



A Profile  
of Women's Health  
in Manitoba

Lissa Donner  
Harpa Isfeld  
Margaret Haworth-Brockman  
Caitlin Forsey

Final  
November 2008

**PRAIRIE WOMEN'S HEALTH**

CENTRE OF EXCELLENCE  
RESEARCH ■ POLICY ■ COMMUNITY



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Prairie Women's Health Centre of Excellence (PWHCE) is one of the Centres of Excellence for Women's Health, funded by the Women's Health Contribution Program of Health Canada. The PWHCE supports new knowledge and research on women's health issues; and provides policy advice, analysis and information to governments, health organizations and non-governmental organizations. The views expressed herein do not necessarily represent the official policy of Health Canada.

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## Foreword

It is with great pleasure that I write this foreword to *A Profile of Women's Health in Manitoba*. In some ways, it is the last word, as the work of four years, four authors and many, many drafts and edits comes to a close.

Following the 2003 development and release of our small primer on gender-based analysis using health administration data, *Including Gender in Health Planning: A Guide for Regional Health Authorities*, author Lissa Donner and I began to discuss the possibility of a “report card” or profile on women’s health with colleagues at Manitoba Health and Healthy Living as a next step. While many people have been presenting gender-based analysis in a number of formats, the 2003 *Guide* seemed to match what planners and programmers in Manitoba RHAs needed in order to understand how gender-based analysis can help them serve Manitoba men and women better, despite always-constrained resources.

At about the same time as I received word that Manitoba Health and Healthy Living could invest in this *Profile* in 2005, we had the extraordinary opportunity to connect with staff at the World Health Organization Women’s Health Programme in Kobe, Japan. The Women’s Health Programme was seeking pilot test sites for a list of gender-sensitive leading health indicators, and Manitoba proved to be a site that could illustrate the strengths and challenges of the indicators to be tested. Our analysis of those 37 health indicators gave us an opportunity to develop our methods and hone our analyses, as well as to contribute to international discussions of women’s health and women’s health indicators. In 2008 the WHO Commission on Social Determinants of Health released its report, emphasizing the need for all health administrators and policy makers to look beyond physical and mental illness in understanding real population health. In particular, the WHO report points to the critical need to consider gender and improve women’s health for social justice and health inequities to improve.

These developments situate *A Profile of Women's Health in Manitoba* as part of ground-breaking work in exploring indicators of health status, outcomes and health system performance in the international arena, including appropriate sex disaggregation in collection and reporting of data and the use gender-based analysis. Indeed, in July 2008 we completed two guides for the Pan-American Health Organization that describe our methods.

Our focus in this *Profile*, however, remains on the women of Manitoba. The *Profile* presents and blends current health administrative and surveillance data and up-to-date research literature, with the additional investment of local knowledge about the lives of women in this province. In so doing, I hope we have again achieved our goal and demonstrated how gender-based analysis can make health services in Manitoba more relevant and appropriate to improve women’s health, redress inequities and achieve the consistent high quality of care in the health system we all seek.

Margaret J. Haworth-Brockman  
Executive Director  
Prairie Women’s Health Centre of Excellence







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Dale Brownlee and Dawn Ridd of Manitoba Healthy Living were instrumental in getting this project off the ground, and keeping the project on course. Dr. Leonie Stranc, Kelly McQuillen and Rolf Puchtinger from Health Information Management provided technical assistance and advice and reviewed indicator drafts, as did Louis Barre, Deborah Malazdrewicz and Erin Schillberg. Lorraine Dacombe-Dewar provided important links to the RHAs through the Community Health Assessment Network. We also thank Janet Fontaine and staff from the Aboriginal Health Unit who gave advice.

The authors gratefully acknowledge the assistance provided to them by many others. We wish especially to thank Dr. Barbara Clow, Professor Pat Armstrong and Ann Pederson of the Women's Health Contribution Program who reviewed drafts for some indicators and provided other advice. Dr. Sandra Kirby gave support and guidance throughout and Dr. Faten Ben Abdelaziz and Dr. Vivian Lin provided technical assistance on the first indicator work through the WHO Kobe Centre.

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We thank the very helpful staff at Statistics Canada Prairie Region: Adam Peeler, Lyle Sather, Milana Karaganis and Gretchen Gordon, as well as Ingrid Ledrou, Statistics Canada's Health Statistics Division in Ottawa. Jeremiah Prentice at the Canadian Mortgage and Housing Corporation provided data runs for the indicators on housing.

Caitlin Forsey provided exceptional research assistance and also wrote two sections (Nutrition and Physical Activity). Lisa Murdock researched and wrote the section on Literacy and Education. Brigitte Krieg assisted with Chapter One. Molly McCracken did the preliminary research and calculations as well as drafted the section on women in the labour force. Shannon Pidlubny provided assistance with the indicators in the Health Services chapter. Thank you all.

Design, layout and administrative assistance were provided by Pamela Chalmers, for which we are very grateful.

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## Introduction





A *Profile of Women's Health in Manitoba (Profile)* is a partnership of Prairie Women's Health Centre of Excellence (PWHCE)<sup>1</sup>, Manitoba Health and Healthy Living, Health Canada's Bureau of Women's Health and Gender Analysis, and the Health Canada Manitoba-Saskatchewan Regional office. The *Profile* is a first-ever comprehensive review of over 140 indicators of women's health in the province, including an examination of health status, health services use, socio-economic influences, health system performance and lifestyle choices. *Profile* was developed using existing data from provincial health administrative files (aggregate data about physician and hospital use), national surveys, Census of Canada, and municipal and other studies. Using a gender-based analysis (GBA) the data are presented in the context of women's lives, using the most current research literature and community knowledge, to understand better what the data report. Where possible, the analysis includes information by RHA, age, and Aboriginal ancestry, as well as urban-rural comparisons for women in the province, providing a unique report on the status of women's health in Manitoba, and with recommendations for data monitoring and policy change.

The *Profile* is in keeping with epidemiological and health planning research already underway in other jurisdictions. National and international examples demonstrate how the production and publication of this *Profile* increases the breadth of knowledge about women's health by contributing new information on the ways in which gender influences health and how gender interacts with other social and clinical factors [1, 2, 3, 4, 5]. These profiles and surveillance reports have proven very popular and have been requested by a variety of governments, health planners and clinicians because they provide the type of detailed information needed for effective and efficient allocation of scarce resources.

This introductory chapter gives some context about Manitoba for the *Profile*. Following a brief look at the province and its geography, we provide a short description of how health care is delivered, including a description of how health service delivery for Aboriginal women is complicated by jurisdiction and historical entitlements. The chapter concludes with information about the value of looking at women's health indicators and how the *Profile* is presented.

## Manitoba

The province of Manitoba is in the east-west centre of Canada, south of the arctic territories, with a southern border with the United States of America (see Map 1). As is the case for most Canadian provinces, Manitoba's land mass is vast (649,950 km<sup>2</sup>), with a relatively sparse, unevenly distributed population (1.2 million). More than half the population lives in the capital city, Winnipeg (640,000), with two smaller cities of Brandon and Thompson having populations of 39,716 and 13,256, respectively. While Thompson is more northerly, most of the Manitoba population lives south of 53°N.

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<sup>1</sup> PWHCE is funded by the Women's Health Contribution Program of Health Canada to improve the health of women and girls through policy advice, new research, information analysis, networking and communications. For more than 10 years PWHCE has developed considerable expertise in applying gender-based analysis to health and health-related issues at all levels; locally, nationally and internationally. For more information about PWHCE see [www.pwhce.ca](http://www.pwhce.ca)





Map 1: Canada

The original indigenous peoples lived throughout what is now called the province of Manitoba (See Chapter One for a brief description of the women of Manitoba, including an explanation of the term Aboriginal and the women it describes.) During European colonization, Aboriginal people were moved off their traditional lands by force and by law, and many were required to live in reserves set up by the Canadian government.

Although Europeans came to Manitoba for opportunities in farming, forestry and mining, most of the land in the province is not arable. A great deal of the “land” in Manitoba is in fact covered with freshwater rivers and lakes.

The history of the settlement and colonization of Manitoba, and the distribution of the arable and non-arable land, has led to considerable disparities in economic development and economic stability. Systematic and systemic oppression have created large inequities for Aboriginal residents in particular. Other rural residents are largely dependent on single resource-based incomes that can be unstable, subject to the vagaries of weather, market demands and international trade agreements.

Manitoba’s first immigrants came from Scotland, England and France, and later from other European countries. Newcomers and new immigrants continue to settle in Winnipeg and other towns, most recently from Southern and Southeast Asia as well as Northeast Africa.





