hip and knee replacements and cataract surgeries, because they are high profile procedures associated with major improvements in quality of life.”

**Cataract surgery** in residents 50+ years in NE had similar rates as Manitoba with a slight increase from 23.3/1,000 to 26.6/1,000. Springfield was the only health district that had a significant increase from 14.1/1,000 during 2000/01 to 25.9/1,000 during 2005/06.

**Cardiac catheterizations** in residents aged 40+ years in NE (7.4/1,000) was slightly higher compared with Manitoba at 6.9/1,000 during 2003/04 to 2005-06. Blue Water had significantly more procedures than Manitoba for both time periods at 11.6/1,000 during 1998/99-2000/01 and 10.2/1,000. None of our health district increases were significant.

**Coronary Artery Bypass Graft** (CABG) rates for residents over 40+ years between 1996-97-2000/01 and 2001/02-2005/06 changed little. NE rates were the same as Manitoba’s rates at 1.6/1,000 and 1.5/1,000 respectively. There was some variability within the health districts but none was statistically significant.

**Hip & Knee Replacement Surgery - Refer to Section III Population Health / Heath Conditions for detailed discussion.**

Figure 5-30 Percutaneous Coronary Intervention (PCI) – Aged 40 + Years

Manitoba and NE’s rates significantly increased during the latter time frame.

All health districts had increases in their PCI rates.

Springfield increased significantly from 1.4/1,000 to 2.6/1,000 during the latter time frame. Brokenhead had the lowest number of interventions and Blue Water had the highest during the latter time frame.

When we compare the number of acute heart attack hospitalization and death rates for the same time period, we see that Iron Rose (4.6/1,000) followed by Blue Water (4.4/1,000); Springfield and Brokenhead (4.3/1,000) had the highest rates of heart attacks. Winnipeg River & Northern Remote (3.4/1,000) had the least number.

This increase in PCI’s is consistent with the changes in clinical practice as PCI is now considered one of the primary treatments for heart attack patients.
Fiscal

Figure 5-31 Administration Costs – 5 years NE & Manitoba.

Administration costs include general administration, human resources, information technology and communications costs / total operating costs less capital costs. NE’s percent of total operating costs spent on administration ranged between 6% and 7% during the five years reviewed.

In 2007/08 Burntwood’s administration cost was 6%, while Parkland was 5%. There was a range of administration costs from 4% in Winnipeg and Brandon to 12% in Churchill.

Figure 5-32 Percent of Budget for Acute Care, Personal Care Homes and Community

There was little change in the proportion of budget allocated to acute, personal care and community services over the 5 years reviewed in NEHA.

Figure 5-33 Proportion of the RHA total budget allocated to acute care vs. PCH vs. community care.

For both Manitoba and NE the highest percentage of costs were allocated to acute care services.

Proportionally NE allocates considerably less to acute care, and spends more on community and personal care home services than does Manitoba.
HEALTH CARE SYSTEM

It is not the intent of this report to debate the value or appropriateness of health care utilization or cost of services, however understanding cost and utilization based on population ‘need’ indicators is useful in measuring the equity (are those who suffer poorer health receiving treatment?) and efficiency (are we allocating care based on need?).

The following table illustrates the difference in costs for service utilization between age groups.

Table 5-5 Health Care Projected Spending by Age Group, Canada (Percent)

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 14</td>
<td>7.4</td>
<td>6.5</td>
<td>5.8</td>
<td>5.3</td>
<td>5.0</td>
<td>4.6</td>
<td>4.5</td>
</tr>
<tr>
<td>15 - 44</td>
<td>26.4</td>
<td>24.4</td>
<td>22.3</td>
<td>20.6</td>
<td>18.9</td>
<td>17.3</td>
<td>16.6</td>
</tr>
<tr>
<td>45 - 64</td>
<td>20.9</td>
<td>22.8</td>
<td>24.2</td>
<td>23.5</td>
<td>21.9</td>
<td>19.8</td>
<td>19.0</td>
</tr>
<tr>
<td>65 +</td>
<td>45.3</td>
<td>46.3</td>
<td>47.7</td>
<td>50.6</td>
<td>54.2</td>
<td>58.3</td>
<td>58.9</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The percent of health care spending percent in Canada is projected to
- decrease in the 0-44 age categories;
- increase in the 45-64 year olds until 2009/10 and then decrease;
- increase in the over 65 year old age group.

Health care costs are not exclusively due to changes in population. Other “…accelerators include: emerging and new technologies (such as major joint surgery, neonatal and fetal technologies, dialysis, organ transplantation, genetic testing and therapy), and increased incidence of chronic and new diseases such as heart diseases, diabetes, tuberculosis, Hepatitis C, HIV, and AIDS. In addition, new pharmaceuticals, declining productivity gains and changing expectations also impact on costs.”

To frame our discussion on the health care system, the following provides outcomes that are felt to be general predictors of health care ‘need’ and with need comes utilization of health care services:

- **Age** - “Canadians are living longer over time…The probability of health problems increases with age for all outcomes.” Health needs associated with age may be related more to function and ability and society’s expectation of services. The latter point is the critical factor “…it isn’t the number of elderly driving the increase in healthcare costs –it’s that they’re using healthcare services more and more…[in fact] it’s actually healthy seniors who have driven the most significant increase in healthcare use…”

- **Mortality Rate** is used to model future health care utilization. The last year of life accounts for 10-33% of total health care costs.
• **Functional ability** is an indicator of overall quality of living, particularly in the elderly. Problems with mobility and functioning can require considerable health resources. “Lower extremity function is predictive of severe disability, death and institutionalization.”

• **Chronic pain** - self reported pain is a key predictor of patient-initiated visits.

• **Chronic conditions** are an important indicator for health service demand and need.

NE spends a higher percent of its budget on PCH and community costs.

* Acute Care – 33%;
* Personal Care Homes (PCH) – 31%;
* Community costs – 24%.

**Accessibility to facilities**

There was very little change in where residents access hospital care. There are several possible reasons why NE residents access hospital care in Winnipeg for example specialists do not regularly travel to NE; severity of the medical condition, the type of health resources and capacity available in NE and geographical distances for example many Springfield residents live in close proximity or work in Winnipeg. Northern Remote residents considered isolated, access hospital services in Winnipeg using the Northern Patient Transportation Program where there were considerably more elective trips than emergency trips.

**Short stays** in hospital usually reflect acute episodes of illness. **Long stays** are often associated with chronic conditions and/or patients awaiting alternate placement for care. Northern Remote had the highest number of short and long stays in hospital during 2005/06, with slightly more long stay days 775 compared to 689 short stays. Blue Water had the second highest number of short and long stays in hospital during 2005/06, with slightly more short stay days 609 compared to 502 long stays. Patients living in Springfield and Iron Rose had the fewest number of short and long stay bed utilization compared to our other districts.

When we review the number of all NE hospital bed days used for **alternate level of care (ALC)** we see that the percentage of beds for this designation was the highest during 2008/09 with almost one quarter of bed days used for this purpose. Monitoring alternate levels of care and ambulatory care sensitive condition bed usage helps program directors to plan resource allocation.

Patients are categorized as ALC because they are

a) in panel process, or already panelled and waiting placement for a PCH bed,

b) waiting for home care services, mental health services, nutrition services etc.,

c) waiting for other placement services e.g. foster care, mental health facility care, hospice care etc.,
d) waiting for a respite bed, are homeless, there is no caregiver available, or waiting transport etc.  

The coding and sub-coding of these categories in NEHA was not formalized until this year, so information as to cause was not available. We know that many ALC beds were used by patients waiting for available PCH beds.

NE has the fewest number of PCH beds per 1,000 population compared to all other RHAs, as well the median wait time is more than double that of Manitoba overall during 2004/05-2005/06. The primary reason for this is that the demand exceeds the limited number of beds. The increasing elderly population in NE, the increase in chronic diseases, and longer life expectancy will continue to place a demand on both acute and long term care beds.

**Focus Group** participants speak to acute care services in NE

- “Hospital [is] underutilized…. want operations [surgery] and delivery [obstetrics], more physicians and nurses… sometimes no doctor on call, emergency closes but you don’t know until you arrive there – stressful.” (Blue Water)
- “When Pine Falls emergency room closed, prefer to go to Selkirk rather than Pinawa.” (Blue Water)

**Ambulatory Care Sensitive (ACS) conditions** refers to chronic conditions that can be potentially managed in the community, preventing or reducing the need for hospitalizations, which in turn contributes to improved health outcomes and more efficient use of resources. Examples of some diseases are: angina, asthma, chronic obstructive pulmonary disease (COPD), diabetes, epilepsy, heart failure and high blood pressure (hypertension).

In Canada, rates of hospitalization for ACS conditions decreased by 29% from 2001-2002 to 2007-2008. Decreases occurred in all provinces. Older Canadians (age 60-74 years) accounted for approximately half of all hospitalizations during 2007-2008. NE had significantly higher rates of ACS condition hospitalizations compared with Manitoba during 2005/06. The highest rates occurred in Blue Water and Northern Remote districts. The lowest rates occurred in Springfield.

In NE we see that during 2005/06, 81% of residents had at least one visit to a physician for an ambulatory care condition compared with 82.6% in Manitoba. Residents in Blue Water had the most visits (86.5%) compared to our other health districts. Northern Remote had significantly lower physician visits compared with Manitoba and had the least visits (56.5%) compared to other NE health districts. Northern Remote’s low visit rate may be attributable to physician access. For many chronic conditions, residents may seek out other health practitioners for ongoing management of their illness.
Accessibility to physician services

The ability to access to specialists within NE was raised during focus group consultations. There was a slight decrease in specialist visits in NE overall. Over 93% of NE residents access specialists in Winnipeg or in other RHA’s other than NE. In our health districts, significantly fewer residents visit specialists compared with Manitoba except for Springfield where visits were similar to the Manitoba average during the latter time period. This was not unusual as most health districts bordering on Winnipeg had rates higher than more distant districts.

Focus Group participant’s comment on access to specialist services:
- Suggest bringing out specialist on a rotating basis. (Winnipeg River)
- “Access to specialist difficult – long wait times for appointments.” (Winnipeg River)

NE’s pattern of physician usage, average number of ambulatory visits or ambulatory consultation rates did not change in NE or within our health districts between 2000/01 and 2005/06. Usage, visits and ambulatory consultations were highest in Blue Water one of the least healthy as measured by the premature mortality rate.

Continuity of care is a concept that includes “The experience of care by a single patient with his or her provider(s) [and] …care continues over time.” There is growing evidence that health status and chronic disease outcomes are improved with continuity of care.

Some key implications of continuity of care cited in a mental health study include: “Better continuity was associated with higher community costs…and lower hospital costs…associated with improved quality of life, community functioning, and satisfaction with services…” Another study cited lower emergency room visits.

When reviewing the percentage of resident care visits to the same physician at least 50% of the time, we found that between 2000/01 and 2005/06 almost 70% of Manitoba and NE residents had received care from the same physician. During the same time period, Springfield and Brokenhead same physician visit rates significantly increased while Blue Water significantly decreased.

Some reasons cited in the literature for reduced continuity:
- Increasing health care delivery fragmentation due to many agencies providing care.
- Use of speciality clinics for specific problems.
- Physician shortages or turnover making it difficult for patients to have a regular physician.

In NEHA the primary health care model is practiced and this decreases fragmentation of care, however physician turnover remains an ongoing challenge especially in Pine Falls.
One of the four essential building blocks of an effective primary health care system is “...continuity – an experience of health care that is coherent, consistent and connected over time...”

Focus group participants speak to continuity of care:

- “Reduce physician transience …we have some good doctors coming and then they leave…we’re practically guinea pigs.” (Blue Water)
- “Lack of continuity a big stressor…” (Blue Water)

**Hysterectomy** rates have been declining in Canada since 1980, but continue to remain the second most common surgery for Canadian women. Although the ‘right’ level of utilization is not known, understanding the pattern and the type of procedure performed is useful. The Society of Obstetricians and Gynaecologists of Canada encourages vaginal rather than abdominal hysterectomy where possible. During 2007-2008, 85% of hysterectomies were for cancer, and 60% for gynaecological reasons (without cancer). These were done abdominally. In Canada between 1998-1999 and 2007-2008 hysterectomies decreased by 25%. In Manitoba between 2002/03 to 2006/07 hysterectomies also decreased from 4.7/1,000 to 3.6/1,000 in women over 25 years of age. In NE rates were variable for the same time period with some increases and decreases, but the trend appears toward a decrease.

Focus Groups held in the fall of 2008 concentrated on mental well-being and illness. Due to this, any health delivery comments were often targeted toward mental health services. **Refer to Section III for complete discussion regarding Mental Health Services.** The Francophone Focus Group held in the spring had a general focus; therefore one particular topic was not emphasized over another.

Listed below are comments made about health services in general. The health district where the comments were made is indicated.

**Wait Times**

- “Stressful waiting for surgery or diagnostics.” (Winnipeg River)
- “Longer wait time for a doctor’s appointment in Lac du Bonnet, not as long in Pinawa.” (Winnipeg River)

**Access To Services**

- “French language services are non-existent…it would be nice to have a French speaking public health nurse…we haven’t had a Francophone doctor since 1953.” (Blue Water)
- We have to acknowledge that even though a Francophone community exists in the region, we are not able to deliver all services in French. (Blue Water)
- Population is increasing but it is retirees – they want health services. (Blue Water)
- “…good health system, access to counselling, ambulance [service], fire department….” There was a concern raised about no fire department in Rennie. (Iron Rose)
In October 2009, NEHA updated their district specific health care service directory and distributed this to all mailboxes in North Eastman. Northern Remote was excluded.

### Awareness of Services

- “…better publicity of programs and services is needed.” (Winnipeg River)
- “…need for multi-media, not everyone reads the paper/looks at bulletin board.” (Iron Rose)
- “I don’t go anywhere at this point so I wouldn’t see a notice or poster...if something came through the mail I would see it…” (Iron Rose)
- “…need a printed book that comes out once a year…recreation commission produces a booklet but doesn’t include everything.” (Brokenhead)
- “…many programs were not available many years ago. Seniors may ‘not realize there is help out there.’” (Brokenhead)
- “…a 1-800 number to a central database that could identify where one could find the nearest regional health program or service.” (Brokenhead)
- “…presentations at public groups on services available.” (Winnipeg River)
- “…use TV, radio, print to share information as…a lot of people don’t want to give up their evenings to go to seminars.” (Brokenhead)

### Other Comments

- “…cooperation and integration among departments for efficiency and better access to service and easier sharing of information.” (Blue Water)
- “…need to incorporate traditional First Nation ways in health service delivery.” (Blue Water)
- “Hiring of a French Language Service Coordinator an asset.” (Blue Water)
SECTION SUMMARY

Health care services that maintain and promote health, prevent disease and restore health significantly contribute to population health. Almost one quarter of NEHA’s operating costs were spent on community services.

Just over fifty percent of residents admitted to hospital use NE hospitals. There has been a slight increase in the percentage of patients occupying Winnipeg and other regional health authority hospital beds. There has been an overall increase in the number of hospital beds in NE utilized by patients who require non acute health care. Hospital discharge rates decreased but were significantly higher than Manitoba. Northern Remote and Blue Water had the highest number of hospital discharges. There has been an increase in the number of hospital beds in NE utilized by patients who require non acute health care. Hospital discharge rates decreased but were significantly higher than Manitoba. Northern Remote and Blue Water had the highest number of hospital discharges. There has been an increase in the number of hospital beds in NE utilized by patients who require non acute health care. Hospital discharge rates decreased but were significantly higher than Manitoba. Northern Remote and Blue Water had the highest number of hospital discharges.

The number of emergency visits at each of the three hospitals in NE has not changed over the past few years. The numbers of emergency room visits were consistently higher in Pine Falls Hospital compared to the other two hospitals. Pine Falls Hospital consistently had the highest number of acute care admissions compared to the other NE hospitals. There was a decrease in the number of ambulatory care sensitive (ACS) conditions admitted to hospital; however NE’s rates were significantly higher than Manitoba. ACS conditions are chronic diseases such as diabetes, high blood pressure that could be potentially managed by community care givers.

All NEHA operated ambulance stations have shown a notable increase in call volume over the past few years.

There is a wait time for admission to all NEHA personal care homes (PCH). We expect that PCHs will continue to admit more complex cases in both the physical and psychosocial care domains as chronic illnesses such as dementia continue to increase.

There has been little to no change in the percent of residents who visited any physician at least once during the year. The average number of visits to any physician increased slightly. Blue Water had the highest average number of visits, while Northern Remote had the lowest. More residents accessed general and family physicians within their own health districts. Almost 70% of residents received care from the same physician. This is important as there is growing evidence that care given by the same caregiver is known to improve health status and chronic disease outcomes.

Balancing health service accessibility, with continuity, efficiency and effectiveness is a challenge at the best of times but in rural areas geographical distances and resource limitations, both material and people are added challenges.
REFERENCES


7 Telephone message November 9, 2009 from L.Dent-Prychun, NEHA Director of LTC to S.Dick.

8 Fransoo, R. et al (2009) Chapter 10: Use of Personal Care Homes (PCH’s) Figure 10.1.1. RHA Atlas. MCHP. Pg. 338.


25 Jay Ferens, EMS Director, NEHA. September 28, 2009.


29 Misericordia Health Links website Accessed August 26, 2009 @ http://ca.geocities.com/rn_mb_ca/


35 Email from L. Dent-Prychun, Director of LTC. December 22, 2009.


39 Fransoo, R. et al. (2009) Figure 8.6.1 & 8.6.2. MB RHA Indicators Atlas 2009. MCHP

40 Fransoo, R. et al. (2009) Figure 8.1.1 & 8.1.2. MB RHA Indicators Atlas 2009. MCHP

41 Fransoo, R. et al. (2009) Figure 8.3.1 & 8.3.2. MB RHA Indicators Atlas 2009. MCHP
42 Fransoo, R. et al. (2009) Figure 4.7.1 & 4.7.2. MB RHA Indicators Atlas 2009. MCHP
58 Fransoo, R et al (2009) Chapter 6: Physician Services. Figure 6.8.1 & Table 6.8.1 Location of Visits to Specialists. MB RHA Indicators Atlas 2009. MCHP


Email from D.Viel, Director of Primary Health Care to S. Dick November 13, 2009 Entitled: Quick Query.


Section VI
VALIDATION SURVEY
Validating information to determine if there are correlations with the quantitative data and the population’s perception of the issue is another process in a community health assessment (CHA). Validation assists in the analysis and interpretation of the findings. When the same information is repeated either quantitatively or qualitatively then it is seen as verification that the information likely reflects what the population is experiencing.

**METHODOLOGY**

A Validation Survey was conducted in October 2009, using a convenience sample i.e. participants attending a Chronic Disease Prevention Intervention (CDSPI) workshop in Powerview-Pine Falls and in Beausejour.

The survey questions were developed with the input of the CHA Steering and Advisory Committees.

A half hour presentation of selected CHA indicators targeting chronic diseases was presented to inform the audience of some of the findings during the CDPI workshop. The audience was asked to voluntarily fill out the survey based on their knowledge of their community in which they lived using a scale of ‘strongly agree, agree, disagree, strongly disagree, don’t know.’

**SURVEY DEMOGRAPHICS**

Table 6-1 Validation Survey Demographics

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual attendance at the two workshops</td>
<td>216</td>
<td></td>
</tr>
<tr>
<td>Number of completed surveys</td>
<td>175</td>
<td>81% response rate</td>
</tr>
<tr>
<td>Survey exclusions due to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No demographics filled out</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Non North Eastman residents</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Number of surveys collated</td>
<td>165</td>
<td>94.2% of total surveys filled out</td>
</tr>
<tr>
<td>Number of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>129</td>
<td>78.2%</td>
</tr>
<tr>
<td>Males</td>
<td>35</td>
<td>21.2%</td>
</tr>
<tr>
<td>No gender stated</td>
<td>1</td>
<td>0.6%</td>
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</table>

### Table 6-2 Gender and Location of Survey Respondents

<table>
<thead>
<tr>
<th>District Females</th>
<th>Brokenhead</th>
<th>Springfield</th>
<th>Wpg River</th>
<th>Iron Rose</th>
<th>Blue Water</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>No age stated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>under 18</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>19 - 39</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td></td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>40 - 64</td>
<td>28</td>
<td>6</td>
<td>12</td>
<td>8</td>
<td>24</td>
<td>78</td>
</tr>
<tr>
<td>65 - 74</td>
<td>8</td>
<td></td>
<td></td>
<td>1</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>over 75</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Females</strong></td>
<td>45</td>
<td>11</td>
<td>14</td>
<td>9</td>
<td>50</td>
<td><strong>129</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>District Males</th>
<th>Brokenhead</th>
<th>Springfield</th>
<th>Wpg River</th>
<th>Iron Rose</th>
<th>Blue Water</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>under 18</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>19 - 39</td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>40 - 64</td>
<td>8</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>65 - 74</td>
<td>4</td>
<td></td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>over 75</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Males</strong></td>
<td>16</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>14</td>
<td><strong>35</strong></td>
</tr>
</tbody>
</table>

There was one respondent who did not state their gender from Blue Water who was counted for a total of **165**.

### Data Limitations

- Convenience sample, therefore not representative of NE population.
- The majority of respondents came from the districts where the CDPI workshops were held i.e. Blue Water and Brokenhead.
- More females (78.6%) than males.
- Variety of ages, however the majority of participants were in the 40-64 age group (57.5%) and the over 65 year age group (28.6%).

### VALIDATION SURVEY QUESTIONS

The following is the survey questionnaire handed out to participants.
<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. It is important for children to have recommended childhood vaccinations.
2. A person's choice about healthy eating and regular physical activity can reduce the risk of chronic diseases like diabetes, lung, & heart disease.
3. Keeping good mental health is as important as keeping good physical health.
4. Being lonely or isolated can have a negative effect on the health of people and communities.
5. The quality of the water I drink is NOT a concern for me or my community.
6. Children's health and development can be improved by attending parenting programs and training.
7. Maintaining a healthy weight will potentially prevent diseases like diabetes and heart disease.
8. I feel that the people in my community are in good health.
9. People with disabilities or the elderly have limited housing options in my community.
10. Housing in my community is safe and affordable.
11. I know where to get information about disease prevention in my community.
12. I know how to get health services when I need to.
13. I am concerned about injuries in my community, for example: falls, drowning, motor vehicle accidents.
14. I feel safe in my community and would recommend it as a good place to live.

Please check:
- Male □
- Female □

Age
- Under 18 □
- 19-39 years □
- 40-64 □
- 65-74 □
- Over 75 years □

I live in this Health District:
- [Please check a staff member]
- Northern Remote □
- Winnipeg River □
- Blue Water □
- Springfield □
- Iron Rose □
- Brokenhead □

CHA SURVEY_CDPI_FINAL (Sep28_09)
VALIDATION SURVEY RESULTS

The following results were collated at the regional level.

Figure 6-1 Validation Survey – Question 1

Ninety percent of those surveyed strongly agreed or agreed that childhood vaccinations were important.

Figure 6-2 Validation Survey Question 2

Ninety-eight percent of respondents strongly agreed or agreed that a person’s choice about healthy eating and regular physical activity reduces the risk of chronic diseases like diabetes, lung & heart disease.

Ninety-eight percent of respondents strongly agreed or agreed that a person’s choice about healthy eating and regular physical activity reduces the risk of chronic diseases.
3. Keeping good mental health is as important as keeping good physical health.

Ninety-eight percent of survey respondents strongly agreed or agreed that keeping good mental health was as important as keeping good physical health.

4. Being lonely or isolated can have a negative effect on the health of people & communities.

Ninety-seven percent of respondents strongly agreed or agreed that being lonely or isolated can have a negative effect on the health of people or communities.
5. a) The quality of the water I drink is NOT a problem for me.

Thirty-six respondents strongly agreed or agreed that the quality of water was not a problem for them.

Almost half of respondents felt that water quality was a problem for them.

5. b) The quality of the water is NOT a concern for my community.

Twenty-two percent of respondents strongly agreed or agreed that water quality was not a problem for their community.

More than half (54%) felt that the water quality was a problem for their community.

There was a fairly high proportion of respondents who had no response (20.6%). The question layout on the survey could have been responsible for this.
7. Maintaining a healthy weight will potentially prevent diseases like diabetes & heart disease.

Most survey respondents strongly agreed or agreed that children’s health and development can be improved by attending parenting programs and training.

Ninety-seven percent of respondents strongly agreed or agreed that maintaining a healthy weight will potentially prevent diseases like diabetes and heart disease.
8. I feel the people in my community are in good health.

The responses were more variable to this question. Twenty-eight respondents strongly agreed or agreed that the people in their community were in good health, while 49% did not agree and another 13% strongly disagreed.

The majority of the survey respondents lived in Blue Water or Brokenhead districts, the area where the workshops were held.

9. People with disabilities or the elderly have limited housing options in my community.

Sixty-four percent of respondents strongly agreed or agreed that people with disabilities or the elderly have limited housing options in their community.

Twenty-six percent of respondents disagreed or strongly disagreed that people with disabilities or the elderly have limited housing options.
Figure 6-11 Validation Survey Question 10

Fifty-eight percent of respondents strongly agreed or agreed that housing in their community was safe and affordable.

Thirty percent did not agree that housing was safe and affordable. Unfortunately the question had two different options, so we cannot determine if respondents felt the same way for both issues.

 Likely due to the ambiguity of the question there were almost 12% of respondents who either did not know or had not responded.

Figure 6-12 Validation Survey Question 11

Ninety-four percent of respondents knew where to get information about disease prevention.

Four percent of respondents did not know where to get information about disease prevention in their community.
Eighty-nine percent of respondents strongly agreed or agreed that they knew where to get health services when needed.

Almost ten percent indicated that they didn’t know where to access health services. Most of these respondents lived in Blue Water.

Seventy percent of respondents strongly agreed or agreed that they were concerned about injuries in their community.
14. I feel safe in my community & would recommend it as a good place to live.

Eighty-nine percent of respondents strongly agreed or agreed that they felt safe in their community and would recommend it as a good place to live.

Ten percent felt that their community was not safe.

Refer to Appendix F. Validation Survey Results for information collated at the district level.
SECTION SUMMARY

The Validation Survey response rate was very good, at 81%, based on the CDPI total attendance numbers.

The majority of participants strongly agreed or agreed with the statements that:

• Childhood vaccinations were important (90%).
• Healthy eating and regular exercise will reduce the risk of chronic diseases (98%).
• Keeping good mental health is as important as keeping good physical health (98%).
• Being lonely or isolated can have a negative effect on the health of people or communities (97%).
• Children’s health and development can be improved by attending parenting programs and training (89.7%).
• Maintaining a healthy weight will potentially prevent diseases (97%).
• Most respondents knew where to get disease prevention information (94%).
• Most respondents knew where to get health services when needed (89%).

There was some variability and concerns around the following topics:

Water- More than half of respondents felt that there were water concerns for them individually and for their communities.

Good health- 62.4% of respondents felt that people in their community were not in good health.

Housing Options- 64.3% of respondents felt that people with disabilities and the elderly had limited housing options, while 26% felt that there were housing options.

Injuries – 70% of respondents were concerned about the rate of injuries in their community.

Picture Credits

Section VII

KEY FINDINGS
This section highlights some key findings found in the Community Health Assessment (CHA) Report sections.

Unless mentioned, the key finding stem bullet highlights information at the North Eastman (NE) region level. Subsequent indented bullets describe rates and rankings among NE health districts. The time period(s) shown for the NE region will be the same at the district level unless otherwise stated. District rates that rank between the highest or lowest are not usually mentioned unless they are significant. The reader is asked to go to the section / chapter for detailed information about all districts.
SECTION II – GEOGRAPHY & POPULATION CHARACTERISTICS

- **Population** has grown from 39,644 in 2003 to 40,994 in 2008; a 3.4% increase. The projected growth in population will be from net migration.

- Between 2003 & 2008 there was a 5.7% decrease in 0-19 year olds and an 8.7% increase in people 65 years and older.
  - Springfield, Blue Water and Brokenhead districts had the highest number of people in all age groups.
  - Winnipeg River, Springfield and Brokenhead had the highest 65 years and over population.
  - Northern Remote had the largest percent of their population (48%) in the 0-19 age group followed by Blue Water (32%) and Springfield (27%).

- The percentage of Aboriginal people in NE has not changed in the 2001 and 2006 census, remaining at 25%.
  - Northern Remote (91%) and Blue Water (58%) had the highest number of Aboriginal people in 2006.
  - Iron Rose had the least at 5% in 2006.

- **Dependency ratio** decreased slightly during each census in 1996, 2001 and 2006. NE at 54 per 100 working individuals was similar to Manitoba overall (51.6/100) in 2006.
  - Northern Remote’s dependency ratio at 73.8/100 in 2006 appears to have declined since 2001.
  - Blue Water’s ratio at 63.5/100 in 2006 increased slightly since 2001.
  - Springfield’s dependency ratio appears to be decreasing and was the lowest at 43/100 in 2006.

- NE (4.3%) had fewer lone parent families compared with Manitoba overall at 5.7% in 2006.
  - Northern Remote at 8.7% and Blue Water at 7.9% had the highest percent of lone parent families.
  - Brokenhead at 2.6% had the least number of lone parent families.
SECTION III – POPULATION HEALTH STATUS

- **Life expectancy** for females significantly increased from 79.7 to 81.3 years between 1996-2000 and 2001-2005. Males did not experience any change at 75.4 years during 2001-2005.
  
  o *Springfield’s* was similar for both time periods and had the highest rates for both males 79.5 and for females 84.2 years.
  
  o *Northern Remote* had the lowest rate for males (63.9) and females (67.3).

- Combining 2001, 2003 and 2005 Canadian Community Health Survey (CCHS) cycles, 58.3% of residents over age 12 self reported excellent or very good health.

- *NE* (52%) and Manitoba (56%) reported similar functional physical health scores.
  
  o *Iron Rose* reported the highest score of 60%.
  
  o *Blue Water* reported the lowest score of 37%.

- **Premature mortality** rates significantly declined between 1996-2000 (3.7/1,000) and 2001-2005 (3.2/1,000).
  
  o *Springfield* (2.3/1,000) had the lowest and has decreased.
  
  o *Northern Remote* (10.9/1,000) had the highest and has increased.

- Causes of potential years of life lost (PYLL) were different for males and females between 2002-2006.

  **The top causes of PYLL:**
  
  o **Males** - injury, suicide, circulatory diseases and cancers.
  
  o **Females** - cancers, injury, suicide, and circulatory diseases.

- Circulatory disease, cancers and external causes (includes injuries, poisoning and certain other consequences of external causes) were the leading causes of all deaths.
• The leading type of newly diagnosed cancer rates were prostate in males and breast in females during 2000 to 2002 and 2003 to 2005.
  
  o Prostate cancer appears to be declining.
  
  o Breast and cervical cancers appear to be increasing.
  
  o Colorectal cancer in both males and females appears to have decreased.
  
  o Melanoma (skin cancer) had decreased in males but increased in females from 7/100,000 to 15/100,000 surpassing Manitoba’s overall rate of 9.0/100,000 during the latter time period.
  
  o Lung cancer increased in males while there was no change for females.

• Arthritis treatment prevalence changed between 1999/2000-2000/01 and 2004/05-2005/06, and was significantly higher in NE (21.2%) than Manitoba overall (20.2%) during the latter time period.
  
  o Blue Water’s rate did not change and was the highest compared to our other health districts.

• Osteoporosis treatment prevalence in NE and Manitoba significantly increased for residents over 50 years during 2003/04 – 2005/06.

• Respiratory illnesses for all ages did not appear to change between 2000/01 and 2005/06 and was similar to Manitoba.
  
  o Brokenhead, Iron Rose and Winnipeg River had significantly increased.
  
  o Blue Water significantly declined during the latter time period yet had the highest percentage of respiratory illnesses.

• Treatment prevalence for diabetes for residents aged 19 and over significantly increased from 7.3% in 1998/99-2000/01 to 9.8% in 2003/04-2005/06 and was significantly higher than Manitoba overall.
  
  o Northern Remote significantly increased from 22% to 35%, having the highest diabetes prevalence.
  
  o Blue Water’s diabetes treatment prevalence significantly increased from 11% to 15%, and was the second highest.
  
  o Brokenhead, Winnipeg River and Iron Rose significantly increased.
  
  o Springfield at 5.6% during the latter time period had the lowest diabetes treatment rate.
• **Diabetes** prevalence in children, aged 5-19 years significantly increased from 0.29/1,000 to 0.53/1,000 between 1998/99-2000/01 and 2003/04-2005/06.
  
  o *Northern Remote* had a diabetes prevalence of 1.0/1,000, the highest of all our health districts, followed by *Blue Water* at 0.62/1,000 during the latter time period.

• Treatment prevalence for **high blood pressure (hypertension)** for 19 years and over showed a significant increase from 21.6% to 26.1% between 2000/01 and 2005/06 and was significantly higher than Manitoba’s overall rate of 23.7% during 2005/06.
  
  o All health districts increased, however *Iron Rose* increased significantly.
  
  o *Northern Remote* (37%), followed by *Blue Water* (31%) and *Brokenhead* (27%) had the highest hypertension rates during the latter time period.

• The rate of death or hospitalization due to **heart attacks** for residents 40 years and older has significantly decreased and was similar to Manitoba between 1996/97-2000/01 and 2001/02-2005/06.
  
  o There was considerable variation within the health districts, but rates all appeared to be decreasing.

• Treatment prevalence for **ischemic heart disease** for 19 years and older showed a significant decrease between 1996/97-2000/01 and 2001/02-2005/06 and was significantly lower than Manitoba overall.
  
  o There were no significant changes in *Iron Rose, Winnipeg River, Blue Water and Northern Remote* between the two time periods.
  
  o *Blue Water* had the highest prevalence when compared with other health districts for both time periods.
  
  o *Springfield and Brokenhead* significantly declined in prevalence between time periods.

• **Stroke incidence** rates for death or hospitalization for 40 years and older showed a significant decrease between 1996/97-2000/01 and 2001/02-2005/06 but was significantly higher than Manitoba overall during both time periods.
  
  o All health district stroke incidence rates appeared to be declining, except for *Northern Remote*.
  
  o *Northern Remote* at 5.5/1,000 had the highest stroke incident rate of all our health districts and was higher than NE (3.6/1,000).
• **Falls** were the main cause for injury hospitalizations and appeared to decrease between 1993-1999 and 2000-2006. More females than males were hospitalized due to falls.

• **Injury hospitalizations** rates were similar between 1996/97-2000/01 and 2001/2002-2005/06 but were significantly higher than Manitoba overall for both time periods.
  
  o *Northern Remote* followed by *Blue Water* had significantly higher hospitalizations due to injury than Manitoba and surpassed other health districts for both time periods. Both districts showed a slight non-significant decrease during the latter time period.