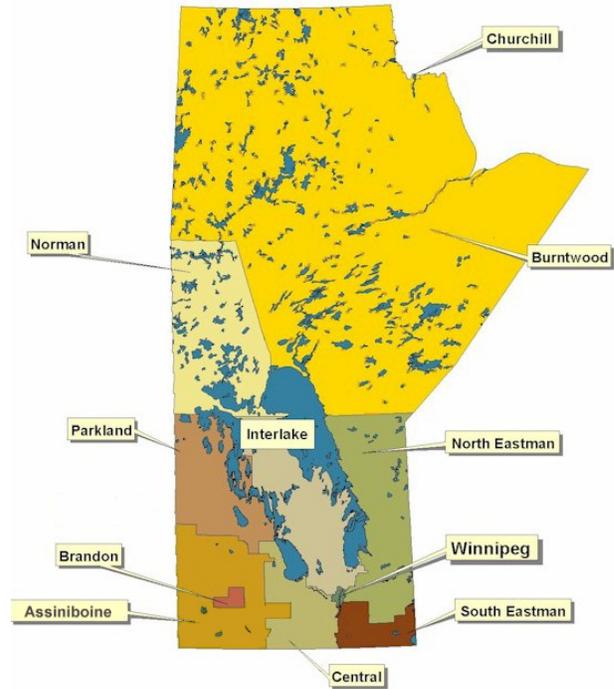
## Health Systems in Manitoba

The health care system in Manitoba is multi-layered. Under the federal system of government, health is a matter of provincial jurisdiction; provinces are responsible for health budgets and monies and the provision of health care. Provinces are accountable, however, under the federal *Canada Health Act*, which since 1984 has ensured universal access to health care for all residents.<sup>2</sup>

In 1997, Manitoba *de-centralized* the direct provision of health care to 11 Regional Health Authorities (RHAs) (see Map 2)<sup>3</sup>. The province maintains responsibility for ultimate oversight of health care expenditures and Manitoba Health and Healthy Living (MHHL) sets certain policy and provides leadership. RHAs are governed by voluntary Boards of Directors, the members of which are provincially appointed. Because the regionalized system was developed to give the community more local control over health care provision, it has in some ways led to regional *centralization*: community hospital boards were dissolved and some smaller hospitals were closed or reduced their hours and range of service.

The actual delivery of health service then, is almost exclusively the domain of the RHAs. RHAs are responsible for public health, hospital administration, and community health clinics. Complex systems of exchange for services and care come into effect when services are not available in a given region of the province. Policy makers, planners and programmers are employed by the RHAs, as are most nurses, midwives and other providers. Physicians are usually in private practice and they bill directly to MHHL, on a fee-for-service basis. The RHAs are bound to report and be accountable to MHHL.

Manitobans are free to seek care from the physician of their choice. Access is an issue, however, since there is a shortage of both family physicians and specialists, and this is particularly true outside of Winnipeg, where there are very few specialists in practice. Rural and northern Manitobans are often referred to Winnipeg for specialist care, and under some circumstances their travel costs are covered by the medicare system.



Map 2: Regional Health Authorities in Manitoba

<sup>2</sup> See [http://www.hc-sc.gc.ca/hcs-sss/medi-assur/overview-apercu/index\\_e.html](http://www.hc-sc.gc.ca/hcs-sss/medi-assur/overview-apercu/index_e.html).

<sup>3</sup> There were originally 13 RHAs under the legislation.





Because fee-for-service physicians bill Manitoba Health directly for all medical services<sup>4</sup> and because hospitals report patient information directly to Manitoba Health, the department can maintain two comprehensive data bases for information about health care utilization among its residents. Manitoba provides some prescription drug coverage (Pharmacare) and home care services as part of its medicare system, for which related administrative data are also collected.

## Jurisdictional Issues and Health Data Collection for Manitoba Aboriginal Women

The term Aboriginal in Canada is commonly used to mean those persons who are First Nations (legally called Indian), Métis and Inuit<sup>5</sup>. The federal *Indian Act*, amended and revised for over one hundred years, legally defines “Indian” (more commonly now First Nations), and among First Nations people there are distinctions made for Treaty Status and Non-Status as well as for band membership [6].<sup>6</sup>

Like all Canadians, Aboriginal people are entitled to physician and hospital services per the *Canada Health Act*. Treaties between First Nations and the Government of Canada, most dating back a hundred years, create additional entitlements for those Canadians with Treaty Status. Health Canada has a fiduciary responsibility to provide health services to treaty (Status) residents of First Nations Reserves and Inuit people. This includes non-insured health benefits.<sup>7</sup>

However, only those persons recognized under the current legislation as having Treaty Status and are Registered are entitled to these additional uninsured health services, including dental care, and non-prescription medication [7]. This is significant to the population of Manitoba because some Aboriginal persons are entitled to some funded health services, while others are not. Distinctions are made between and among Aboriginal women and men residing on reserve, off reserve and in rural and urban settings, and the provision of health care and services may be broken along federal, provincial, regional and band community lines. Free prescription drugs, certain dental procedures and eye care, for example, are not provided for Aboriginal men and women who do not have treaty status [7]. For Manitoba Aboriginal residents there can be confusion about which services are available and where people apply for compensation and reimbursement.

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<sup>4</sup> Information from salaried physicians employed at hospitals and community health centres is obtained through “shadow billing”.

<sup>5</sup> For example: “The Aboriginal identity population is composed of those persons who reported identifying with at least one Aboriginal group, that is, “North American Indian”, “Métis” or “Inuit (Eskimo)”, and/or who reported being a Treaty Indian or a Registered Indian, as defined by the *Indian Act of Canada*, and/or who were members of an Indian Band or First Nation.” (Statistics Canada. 2001 Aboriginal Population Profile). Note however that definitions of “Aboriginal” vary among surveys.

<sup>6</sup> These terms are confounded when they are used interchangeably in some policy and research discourse. PWHCE commissioned a paper which elucidates the issues for researchers and policy-makers alike [7].

<sup>7</sup> “The non-Insured Health Benefit Program is for registered Indians according to the *Indian Act*, Innu members of one or two Innu communities in Labrador, Inuk recognized by one of the Inuit Claim organizations, and any infant less than age one (1), whose parent is an eligible recipient.” Source: <http://www.hc-sc.gc.ca/fnihb/nihb/publications/infobook.htm>.





Though the federal non-Insured Health Benefits system is complicated for First Nations women, there are no additional benefits at all for Métis women. Métis women are entitled to only those health care services available to all provincial residents. Settlement patterns, family ties, changes in the *Indian Act* and geography have thus contributed to having some people in a community receiving health care on one side of a community road (or a lake) and others not [7].

The issues of jurisdiction and entitlement are further complicated in the data available. Manitoba Health collects health utilization data about all Manitobans. Health utilization data can be retrieved about those persons who voluntarily declare their First Nations status to Manitoba Health, however, Manitoba Vital Statistics which is responsible for data about births and deaths in the province, include in their death registry as “First Nations” all those, and only those, whose place of residence at the time of their death was a First Nations reserve. This is a restrictive definition since it excludes all First Nations Manitobans who live off reserve. These two data sets then do not necessarily identify the same persons as First Nations.

Other surveillance reports based on existing administrative, survey, population and other data sets are limited by how populations were included. Statistics Canada, for instance, uses several methods for identifying Aboriginal ancestry. Most often, Statistics Canada uses the broadest definitions, allowing survey and census respondents to self-identify as having Aboriginal ancestry. However some First Nations reserves refused to take part in some national surveys (e.g. Census Canada, for instance), and in other cases survey design did not include residents of the northern territories, most of whom are Aboriginal (e.g. Canadian Community Health Surveys). Smylie and Anderson summarize the numerous limitations in existing data sets [8]. Throughout this *Profile* the authors have clearly defined how populations are identified.

While these definitions and points of jurisdiction are important, the main issue should not be overlooked: However one defines them, Aboriginal people, especially Aboriginal women, have much greater rates of morbidity and mortality when compared to other Manitobans. This theme emerges time and again through our analyses of the indicators presented in this *Profile* (see further discussion in Chapter One).

## Women’s Health Indicators in Manitoba

As part of its leadership to the Regional Health Authorities, Manitoba Health provides guidance and sets expectations for certain targeted initiatives. In 2000, for instance, Manitoba Health acknowledged and adopted the concept of gender as a determinant of health. One year later, the department and the provincial Women’s Directorate jointly released a *Women’s Health Strategy* [9]. Among the 12 steps to implement the *Strategy* was the development of “a provincial profile of women’s health”, and PWHCE was commissioned to conduct a feasibility project. *Producing a Profile of Manitoba Women’s Health: Background Report* (published in 2004) outlined a framework for over 100 key indicators in women’s health, based on available data sets collected and administered by the province as well as other data sets held by Statistics Canada [3]. The framework of indicators recommended for the *Profile* covers a broad definition of health, including not only health status and outcomes, but also factors such as unpaid work, income, employment and exposure to violence. Ultimately this final *Profile* covers more than 145 indicators of women’s health.





As the *Profile* began, PWHCE had an opportunity to include work for the World Health Organization, testing an international Core Set of Gender-Sensitive Leading Health Indicators [10]. The Manitoba field test of the Core Set allowed the *Profile* authors to test and refine our methods and analyses for women's health indicators. It also gave us an opportunity to consider new indicators that were not included in the original framework. The WHO Kobe Centre provided technical assistance for the development of the pilot test of the core indicators in the province of Manitoba [11].