• **Injury death rate** for all causes decreased from 0.8/1,000 to 0.7/1,000 and was slightly higher than Manitoba overall between 1996-2000 and 2001-2005.
  
  o *Northern Remote*’s injury death rate was similar for both time periods and was the highest of all health districts, significantly higher than Manitoba.

• All unintentional injury deaths (suicide excluded) increased for both males and females in 2002 to 2006. In 2003, 2004, 2005 males had higher rates of injury deaths. In 2006, females (75/100,000) surpassed males (63/100,000) for unintentional injury deaths.

• **Children** 0-19 years had a slight decline in injury death between 1996-2000 and 2001-2005, however rates continue to be significantly higher compared to Manitoba overall.

• *Manitoba (40%) and NE residents (41.4%)* 12 years and older reported themselves in the ‘high’ category on the mental health scale during 2003 and 2005. The higher the category, the more positive a person’s mental health.

• Between 2000-2005, 24% of residents 15 years and older reported high life stress compared with 21% of Manitobans.
  
  o *Springfield (28.2%), Iron Rose (21.9%) and Brokenhead (21.2%)* self reported the highest percent of life stress.

• More females than males visited physicians and were hospitalized for mental illnesses between 2003/04 - 2007/08.

• **Suicide** rates were significantly higher than Manitoba overall and have not changed between 1996-2000 and 2001-2005 for both time periods.
  
  o At the district level for the same time period, Northern Remote’s *crude* suicide rate was approximately eight times higher than our other health districts.
• *NE males* had consistently higher potential years of life (PYLL) lost due to suicide compared with females between 2002 and 2006. In two one year periods (2005 and 2006) male PYLL decreased from 27.5/1,000 to 21/1,000 and *females* increased from 8.8/1,000 to 11.2/1,000.

• Between 1996/97-2000/01 and 2001/02-2005/06 the percent of people over 10 years old with *mental disorders* (except anxiety) increased.

• Between 2000/01 and 2005/06 there appeared to be a significant increase in *prescriptions for selective serotonin reuptake inhibitors (SSRI)* in *Brokenhead* for children aged 10 -19.

• All health districts, as well as Manitoba had a significant increase in *antidepressant use* in 2005/06 compared with 2001/02.

• **Follow up physician visits** for patients on new prescriptions for antidepressants increased from 58.3% in 1998/99-2000/01 to 62.3% in 2003/04-2005/06.
  - *Iron Rose* had the only significant increase, from 43.5% to 64.3%, during the latter time period.

• **Depression treatment prevalence** increased significantly from 15.4% to 17.8% between 1996/07-2000/01 and 2001/02-2005/06. Manitoba’s overall prevalence also increased.
  - *Iron Rose, Brokenhead and Blue Water’s treatment for depression* increased significantly during the same time period.
  - *Springfield, Winnipeg River and Northern Remote’s rates* had increased slightly but not significantly.

• **Lack of awareness of mental health services/supports** and the *stigma* associated with mental illness were raised as concerns by focus group participants in 2003 and 2008 community health assessments.

• For many focus group participants in 1997, 2003, and 2008, *mental health issues* emerged as an important area of concern, with stress and feelings of isolation as common themes.
SECTION IV: DETERMINANTS OF HEALTH

CHAPTER 1- LIFESTYLES, PERSONAL HEALTH PRACTICES & COPING SKILLS

- On average, 33% of children aged 12-19 consumed 5+ servings of fruits and vegetables daily, which was similar to Manitoba (31.8%) during 2001, 2003, 2004 combined CCHS cycles.

- Thirty-eight percent of residents surveyed over 12 years were overweight compared to 35% of Manitobans during 2001, 2003 and 2005 combined CCHS cycles.
  - Winnipeg River had the highest percent of overweight residents at 46.8%, Brokenhead (44.5%) and Blue Water (40%).
  - Springfield had the highest reported underweight / normal weight residents at 49.3%, followed by Iron Rose (39.5%).

- Between 2001-2005 approximately 16% of children between 12-19 years were overweight, compared with 14% of Manitoba children.

- In 2005, 74% of adults compared with Manitoba overall (70%) met the Health Canada Physical Activity Guide (PAG) guidelines.

- Significantly more NE children aged 12-19 years (61.2%) compared with 44% of Manitoba children were found to be physically active during 2001, 2003, 2004 and 2005 combined CCHS cycles.

- Most focus group participants in all health districts recognized the benefits of exercise not only as a way of improving their physical health, but also as a way of relieving stress.

- NE and Manitoba residents aged 12 years and older reported themselves as current smokers at 22.7% during 2001, 2003 and 2005 combined CCHS cycles.
  - Winnipeg River residents had the highest rates of current smokers (29.7%).
  - Iron Rose had the least number of current smokers at 18.4%.
• Over one third of residents over aged 12 in NE and Manitoba overall reported **binge drinking** (5 or more drinks at one time), combining 2001, 2003 and 2005 CCHS cycles.
  
  o **Winnipeg River** (48%) had the highest percent of self reported rates of binge drinking.
  
  o **Iron Rose** (28.4%) had the lowest percent of self reported rates of binge drinking.

• In a 2007 survey, 42% of NE students in Grades 6-12 reported consuming at least one drink of alcohol within 30 days prior to the survey.

• Between 2003 and 2006 **alcohol use during pregnancy** decreased. When the four years were combined, 9% of new mothers reported using alcohol during pregnancy compared with 12.9% in Manitoba overall.
  
  o **Blue Water** (14.4%) and **Winnipeg River** (13.9%) had the highest rates of self reported alcohol use during pregnancy.
  
  o **Iron Rose** rates were suppressed, **Springfield** had 3.3% self reported alcohol use during pregnancy.

• Focus group participants revealed that the use, abuse and addiction to prescription medications, illicit drugs, alcohol and gaming were prevalent concerns in all health districts.

• **Substance abuse** diagnosis significantly declined in residents over age 10 between 2001/02 and 2005/06.
  
  o **Northern Remote** and **Blue Water** had the highest rates.
  
  o **Winnipeg River** increased significantly during the second time period.

• In 1997, 2003 and 2008 **CHA focus group participants** expressed concerns with regard to drug abuse especially among youth.

• Between 2003 to 2008 **crude cases** of **gonorrhea and chlamydia** increased in NE.

• In Manitoba between 1985-1995 and 1996-2007 newly diagnosed **HIV** cases in females had almost quadrupled.

• **Antibiotic use in children** decreased significantly between 2000/01 and 2005/06.
• Breast cancer screening rate in women aged 50-69 during 1998/99-2000/01 and 2003/04-2005/06 was similar and was slightly higher than Manitoba overall during the latter time period.
  
  o Winnipeg River had the highest breast screening rate.
  
  o Northern Remote had the lowest screening rate.

• Between April 2006 to March 2009, cervical cancer screening for women 15 and over was slightly higher (544.7/1,000) compared with Manitoba overall at 543.8/1,000.

  Between 1998/99-2000/01 and 2003/04-2005/06 aged 18-69 years:
  o Northern Remote showed a significant decline and had the lowest percent of cervical screens.
  
  o Springfield had a significant decline in cervical screens yet had the highest rate of screens compared to other health districts during the latter time period.

CHAPTER 2 - SOCIAL SUPPORT NETWORKS

• Focus group participants in 1997, 2003 and 2008 raised concerns about vulnerable people (often seniors) who lived alone.

  • According to the 2006 census, over three-quarters of people live with a family, a slight decrease from 2001.

  • In 2001, there were 58.9% of people married compared with 57% in 2006 census, slightly higher than Manitoba average for both census.

    o Married people in Springfield decreased slightly, but was the highest for both census periods.

    o Married people in Northern Remote decreased slightly and was the lowest for both census periods.

• Mothers with newborns who indicated no social support appeared to decline from 2003 to 2006. When four years were combined, NE’s rate was 9.7%, significantly higher than Manitoba’s overall rate of 5.2%.

  o In Blue Water, 41.1% of new mothers indicated they had no social support while the other health district rates were suppressed.
• *Focus group participants* in all districts except Springfield identified that a lack of *child care* support was a major concern for many working parents.
  
  o Child care spaces per capita in NE increased in *Springfield and Brokenhead* but remained the same in other districts.

• Since the last CHA, a new *food bank* opened up in *Springfield* in February 2008, making a total of three in NE.

• The number of calls made to the Manitoba *Farm and Rural Stress Line* from NE residents did not appear to have changed noticeably between 2006 and 2008.

• *Focus group participants* felt that cultivating and seeking a social support network was important to a person’s mental health and well-being.

### CHAPTER 3 – EMPLOYMENT & WORKING CONDITIONS

• *Manitoba (27.6%) and NE (28.2%) residents reported similar levels of ‘high’ work stress.*
  
  o *Springfield, Brokenhead, and Winnipeg River* residents self-reported the highest levels of ‘medium and high’ workplace stress.

• The percentage of *children* 0-17 years, living in families receiving *income assistance* between 1999/2000-2000/01 and 2004/05-2005/06 was similar at 5.1% and 5.3%. Manitoba overall was 13.3% during the latter time period.

• There was no significant change in *youth* 18-19 years *receiving income assistance* between 1999/2000-2000/01 and 2004/05-2005/06. Youth receiving income assistance was significantly lower at approximately 3%, compared to Manitoba overall at 9.1%.

• In 2006 sales and service *occupations* replaced management as one of the top three occupations for males. Females had no change in the top three occupations: sales and services; business, finance and administration and social sciences, education and government services.

• In 2006 the *top occupations* for 36% of males were trades, transport and equipment operators and related occupations. During 2000-2007 the top three occupations in *Manitoba* with the most *workplace fatalities* were:
  
  o Tradesperson (30%)
  o Truck driver (14%)
  o Farmers (13%)
In North Eastman Health Association Inc. (NEHA), the categories of staff most frequently reporting a **workplace injury** (a workers compensation board notice of injury was filed, but not necessarily requiring time loss) over the last six years were:

- Emergency Medical Service staff
- Health Care Aides especially in long term care
- Food, housekeeping and laundry staff

**CHAPTER 4 – SOCIAL & PHYSICAL ENVIRONMENT**

- As of September 24, 2009 there were 74 **boil water advisories** in Manitoba; 35 in NE and Eastern Manitoba.

- At least one quarter of the population aged 12 -19 years reported being exposed to second hand smoke.

- *Focus group* participants, particularly in Springfield, indicated that housing options were important at different stages of life e.g. starter housing for young people and transitional housing for older people so they do not have to leave their community.

**CHAPTER 5 – EARLY CHILD DEVELOPMENT**

- **Live birth** rate was 12.3/1,000 for both 2006/07 and 2007/08 and was similar to Manitoba overall at 12.6/1,000 during the latter time.

  - There was a non significant increase in live births in *Iron Rose, Northern Remote and Blue Water* yet *Northern Remote (31.5/1,000) and Blue Water (19.2/1,000)* had the highest rate of live births during the latter time.

- The **teen birth rate** (15-19 years) decreased significantly (35.9/1,000) but continues to be significantly higher than Manitoba overall (30.1/1,000).

  - *Northern Remote (129.1/1,000) and Blue Water (80.4/1,000)* had the highest number of teen births, both significantly higher than Manitoba however teen births decreased in both districts.
• **Pre-term** births were slightly higher (8.6%) compared with Manitoba overall (7.9%).
  
  o Eleven percent of all newborns were pre-term in *Blue Water* and *Northern Remote*, the highest percent of all districts.
  
  o *Winnipeg River* had the fewest at 5%.

• Between 2002/03 – 2006/07, 18% of newborns were considered to be **high birth weight** compared to 17% in Manitoba overall.
  
  o *Northern Remote* (22.3%) followed by *Blue Water* (20.1%) had the highest percent of high birth weights.
  
  o *Iron Rose and Winnipeg River* had the lowest percent both at 14.5%.

• Between 2002/03 – 2006/07, 5.2% of newborns were considered **low birth weight** compared to 5.3% in Manitoba overall.
  
  o *Blue Water* (7%) and *Winnipeg River* (5.6%) had the highest percent of low weight babies.
  
  o *Iron Rose* had the lowest percent of low birth weights at 2.4%.

• **Infant mortality** (a useful measure of a community’s health) declined from 9.85/1,000 to 8.58/1,000. There were no significant differences between NE and Manitoba’s overall rates.

• **Child mortality** rate declined from 72.9/100,000 in 1996-2000 to 60.1/100,000 between 2001-2005 but remains significantly higher than the Manitoba average.

• **Breastfeeding (BF)** initiation rates did not change significantly from 70.9% in 1996/97-2000/01 to 71.5% in 2001/02-2005/06. NE’s rates were significantly lower than Manitoba for both time periods.
  
  o *Northern Remote (36.7%) and Blue Water’s (69.9%) BF rates were the lowest.
  
  o *Iron Rose (92.3%) and Springfield’s (88.6%) BF rates were the highest.

• During 2007, *NE* had slightly lower completed **immunization** rates compared to Manitoba overall for ages 1, 2, 11 and 17 years. At age seven, NE had higher rates (72.3/100) than Manitoba (68.6/100) during 2007.
• Between 1996/97-2000/01 and 2001/02-2005/06, Caesarean sections increased but were significantly lower compared to Manitoba overall.
  
  o There were non significant decreases in Iron Rose, and Blue Water.

  o There were non significant increases in Springfield, Winnipeg River, and Brokenhead.

  o Northern Remote had the only significant increase; from 7.1% to 13.4% of deliveries.

  o Brokenhead and Winnipeg River (both at 17.5%) had the highest percent during the later time period.

• Children in foster care increased significantly from 4.1% (1998/99-2000/01) to 5.4% (2001/02-2003/04) and was significantly higher than Manitoba overall (3.0% and 3.3%).

  o Northern Remote (14.7% to 19.4%) followed by Blue Water (5.1% to 6.7%) had significant increases in children in foster care, the highest of our health districts.

• There were 22.5% of all mothers with newborns surveyed with three or more risk factors for poorer child health outcomes compared to 24.4% in Manitoba overall when 2003 to 2006 were combined.

  o Northern Remote (62.2%) followed by Blue Water (41.9%) had the highest percent of children identified as having three or more risk factors during the same period.

  o Springfield had the lowest number of families with three or more risk factors at 9.1%.

CHAPTER 6 – EDUCATION

• Physical health and well-being and emotional maturity were the two domains that did not improve in children screened for school readiness between 2005/06 and 2006/07.

• School retention rates (holding students back in the same grade) saw a significant decrease from 7.2% in 1997/98-2000/02 to 3.7% in 2001/02-2005/06 but remains significantly higher than Manitoba overall for both time periods.

  o Significant decreases occurred in all health districts during the same time.

• There was a significant increase from 75% in 1997/98-2000/01 to 87% in 2002/03 – 2005/06 of students in Grade 3 who did not change schools.
• There was a decline in **high school completion** from 76.8 % in 2002/03 to 71.5% in 2005/06 while Manitoba overall significantly increased to 77.7% during the latter time.

• In 2006, 60% of residents aged 15-24 did not have a **diploma / degree / certificate** compared to 48% in Manitoba.

• In 2006, 28% of residents aged 25-64 did not have a **diploma / degree / certificate** compared to 20% in Manitoba.

• In 2006, 48% of residents aged 65 + did not have a **diploma / degree / certificate** compared to 46% in Manitoba.

**CHAPTER 7 - INCOME & SOCIAL STATUS**

• Males appear to have a higher **median individual income** than females both in **NE** and Manitoba. Both males and females increased their median individual income in 1996, 2001, 2006 census years.

  o All districts showed an increase in median income for both males and females except for Northern Remote.

  o **Northern Remote** had the lowest median individual income. **Females** earned more than males in 2006.

  o **Springfield** had the highest median individual income. Males earned more than females.

• All **household incomes** appear to have increased in 2006 compared with 2001.

• In 2006, 23% compared with 25% in 2001 of **unattached residents** had **incomes below the low income cut-off**.

  o **Winnipeg River** was the only district where there was an increase from 21% in 2001 to 27% in 2006.

  o **Brokenhead** had a decrease from 37% to 29%, but had the highest percent of low income for unattached individuals.

  o **Springfield** at 15% had the lowest rate of low income for unattached individuals in 2006.
• In 2006, 5% compared with 8% in 2001 of economic families had incomes below the low income cut-off.
  
  o Northern Remote at 13% had the highest percent of low income economic families in 2006.
  
  o Springfield decreased from 6% to 3%, the lowest percent of low income economic families during both time periods.

• In 2006, 30% compared with 28% in 2001 of NE tenants spent more than 30% of their income on shelter.
  
  o Brokenhead had the largest proportion of tenants (44%) spending more than 30% of their income on shelter in 2006. This increased from 29% in 2001.
  
  o Springfield had the lowest proportion of tenants (13%) spending more than 30% of their income on shelter. This decreased from 28% in 2001.

• In 2006, 10% compared with 11% in 2001 of owners spent more than 30% of their income on shelter.
  
  o Brokenhead had the largest percent of owners (13%) spending more than 30% of their income on shelter in 2006. This was a 6% increased compared with 2001.
  
  o Northern Remote had the lowest proportion of owners (6%) spending more than 30% of their income on shelter in 2006. This was a 11% decrease from 2001.

**SECTION V - HEALTH CARE SYSTEM**

• NE had the second fewest number of hospital beds per 1,000 population compared with other Manitoba regional health authorities (RHA’s) in 2005/06.

• Just over one half of NE residents requiring hospital admissions utilize NEHA hospitals. There was a slight increase from 39.3% (2000/01) to 40.1% (2005/06) in residents using Winnipeg and other RHA hospital beds (5.4% to 7.1%).

• In NE acute care facilities, between 20.8% and 24.6% of patient care days were designated as alternate level of care during 2008/09.
• **Hospital discharge** rates decreased between 2000/01 and 2005/06, but were significantly higher than Manitoba overall for both time periods.
  
  o *Northern Remote and Blue Water* had the highest number of hospital discharges; significantly higher than Manitoba during 2005/06 yet discharges had:
    - increased in *Northern Remote*
    - significantly decreased in *Blue Water*
    - significantly increased in *Iron Rose*

• The number of **emergency room visits** varied between hospitals; however the number of ER visits within each hospital did not fluctuate much over time (2006 and 2009).
  
  o *Pine Falls Hospital* had the highest volume of ER visits compared to other NE hospitals (April 2005 - March 31, 2009).

• **Dialysis use** at Pine Falls Health Complex showed a steady increase between 2007/08 and 2008/09.

• Although there was a decrease, residents had significantly more **short day** hospital stays compared to Manitoba between 2000/01 and 2005/06.

• There was a non significant decrease in the rate of residents having **long hospital stays** (14 days and over) from 554.9/1,000 (2000/01) to 503.8/1,000 (2005/06).
  
  o *Northern Remote and Blue Water* residents had the most short term and long term hospital stays during the same time.

• *Pine Falls Hospital* consistently had the highest number of **acute care admissions** compared to our other NE hospitals between April 2005 and March 31, 2009.

• All **ambulance** stations in NE have increased in **call volume** from 2005/06 to 2008/09. There were a total of 599 more trips in 2008/09 compared to the previous year.
  
  o *Pine Falls* ambulance station followed by Beausejour dispatched the highest number of calls.

• **NE** at 89.9/1,000 in 2005/06 had the fewest **number** of personal care home (PCH) **beds** for residents over 75 years compared with other Manitoba regional health authorities (RHAs).
• **Wait times for a PCH bed** during 2007/08 and 2008/09 increased in the following personal care homes (PCH): Sunnywood Manor, Kin Place, East Gate Lodge and Whitemouth.

• During 2004/05-2005/06 NE had the **longest median wait time for PCH admission** at 22.9 weeks per 1,000 residents over 75 years, compared to other RHAs and was significantly longer than Manitoba overall.

• Respite care admissions increased at Whitemouth PCH and decreased at East Gate Lodge and Kin Place PCH during 2008/09.

• In NE the percentage of residents who **visited a physician** at least once was the same in 2000/01 as 2005/06 at 81.2%. This was similar to Manitoba overall at 82.6% during the latter time.

• The average number of **ambulatory visits** to any physician during 2005/06 was 5 visits in 2005/06, an increase from 4.8 visits during 2000/01. Manitoba overall had 5 visits during the latter time period.

  o **Blue Water** had the highest number of visits at 6.7 in 2005/06 from 6.6.

  o **Iron Rose** had a significant increase in ambulatory visits at 5.4 in 2005/06 from 4.8.

  o **Springfield** had the second lowest number of visits at 4.3 in 2005/06 from 4.5.

  o **Northern Remote** had the lowest at 2.6 for both time periods.

• More residents **accessed general and family physicians in their own health districts** in 2005/06.

  o **Winnipeg River and Iron Rose** increased the number of visits to physicians in their own districts.

  o **Springfield** increased the number of visits in their district, although the majority of residents continue to access services in Winnipeg. In recent years physician numbers have increased in Springfield.

  o **Northern Remote** residents, who have traditionally accessed physicians in Winnipeg, have nearly doubled their visits from 28.6% in 2000/01, to 44.3% in 2005/06 within their district.
• Almost 70% of residents received **care from the same physician** in 2005/06.
  
  o *Springfield and Brokenhead* had significant increases in continuity of care.
  
  o *Brokenhead* had the highest rate of continuity of care at 87%.
  
  o *Blue Water* had a significant decrease and had the lowest rate of continuity of care at 44%.

• The percent of **staff receiving flu vaccines** from NEHA’s Public Health program was 31% (2003/04) compared to 33% (2008/09).

• **Ambulatory care sensitive** (ACS) condition hospital admissions significantly decreased from 15.4/1,000 (2000/01) to 12.7/1,000 (2005/06). These rates were significantly higher than Manitoba overall for both time periods.
  
  o *Northern Remote* had an increase in ACS conditions.
  
  o *Blue Water* had a significant decrease in ACS conditions, and was higher than all other districts for both time periods.
  
  o *Springfield* ACS conditions decreased and were the lowest of all districts.

• **Hysterectomy** rates were higher (4.5/1,000) compared with 4.0/1,000 in Manitoba between 2002/03 and 2006/07.
  
  o *Northern Remote* had the highest rate of hysterectomies compared with Manitoba, NE and our other districts at 9/1,000.

**Picture Credits:**


Pg. 2- Beausejour Grain Elevator. Source: Pat Hayes, September 2009.

Pg. 4- Dr. Zeiler and Nurse Rhea Prairie. Beausejour Hospital. Spring 2009. Picture taken by Pat Hayes.

Pg. 7- Flower created by Pat Hayes for CDPI PPT presentation. October 2009.


Pg. 10- Picture taken at Victoria Beach by Jim Hayes. Jim’ & Pat’s daughter with her dog Murphy. Email from Pat Hayes to S. Dick Entitled. September 28, 2009.


Pg. 16- Beausejour Ambulance in front of Beausejour Health Centre. Summer 2009.

The health of NE residents overall has shown an improvement evident by a decrease in both premature mortality rate (PMR) and infant mortality rate (IMR).

Our elderly population has increased since the last community health assessment. Population projections expect this increase to continue. Being that chronic diseases are more evident with age we expect that with the increase in the ‘baby boomers’ over the next couple of decades we will likely see a rise in chronic illnesses especially in the area of cardiovascular diseases.\(^1\)

The majority of our residents are reporting that they are in excellent or very good health. Life expectancy for females, has increased, new stroke events decreased in people over 40 years, as did heart attacks. Colorectal cancer appears to be decreasing as does fall injuries, however falls were the leading reason for injury hospitalization.

The two leading causes of death in NE were circulatory diseases, which appears to be decreasing and cancer where there was no change. Respiratory illnesses and asthma have not changed in NE but rates were quite variable among our health districts.

Skin, breast and cervical cancer increased in females, as did lung cancer in males. Osteoporosis increased in residents over 50 years old, diabetes in adults and children increased for both males and females, high blood pressure increased. The treatment prevalence for all mental health disorders increased except for anxiety disorder. The treatment for depression significantly increased, however suicide rates have not changed. One explanation for many of these increases could be better screening practices. Screening allows for early detection so that management and treatment of the illnesses can occur, with the goal to manage the illness and decrease complications.

Health status is influenced by income. Lower life expectancy, higher injury deaths, suicides, diabetes, heart attacks, strokes, substance abuse and schizophrenia occurred more in lower income areas of North Eastman. Household incomes are increasing.

We have highlighted the importance of determinants of health in our report. When reviewing the indicators, think of this concept and take into consideration all local factors. We encourage our planners, policy makers, clinicians and others who use these findings to review, plan and evaluate programs and services, thereby putting evidence into practice.
**Picture Credit**
Pg. 1- S. Lazaruk and Y. Lemire – were the two ladies in the picture at the Women’s Wellness Day event - May 2008. They both were volunteer hostesses for the day from the Pine Falls Women’s Health Auxiliary. Picture sent by S. Spindlar. September 2, 2009.

**REFERENCES**

CHA REPORT

APPENDICES

A. CHA Process
B. Community Consultation Methodology & Questions
   - Partner Interviews
   - Focus Group
   - Key Informant Interviews
   - Consent [Focus Group & Key Informant]
C. Acknowledgments
D. Acronyms & Definitions
E. CHA Indicators, Validation Survey & Diagram
   Location & Definitions
F. Validation Survey Results
This appendix outlines the scope of the CHA project. A detailed CHA Work Plan was developed to go with the Charter and will be used for evaluation purposes.

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>North Eastman Health Association Inc. Community Health Assessment 2008-2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Lead:</td>
<td>Medical Officer of Health</td>
</tr>
<tr>
<td>Project Coordinator:</td>
<td>Projects Coordinator</td>
</tr>
<tr>
<td>CHA Steering Committee:</td>
<td>Members – VP of Programs and Services, Medical Officer of Health (MOH), Projects Coordinator, Director Primary Health Care, CHA Assistant Ad hoc – CEO, Director Public Health, VP of Quality &amp; Organizational Development</td>
</tr>
<tr>
<td>CHA Advisory Committee:</td>
<td>-NEHA Evidence Based Research Practice Team will temporarily serve on this committee as well as other staff members.</td>
</tr>
<tr>
<td>CHA Advisory Committee Working Groups:</td>
<td>District Consultations - North Eastman Districts - Director of Primary Health Care and Wellness facilitators (5) as leads for each district. Includes members of the CHA Advisory Committee. First Nation Consultation Team – Director of Primary Health Care, Director of Public Health and other members. Awareness Team – Lead: Performance Measurement Coordinator, Wellness Facilitator for Beausejour/Brokenhead and Nurse Practitioner for Hollow Water.</td>
</tr>
<tr>
<td>Clerical Support:</td>
<td>-CHA Assistant – J. Walker (September 2008 to November 27, 2009)</td>
</tr>
<tr>
<td>CHA Review Committee:</td>
<td>-MOH, VP Programs and Services, VP of Quality &amp; Organizational Development, Performance Measurement Coordinator, Projects Coordinator, CHA Assistant.</td>
</tr>
</tbody>
</table>
| External Consultations: | -To facilitate formal community consultations:  
  • Lesley Anne Fuga of Corporate Magic to facilitate focus groups (September to December 2008)  
  • To independently review the CHA Draft Report (November 2009)  
  • Elaine Heinl – RN |
| PROJECT SCOPE | To conduct a community health assessment of residents who reside in the North Eastman region of Manitoba from April 2008 to January 31, 2010. |
| Project Objective: | North Eastman Health Association Inc, Community Health Assessment 2008-09 Report. This document describes the health status of North Eastman residents using at minimum 113 mandatory population health indicators. |
| Deliverable: | -The primary deliverable is a report that meets the prescribed parameters of MHHL’s Accountability Support Branch Policy entitled: Reporting on the Community Health Assessment. |
| Phase II - Project Activation: [April 1, 2008 to March 31, 2010] | |
### Phase III Milestones

**[February 2010 to June 2010]**

- Promote awareness of NEHA CHA Report 2008-2009 with NEHA board, partners, public, and staff.
- Revise Work Plan for use as a historical record of the process.
- Evaluate assessment process.

### Implications to the Organization

- Resources will be shared throughout the duration of the project.
- The results of the project information collected may require revisions to the organization’s strategic plan.

CHA Report’s intended use include: ¹

- To inform the health authorities Strategic Planning process
- To inform the health authorities communities and stakeholders
- To inform evidence – informed decision making in the health authorities
- To inform MHHL Strategic Planning Process
- To inform evidence – informed decision making in MHHL

### Summary Baseline Budget Requested

- The budget was received from Manitoba Health and Healthy Living on April 16, 2008.
- Total budget for NE was $146,916.00

### Limits & Exclusions

- The CHA project is limited to a CHA assessment and the development and distribution of the deliverable i.e. the NEHA CHA 2008-09 Report.

### Assumptions

- Budget is fixed and includes salary for a coordinator (.5 EFT) and assistant (.6 EFT).
- Funding is available for external and internal training.
- Timelines are fixed unless extensions are negotiated with MHHL.
- NEHA will provide in kind material and services for example:
  - Selected NEHA employees will be asked to contribute work hours to the project especially related to community consultation component of the project.
  - NEHA will prioritize this project

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¹ Manitoba Health (2009) Policy: Reporting on Community Health Assessment.. Accountability Support Branch / Administration, Finance and Accountability.
| Major Stakeholder Review | o NEHA will provide working space, office equipment to support the work e.g. computer, telephone, software, access to fleet car, etc.  
|                         | o NEHA will provide in house Information Technology (IT) support as required. |
|                         | • Review and feedback as the project proceeds will be coordinated through the CHA Steering Committee.  
|                         | • Manitoba Health Healthy Living (MHHL) Accountability Support Branch will receive from the Projects Coordinator a status report every three months. This report will be copied to the CHA Steering Committee.  
|                         | • Copies of the NEHA CHA Report 2008/09 will be given to MHHL Accountability Support Branch |
This appendix will discuss:
  o Participant summary
  o Partner interviews
  o Focus Groups
  o Key Informant interviews

**PARTICIPANT SUMMARY**

Table B-1 Summary of Participants in Consultations and Validation Survey during 2008/09 Community Health Assessment

<table>
<thead>
<tr>
<th>Partner Interviews May/June 2008</th>
<th>Focus Groups October/November 2008 &amp; April 2009</th>
<th>Key Informant Interviews October/November 2008</th>
<th>Sub-Total</th>
<th>Validation Surveys October 2009 *</th>
<th>TOTAL</th>
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<td>163</td>
<td>165</td>
<td>328</td>
</tr>
</tbody>
</table>

* - refer to Section VI- Validation Survey and Appendix F: Validation Survey Results
Source: S. Dick & J. Walker. CHA File 'All Consultation Numbers'

**PARTNER INTERVIEWS – June 2008**

There was a total of 47 single partner interviews and 5 partner groups interviewed (21), for a grand total of 68 people interviewed in June. Partners were asked specific questions to a variety of preliminary health indicators that Community Health Assessment (CHA) Advisory team members felt were relevant for the district where the partner worked. Partners were also given the opportunity to speak to any health issues they felt were important to them. This is represented in the ‘other’ response.

**Purpose – June 2008**

The purpose of consulting with partners was to:

1. review selected data to determine insights into the causes in order to determine focus group questions,
2. network about possible focus group target population and provide names of possible focus group participants,
3. inform partners about the CHA process.
Method

The CHA Advisory subcommittees consisted of a team representing our five districts and one team representing our Aboriginal partners. The teams were asked to identify and then contact partners in June 2008 in order to answer the questions described below.

Responses were collected by:
- Completing a written question usually through email.
- Telephone or in person interviews.

The following information provides a summary of partner feedback. Due to the numbers interviewed, this is not meant to be a representative sample of our partners.

Partner Interview Questions by CHA Advisory Team members (North Eastman Health Association (NEHA) staff)

1. We were reviewing some preliminary statistics for NE region and from this we noticed that …. [statistics chosen varied depending upon the secondary data results]

2. Do you have any idea/insight/understanding of why this might be?

3. How do you think we might get this information e.g. from whom, and what might be the questions we would ask to generate further understanding of this issue?

4. In closing….is there anything else that you would like to know about the health of your community?

Single Partner Interviews

Regional Partner from: (3)
- Self Help (MDAM)
- Self Help (MSS)
- Addictions Foundation of Manitoba (AFM)

District partners (44) - Brokenhead (8), Winnipeg River (7), Blue Water (11), Springfield (6), Iron Rose (8).

District partner occupations
Health Sector- Public Health nurses, dietitians, care team manager, nurse practitioner, mental health workers, physicians, services to seniors.

Other sectors - school counsellors, municipal counsellors, Culture Heritage & Tourism, Network for Change, other school staff, volunteer, RCMP, Kids Help Line, Wellness Coalition, receptionist, New Friends, Milner Ridge, recreation.
Table B-2 Partner Identification of Specific Themes or Topics  
Note: Responses were aggregated into districts where the partner worked.

<table>
<thead>
<tr>
<th>Core Themes</th>
<th>Regional</th>
<th>Blue Water</th>
<th>Iron Rose</th>
<th>Brokenhead</th>
<th>Springfield</th>
<th>Winnipeg River</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Mental Health</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>A - Depression</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>B - Suicide</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>C - Work Stress</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>D - Other</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2 Lifestyle</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>E Nutrition</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>F - Smoking</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>G - Physical Activity</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>H - Other</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3 Other Comments</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>I Chronic Disease</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>J Immunization</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>K Injury Prevention</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>L Ambulatory Visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

✓ = area of discussion and/or type of data reviewed.

Partner Group Interviews

There were five partner group interviews held in June 2008 from the following occupational categories:

- *Health Sector* – nurses from First Nation Health Centres or other health centres in the region.
- *Other Sectors* - Health centre staff, Aboriginal Leaders.

Table B-3 Partner Group Themes

<table>
<thead>
<tr>
<th>Topic Categories</th>
<th>Blue Water (4)</th>
<th>Blue Water (10)</th>
<th>Blue Water (2)</th>
<th>Blue Water (2)</th>
<th>Winnipeg River (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Health</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic disease</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life styles</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injury Prevention</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immunization</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Ambulatory Visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

( ) = number of participants in the group interview

✓ = area of discussion and/or type of data reviewed.
Partner responses provided the CHA Advisory members a place to begin when developing focus group questions. Mental health was a common theme raised. It was felt that this would be an area where we would like to have more information from our community members.

**FOCUS GROUPS – Fall 2008**

A Focus Group provides the ability to examine a specific topic, in this case mental health, from different perspectives in a safe environment. A Focus Group is meant to be informal in order to encourage open discussion among the participants. A Focus Group generally involves 6-12 people that broadly represent a particular segment of the population. Our Focus Groups were made up of a convenience sample of adults, of all ages and gender.