## Description of the Manitoba Women's Health Profile

The *Profile* is divided into seven chapters. Chapter One describes the women of Manitoba in general and demographic terms. Particular emphasis is given to the health and health indicators for Aboriginal women in the province. It is important to note that while the health and health issues for Aboriginal women may be better understood than they were, there are many other sub-populations (e.g. new immigrants, other ethnic groups, women with disabilities etc) among Manitoba women about whom we are unable to comment.

Chapters Two to Seven are arranged according to the factors that influence health and health conditions and outcomes. For each of the indicators contained in a chapter, the authors of this report retrieved the necessary data; described the primary analysis; and then proceeded with a gender-based analysis of the implications for women's health.

Gender-based analysis (GBA) is a method of analysis which assesses the differences and similarities between and among men and women. It is used to demonstrate the differences and similarities in health status, health care utilization, and health needs of men and women. *“GBA helps to clarify the differences between women and men (and the diversity among them), the nature of their social relationships, and their different daily activities, life expectations and economic circumstances. It identifies how these conditions affect women's and men's health status and the different and similar ways they are vulnerable. Ultimately GBA brings into view the influences, omissions and implications of our work in health policy, programming and planning”* [12].

GBA gives us the framework to provide comments on how the data are collected, what we learn about the women in the province, what other evidence there is in the subject area, followed by discussions of policy implications arising. The discussion and analysis set the survey and administration data in the context of women's daily lives. Differences and similarities based on gender between women and men, and among some groups of women are noted, as are other variations and trends.

*“Tailoring the health care system to meet the particular needs of women and men should lead to better use of resources”* [13].





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Material in this chapter was previously produced for the World Health Organization in *Manitoba Field Testing of Gender-Sensitive Core Set of Leading Health Indicators*, by Donner, Haworth-Brockman and Isfeld (2006). The authors are grateful to the World Health Organization for technical assistance.





CHAPTER ONE

## Who Are the Women of Manitoba?

In this chapter we describe the basic demographics of the population of women in the province. In particular we describe the populations of First Nations, Métis and other Aboriginal women, including an overview of their health status and a description of the health data available.





## Who Are the Women of Manitoba?

Women comprise just over half of Manitoba's population. In 2006, Manitoba's population was estimated at 1,177,765 with 585,414 men and 592,351 women [1]. The median age of women in Manitoba was 39.2 years, with 81.3% of the population over the age of 15 [2].

Most female residents in Manitoba identify as Caucasian. Total visible minority populations in Manitoba are estimated at 87,110, with female (non-Aboriginal) visible minority populations at 43,770 [3]. The primary ethnicity of visible minority women in Manitoba is Filipino (pop. 16,225), Chinese (pop. 5,765), South Asian (pop. 6,305), and Black (6,125) [3]. Forecasts of immigration patterns from the Manitoba Bureau of Statistics show a 20% increase in Manitoba and Winnipeg's new immigrant population by 2026.

Canada's Prairie Provinces have a higher Aboriginal population than Canada as a whole. According to 2001 Census data, approximately 30% of Canada's Aboriginal population resides in Saskatchewan and Manitoba [4]. Current estimates of the total Canadian Aboriginal population are 976,305 with 179,682 Aboriginal people residing in Manitoba; 90,157 women and 89,525 men [1]. Of this population, 90,340 are First Nations, 56,800 are Métis and 340 are Inuit [5]. This means that Manitoba holds 11.7% of the entire female Aboriginal population in Canada [6].

Among First Nations in Manitoba, 46,930 are female, and 24,870 First Nations females live on reserve, 4,230 live off reserve in rural communities, and 17,830 live in urban centres [5]. There are 28,615 Métis females in Manitoba: 320 live on reserve, 8,035 live off reserve in rural communities and 20,260 live in urban centres [5].

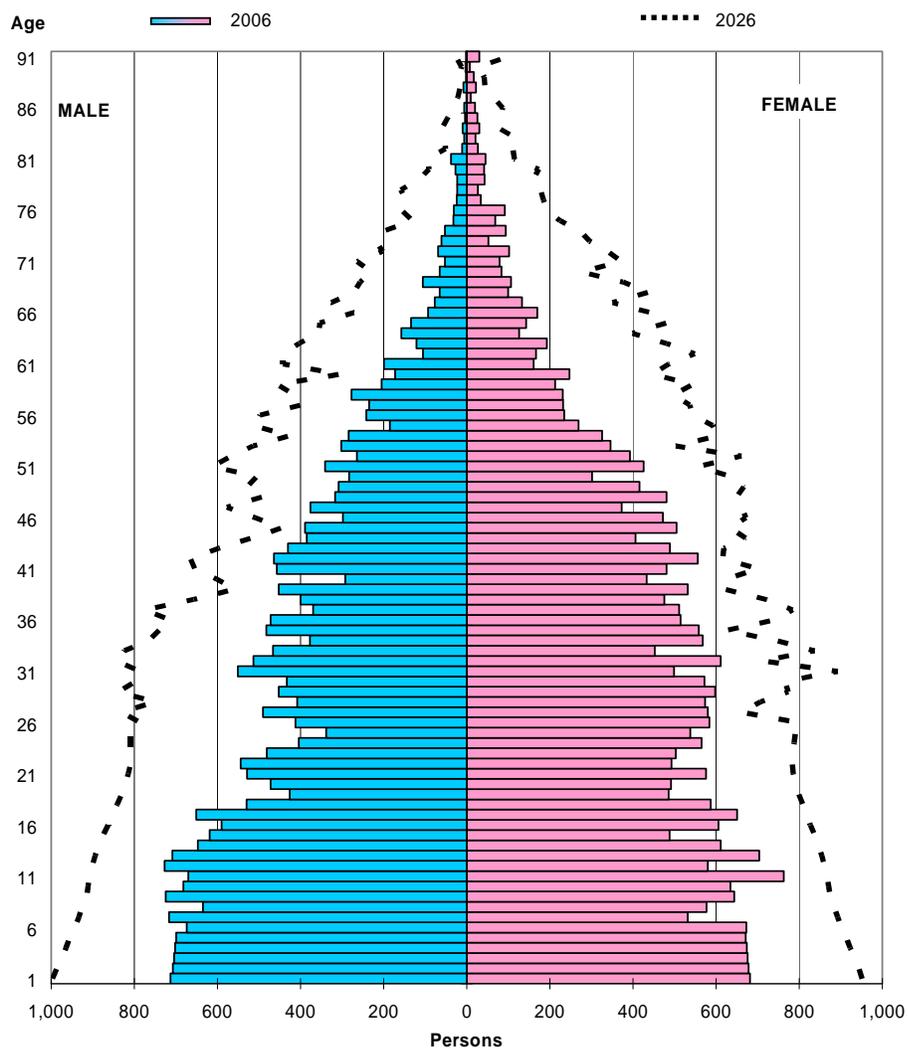
The Manitoba Bureau of Statistics estimates a 9.1% increase in Manitoba's entire female population by 2017 and an increase of 21.6% by 2026 [1]. However, estimates calculated by the Manitoba Bureau of Statistics project a 24% increase in Manitoba's female Aboriginal population by 2017 and a 45.2% increase by 2026 [1] (see Figures 1 & 2).

Given these estimates, and because it is often possible to identify Aboriginal Manitobans in health related data, we describe the health of Aboriginal women in Manitoba wherever possible. We hope that this will in some way rectify the lack of attention paid to Aboriginal women's health historically, but we acknowledge that ideally, we should be able to report and comment on the health of other sub-populations in the province as well.