Table B-4 Focus Group Adult Participant Numbers

<table>
<thead>
<tr>
<th>Winnipeg River</th>
<th>Iron Rose</th>
<th>Brokenhead</th>
<th>Springfield</th>
<th>Bluewater</th>
<th>Francophone Blue Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>- One group</td>
<td>- One group &amp; 3 interviews</td>
<td>- Two groups</td>
<td>- Two groups</td>
<td>- Four groups</td>
<td>- One group in March 24, 2009.</td>
</tr>
<tr>
<td>n= 13</td>
<td>n= 11</td>
<td>n= 12</td>
<td>n= 12</td>
<td>n= 28</td>
<td>n= 10</td>
</tr>
<tr>
<td>M- 7 F- 6</td>
<td>M- 4, F- 7</td>
<td>M- 5, F- 7</td>
<td>M-7, F- 5</td>
<td>M- 7, F- 21</td>
<td>M- 1 F- 9</td>
</tr>
</tbody>
</table>

Total Focus Group Numbers (n) = 86 participants. Conducted September/October/November 2008 & March 2009.

Note: The Francophone Focus Group had different questions, but questions included mental health challenges/gaps in services.
M = males          F= females

The CHA project hired a professional researcher, Lesley Anne Fuga of Corporate Magic to facilitate the Focus Groups. The CHA Assistant was assigned the role of recorder. This worked well as it ensured consistency between Focus Groups.

**Methodology**

**Purpose**

To understand and explore the community’s perception of mental health issues in their community, contributing factors leading to or from mental health, and to determine if they are aware of current services or if they have any suggestions on other types of programs and supports which would enhance their own or their community’s mental health. These services could be preventive, supportive and or treatment related. This information would be used for program planning and to ensure appropriate delivery of services in order to meet the needs of NEHA’s client population.
Questions

Focus group questions were developed from the partner responses over the summer of 2008 in preparation for the fall community consultations. The CHA Steering and Advisory Teams were involved in the question development.

Recruitment Process

We asked the CHA Advisory Team members to use their community and partner contacts to generate a list of possible focus group participant names. The participants were contacted in June to determine interest and then again in September to confirm attendance at a session within their district.

Focus Group Limitations[1] [2009]

a) Recruitment biases - We excluded current NEHA staff, community leaders, or politicians. Adults were selected from CHA Advisory Team contacts and partners. An even gender was aimed for.

b) Limited number of participants - There was not a representative sample from the community. It is felt however that when groups expressed similar themes and concerns, that this was an indication of the themes importance.2

c) There is always the potential for participants to be influenced by the interaction among group members. This limitation was minimized by hiring an experienced and non NEHA staff facilitator and by the exclusion criteria described in point a) above.

d) Resource intensive - Focus groups are very time consuming. Recruiting participants was the most challenging part of the process.

Focus Group Analysis

Ms. Fuga used the written session notes and verbal recordings to develop themes. Specific focus group participant quotes were inserted into the report where a particular indicator or discussion matched the perceptions and comments. The district where the focus group was held was noted in brackets.
Focus Group Question Summary Results

Lesley Anne Fuga provided a regional roll up of each question posed to participants as follows:

**What does the term ‘mental health’ mean to you?**

 participants explored the concept of Mental Health (MH). Overall they felt that mental health is more than a medical definition. It is what you are doing, work, producing, feeling good about yourself… looking after our over all well-being through exercises, sharing our personal feelings….to a trusted person…giving back what you received on a daily basis.

**What are the types of things that influence a person’s mental health?**

Participants noted that external events have an impact, and may be beyond an individual’s control, and that some effects could be mitigated by individual choices. Individuals might have a certain degree of self-determination in their perspective and response to daily events. Having a purpose, staying positive, and contributing (giving to others) were frequently mentioned as benefiting one’s mental health.

**What programs or services are offered in your community that help to promote good mental health? What other services do you feel should exist, or things that you feel the community could do better, to help people to promote [good] mental health?**

 Communities can support good mental health by providing opportunities for physical and social activities, and offering services and an environment that contribute to individuals’ feelings of safety and security. Programs and services to turn to for help are important and participants noted that having a good health care system with follow-up supports, and good response from emergency services, help people to feel secure. Some participants also noted needs for creative and intellectual stimulation. Seniors’ groups, churches and Healthy Baby / Baby First programs were common to all districts and seen as necessary elements of community support. Alcohol Anonymous (AA) was another commonly mentioned support program.
Could you describe some particular issues you have might have related to ‘mental health’ in your community?

General community issues related to mental health included the lack of individual involvement in the community, reflected in difficulty finding volunteers and a lesser sense of community cohesion than in the past. Many participants specifically identified a lack of parental involvement, both at the community and at the family level. One key factor relates to the lack of program opportunities for youth and to the relative disengagement of youth in general. Child and youth related programming needs, as well as community dynamics were also discussed. Personal responsibility for change and improvement was highlighted.

Could you describe some particular concerns you have might have related to ‘mental health’ in your community?

In response to a query regarding mental health concerns, discussions revealed that the use, abuse and addiction to prescription medications, illicit drugs, alcohol and gaming are prevalent concerns in many NE communities. Co-occurrence with mental health disorders was noted and participants acknowledged that while this potential for an inter-relationship exists, it is not a certainty in all cases. While mentioned in every district excluding Iron Rose, participants did not discuss suicide in depth, although the groups equally recognized the potential for relationships between suicide and addictions, as well as between suicide and general mental health issues.

What barriers or obstacles do you think prevent people from accessing mental health services?

The most discussed barriers that limit access to programs and services that promote good mental health were cost, transportation availability and childcare issues, privacy, effects associated with the mental health condition or illness, and negative connotations associated with mental health (stigma). Participants also identified potential gender and age-related differences in whether one might seek assistance.
If you needed information or help with a mental health concern how would you get it (what would you do)?

Participants responded with a range of options for where to seek help for a mental health issue. All groups identified the family doctor as a source of support and/or referral.

All groups saw ways to augment programs and/or services to improve the health of their communities. They identified a need for expanded awareness of mental health issues, and of the community resources that are currently available. Participants stated it was important to proactively address the stigma by sharing information and normalizing discussions about mental health. Public education, programs targeted at healthcare and other professionals, and topical informative programs for youth would help ensure individuals could support each other or find help for themselves if ever needed. Specific suggestions to improve service delivery included a need for more counseling resources, more prevention programming, and a more holistic approach to mental health in general.

What are some things we can do to promote our own mental health?

When describing how to promote mental health, participants referred to all the elements they used to conceptualize mental health. They advised maintaining family, social and community connections, balancing work, home, creative and spiritual pursuits, getting adequate rest and a good diet. Exercise was listed as a factor in mental health and an important component of mental health maintenance, both as a substrate for good self esteem and as a body chemistry management tool to ward off depression. Avoiding drug and alcohol abuse and managing stress were also listed as important in a lifestyle that supports good mental health.

What is the connection between our lifestyle choices and activities and our mental health?

Participants linked the following factors with chronic disease: excessive drinking and smoking, poor nutrition, obesity, lack of exercise, exposure to chemicals / toxins / plastics, and stress. They recognized this list is not comprehensive and, while they repeated the need for individuals to take responsibility for their own health, they qualified this by stating there are factors beyond an individual’s control. Groups also discussed the stressful effects of chronic disease on mental health and on one’s family and the need for preventive measures and supports.
What lifestyle changes have you made in the past year or two to improve your health? What motivated the change(s)?

Several individuals reported they had undertaken lifestyle changes to improve their health, including increasing activity, reducing drinking and smoking, reducing stress, and eating better.

Some choices we make may prevent or limit the severity of certain disease. An example is immunizations. What are your thoughts on immunization?

Participants were generally supportive of standard childhood immunizations, but some had concerns and reported electing not to have their children immunized with certain vaccines due to the potential for negative side effects. Respondents felt the choice was for parents to make, and noted the need for credible information. Based on their own experience, and that of their friends and family, there was a mixed response to the influenza vaccine. The groups identified an opportunity to promote the associated beneficial reduction of chest and upper respiratory infections, of which many were unaware.

FRANCOPHONE FOCUS GROUP- APRIL 2009

Objectives

- “…identify the perceived health issues and needs of Francophones in Manitoba;
- come up with possible ways of addressing those issues and needs.”

Provincial Francophone Focus Group Demographics

- 20 focus groups met in eight regions in Manitoba from March 16 to May 6, 2009.
- A total of 169 people took part in the groups.
- Eight regional health authorities were included: Assiniboine, Central, Interlake, North Eastman, Parkland, South Eastman and Manitoba. Brandon was added to the project in March 2009.
Methodology

Francophone focus groups were provincially organized and implemented. For a complete description, methodology and results please refer to the report:


Table B-5 NE Francophone Focus Group Demographics

<table>
<thead>
<tr>
<th>North Eastman Francophone Focus Group</th>
<th>Demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date: April 7, 2009</td>
<td>Organized &amp; facilitated by:</td>
</tr>
<tr>
<td>Location: St. Georges</td>
<td>Francine Deroche, of Deroche Consulting in consultations from Francophone Community Consultation Working Group FCCWG of the CHA Network.</td>
</tr>
<tr>
<td>Participants in NE</td>
<td>Local recruiter, planner &amp; English translator of the French transcript:</td>
</tr>
<tr>
<td>-Adults from communities in Blue Water Health district with French as their first language.</td>
<td>Michelle Berthelette- NEHA French Language Services and Wellness Facilitator, Bluewater.</td>
</tr>
<tr>
<td>n=10 Male=1 Female=9</td>
<td></td>
</tr>
</tbody>
</table>

Data Limitations 5

- “…some groups and regions had a small number of participants, particularly those regions where a single focus group met (Assiniboine, Interlake, Parkland, North Eastman and Brandon). It was also difficult to get people out in some of the rural communities (particularly Lorette, Marchand, Ste-Geneviève, Richer and Otterburne in South Eastman, Powerview–Pine Falls and Albert Beach in North Eastman, and Brandon). The results in these cases must be interpreted with caution.”

- “…It should also be kept in mind that the purpose of the focus groups was to get participants’ perceptions… The research did not take into account other possible sources of information that could be used to determine and address the health needs and gaps of Francophone communities.”

- “The sampling-based recruitment process may have biased the participant profile... The research is limited to the designated regions and the Brandon region.”

- “…analyzing the emerging themes allowed for the data to be organized but could also limit the ways of interpreting the data.”
KEY INFORMANT INTERVIEWS- FALL 2009

It was important to include community members who were excluded from participating in our focus groups. The CHA District Team leads were given the opportunity to select community leaders who they felt would make a contribution to the consultation process as ‘key informants.’

Key informant questions and process were the same as the focus groups, except that the facilitation of the interview was done by a member of the CHA Advisory Committee.

Table B-6 Key informant Numbers & Occupation Categories

<table>
<thead>
<tr>
<th>Occupation Category</th>
<th>Blue Water</th>
<th>Brokenhead</th>
<th>Winnipeg River</th>
<th>Iron Rose</th>
<th>Springfield</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(4)</td>
<td>(2)</td>
<td>(1)</td>
<td>(1)</td>
<td>(1)</td>
</tr>
<tr>
<td>School Board</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counsellor</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>RCMP</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Long Time Residents</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Recreation Director</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Community Volunteer</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Health Centre Staff</td>
<td></td>
<td></td>
<td>Black River (2)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>- Group of 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n= 9</td>
</tr>
</tbody>
</table>

( ) = number of persons interviewed.

Data Limitations

a) There were a variety of interviewers, no consistency in interview technique or recording.

b) Convenience sample, not generalizable to the population.

c) Information was collated by the CHA Assistant who did not attend the interview.
Results

This is a summary, and not meant to be comprehensive of all responses. The most frequent points are noted.

What does the term ‘mental health’ mean to you?

Most participants felt that mental health referred to life balance, being adaptable and emotional and social wellbeing.

What types of things influence a person’s mental health?

There were many factors raised such as genetics, health status, economic situation, isolation, social supports, living conditions all contributed to positive or negative mental health.

What programs or services are available in your community that help to promote good mental health?

Communities can support good mental health by providing opportunities for physical and social activities. Most key informants were able to list a variety of programs available within their communities.

What other services are needed / improved on?

The one response that was raised by all key informants was the need to promote services that are available.

What barriers or obstacles do you think prevent people from accessing mental health services?

The two barriers consistently raised was the stigma around mental illness and a lack of confidentiality / privacy.
How would you get help for a mental health concern?

The doctor and health centre were the two sources most often mentioned. Others were internet, friends, and 24 hour help line.

What are some things we can do to promote our own mental health?

Thoughts raised that promote positive mental health were to socialize, have hobbies, participate in sports, volunteer and set goals.

What is the connection between our lifestyle choices and activities and our mental health?

Participants linked being physically active, eating a nutritious diet, and interacting with people as having a positive influence on mental health and wellbeing.

How does your community promote healthy lifestyle activities?

Two frequent responses were the local recreation facility and NEHA information sessions.

What might prevent people from participating?

Lack of transportation and cost of activities were the two predominant reasons.

Could you describe some particular issues or concerns you might have related to ‘mental health’ in your community?

The main issues raised were: lack of youth/single family social supports, lack of parenting skills, isolation and loneliness, addictions, poor doctor / patient relationships’, substance abuse.

How to improve the health of the community:

Constant [positive] messaging and availability of healthy food were mentioned.
There are a number of chronic diseases (CD) prevalent in the region. Do you think people associate CD’s with lifestyle choices people make?

Most felt that in general people did not especially youth.

What are your thoughts on immunization?

Most key informants felt that childhood immunizations were important. Not all thought ‘flu shots’ were important. Most felt that the flu clinics were well advertised.

What life style changes have you made in the past year or two to improve your health? What motivated the change(s)?

Smoking cessation, less alcohol use and improved nutrition and exercise were the main changes made.

Other comments raised suggestions:

- Need seniors housing.

  - Need employment for young people to keep them in the community.

  - Recognize that we can’t have full [health] services in all communities, but have a regional centre similar to Boundary Trails.

  - There are more bureaucratic layers in healthcare than people in the field.
CONSENT

Consent process was through a letter as which was handed out to the focus group participants or interviewee at the beginning of the session. At the focus groups the letter was read out loud to the group. During the interview, the person being interviewed read the letter and was invited to ask any questions. The participants were reminded that they could leave at any time.

Community Health Assessment 2008/2009

We thank you for agreeing to attend this focus group discussion or interview.

North Eastman Health Association Inc. (NEHA) has a moral and legal responsibility to respect and protect the privacy of clients, employees and those persons regularly associated with this organization. This focus group discussion or interview is being conducted within the ethical guidelines established in the Personal Health Information Act.

This session may be audio-recorded (if applicable) for administrative purposes. After the notes taken at this meeting have been verified, the tapes will be placed in secure storage for a period of 7 years, at which time they will be destroyed. Only the focus group facilitator or interviewer and recorder (if applicable) will have your name. Your last name will not be recorded on the audio-tape (if applicable) or notes. No permanent record will be kept of your participation in this discussion.

The focus group or interview results will be anonymous. Information will be summarized. Your name will not appear in any reports or publications. No information which could be used to identify you will be included in any report.

Focus Group letter only:
If you are interested in receiving a summary report of the focus group results, please call our North Eastman Health Association Inc. toll free number @ 1-877-753-2012 and leave your name and address with the receptionist. We expect the results will be collated by the spring of 2009.

Your participation in this process is entirely voluntary. By participating in this discussion you consent to the use of the information discussed today in accordance with the protection of your privacy as outlined above.

Please ask the focus group facilitator or interviewer any questions you may have.
REFERENCES


Dr. Bunmi Fatoye CHA Lead, Suzanne Dick, CHA Project Coordinator and Janice Walker, CHA Assistant wish to thank the following people who contributed to the 2008-2009 Community Health Assessment.

Without their time and support this project could not have been accomplished. If we inadvertently left anyone out we sincerely apologize; it was not intentional.

CHA TEAMS

Steering Committee
• Core Members - Judy Coleman, Dr. Bunmi Fatoye, Debbie Viel, Suzanne Dick & Janice Walker
• Ad Hoc Members- Jim Hayes, Bonnie Frith, Myrna Suski

Review Team
• Judy Coleman- VP Programs and Services
• Bonnie Frith – VP Quality & Organizational Development
• Dr. Bunmi Fatoye - Medical Officer of Health
• Pat Hayes- Performance Measurement Coordinator
• Janice Walker – CHA Project Assistant
• Suzanne Dick – Projects Coordinator

In addition:
• Amy Hnatishin- Nursing student assisted with cross checking information.
• Elaine Heinl – provided an independent report review.

CHA Advisory Team Core Team [includes CHA Lead, Coordinator and Assistant]

• Primary Health Care- Caroline McIntosh, Susan Spindler, Bonnie Stefansson, Kristen Ticknor, Dawn Sawatsky, Karen Omichinski, Michelle Berthelette, Marilyn Sitar
• Public Health - Kelly-Lynn Bekar, Wayne Desrosiers
• Acute Care - Brenda Neufeld, Glennda Gould, Bella Malo
• Long Term Care - Glen Didyk,
• Mental Health- John Hawranik, Dawn Sawatsky
• Quality & Organizational Development - Pat Hayes
• Home Care Program - Kin Chu, Susan Musey
• Emergency Medical Services - Jeff Bedosky

• Ad Hoc Members – Judy Coleman, Debbie Viel (PHC), Myrna Suski (PH)
CHA DOCUMENT Formatting

- Gertie Oliveira – Executive Assistant

CHA FOCUS GROUP CONSULTANT

- Lesley Ann Fuga- Corporate Magic

INFORMATION TECHNOLOGY

- Janice Sayer
- Kevin Lange
- Patty Charles
- Jeffrey Kong
- Mike Szalai

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- Brian Magnusson, Director of Human Resources
- Gisele Wilson, Executive Assistant
- Lydia McCoy, Executive Assistant
- Melanie Shumilak, Community Mental Health Worker
- Pat Porth, Community Resource Coordinator
- Carien Van Rensburg, Receptionist
- Cheryl Lidfors-Karklin, Human Resources Manager
- Cindee Bialek, CTM EGL
- Donna DeMarco, VP Finance & Support Services
- Earl Slimmon, Regional Diagnostics Manager
- Grace Honke, Services to Seniors
- Holly Parcey, SARAH Program
- Jay Ferens, Director, EMS Services
- Judy Fenez, Home Care Admin
- Karen Bernauer, Occupational Health Nurse
- Karen Steven-Chambers, Director, Home Care Services
- Kathy Hanna, Director, Financial Services
- Laura Gmiterek, Receptionist
- Lorraine Dent-Prychun, Director, Long Term Care Services
- Lynne Hallam, Health Information Services Manager
- Susan Borkowsky, RDP Administrative Assistant
- Val Orlick, Immunization Clerk
- Cheryl Smith, Palliative Care Coordinator
- Dee Rickner, Community Resource Coordinator
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• Furlon Barker
• Robert Carmichael
• Therese Conroy
• Steve Day
• Daniel Franklin
• Ian Goodall-George
• Oral Johnston
• Karen Kost
• Boyd Kramble
• Donna MacDonald
• Virginia Mathews
• Barbara Sabanski
• Harold Slaby
• Fran Thompson

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• Jack McRobie, Vice Chair
• Ruth Ferens
• Patricia Ledingham
• Lynn Montsion
• Lloyd Rattai
• David Roffey
• Sheila Sutyla
• Marilyn Zarecki

MANITOBA CENTRE FOR HEALTH POLICY
• Elaine Burland, MSc
• Randy Fransoo, PhD
• Patricia Martens, PhD
• Programmers

MHHL HEALTH INFORMATION MANAGEMENT
• Debbie Malazdrewicz and her staff
• Rachel McPherson, Statistical Analyst, Decision Support Services
• Marc Silvas
MHHL ACCOUNTABILITY SUPPORT BRANCH
• Lorraine Dacombe-Dewar
• Heather Sparling

CHAN PROVINCIAL NETWORK
• Colleagues at the Community Health Assessment Network (CHAN)

AROUND NORTH EASTMAN REGION
• Carol Findlay, Finance Officer, School District of Whiteshell
• Corrine Tetrault, Administration, Lac du Bonnet Senior School
• Darlene Lamoureux, Executive Assistant, Sunrise School Division
• Deb Sawka, Secretary, Whitemouth School, Sunrise School Division
• Diane Oertel, Environmental Operations, MB Conservation, Lac du Bonnet
• Diane Van Damme, Student Records, Springfield Collegiate, Sunrise School Division
• Ecole Communautaire Saint-Georges
• Felicia Morriseau, Secretary to the Chief Superintendent, Frontier School Division, Winnipeg
• Gail Davey, Lac du Bonnet & Area Foodbank
• Leanne Brackenreed, Counsellor, Manitoba Farm & Rural Stress Line.
• Lorri Beer, Springfield Foodbank, Anola
• Melanie Betsill, Drinking Water Officer, MB Water Stewardship
• Michelle Berthelette, Wings of Power, Pine Falls
• Pamela Selch, Ecole Edward Schreyer School, Sunrise School Division
• ShaunTosh, Public Works Department, RM of Springfield
• Sue Mackenzie, Beauséjour & Area Foodbank
• Wayne Omichinski, Public Works Supervisor, RM of Brokenhead
• Wendy Kozmak, Assistant Administrative Officer, RM of Whitemouth

OUT OF REGION
• Anna Pazdzierski, Nova House, Selkirk
• Cathy McKinley, IRHA Mental Health Crisis Services, Selkirk
• Child & Family Services, Winnipeg
• Heather Lewis, RCMP D Division, Winnipeg
• Khalida Hai-Santiago, DMD, Dental Consultant Environmental Health Branch Public Health Division, Winnipeg
• Martha Calden, RCMP MB East District, Selkirk
• Oliver Bernuetz, Information Specialist, C/MBSC, Winnipeg
APPENDIX D. ACRONYMS & DEFINITIONS

This appendix looks at:

- Acronyms
- Selected Definitions
  - RCMP detachment area and criminal codes
  - Active Offer referred to from the Francophone Focus Group
  - Census family – definition from Canadian Census, Statistics Canada
  - Incidence and Prevalence
  - NEHA financial statement indicator definitions
  - Health Canada Physical Activity Guideline
  - Relative cancer survival
- ICD 10- Categories and selected definitions

ACRONYMS

A  Appendix
ACSC  Ambulatory Care Sensitive Condition
ADAM  Anxiety Disorders Association of Manitoba
AFM  Addictions Foundation of Manitoba
AGM  Annual General Meeting
ALC  Alternate Level of Care
AMI  Acute Myocardial Infarction

BF  Breast Feeding
BMI  Body Mass Index

CAMIMH  Canadian Alliance on Mental Illness and Mental Health
CCHS  Canadian Community Health Survey
CHA  Community Health Assessment
CADEC  Clinic for Alcohol and Drug Exposed Children
CEO  Chief Executive Officer
CHAN  Community Health Assessment Network
CIHI  Canadian Institute for Health Information
CMHA  Canadian Mental Health Association
COPD  Chronic Obstructive Pulmonary Disease
C-section  Caesarean section

DEP  Diabetes Education Program
DER  Diabetes Education Resource
DHAC  District Health Advisory Council
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECD</td>
<td>Early Childhood Development Strategy</td>
</tr>
<tr>
<td>EDI</td>
<td>Early Development Instrument</td>
</tr>
<tr>
<td>EGL</td>
<td>East Gate Lodge</td>
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<tr>
<td>EMS</td>
<td>Emergency Medical Services</td>
</tr>
<tr>
<td>ER</td>
<td>Emergency Room</td>
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<tr>
<td>FASD</td>
<td>Fetal Alcohol Spectrum Disorder</td>
</tr>
<tr>
<td>FN</td>
<td>First Nation</td>
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<tr>
<td>IT</td>
<td>Information &amp; Technology</td>
</tr>
<tr>
<td>KKD</td>
<td>kilocalories per kilogram</td>
</tr>
<tr>
<td>LGD</td>
<td>Local Government District</td>
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<tr>
<td>LICO</td>
<td>Low income cut-off</td>
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<tr>
<td>LPN</td>
<td>Licensed Practical Nurse</td>
</tr>
<tr>
<td>LTC</td>
<td>Long Term Care</td>
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<tr>
<td>MB</td>
<td>Manitoba</td>
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<tr>
<td>MCHP</td>
<td>Manitoba Centre for Health Policy</td>
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<tr>
<td>MFRSL</td>
<td>Manitoba Farm &amp; Rural Stress Line</td>
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<tr>
<td>MHHL</td>
<td>Manitoba Health &amp; Healthy Living</td>
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<td>MHMIS</td>
<td>Mental Health Management Information System</td>
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<td>MHW</td>
<td>Mental Health Worker</td>
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<tr>
<td>MIMS</td>
<td>Manitoba Immunization Monitoring System</td>
</tr>
<tr>
<td>MI</td>
<td>Myocardial Infarction</td>
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<td>MRCC</td>
<td>Milner Ridge Correctional Centre</td>
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<td>MVA</td>
<td>motor vehicle accident</td>
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<td>MWS</td>
<td>Manitoba Water Stewardship</td>
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<td>NE</td>
<td>North Eastman</td>
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<td>NEHA</td>
<td>North Eastman Health Association Inc.</td>
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<td>NP</td>
<td>Nurse Practitioner</td>
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<td>NPTP</td>
<td>Northern Patients Transportation Program</td>
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<td>OPF</td>
<td>One Parent Family</td>
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<td>PAG</td>
<td>Physical Activity Guideline</td>
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<td>PCH</td>
<td>Personal Care Home</td>
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<tr>
<td>PHCN</td>
<td>Primary Health Care Nurse</td>
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<tr>
<td>PHIA</td>
<td>Personal Health Information Act</td>
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<tr>
<td>PHIN</td>
<td>Personal Health Information Number</td>
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<td>PHN</td>
<td>Public Health Nurse</td>
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<td>PMR</td>
<td>Premature Mortality Rate</td>
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<tr>
<td>Acronym</td>
<td>Definition</td>
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<tr>
<td>PWHCE</td>
<td>Prairie Women’s Health Centre of Excellence</td>
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<td>PYLL</td>
<td>Potential Years of Life Lost</td>
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<td>RCMP</td>
<td>Royal Canadian Mounted Police</td>
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<td>RHA</td>
<td>Regional Health Authority</td>
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<td>RM</td>
<td>Rural Municipality</td>
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<tr>
<td>RN</td>
<td>Registered Nurse</td>
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<tr>
<td>SGA</td>
<td>Small for Gestational Age</td>
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<tr>
<td>STI</td>
<td>Sexually Transmitted Infection</td>
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<tr>
<td>SSGL</td>
<td>Support to Seniors in Group Living</td>
</tr>
<tr>
<td>SSRI</td>
<td>Selective Serotonin Reuptake Inhibitor</td>
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<tr>
<td>VBAC</td>
<td>Vaginal birth after caesarean</td>
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<tr>
<td>VLT</td>
<td>Video Lottery Terminal</td>
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<tr>
<td>VP</td>
<td>Vice President</td>
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<td>WCB</td>
<td>Workers Compensation Board of Manitoba</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
DEFINITIONS


Data Limitations

- Reported by detachment offices and their boundaries do not follow our health district boundaries, so there may be under or over reporting.
- The figures used in this report are reported cases to the RCMP. This does not mean that for all the reported cases there was a person charged with the offense. Similarly some of the persons charged with the offense may have been cleared.
- Unlike the MCHP reports where the NE resident is a case, no matter where they received care, the RCMP crime stats report the case offense number. The person related to the event may or may not be a person who lives in the NE health district area.

RCMP Detachment Geographic Boundaries- These boundaries do not match with NE health districts.

Information came from the following sources:

- RCMP web site: www.rcmp-grc.gc.ca/mb
- H. Lewis, RCMP D Division emails to J Walker entitled Detachment Boundaries June 24, 2009

Lac du Bonnet Detachment

Geographic Area ~7,500 sq. km [Includes Blue Water, Winnipeg River & Iron Rose]

- Town Lac du Bonnet
- RM Lac du Bonnet
- RM of Alexander [portion only in NE]
- LGD Pinawa
- RM Whitemouth
- RM Reynolds [portion]
- Whiteshell & Nopiming Park [portions]

Powerview Detachment – Total

Geographic Area ~11,500 sq km- Includes Blue Water

- Powerview-Pine Falls
- RM Alexander [portion]
- Sagkeeng FN
- Black River FN
- Hollow Water FN
- Manigotagan, Seymourville
- Aghaming, Bissett
- Atikaki & Nopiming Park [portions]
- Lake Winnipeg [portion]
Northern Remote Detachments – Includes Northern Remote
• Berens River
• Bloodvein
• Little Grand Rapids
• Panguassi

Beausejour / Oakbank Detachment- Geographic Area - with Oakbank ~ 1,321 sq Km – Includes Springfield & Brokenhead.
Note: There are two offices in this division, one in Oakbank and one in Beausejour.
• RM Springfield
• Town of Beausejour
• RM Brokenhead
• RM St. Clements [portion is in NE]
• RM Alexander [portion]
• Birds Hill Park

Falcon Beach Detachment- [Includes Iron Rose & Winnipeg River]
• Falcon Beach
• West Hawk Lake
• Caddy Lake
• Star Lake
• Whiteshell Park (southern half is located in NE)
• East Braintree
• Prawda
• Spruce Siding
• Hadashville in RM Reynolds

Definitions of Offences Discussed in this Report:

The definitions come from the Criminal Code of Canada and the MB Highway Traffic Act. Specific sources are provided after the definition.

Traffic Accidents-Fatal & Non-Fatal – "accident" means an unplanned, unintended event that occurs suddenly, unexpectedly, and without actual premeditation upon the part of an insured……

(Includes a single vehicle accident, collision with another vehicle(s), and collision with an animal or a pedestrian..."vehicle" means any vehicle that is capable of being driven or drawn on roads by any means other than muscular power exclusively, but does not include any vehicle designed to run exclusively on rails. 1993, c. 16, s. 2; 1999, c. 33, s. 350.)
Off Road Vehicle Collisions Fatal & Non-Fatal – According to the *Manitoba Off-Road Vehicles Act* an ‘off-road vehicle’ means “…any wheeled or tracked motorized vehicle designed or adapted for cross-country travel on land, water, ice, snow, marsh, swamp land or other natural terrain and includes, but is not limited to,

(a) a snowmobile,
(b) an all-terrain vehicle,
(c) a mini-bike, dirt-bike and trail-bike,
(d) a miniature vehicle such as a dune or sport buggy,
(e) an off-road maintenance machine,
(f) an amphibious vehicle, and
(g) a four-wheel drive motor vehicle, motorcycle or snow vehicle that is being driven elsewhere than on a highway, whether or not it is registered under *The Drivers and Vehicles Act.*”  

Provincial Traffic Offences - Seatbelt offences as defined under the *Manitoba Highway Traffic Act*:  
Sec 186 (2) (3) (4) (6) (9) (10) (11)

“Seat belt required by driver

186(3) Subject to subsection (5), every person who drives on a highway a motor vehicle in which a seat belt assembly is provided for the driver shall wear a complete seat belt assembly in a properly adjusted and securely fastened manner; but where a seat belt assembly consists of a separate pelvic and torso restraint the driver may wear the pelvic restraint only.

Seat belt required by passenger

186(4) Subject to subsection (5), every person who is a passenger in a motor vehicle while it is being driven on a highway in which a seat belt assembly is provided for seating positions occupied by the passenger shall wear the complete seat belt assembly in a properly adjusted and securely fastened manner; but where a seat belt assembly consists of a separate pelvic and a torso restraint the person may wear the pelvic restraint only.

Child restraints required

186(9) No person shall operate, or permit the operation of, a motor vehicle on a highway unless every passenger in the vehicle who has not yet attained the age of 5 years and who is under 50 pounds in weight is properly secured in a restraining device of a kind prescribed in the regulations and the device is properly secured to the motor vehicle.”
Impaired Operation Related - According to the Criminal Code Impaired Driving Section # 253-

Operation while impaired includes:

“Every one commits an offence who operates a motor vehicle or vessel or operates or assists in the operation of an aircraft or of railway equipment or has the care or control of a motor vehicle, vessel, aircraft or railway equipment, whether it is in motion or not,

(a) while the person’s ability to operate the vehicle, vessel, aircraft or railway equipment is impaired by alcohol or a drug; or

(b) having consumed alcohol in such a quantity that the concentration in the person’s blood exceeds eighty milligrams of alcohol in one hundred millilitres of blood.

R.S., 1985, c. C-46, s. 253; R.S., 1985, c. 27 (1st Supp.), s. 36, c. 32 (4th Supp.), s. 59.” 5

Criminal Code of Canada 6

Dangerous Operation Motor Vehicle:

“Sec 249. (1) Every one commits an offence who operates

(a) a motor vehicle in a manner that is dangerous to the public, having regard to all the circumstances, including the nature, condition and use of the place at which the motor vehicle is being operated and the amount of traffic that at the time is or might reasonably be expected to be at that place;

(b) a vessel or any water skis, surf-board, water sled or other towed object on or over any of the internal waters of Canada or the territorial sea of Canada, in a manner that is dangerous to the public, having regard to all the circumstances, including the nature and condition of those waters or sea and the use that at the time is or might reasonably be expected to be made of those waters or sea;

(c) an aircraft in a manner that is dangerous to the public, having regard to all the circumstances, including the nature and condition of that aircraft or the place or air space in or through which the aircraft is operated; or

(d) railway equipment in a manner that is dangerous to the public, having regard to all the circumstances, including the nature and condition of the equipment or the place in or through which the equipment is operated.” 7
Drug Enforcement includes regulations under the Controlled Drugs and Substances Act regarding trafficking, production and possession of a controlled substance. Sec. 4, 5, 6, 7:

- ‘controlled substance’ means a substance included in Schedule I, II, III, IV or V;
- ‘possession’ means possession within the meaning of subsection 4(3) of the Criminal Code;
- ‘produce’ means, in respect of a substance included in any of Schedules I to IV, to obtain the substance by any method or process including
  (a) manufacturing, synthesizing or using any means of altering the chemical or physical properties of the substance, or
  (b) cultivating, propagating or harvesting the substance or any living thing from which the substance may be extracted or otherwise obtained, and includes offer to produce;
- ‘traffic’ means, in respect of a substance included in any of Schedules I to IV,
  (a) to sell, administer, give, transfer, transport, send or deliver the substance,
  (b) to sell an authorization to obtain the substance, or
  (c) to offer to do anything mentioned in paragraph (a) or (b), otherwise than under the authority of the regulations."

Crimes Against the Person include:

Sexual Offences, Robbery, Criminal Harassment, Uttering Threats, Assault, Aggravated Assault, Assault w/ Weapon or Causing Bodily Harm, Kidnapping, Hostage, Abduction, Forcible Confinement, Manslaughter, Murder 2nd Degree.