**Figure 1**  
**Projected Population Pyramid**  
**Aboriginal People in Winnipeg 2006 and 2026**

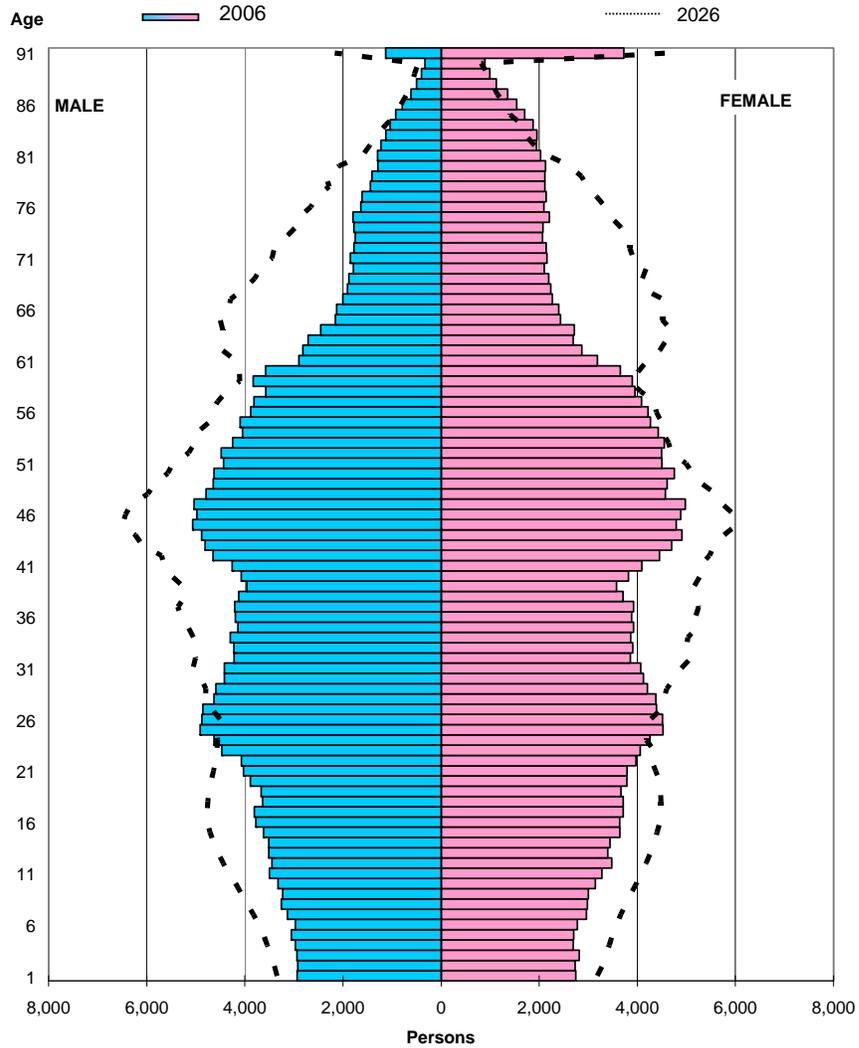


Source: Manitoba Bureau of Statistics. 2007





**Figure 2**  
**Projected Population Pyramid**  
**Non-Aboriginal People in Winnipeg 2006 and 2026**



JANUARY 2007

Source: Manitoba Bureau of Statistics. 2007





## Aboriginal Women's Health

There is very limited research and literature specific to the state of Aboriginal women's health in Manitoba. What information there is available, is further limited because often Aboriginal peoples are viewed as a homogenous group, making it difficult to know how gender, sex and geography, among other factors, contribute to the research and surveillance evidence. The term Aboriginal itself is problematic: it is an umbrella term that includes First Nations peoples (Status and non-Status, Status through Bill C-31) Métis and Inuit [7]. But in actual fact, research and statistics may very specifically refer to one group or sub-group of the population only. (Readers will find that throughout this *Profile*, different definitions of Aboriginal populations have been used in various ways when collecting and reporting health and health related data.)

Furthermore, much of the current literature examining health concerns of Aboriginal peoples are not sex-specific, which limits our understanding of how the research relates specifically to Aboriginal women [see 8, for example]. The need for greater gender-based analysis, research that is specific to Aboriginal women, and research and analysis that is also culturally appropriate (following OCAP<sup>1</sup>, for instance, and developed in consultation with, by and for Aboriginal women) are issues more Aboriginal women's groups are raising.

Despite the shortage of reliable, comprehensive and descriptive data and analyses, what we do know about the health of Aboriginal women is concerning. Aboriginal women's life expectancy is considerably lower at 76.6 years [11] compared to 81.1 years for non-Aboriginal women. Statistically, Aboriginal women have greater morbidity rates for circulatory and respiratory conditions, diabetes, cervical cancer, and HIV/AIDS in comparison to non-Aboriginal women [12]. Aboriginal women have mortality rates due to violence 2.8 times higher than non-Aboriginal women and suicide rates three times higher than Canadian women as a whole [13, 14, 15].

This *Profile* shows for instance that

- Hypertension is more prevalent among first Nations women than other Canadian women (23.2% versus 17.4%), as is heart disease (8% in First Nations women, 5.1% in other Canadian women)<sup>2</sup>
- First Nations women are 4 times as likely to be diagnosed with diabetes and non-First Nations women in Manitoba. First Nations women are also younger at the time of onset of type 2 diabetes. Diabetes among Manitoba Métis women has a prevalence of about 40%<sup>2</sup>
- Cancer rates have historically been lower in First Nations women, but incidence is now increasing at greater rates among First Nations women, than among non-First Nations women in the province<sup>2</sup>

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<sup>1</sup> OCAP stands for Ownership, Control, Access and Possession. It is a term coined and used by Aboriginal communities that highlights the need for local control of research and data. It is a call to be in control of research instead of being merely research subjects, as was historically the case [9, 10].

<sup>2</sup> See Chapter Five for full information and references.





- One-third of new HIV diagnoses occurred among Manitobans who self-identify as Aboriginal (220 of 676 cases), although they represented only 13.7% of the population. The rate of new HIV infection among Aboriginal women is nearly ten times the rate of new infection for non-Aboriginal women (40.1 per 100,000 versus 4.6 per 100,000)<sup>3</sup>

From the information gathered in this *Profile*, and from other recent studies, we find that Aboriginal women are marginalized or disadvantaged by many important social factors (income, social support, employment, etc) and these structural inequalities pose a major barrier to health and wellness [16, 17]. Overcrowded housing, unemployment and underemployment, poverty, addictions, intimate partner violence and limited supports are characteristic of the lived experience of Aboriginal women [16].

Although the poor health status of First Nation women has been documented to some extent, there are less data available about Métis women. There has been some research, however, done on the *positive* health practices women are taking. Aboriginal organizations are now taking more of a lead in guiding new health research that is culturally appropriate.

Bent [12] and Wilson [15], among other authors, point out that measures of health and wellness differ for Aboriginal and non-Aboriginal women and indicators currently used may be inappropriate for assessing Aboriginal peoples and communities [12]. Whereas non-Aboriginal definitions of health are typified as the absence of physical and mental disease, Aboriginal definitions of health view each person as a whole, equally influenced by interconnected spiritual, emotional, physical and mental aspects. Healthy functioning within the family, community and nation is essential to individual well-being [13, 15, 16], making community health and individual health inseparable in Aboriginal communities [6, 15]. Recognizing the essential connection between the strength of community and individual health, Aboriginal women note that community well-being is influenced by the quality and quantity of available community resources.

For example, standard treatments and methods used to address personal issues of violence and addictions require removal of the victim from the communities and consequently away from social supports, health care benefits and affordable housing [14, 16]. Aboriginal women understand that as their communities establish more responsibility and control of their own cultures, both the communities and the women will benefit [13].

Aboriginal women's groups now call more formally call for ensuring that research used to measure health status of Aboriginal women is inclusive of culturally appropriate and gender specific determinants of health.<sup>4</sup> The result is health definitions that are inclusive of voice and vision of Aboriginal women and that highlight this important connection between community and individual wellness [12].

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<sup>3</sup> See Chapter Four for full information and references

<sup>4</sup> See for example, Saskatoon Aboriginal Women's Health Research Committee, *Ethical guidelines for Aboriginal women's health research*, Prairie Women's Health Centre of Excellence, Saskatoon, Saskatchewan, 2004. <http://www.pwhce.ca>





## Summary

Manitoba's population is more than half female, and the demographics reflect the changing trends in immigration and population growth. In fewer than 20 years, the population will be more than 25% Aboriginal, with many more new immigrants as well.

Different sub-populations show different trends in health status, access to care and the influences of many health-related factors. In this *Profile*, we discuss these differences wherever possible, particularly by regional health authority, using urban and rural comparisons, and by reporting and commenting on what is known of the health of Aboriginal women, as identified in the data and related literature.

It is important to note that these opportunities to report on data are limited by how they are collected and that decision makers in policy, planning and programming will want to seek other means of becoming knowledgeable about the people they serve, including consulting with local women and girls about their health-related needs.

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## CHAPTER TWO

# Income, Living Conditions and Other Determinants of Women's Health in Manitoba

Women's health is affected by their income and their living conditions. This is not a new discovery, but the data and information in this *Profile* of the women of Manitoba confirms what other research in Canada and elsewhere in the world has found. Indeed, this *Profile* confirms what women themselves have been saying for a very long time.

This chapter includes women's health indicators across a number of health determinants. As income is so critical to health, we begin with a look at women's poverty in Manitoba. We see in this chapter that women remain the poorest of our population. Elderly and Aboriginal women, women with disabilities, new immigrants and women with mental illness are also among the poorest of the poor in our province. There is less information in the research literature about the nature of rural women's poverty of women. At a gathering in 2003 however, rural women from across the country cited low income and poverty as the most pressing issue affecting their health and health status.<sup>1</sup>

Consistently across the data and throughout this *Profile*, we see that women with low income are more likely to have their health affected in a number of ways. Women with low income experience more heart disease, more diabetes, live in worse housing and unsafe neighbourhoods, and are less physically mobile. There is no doubt that the stress of living in poverty, compounded by exclusion from education, employment opportunities and even health resources, all contribute to poor health and shorten life expectancy.