Under the Criminal Code Offensive Weapons charges include:

- Using a Firearm in the Commission of an Offense
  “85.(1) Every person commits an offence who uses a firearm
  (a) while committing an indictable offence, other than an offence under section 220 (criminal negligence causing death), 236 (manslaughter), 239 (attempted murder), 244 (discharging firearm with intent), 272 (sexual assault with a weapon) or 273 (aggravated sexual assault), subsection 279(1) (kidnapping) or section 279.1 (hostage-taking), 344 (robbery) or 346 (extortion),
  (b) while attempting to commit an indictable offence, or
  (c) during flight after committing or attempting to commit an indictable offence, whether or not the person causes or means to cause bodily harm to any person as a result of using the firearm.”
Careless Use of a Firearm

“ 86.1) Every person commits an offence who, without lawful excuse, uses, carries, handles, ships, transports or stores a firearm, a prohibited weapon, a restricted weapon, a prohibited device or any ammunition or prohibited ammunition in a careless manner or without reasonable precautions for the safety of other persons.

Pointing a Firearm

87. (1) Every person commits an offence who, without lawful excuse, points a firearm at another person, whether the firearm is loaded or unloaded.

Possession of Weapon for Dangerous Purpose

88.(1) Every person commits an offence who carries or possesses a weapon, an imitation of a weapon, a prohibited device or any ammunition or prohibited ammunition for a purpose dangerous to the public peace or for the purpose of committing an offence.”

ACTIVE OFFER in relation to Francophone services

The active offer of bilingual services refers to:

- delivery of equal quality service in the official language of the client's choice
- delivery of the service in a manner that makes the service readily apparent, easily available and accessible to the client
- delivery of a comparable service in both official languages for all oral, written or electronic communication relating to the service involved.

Census 2006 Family

Census family is defined as a married couple and the children, if any, of either or both spouses; a couple living common law and the children, if any, of either or both partners; or, a lone parent of any marital status with at least one child living in the same dwelling and that child or those children. All members of a particular census family live in the same dwelling. A couple may be of opposite or same sex. Children may be children by birth, marriage or adoption regardless of their age or marital status as long as they live in the dwelling and do not have their own spouse or child living in the dwelling.

Grandchildren living with their grandparent(s) but with no parents present also constitute a census family.

Incidence

"Incidence is defined as the number of new cases detected in the population at risk for the disease during a specific period."

Prevalence

"Prevalence is the total number of people known to be living with a disease at any time during a specific period. It provides an estimate of the importance and burden of disease at a given time."
Census 2006: Household Type

Category to which a person living alone or a group of persons occupying the same dwelling belong. There are two categories: non-family households and family households.

A non-family household consists either of one person living alone or of two or more persons who share a dwelling, but do not constitute a family.

Family households are divided into two subcategories: one-family households and multiple-family households.

A one-family household consists of a single family (e.g., a couple with or without children). A multiple-family household is made up of two or more families occupying the same dwelling.

Canada's Physical Activity Guide (PAG)

The researchers used Canada's Physical Activity Guide (PAG) as a reference when determining activity levels e.g. How much physical activity participants had in the past week and what type, length of time performed and level of intensity.

As with adults PAG is the accepted physical activity guide for children, however a minimum amount of physical activity for youth is not defined, so researchers included an additional measure called KKD-kilocalories (an energy measure) per kilogram (body weight) per day. Guidelines recommend at least 6 KKD or 45 minutes of vigorous activity each day. Similar questions were asked e.g. how much physical activity youth had in past week, what type, length of time performed and intensity.

NEHA Statistical Reports Definitions From Financial Report

- **Active cases** - refers to the total number of cases open including new cases and cases carried forward from previous months/years.
- **Open cases** refers to the number of cases opened.
- **Units of services** – diagnostic department and dietitians categorize one unit = one minute, however in other programs it may mean one unit = 1 hour of service.
- **Direct contacts** – may refer to contact with an individual, family, group or community. The specific contact is not usually specified.

Relative Cancer Survival

Relative cancer survival compares the survival experience of individuals with cancer to individuals without cancer. The formula:

\[
\text{Ratio of the actual survival of the cancer cases} / \text{Matched age, sex and year specific probability to survive in the general population [without cancer]}
\]

The ratio percent is the relative survival.
When a health condition is classified under a specific category, the reader is able to determine the diseases that the classification refers to. Only subcategories are given if it is ambiguous in the chapter title.

Table D-2 International Classification of Diseases- 10th Revision

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Chapter List</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>A00-B99</td>
<td><em>Certain infectious and parasitic diseases</em></td>
</tr>
<tr>
<td>ii</td>
<td>C00-D48</td>
<td><em>Neoplasms</em></td>
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<tr>
<td></td>
<td></td>
<td><em>-malignant (cancerous) &amp; benign</em></td>
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<tr>
<td>III</td>
<td>D50-D89</td>
<td><em>Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism</em></td>
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<td>IV</td>
<td>E00-E90</td>
<td><em>Endocrine, nutritional and metabolic diseases e.g.</em></td>
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<tr>
<td></td>
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<td><em>-obesity</em></td>
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<td><em>-diabetes</em></td>
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<td><em>-malnutrition</em></td>
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<td>V</td>
<td>F00-F99</td>
<td><em>Mental &amp; behavioural disorders e.g.</em></td>
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<td></td>
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<td><em>- Organic, including symptomatic, mental disorders</em></td>
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<td><em>- Mental and behavioural disorders due to psychoactive substance use</em></td>
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<td></td>
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<td><em>- Schizophrenia, schizotypal and delusional disorders</em></td>
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<td><em>- Mood [affective] disorders</em></td>
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<td><em>- Neurotic, stress-related and somatoform disorders</em></td>
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<td><em>- Disorders of adult personality and behaviour</em></td>
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<td><em>- Mental retardation</em></td>
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<td><em>- Disorders of psychological development</em></td>
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<td></td>
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<td><em>- Behavioural and emotional disorders with onset usually occurring in childhood and adolescence</em></td>
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<td><em>- Unspecified mental disorder</em></td>
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<td>VI</td>
<td>G00-G99</td>
<td><em>Diseases of the nervous system</em></td>
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<tr>
<td>VII</td>
<td>H00-H59</td>
<td><em>Diseases of the eye and adnexa</em></td>
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<td>H60-H95</td>
<td><em>Diseases of the ear and mastoid process</em></td>
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<td>IX</td>
<td>I00-I99</td>
<td><em>Diseases of the circulatory system e.g.</em></td>
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<td><em>- Acute rheumatic fever</em></td>
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<td><em>- Chronic rheumatic heart diseases</em></td>
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<td>X</td>
<td>J00-J99</td>
<td><em>Diseases of the respiratory system e.g.</em></td>
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<td><em>- Acute upper respiratory infections</em></td>
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<td><em>- Influenza and pneumonia</em></td>
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<td><em>- Other acute lower respiratory infections</em></td>
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<td>K00-K93</td>
<td><em>Diseases of the digestive system</em></td>
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<td>XII</td>
<td>L00-L99</td>
<td>Diseases of the skin and subcutaneous tissue</td>
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<td>Diseases of the musculoskeletal system and connective tissue</td>
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<td>N00-N99</td>
<td>Diseases of the genitourinary system</td>
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<td>O00-O99</td>
<td>Pregnancy, childbirth and the puerperium</td>
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<td>XVI</td>
<td>P00-P96</td>
<td>Certain conditions originating in the perinatal period</td>
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<td>XVII</td>
<td>Q00-Q99</td>
<td>Congenital malformations, deformations and chromosomal abnormalities</td>
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<td>XVIII</td>
<td>R00-R99</td>
<td>Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified</td>
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<td>XIX</td>
<td>S00-T98</td>
<td>Injury, poisoning and certain other consequences of external causes e.g.</td>
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<td>- Injuries to various body areas e.g. head, neck, thorax, abdomen etc.</td>
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<td>- Injuries involving multiple body regions</td>
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<td>- Injuries to unspecified part of trunk, limb or body region</td>
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<td>- Effects of foreign body entering through natural orifice</td>
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<td>- Burns and corrosions</td>
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<td>- Poisoning by drugs, medicaments and biological substances</td>
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<td>- Toxic effects of substances chiefly nonmedicinal as to source</td>
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<td>- Other and unspecified effects of external causes</td>
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<td>- Sequelae of injuries, of poisoning and of other consequences of external causes</td>
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<td>XX</td>
<td>V01-X59</td>
<td>External causes of morbidity and mortality e.g.</td>
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<td>V01-V99</td>
<td>Accidents e.g.</td>
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<td>- Transport accidents e.g. car, bus, bicycle,</td>
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<td>- Other land or water transport accidents</td>
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<td>Other external causes of accidental injury e.g.</td>
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<td>- Accidental drowning and submersion</td>
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<td>- Exposure to electric current, radiation and extreme ambient air temperature and pressure</td>
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<td>- Exposure to smoke, fire and flames</td>
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<td>- Exposure to forces of nature</td>
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<td>X60-X84</td>
<td>X60-X84 -Intentional Self Harm .</td>
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<td>X85-Y09- Assault</td>
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<td>X35-Y36- Legal intervention and operations of war</td>
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<td>Y40-Y84- Complications of medical and surgical care</td>
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<td>XXI</td>
<td>Z00-Z99</td>
<td>Factors influencing health status and contact with health services e.g.</td>
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<td>- Persons encountering health services for examination and investigation</td>
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<td>- Persons with potential health hazards related to communicable diseases</td>
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|         |       | - Persons encountering health services for specific procedures and health care  
|         |       | - Persons with potential health hazards related to family and personal history and  
|         |       |   certain conditions influencing health status  
| XXII    | U00-U99 | *Codes for Special Purposes e.g.*  
|         |       |   - New diseases  
|         |       |   - Bacterial agents resistant to antibiotics  

[http://apps.who.int/classifications/apps/icd/icd10online/](http://apps.who.int/classifications/apps/icd/icd10online/)  
Accessed: October 8, 2009
REFERENCES

### APPENDIX E. CHA Indicators, Validation Survey and Diagram Location & Definitions

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<tr>
<th>Category</th>
<th>Ref. No. to MB CHA Core Indicators</th>
<th>Core vs Non-Core vs Other</th>
<th>Figure, Table, Survey, or Diagram Name</th>
<th>Location Page</th>
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<td><strong>B. Functional Status</strong></td>
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<td>B-2 Core</td>
<td></td>
<td>Self-rated Health</td>
<td>Pg. 3-2</td>
<td>Percent (%) of the population age 12 &amp; over who report that their health is excellent, very good, good, or fair/poor.</td>
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<td>B-3 Core</td>
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<td>SF36 - Functional Physical Health</td>
<td>Pg. 3-2</td>
<td>Percent (%) of the population age 12 and over with a score of 100% on the Physical Functioning scale of the SF36.</td>
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<td>B-4 Core</td>
<td></td>
<td>SF36 - Mental Health Scale &amp; Perceived Life Stress</td>
<td>Pg. 3-33 &amp; 3-34</td>
<td>The general mental health scale is a derived measure from the SF-36 questionnaire, addressing overall mental health on a scale of 0 to 100 (higher is better). Based on the distribution of scores, three groups were created with approximately one third of respondents in each group: Low (0-79), Medium (80-91) and High (92-100). The proportion of the respondents in each group is reported.</td>
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<td>Self-rated Life Satisfaction</td>
<td>Pg. 3-34</td>
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<td><strong>C. Health / Social Conditions</strong></td>
<td>Non-Core</td>
<td>High Birth Weight</td>
<td>Pg. 4-5-3</td>
<td>The percentage of live infants born weighing more than 4000 grams to the number of births (birth weight known and greater than 500 grams).</td>
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<tr>
<td>Non-Core</td>
<td>Low Birth Weight</td>
<td>Pg. 4-5-3</td>
<td>The percentage of live infants born weighing less than 2500 grams to the number of births (birth weight known and greater than 500 grams).</td>
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<td>Other</td>
<td>Live Births</td>
<td>Pg. 4-5-1</td>
<td>The live birth rate per 1,000 population</td>
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<td>C-4 Core</td>
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<td>Preterm Birth Rate</td>
<td>Pg. 4-5-2</td>
<td>The number of live born infants prior to 37 weeks gestation expressed as a proportion of all live births.</td>
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<td>C-6 Core</td>
<td></td>
<td>Arthritis Treatment Prevalence</td>
<td>Pg. 3-11</td>
<td>The percentage of residents aged 19 or older diagnosed with arthritis (osteo or rheumatoid) using a combination of data in physician visits, hospitalizations, and prescription drugs.</td>
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<td>C-7 Core</td>
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<td>Osteoporosis</td>
<td>Pg. 3-12</td>
<td>The percentage of residents aged 19 or older diagnosed with osteoporosis.</td>
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<td>Asthma Prevalence</td>
<td>Pg. 3-16 &amp; 3-17</td>
<td>The number of individuals who had been diagnosed by a health professional as having asthma within a 2 year window, expressed as a rate per 1000.</td>
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<td>C-9 Core</td>
<td></td>
<td>Total Respiratory Morbidity</td>
<td>Pg. 3-15</td>
<td>The percentage of persons having at least one physician visit or hospitalization for a respiratory disease within a two-year period.</td>
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<td>C-10 Core</td>
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<td>Cancer Incidence</td>
<td>Pg. 3-7 &amp; 3-8</td>
<td>Age standardized rate and crude rate of new sites of cancer (malignant neoplasms) per 100,000 population: for all cancers, all new sites of melanoma, colorectal, breast, cervical, prostate, and lung cancer.</td>
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<td>Non-Core</td>
<td>Cancer Prevalence</td>
<td>Pg. 3-6</td>
<td>Annual age standardized rate of individuals who have ever been diagnosed with cancer and are still alive in 2000 to 2005. Included for: all cancers, melanoma, colorectal, breast, cervical, prostate, and lung cancer.</td>
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<td>Breast &amp; Cervical &amp; prostate cancer incidence</td>
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<td>Treatment Prevalence for: chronic renal disease</td>
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<td>D. Mortality</td>
<td>D-2</td>
<td>Core</td>
<td>Infant Mortality</td>
<td>Pg. 4-5-4</td>
<td>(a) Ratio of deaths among infants under 1 year old to the number of live births, for a given period of time (excludes stillbirths and infants less than 500 grams or 22 weeks of gestation). (b) Rate of stillbirths (number of stillbirths divided by total number of births).</td>
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<td>Other</td>
<td>Top 3 Causes of Infant Mortality- Manitoba</td>
<td>Pg. 4-5-4</td>
<td>The top 7 causes of deaths among infants under 1 year old, reported as a percentage of all infant deaths, by aggregate area (Rural South, Mid, North, Brandon, Winnipeg, Manitoba).</td>
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<td>Other</td>
<td>Child Mortality</td>
<td>Pg. 4-5-4</td>
<td>Ratio of deaths among children aged 1 to 19 years to the total number of children, for a given period of time.</td>
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<td>Non-Core</td>
<td>Top 4 Causes of Child Mortality- Manitoba</td>
<td>Pg. 4-5-4</td>
<td>Number of deaths for the 5 most deadly cancer categories per year. Includes lung, colorectal, prostate, pancreas, bladder and other.</td>
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<td>Non-Core</td>
<td>Injury Mortality Rates</td>
<td>Pg. 3-27, 3-31, 3-32</td>
<td>The number of deaths due to injury per 1000 residents per year, based on Vital Statistics death codes.</td>
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<td>Injury Causes of Hospitalization- MB &amp; NE</td>
<td>Pg. 3-23, 3-24</td>
<td>The top 10 causes of hospitalization due to injury, reported as a percentage of all injuries, by aggregate area (South, Mid, North, Brandon, Winnipeg most healthy, Winnipeg average health, Winnipeg least healthy, Manitoba).</td>
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<td>Causes of Death due to Injury</td>
<td>Pg. 3-2, 3-30, 3-32</td>
<td>The causes of hospitalization and death due to injury, reported as a percentage of injuries within an aggregate area (South, Mid, North, Brandon, Winnipeg most healthy, Winnipeg average health, Winnipeg least healthy, Manitoba).</td>
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<td>Non-Core</td>
<td>Unintentional Injury Deaths</td>
<td>Pg. 3-28</td>
<td>Age adjusted rate of death from unintentional injuries per 100,000 population. Unintentional (“accidental”) injuries include injuries due to causes such as motor vehicle collisions, falls, drowning, burns and poisoning, but not medical misadventures/complication.</td>
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<td>D-9</td>
<td>Core</td>
<td>Suicide Rates</td>
<td>Pg. 3-40</td>
<td>The annual rate of deaths due to suicide, per 100,000 residents aged 10 and older. The data are by calendar year rather than fiscal year. Suicide is the act of intentionally killing oneself through self-inflicted injury (e.g. cutting or poisoning).</td>
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<td>Other</td>
<td>PYLL Suicide</td>
<td>Pg. 3-39</td>
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<td>D-11</td>
<td>Core</td>
<td>Life Expectancy</td>
<td>Pg. 3-3</td>
<td>The number of years a person would be expected to live, starting from birth (the life expectancy at birth), on the basis of the mortality statistics for a given observation period, typically a calendar year.</td>
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<td>D-12</td>
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<td>Top 5 causes of Mortality</td>
<td>Pg. 3-5</td>
<td>Percentage of deaths represented by the five most prevalent causes.</td>
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<td>RCMP- MVA Accidents &amp; Deaths &amp; Off Road Injury &amp; Deaths</td>
<td>Pg. 3-31</td>
<td>See Appendix D for definition.</td>
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<td>Non-Core</td>
<td>Pg. 3-3</td>
<td>Core Premature Mortality Rates</td>
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<td>Annual number of deaths occurring before the age of 75 per 1,000 population for individuals under age 75, which is adjusted to a reference (or standard) population of individuals under 75 years of age.</td>
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<td>Non-Core</td>
<td>Pg. 3-3</td>
<td>Non-Core Top 10 causes of premature mortality</td>
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<td>Crude annual proportion (%) of premature deaths for the 10 most prevalent ICD-9 and ICD-10 code groupings for cause of death, for aggregate areas: South and Brandon, Winnipeg, Mid, North, Manitoba, Public Trustee.</td>
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| Non-Core | Pg. 3-22 | Mortality Rate Comparisons of those with and without:  
- hypertension  
- total respiratory morbidity (TRM)  
- diabetes  
- cumulative mental illness (CMI) |
| Non-Core | Pg. 3-39 | Other  
- hypertension  
- total respiratory morbidity (TRM)  
- diabetes  
- cumulative mental illness (CMI) |
| Non-Core | Pg. 3-40 | Non-Core Potential Years of Life Lost (PYLL) due to all deaths |
|          |       | Potential years of life lost (PYLL) is the number of years of life “lost” by sex, when a person dies “prematurely” before age 75. A person dying at age 25, for example, has lost 50 years of life. |
| Non-Core | Pg. 3-40 | All Circulatory Disease Deaths Potential Years of Life Lost (PYLL) |
|          |       | Potential years of life lost (PYLL) for all circulatory disease deaths, is the number of years of life “lost” when a person dies “prematurely” from circulatory disease before age 75. |
| Non-Core | Pg. 3-40 | All Respiratory Disease Deaths Potential Years of Life Lost (PYLL) |
|          |       | Potential years of life lost (PYLL) for all respiratory disease deaths, is the number of years of life “lost” when a person dies “prematurely” from any respiratory disease before age 75. |
| Non-Core | Pg. 3-40 | Unintentional Injury Deaths Potential Years of Life Lost (PYLL) |
|          |       | Potential years of life lost (PYLL) for all unintentional injuries, is the number of years of life “lost” when a person dies “prematurely” from unintentional injuries before age 75. |
| Non-Core | Pg. 3-40 | Suicide Potential Years of Life Lost (PYLL) |
|          |       | Potential years of life lost (PYLL) due to suicides, is the number of years of life “lost” when a person dies “prematurely” from suicide, before age 75. |
| Core     | Pg. 4-1-3 | Body Mass Index - Adult & Child |
|          |       | Proportion of the population aged 18 and older, reported by three Body Mass Index groupings: underweight/normal, overweight, and obese. Body mass index (BMI-International standard), which relates weight to height, is a common method of determining if an individual’s weight is in a healthy range based on their height. BMI is calculated as follows: weight in kilograms divided by height in meters squared. The index is: under 18.5 (underweight), 18.5-24.9 (acceptable weight), 25-29.9 (overweight) and 30 or higher (obese). |
| Core     | Pg. 4-1-2 | Nutrition: Fruit and Vegetable Consumption |
|          |       | The proportion of the population aged 12 and over who reported that they consumed on average 5 or more servings of fruit and vegetables per day. |
| Other    | Pg. 4-1-9 | Other  
- Adolescent Drinking Rates  
- Frequency of Binge Drinking |
|          |       | Other  
- Adolescent Drinking Rates  
- Frequency of Binge Drinking |