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<sup>1</sup> Sutherns, R., McPhedran, M., and Haworth-Brockman, M., 2004. Rural, remote and northern women's health: policy and research directions. Centres of Excellence for Women's Health. 320 p.





Following income, we examine other determinants, starting with women’s housing, and the availability of potable water and sanitation. Domestic and sexual violence against women continue to be a part of many women’s lives, and are consistently listed by women as impeding their improved health. We then look at literacy and education levels among Manitoba women, leading into women’s participation in the labour force and women’s employment and unemployment. The hazards and injuries of some women’s occupations are examined. Finally, we look at women’s unpaid work and the multiple roles women take on (gender roles), and how they affect women’s time stress.

This chapter includes information about:

1. Women, Income and Health
2. Housing
3. Potable Water and Sanitation
4. Domestic and Sexual Violence
5. Literacy and Education by Lisa Murdock
6. Labour Force Participation, Employment and Unemployment
7. Occupational Health
8. Unpaid Work





# Women, Income and Health

## Introduction

Since before the release of the Whitehall studies [1], and later with the development of the population health approach, the importance of the connection between income and health has been well accepted. It is well documented that health status improves at each step up the income and social strata [2]. The complex intersections of gender, sex, income and health have received less attention, though.

Women's greater risk of poverty, and accompanying gender inequities in power, control over one's life, and ability to obtain economic, social and physical resources, contributes to women's greater burden of illness. Understanding the ways in which gender, income and other determinants of health interact is therefore important to improving women's health.

## Women's Poverty in Manitoba

Compared to many others in the world, Manitoba women enjoy relatively high incomes. However, as elsewhere in Canada, both poverty and income disparities are real problems. Women are at higher risk of poverty than are men in every age group (See Figure 1).<sup>1</sup>

Among Canadians, Manitoba women and men are more likely to live in poverty than those in all other provinces except British Columbia. Manitoba also has the second highest child poverty rate among the provinces; second only to British Columbia [3].

### How is poverty measured in Canada?

The most commonly accepted definition of poverty in Canada is the Statistics Canada Low Income Cut Off Rate (LICO). LICOs are based on family and community size.

Canadians with income below the LICO spend disproportionate amounts of money for food, shelter, and clothing. The cut-offs are updated to account for changes in the consumer price index over time. All sources of income are included – both market income (e.g. wages, salaries, investments and pension income) and government transfers (e.g. income from Old Age Security, social assistance, workers' compensation, Canada and Québec Pension Plan, Child Tax Benefit, etc.).

There are two ways of measuring LICOs – before-tax and after-tax. Statistics Canada prefers the after-tax LICOs, as they better reflect the entire redistributive impact of Canada's tax/transfer system. The LICO rates used in this document use the after-tax basis of calculation [3].

Low income rates are higher on a before-tax basis than on an after-tax basis.

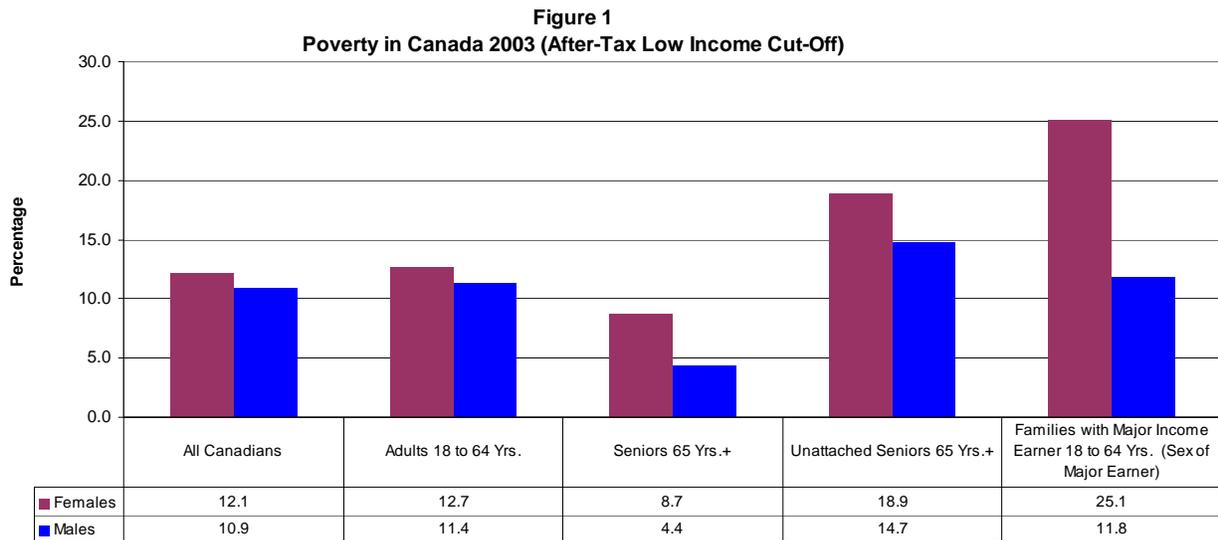
Material in this chapter section was previously produced for the World Health Organization in *Manitoba Field Testing of Gender-Sensitive Core Set of Leading Health Indicators*, by Donner, Haworth-Brockman and Isfeld (2006). The authors are grateful to the World Health Organization for technical assistance.

<sup>1</sup> Data are taken from Statistics Canada's *Income in Canada 2003* and *CANSIM Table 2002-0803* [5], the primary Canadian source for after-tax LICO data.





Women of Aboriginal ancestry<sup>2</sup>, women with disabilities and senior women are at increased risk of living in poverty. Data from the 2001 Census of Canada about Aboriginal Canadians living off-reserve show that Aboriginal females had a poverty rate of 24.8%, compared to 17.2% for non-Aboriginal females [4]. This understates the true extent of low-income among Aboriginal Canadians women because those living in First Nations on reserve communities are much more likely to live in poverty.



Sources: Statistics Canada, Income in Canada 2003 and Statistics Canada, CANSIM Table 202-0803

In 2000, in Winnipeg, Aboriginal people were nearly three times as likely to live in low income as were the general population. 42% of Aboriginal residents lived in low income, compared with 16.2% of Winnipeg residents overall [5].

After-tax poverty rates have decreased in Canada over the last ten years, as illustrated in Figure 2 below. From 1999 to 2003, the poverty rate among Canadian men decreased by 13.8%; the rate among women decreased by 12.4% [3]. Notably, the decrease in before-tax poverty rates has been much smaller (males -8.1%; females -8.6%), demonstrating the important redistributive function of the Canadian income tax system [6].

However, the gender gap in poverty remains. It is greatest among senior women, who are twice as likely to live in poverty as senior men, and among those living in families whose major income earner is a woman aged 18 to 64 years.<sup>3</sup> A comparison of the gender gap in before and after-tax poverty rates shows no reduction in the gender gap. That is, the income tax system does not reduce the gap between women's and men's risks of living in poverty [6].

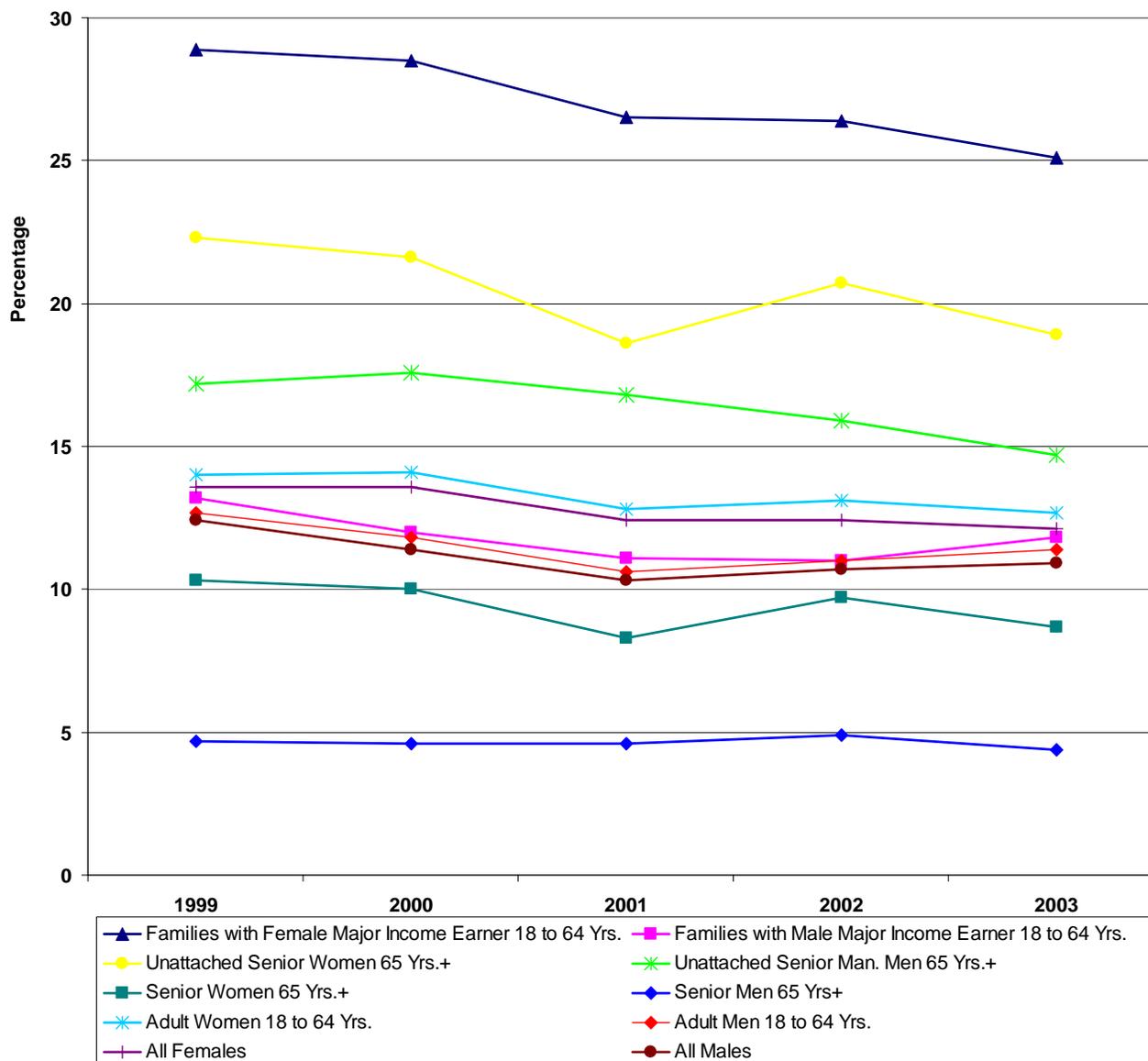
<sup>2</sup> This includes Canadians who reported identifying with at least one Aboriginal group (i.e North American Indian, Métis, or Inuit, and/or those who reported being a Treaty Indian or a Registered Indian as defined by the *Indian Act of Canada*, and/or who were members of an Indian Band or First Nation).

<sup>3</sup> The major income earner is the person with the highest income before tax.





**Figure 2**  
**Changes in Rates of Persons Living in Poverty - Canada**  
**(After-Tax Low Income Cut Off)**



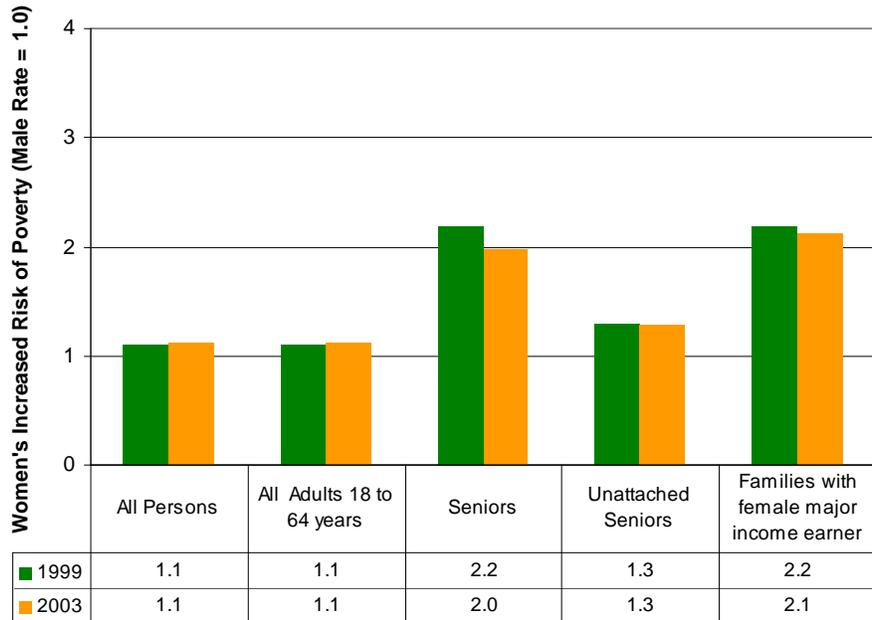
Sources: Statistics Canada, *Income in Canada 2003* and Statistics Canada, *CANSIM Table 202-0803*





Figure 3 below shows the persistence of women’s increased risk of poverty. Despite recent decreases in poverty rates, women’s increased risk of poverty has not changed.

**Figure 3**  
**Poverty Rates Have Decreased but the Gender Gap Remains**  
**Canadian Women's Increased Risk of Poverty (After Tax LICO)**  
**1999 and 2003**



Sources: Statistics Canada, *Income in Canada 2003* and Statistics Canada, *CANSIM Table 202-0803*

## Women’s Personal Income and Household Income

It is important to understand how many women have incomes of their own. Certainly, women’s increased labour force participation has increased their autonomy, and made it easier, for example, to establish independent homes, to raise children on their own if they wish, and to leave abusive or unhappy relationships. Education and labour force participation are also linked, as women with higher levels of education are more likely to be employed. This is described in detail later in this chapter, including the changes over time in the number of mothers of young children who are part of the labour force. Note that women are less likely than men to be participants in the labour force, and women persistently earn less, on average, than men.

These figures presented here, however, cannot describe the extent to which women have control over their personal and household incomes. Decision-making over one’s own income is essential to women’s independence and autonomy. The importance of this autonomy to women’s health is noted by its inclusion in international measures of health (e.g. World Health Organization [7] and Pan-American Health Organization [8]). Currently there are no survey data available to describe the extent to which women control their own incomes, and to what extent they have decision-making power over other family income. For example, Towson [9] as well as Savarese and Morton [10] note that social assistance





policies that assume household income-sharing are flawed, because the presence of a man and a man's income in a household does not mean that a woman can depend on his income [9, 10].

Woolley, in research done in Ottawa, with 300 husband-wife families found that the family should not be viewed as “a model of harmony and sharing in a world of discord [11].” She found that access to, and control over, a family's financial resources was shaped by each family member's circumstances and that women with higher earnings had more control over money. This often means women are at a disadvantage. Woolley found that being married before led to less pooling of family resources in subsequent living arrangements. Her results challenge the notion that the family can be treated as a single entity for purposes of economic theory or public policy [11, also 9].

To really understand women's control over their income, it is important to establish means to measure:

- the extent to which women with independent incomes have control over how their own and their families' incomes are used;
- how women exercise that control; and
- to what extent women without independent incomes have control over how household income is spent.

## Out-of-pocket Health Expenses

As all physician and hospital care is insured through the medicare system, Manitobans do not defer medical or hospital care due to personal costs *per se*. However not all health care is in fact universally available, nor universally paid for. Uninsured items include dental care, physiotherapy, non-prescription drugs, ambulance services and psychology services, and so-called alternative therapies<sup>4</sup>. Rural and northern Manitobans are often referred to Winnipeg for specialist care, and although Northern women's travel costs are covered through the Northern Patient Transportation Program, women report that the expenses of travel and accommodation, lost income, childcare and other items contribute to their decision about whether or not they will seek health care [12, 13, 14].

Insurance for some additional health care costs may be provided through employment-related or privately purchased extended benefits. A review of non-wage compensation (benefits) offered by Canadian employers found that 50% of all employees received extended medical and dental insurance [15]. Employees with “good jobs” (high-wages, unionized, full-time and permanent) or in large companies were much more likely to have access to all types of non-wage benefits. While Marshall did not find age and sex to be statistically significant factors in benefit access, women were found to earn a median wage of \$4.00 less than men [15]. Since women are more likely than men to be unemployed or employed in lower paying jobs which do not provide such additional benefits, they are more likely than men to incur out-of-pocket costs for health care.

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<sup>4</sup> See Chapter Six for a discussion of women's use of medical transportation and women's use of alternative and complementary therapies.





Statistics Canada's Survey of Household Finances includes data about spending on services not insured through the medicare system, including private insurance premiums. However, these are reported by household, therefore making a gendered analysis impossible.

First Nations women with Treaty Status are entitled to some additional health services provided by the federal government. However, only those persons registered under the current legislation are entitled to the additional uninsured health services, including dental care, prescription drugs and non-prescription medication [16]. This is significant to the population of Manitoba because some Aboriginal women are entitled to some funded health services while others are not. "Distinctions are made between and among Aboriginal women residing on reserve, off reserve and in rural and urban settings, and the provision of health care and services may be broken along federal, provincial, regional and band community lines. Free prescription drugs, certain dental procedures and eye care, for example, are not provided for Aboriginal women who do not have treaty status" [16]. For Manitoba Aboriginal residents there can be confusion about which services are available and to whom people apply for authorization and reimbursement [16].