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- CHA Indicators, Validation Survey, and Diagram Location & Definitions  
- E-1. Health Behaviours  
- Dimension: Determinants of Health and Social Well Being  
- E-2. Core  
- Core Body Mass Index - Adult & Child |
| Core     | Pg. 4-1-3 | D-14  
- Core Mortality Rates  
- Mortality Rate Comparisons of those with and without:  
- hypertension  
- total respiratory morbidity (TRM)  
- diabetes  
- cumulative mental illness (CMI) |
| Other    | Pg. 4-1-9 | E. Health Behaviours  
- Dimension: Determinants of Health and Social Well Being  
- Non-Core Potential Years of Life Lost (PYLL) due to all deaths |
|          |       | Non-Core  
- Top 10 causes of premature mortality |

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<td>Smoking</td>
<td>Pg. 4-1-5, 4-1-6, 4-1-7</td>
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<td>The percentage (%) of the population aged 12 and over who reported being either a current smoker (daily or occasional) or a former smoker (former, former daily, former occasional) or a non-smoker (never smoked).</td>
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<td>Physical Activity (PAG)</td>
<td>Pg. 4-1-4</td>
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<td>Total Physical Activity</td>
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<td>Pg. 4-1-15</td>
<td>The percentage of women who do not meet Canada’s Physical Activity Guide (PAG), by RHA.</td>
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<td>RCMP-SEAT Belt use, Drug enforcement offences, impaired operation vehicle, dangerous operation.</td>
<td>Pg. 4-1-11, 4-1-13, 4-1-14,</td>
<td>See Appendix D for definition.</td>
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<td>Breastfeeding Practices (initiation)</td>
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<td>Pg. 4-5-5</td>
<td>Proportion of women who deliver in hospital &amp; initiate breastfeeding (either breast only or breast and bottle) while in hospital.</td>
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<td>Core</td>
<td>Childhood Immunization Rates: completed 2-year olds -7 year olds</td>
<td>Pg. 4-5-5, 4-5-6, 4-5-7</td>
<td>Crude proportion of children who had complete immunization schedules for DTPa/Hib, Diphtheria, Polio, Haemophilus influenza B immunization rates, as of their first, second and seventh birthdays, respectively.</td>
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<td>E-9</td>
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<td>Adult Influenza Immunization Rates</td>
<td>Pg. 4-1-17</td>
<td>Percent (%) of the population aged 65 years &amp; older (including those in PCH), who were immunized for influenza (received a flu shot).</td>
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<td>E-10</td>
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<td>Adult Pneumococcal Immunization</td>
<td>Pg. 4-1-17</td>
<td>Cumulative percentage (%) of the regional population aged 65 years and older, who were immunized for pneumococcal disease.</td>
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<td>Reproductive Health 15-19 years: sexual activity</td>
<td>Pg. 4-1-14</td>
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<td>Percentage of teens 15 to 19 who responded on CCHS that they were/had been sexually active, and average age of first sexual intercourse.</td>
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<td>Sexually Transmitted Infections: Chlamydia</td>
<td>Pg. 4-1-14</td>
<td>Number of cases of the notifiable sexually transmitted infection (STI) Chlamydia trachomatis per population per year. A &quot;case&quot; of Chlamydia is defined as an episode of genital, rectal or anopharyngeal infection, laboratory-confirmed to be C. trachomatis.</td>
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<td>E-14</td>
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<td>Sexually Transmitted Infections: Gonorrhea</td>
<td>Pg. 4-1-14</td>
<td>Number of cases of the notifiable sexually transmitted infection (STI) Gonorrhea per population per year.</td>
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<td>E-15</td>
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<td>Sexually Transmitted Infections: HIV</td>
<td>Pg. 4-1-15</td>
<td>Number of new laboratory-confirmed infections with HIV per 1,000 population per year. A &quot;case&quot; of new HIV infection is defined as a positive test with a unique code that has not been previously associated with a positive test in Manitoba.</td>
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<td>Breast Cancer Screening (Mammography)</td>
<td>Pg. 4-1-18</td>
<td>Rate per 1,000 women in Manitoba aged 50 to 69, receiving at least one mammogram in two years, screened by PHA of residence.</td>
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<td>E-17</td>
<td>Core</td>
<td>Cervical Cancer Screening (PAP Smears)</td>
<td>Pg. 4-1-19</td>
<td>Rate per 1,000 women in Manitoba aged 18 to 69 with one or more PAP smears in a 3 year time period, by PHA of residence.</td>
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<td>Sexually Transmitted Infections by PH Program</td>
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<td>Breast screening participation</td>
<td>Pg. 4-1-18</td>
<td>Women ages 50-59 years.</td>
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<td>Anti-depressant use</td>
<td>Pg. 3-41</td>
<td>The percent (%) of residents receiving two or more prescriptions for antidepressants in a fiscal year.</td>
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<td>F-3 Income Inequality: Median Income of Individuals</td>
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**Definitions**

- **Core** indicators are those that are directly related to the CHA's mission and objectives.
- **Non-Core** indicators are those that are not directly related to the CHA's mission and objectives but may still be useful for analysis.
- **Other** indicators are those that are not related to the CHA's mission and objectives.

**Location**

- **Page** refers to the page number in the document where the definition is located.
- **Figure/Table, Survey, or Diagram Name** refers to the name of the figure, table, or diagram where the definition is presented.
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<td>Non-Core</td>
<td>Elderly Persons Housing in North Eastman</td>
<td>Pg. 4-1-5</td>
<td>The number of elderly persons, housing location, and number of units as of February 2009</td>
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<tr>
<td>Non-Core</td>
<td>Number of live births</td>
<td>Pg. 4-5-2</td>
<td>Percent (%) of females aged 12 to 19 years who give birth</td>
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<td>F-18 Core</td>
<td>Teen Birth Rates</td>
<td>Pg. 4-5-2</td>
<td>Proportion of the non-smoking Canadian population aged 12 and older, exposed to environmental tobacco smoke at home on most days</td>
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<td>G. Environmental Factors</td>
<td>Core</td>
<td>Second-hand Smoke Exposure</td>
<td>Pg. 4-4-4</td>
<td>The annual number of boil water advisories or orders (issued when evidence indicates that the drinking water is or may be responsible for an outbreak of illness) and the length of time that the boil water advisory has been in effect</td>
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<td>Non-Core</td>
<td>Number and length of Boil Water Advisories or Orders</td>
<td>Pg. 4-4-2</td>
<td>Hospital based dental extractions in children 0-5 years between 1996/97-2000/01 and 2001/02-2005/06</td>
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<td>Non-Core</td>
<td>Hospital based dental extractions</td>
<td>Pg. 4-4-3</td>
<td>Life Stress</td>
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<td>H. Personal Resources</td>
<td>Non-Core</td>
<td>Life Stress</td>
<td>Pg. 3-34</td>
<td>Level of chronic life stress reported by the population aged 15 and over, based on their responses to a series of 17 questions about their personal situation</td>
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<td>Life Satisfaction</td>
<td>Pg. 3-34</td>
<td>Level of self-rated satisfaction with life reported by the population aged 12 and over, grouped by the following 3 categories: very satisfied, satisfied, or neutral/unsatisfied</td>
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<td>Non-Core</td>
<td>Social Support: Living Arrangements</td>
<td>Pg 4-2-2</td>
<td>The percentage of the population living in private households, who reported in the Census of Canada that they lived in either a family household or a non-family household</td>
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<td>Non-Core</td>
<td>Social Support: Marital Status</td>
<td>Pg 4-2-2</td>
<td>The percentage of the population by conjugal status, as reported in the Census of Canada e.g. never married (single), married, legally married and separated, legally married and separated, divorced, and widowed</td>
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<td>Other</td>
<td>Two Parent Families</td>
<td>Pg. 4-2-3</td>
<td>The rate of licenced child care spaces per 1,000 children ages 0 to 12 years by area</td>
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<td>Licenced child care spaces</td>
<td>Pg. 4-2-4</td>
<td>Crisis Stabilization unit &amp; Mobile Crisis Unit - NE</td>
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<td>Food Bank Clients in Canada 2008 &amp; 2009</td>
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<td>Pg. 4-6-2</td>
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North Eastman Health Association Inc. — 2008-2009 Community Health Assessment CHA Indicators, Validation Survey, and Diagram Location & Definitions APPENDIX E - 7
## CHA Indicators, Validation Survey, and Diagram Location & Definitions

### Core vs Non-Core vs Other

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### Core School Changes

- School Changes: Percentage of change in residents who changed in district, by population measure in %

### Core Operational Hospital Beds per 1,000 Residents

- Location of visits to General Practitioners and Family Practitioners, by percent (%) of residents in district, % elsewhere in RHA, % to other regions, and % to Winnipeg and Brandon.
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<tr>
<td>N-13</td>
<td>Core</td>
<td>Families First Program Risk Factors, i.e. the % of families with newborns: - with 3 or more risk factors - alcohol use by mother during pregnancy - maternal smoking during pregnancy - maternal depression and anxiety disorders combined - income support or financial difficulties - mother with less than grade 12 education - maternal abuse - child protection file</td>
<td>Pg. 4-1-10, 4-5-10, 4-1-8, 3-36, 6-7, 7-6</td>
<td>The Families First Program provides prevalence rates of risk factors for poor child outcomes based on risk factor percentages (%) of the regional post partum population screened for enrollment in the Families First Program. The 8 factors required for CHA reporting are: (a) Three or more risk factors on the Families First screening form (b) Alcohol use by mother during pregnancy (c) Maternal smoking during pregnancy (d) Maternal depression and maternal anxiety disorders combined (e) Income support or financial difficulties (f) Mother with less than grade 12 education</td>
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<td>N-14</td>
<td>Core</td>
<td>Screening For Demographics &amp; Use of Families First Program</td>
<td>Pg. 4-5-9, 4-5-10</td>
<td>The percentages (%) of the regional post partum population screened for enrollment in the Families First Program, and the percentage (%) screened positive that actually enrolled.</td>
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<td>N-15</td>
<td>Core</td>
<td>Supply of PCH Beds</td>
<td>Pg. 5-5</td>
<td>The number of regionally available PCH Beds per 1,000 population aged 75 and older.</td>
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<td>Other</td>
<td>Admissions to PCH</td>
<td>Pg. 5-20</td>
<td>The annual percent of residents aged 75+ admitted to a PCH, by region of residence prior to admission.</td>
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<td>Median Length of Waiting Time Before Admission to PCH</td>
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<td>Acute Care vs ALC Days &amp; Discharge</td>
<td>Pg. 5-4</td>
<td>The number of primary (dispatched from call centre) and transfer trips (elective/planned trips)</td>
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<td>EMS Ambulance Trips</td>
<td>Pg. 5-16</td>
<td>The number of primary (dispatched from call centre) and transfer trips (elective/planned trips)</td>
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<td>EMS Northern Patient Transfers</td>
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<td>O. Safety</td>
<td>Non-Core</td>
<td>Staff Flu Immunization</td>
<td>Pg. 5-9</td>
<td>Percentage (%) of all regional staff who annually received influenza immunization.</td>
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<td>P. Work Life</td>
<td>Non-Core</td>
<td>Number of NEHA WCB Work Claims</td>
<td>Pg. 4-3-6</td>
<td>The number of Workers Compensation Board claims by worksite.</td>
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<td>R. Continuity of Services</td>
<td>R-1 Core</td>
<td>Continuity of Care</td>
<td>Pg. 5-10</td>
<td>The percentage (%) of residents receiving more than 50% of their ambulatory visits from the same physician in a two year period.</td>
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<td>R-2 Core</td>
<td>Anti Depressant Prescription Follow Up</td>
<td>Pg. 3-41</td>
<td>The crude percentage of patients with a new prescription for antidepressants and a diagnosis of depression within two weeks of each other, who then had three subsequent ambulatory visits within four months of the prescription being filled.</td>
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### Definitions

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<td>Physician Visits 'for' Mental Illness Disorders: - from acute care hospitals</td>
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This document contains information on various statistical indicators, definitions, and procedures related to health care services. The core indicators include measures such as average length of stay, open cases, new cases, and various procedures such as cataract surgery, hip replacement surgery, knee replacement surgery, coronary catheterization, and more. The document also includes definitions for these indicators and their locations in the report.
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<td>PCH Utilization: Median Length of Stay at PCH, by level of care</td>
<td>Pg. 5-19</td>
<td>The median total length of stay in years for residents of PCHs, by location, according to their level of care on admission.</td>
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<td>Y. Fiscal</td>
<td>Y-1</td>
<td>Percent Operating Budget Spent on:</td>
<td>Pg. 5-23</td>
<td>The percentage of the total operating budget going to acute care costs, the percentage of the total budget going to long term care costs and the percentage of the total budget going to community care costs.</td>
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<td>Percent operating budget spent on Administration</td>
<td>Pg. 5-23</td>
<td>The percent (%) of total operating costs spent on administration (MIS Administration Cost Indicator: General Administration, Human Resources, Information Technology, and Communications costs / Total Operating Costs less Capital Costs).</td>
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# APPENDIX F. VALIDATION SURVEY RESULTS

Collated by J. Walker CHA Assistant

## Survey Question

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### Survey Question 8. I feel the people in my community are in good health.

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<th>%</th>
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<th>%</th>
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<th>%</th>
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<th>%</th>
<th>Don't Know</th>
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North Eastman Health Association Inc. - 2008-2009 Community Health Assessment
Validation Survey Results - October 2009

Survey Question

% Strongly Agree % Agree % Disagree % Strongly Disagree % Don't Know % No Response

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don't Know</th>
<th>No Response</th>
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<td>1</td>
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North Eastman Health Association Inc. - 2008-2009 Community Health Assessment
Validation Survey Results - October 2009

Survey Question

% Strongly Agree % Agree % Disagree % Strongly Disagree % Don't Know % No Response

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don't Know</th>
<th>No Response</th>
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### Survey Question: I know how to get health services when I need to.

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<th>Disagree</th>
<th>Strongly Disagree</th>
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<td>Springfield</td>
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<td>Winnipeg River</td>
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### Survey Question: I am concerned about injuries in my community, for example, falls, drowning, motor vehicle accidents.

<table>
<thead>
<tr>
<th>Community</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<th>No Response</th>
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### Survey Question: I feel safe in my community and would recommend it as a good place to live.

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<th>Disagree</th>
<th>Strongly Disagree</th>
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<tr>
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<td>36.1%</td>
<td>37</td>
<td>2</td>
<td>1</td>
<td>1</td>
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<tr>
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<td>16.9%</td>
<td>40</td>
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<td>1</td>
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