Regular dental care is particularly important for overall good health for women and men [17]. Getting and affording dental care are concerns for all people who do not receive dental insurance as part of employment benefits, the majority of whom are women. Dental services exemplify the shifts that have recently occurred in health coverage: children used to receive routine dental check-ups through their schools. Similarly, regular eye exams were also provided through the medicare system. They are now provided only for children and seniors.

On the other hand, the regulation of midwifery in 2000 in Manitoba is an example of an "alternative" service for which women and their families used to pay privately, but midwifery care has now become a funded service in the province. As debates and discussions continue about the future of universal health care in Manitoba and Canada, it will be important to monitor how women are affected by changes in universal access and care.

## Health & Income Inequality

Health is also related to income inequality within a society. The healthiest populations are those in societies which are prosperous and have an equitable distribution of wealth [2]. In Canada, income inequality increased in the ten years from 1994 to 2003. In 1994, families in the highest income quintile had after-tax income of 7.5 times that of those in the lowest quintile. In 2003, the gap was 8.8 times. When total pre-tax income is considered, the gap is even more striking. In 2003, those in the highest income quintile earned 10.8 times that of those in the lowest quintile [3].

A recent study of National Population Health Survey (1997) data quantified this relationship more specifically. Safaei [18] examined health inequalities between income groups, including allowance for the fact that a high proportion of the people in the two lowest income groups are between the ages of 15-24 and may be in very good health (but are more likely to be students, and thus earning less personal income). Safaei reports that





“A vast proportion (about 50%) of women earn below \$15,000 compared to only 25% of men who earn such income. On the other hand, over 50% of men earn more than \$30,000/yr compared to only 23% of women. The income disparity, of course is both a reflection of differential participation rates in the labour market (and earning income) and gender wage differentials. Such income patterns hold by and large across all provinces.” [18 p. 632)]<sup>5</sup>.

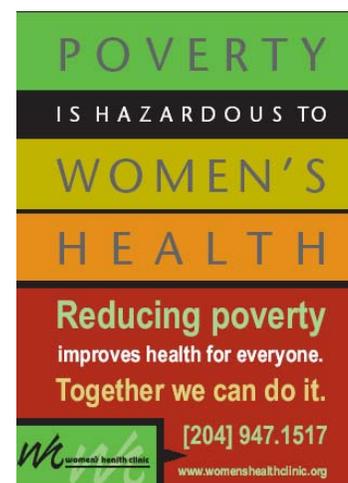
Safaei’s statistical analysis links income to both reported chronic conditions and self-assessed ill health. Compared to the national averages, Manitoba was one of three provinces to show the highest rate of health inequalities. The author speculates on the causes for these provincial differences, but points out that the numerous factors that contribute to ill health are complicated and not necessarily directly traceable in statistical data [18]. However the author notes that while the overall measures of health inequalities are small in magnitude, poor health is clearly concentrated in the low-income groups.

Specifically looking at the burden of illness for women in Canada, Bierman used data from the Canadian Community Health Survey Cycle 1.1 and found that inequities in self-rated health and in reported diseases were greater among women when examined by income than by observation alone [19]. Health inequities were largest among women and men with chronic disease – arthritis, diabetes and heart disease. Specifically, low-income women had more asthma, arthritis, back problems, high blood pressure, diabetes and heart disease than women with higher incomes and more than men in most income quintiles [19].

## Implications for Manitoba Women’s Health

As this *Profile* demonstrates in the following chapters, women’s income has profound implications on their physical and mental health, as well as on their ability to modify their living conditions:

- women are more likely to be living in poor housing and unsafe neighbourhoods;
- women’s ability to afford nutritious foods and to enjoy recreational activities is limited by their incomes;
- women with low income are more likely to have cardio-vascular diseases;
- women with low incomes are significantly more likely to be diagnosed with lung cancer or with cervical cancer, but are less likely to be reached through preventative screening programs;
- women with arthritis in lower income categories are significantly more likely to report their health to be poor and to report great pain and mobility restrictions;
- for urban females there was a strong relationship between ambulatory care visit rates (excluding care provided in hospital and prenatal visits) and income;
- for both rural and urban females there was a strong relationship between hospitalization rates and income;



<sup>5</sup> Note that these calculations use National Population Health Survey data from 1997.





- for both urban and rural females there is a significant relationship between the number of drugs prescribed and income; and
- women with low income have significantly shorter life expectancies and are more likely to die prematurely.

However Manitoba public policy does not yet adequately address these findings to reduce poverty and income inequality. Health services organizations need to consider women's poverty and other social determinants in the course of planning effective development, delivery and evaluation of health services [21]. Health services have so far focused on treatment despite extensive qualitative and quantitative linking low income to health status.

The *Poverty is Hazardous to Women's Health* project of the Women's Health Clinic in Winnipeg is one example of a project that strives to educate the wider public on the importance of reducing health inequities by addressing poverty. The Provincial Council of Women of Manitoba, the Just Income Coalition and the Poverty-Reduction Coalition among others, bring together various agencies who are concerned with the pressing concerns of continued poverty, and the gender inequities women face.

## Implications for Monitoring Women's Health

Disparities in income have long been associated with health inequities at the population level, not just for individuals. As health is inextricably linked to income, it is essential to continue to examine women's health in relation to women's income. The Manitoba Centre for Health Policy has shown leadership for Manitoba and Canada by reporting indicators by income and sex in its reports on health in the province. Consistent application of income-related analysis of health data for women will be essential to continue to address health inequities in Manitoba.

It will be important to establish base-line sex-disaggregated data for indicators of out-of-pocket medical expenses, and to monitor the changes, particularly for women who are more likely to have limited incomes.

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# Housing

## Introduction

Housing, shelter, is a basic human right and essential to good health [1]. While there has been consensus for more than one hundred years that decent housing is required for good health, there is, in fact, little literature about how housing, good or bad, *directly* affects health and health status.

Reduced or poor health has been *associated* with housing and shelter that is compromised by physical, chemical, biological and structural hazards, vermin (insects and rodents), toxins and toxic waste; and poor housing contributes to asthma and other respiratory diseases, chronic disease and other dangers, leading to shorter life span. Housing that is not suitable for seniors, for instance, may increase the danger and likelihood of injury [2]. Homelessness, having no housing at all, is certainly bad for health, and homeless women and men are at much greater risk of respiratory diseases (pneumonia, colds, tuberculosis, asthma), arthritis, rheumatism, high blood pressure, diabetes, lice and scabies [3, 4].

Women themselves say that housing is a fundamental concern to their health. In recent studies led by Prairie Women's Health Centre of Excellence, women with low incomes asked to describe the factors in their lives that contribute to poor health, repeatedly mentioned bad housing, including having to cope with lack of heat, mould, mice, rats and lice, dangerous neighbourhoods, harassment from landlords and the threat of violence. Furthermore, women consistently describe how the stress and deprivation caused by struggling to afford a good place to live, contributes to their weakened mental and physical health [5, 6, 7]. For instance successive studies in Winnipeg report women having to go without food and other essentials in order to pay rents that they cannot afford [5, 6, 8, 9].

Community organizations and policy makers alike recognize that Manitoba, and indeed Canada, has a housing crisis. This section looks at what data and information are available and the need for policy to improve women's housing conditions.

## Housing and Health

According to Moloughney [2], beyond some specific population groups, the published research on the relationships between housing and health are largely focused on relative degrees of housing deprivation. Table 1 outlines the causal relationships between housing conditions and residents' health that have been established to at least some degree in the academic literature. Residents of poor neighbourhoods suffer poorer health for a number of reasons, but it remains unclear to what degree this association of poor health is caused by bad housing, and to what degree the poor health influences the move to, or continuing to remain in, poor housing [10]. What *is* clear, is that low income is directly related to poor health (see section on women and income), and has been independently shown to cause increased morbidity and mortality, and it is women with low income in Manitoba who are the most likely to live in housing that is unsuitable, inadequate, unsafe and unhealthy.





Table 1. Evidence of Causal Effects of Housing Conditions to Residents' Health.  
(Adapted from Moloughney 2004 [2]).

<b>Definitive/Strong:</b> Numerous or some well-designed studies showing the effect; most/all causal criteria met/ preponderance of opinion among experts that a health effect exists	<b>Possible &amp; Associated:</b> Small numbers of studies showing the effect; some or few causal criteria met; no consensus among experts that a health effects exists	<b>Weak:</b> Conflicting or negative evidence regarding the effect; few or no causal criteria met; consensus among experts that health effect is not proven or unlikely
<b>Exposure to toxins:</b> Lead Radon Asbestos House dust mites Cockroaches Environmental tobacco smoke Black mould*	<b>Exposure to toxins:</b> Urea formaldehyde foam insulation (UFFI) Volatile organic compounds	<b>Exposure to toxins:</b> Electromagnetic fields
<b>Building maintenance and structure:</b> Home safety/stairs Smoke detectors Excessive cold & heat; heating system	<b>Building maintenance and structure:</b> Carbon monoxide detectors Building type Floor level High-rise structure	
	<b>Social living conditions:</b> Overcrowding Housing tenure Housing satisfaction	

\* Note that Moloughney does not include black mould in this column, but other authors do [12, 13].

Bryant [3] suggests that the criteria for causal relationship Moloughney uses may be too stringent, but concurs that there has been little research in Canada that looks at the direct links between housing and health.

A Saskatchewan study did find direct links between household dampness and respiratory problems, including wheezing [11]. Studies from The Netherlands and Australia also point to dampness and the likelihood of associated moulds and house dust contributing to asthma and other respiratory illnesses in both children and adults [12, 13, 14]. In one study both women and men were found to have coughs and phlegm strongly associated with living in a damp home, probably because of exposure to fungi and/or house dust mites [12].

Manitoba women themselves repeatedly draw a link between the state and circumstances of their housing and their personal health. Women report that living in bad housing affects them physically





because of mould, draughty and leaky windows and doors which do not keep heat in, lack of heating and the presence of vermin [5]. Manitoba women have also reported that poor housing conditions affect their mental health as well [6]. Trying to keep themselves and their children safe in dangerous neighbourhoods, threats of physical violence, and humiliating encounters with landlords are just some of the stressful conditions women have listed.

## Measuring Housing Availability & Need

Despite the interest in the interaction of housing and health, there are few ways to directly measure who lives in bad housing. An international Expert Working Group, for instance, included housing suitability, affordability and overcrowded living conditions as potential gender-sensitive health indicators, but did not include housing in a final core set of 37 gender-sensitive leading health indicators tested internationally [15]. Other similar frameworks for gender equity in health also do not include measures of housing adequacy (PAHO for example [16]).

The Canadian Mortgage and Housing Corporation (CMHC) uses Canada Census data to examine core housing need in Canada. The CMHC data record the conditions for people who have housing, good or otherwise. These data are typically only published by household (not by the sex of the household residents), providing some understanding of what the state of housing need is in Manitoba. We are able to present sex-disaggregated data for women living in core housing need later in this section.

More difficult to measure is who is *without* any reliable shelter. The Manitoba Housing Authority operates subsidized housing and keeps a waiting list for applicants. These lists very likely underestimate the number of women, men and families who do not have a shelter or home of their own [18, 4].

To better understand the housing situation in Manitoba, we first look at how much housing is available for women, and the costs women face for shelter.

The Manitoba provincial department of **Family Services and Housing** includes the **Employment, Income and Housing Division**. Under this Division, the **Manitoba Housing and Renewal Corporation** (MHRC) is a Crown corporation governed by a board of directors with policy direction provided by government. The MHRC operates as the delivery arm for federal/provincial cost-shared social housing programs and other capital programming provided by the province. The MHRC provides subsidies for about 36,300 housing units developed under various federal/provincial housing programs. Approximately 13,000 units are directly managed through the **Manitoba Housing Authority** (MHA) which functions as the property management arm of the Housing Division. MHA is responsible for the ongoing operation and management of provincially-owned public housing.

The MHRC provides subsidies for about 23,300 housing units developed under various federal/provincial housing programs, and operated by private agencies.

Source: Manitoba Family Services and Housing [17].





## Women Who Own Their Houses

With more disposable income available because of working in better paying jobs, and because financial institutions are willing to lend to women on their own, which was not the case up to 25 years ago, more women are able to own their own houses than ever before. A January 2008 Ipsos-Reid poll of women who own their homes gave the reasons, advantages and disadvantages women cite after having bought a home. Besides being a good investment, most women noted that they like the independence of owning their own home [19].

## The Shortage of Housing in Manitoba

A December 2006 report from CMHC [20] records a decline in vacancies in two of Manitoba's four urban centres: Winnipeg and Thompson. The sharpest decline was in the Winnipeg Metropolitan census area (CMA), which had an average 1.3% rental vacancy. Winnipeg continues to have one of the lowest vacancy rates among all census metropolitan areas in Canada. Brandon, though, showed the lowest apartment vacancy rate of all Manitoba cities, at or below 1% (Table 2).

Table 2. Private Apartment Vacancy Rates (%) by Bedroom Type, Manitoba.

Centre	Bachelor		1 Bedroom		2 Bedroom		3 Bedroom +		Total	
	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006
Winnipeg CMA	3.1 a	2.2 a	1.8 a	1.4 a	1.4 a	1.1 a	1.1 a	0.7 a	1.7 a	1.3 a
Brandon CA	0.0 b	0.0 b	1.1 a	1.4 a	0.9 a	0.6 a	0.0 a	0.0 b	0.9 a	0.9 a
Portage la Prairie CA	12.8 a	11.8 a	4.5 a	8.7 a	4.1 b	4.8 a	4.7 a	4.8 a	4.7 a	6.8 a
Thompson CA	9.7 a	13.3 a	17.8 a	17.3 a	0.6 a	1.1 a	3.4 a	0.0 a	8.3 a	8.2 a
<b>Manitoba 10,000+</b>	<b>3.2 a</b>	<b>2.4 a</b>	<b>2.1 a</b>	<b>1.8 a</b>	<b>1.3 a</b>	<b>1.1 a</b>	<b>1.2 a</b>	<b>0.8 a</b>	<b>1.9 a</b>	<b>1.6 a</b>

The following letter codes are used to indicate the reliability of the estimates:  
 a – Excellent, b – Very good, c – Good, d – Fair (Use with Caution)  
 \*\* Data suppressed to protect confidentiality or data is not statistically reliable  
 n/u: No units exist in universe for this category    n/s: No units exist in the sample for this category    n/a: Not applicable

Alderson and Ryan point out that a key problem in Winnipeg is supply: “There is simply not enough decent housing – either rent-geared-to-income or even private market housing” [9]. In 2008 Mulligan reported that the total private rental housing stock for Winnipeg was 52, 430 units, with only 775 vacant or available for rent [21]. These numbers reflect a substantial loss in units available in the past 15 years, in part because of the boom in conversions to condominiums, but also because some units became uninhabitable (demolished or condemned) [21].

While the housing shortage in Manitoba and Winnipeg is well known and reported by women, men, agencies, government and media, it is very difficult to know how many applicants are waiting for publicly subsidized housing at any one time. Campaign 2000 reported Manitoba Housing Authority had 3,037 households on their wait lists in 2003, and Manitoba Urban Native Housing Authority reported 2,300 in 2007 [21]. Manitoba Housing and Renewal Corporation reported however that wait times were at least 6 months to a year; longer for applicants needing more than 3 bedrooms [as quoted in 9].





In interviews with women who were recent immigrants, Alderson and Ryan report that some women were granted apartments with fewer bedrooms than were previously “required” in seemingly arbitrary decisions: “(I) was told that I had to have a 4 or 5 bedroom. I kept pressuring – nothing. Suddenly, after years of pressure – I was told that a 3 bedroom was available. I told them in the beginning that I wanted a 3 bedroom” [9, page 35].

## Affordability

An established rule-of-thumb is that housing in Canada should not cost residents more than 33% of household income in order to be affordable, and to allow households to have enough money for other necessities. Housing that is too expensive for what residents need is part of the chronic problem Manitobans are facing.

The cost of rent has risen by 3.2% annually, on average, across the country [20]. CMHC reports that in Winnipeg the average rent for a two-bedroom apartment (in existing structures) increased by 3.4%, compared to the year before, which is above the rent control guideline for 2.5%. Brandon’s rents also went up in the year preceding October 2006, increasing by about 4% overall (Table 3).<sup>1</sup> CCPA – Manitoba reports that single people on social assistance are at particular risk of being unable to afford a place to live. Shelter allowance for a single person with disabilities is \$285/ month and \$271/ month for someone considered employable, while rents have been allowed to increase [38].

Table 3. Private Apartment Average Rent (\$) by Bedroom Type, Manitoba (utilities not included).

Centre	Bachelor		1 Bedroom		2 Bedroom		3 Bedroom +		Total	
	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006
Winnipeg CMA	405 <sup>a</sup>	420 <sup>a</sup>	539 <sup>a</sup>	557 <sup>a</sup>	683 <sup>a</sup>	709 <sup>a</sup>	795 <sup>a</sup>	839 <sup>a</sup>	589 <sup>a</sup>	608 <sup>a</sup>
Brandon CA	365 <sup>a</sup>	374 <sup>a</sup>	469 <sup>a</sup>	475 <sup>a</sup>	590 <sup>a</sup>	600 <sup>a</sup>	691 <sup>a</sup>	703 <sup>a</sup>	544 <sup>a</sup>	553 <sup>a</sup>
Portage la Prairie CA	301 <sup>a</sup>	305 <sup>a</sup>	445 <sup>a</sup>	446 <sup>a</sup>	559 <sup>a</sup>	564 <sup>a</sup>	468 <sup>b</sup>	536 <sup>a</sup>	494 <sup>a</sup>	501 <sup>a</sup>
Thompson CA	424 <sup>a</sup>	438 <sup>a</sup>	494 <sup>a</sup>	502 <sup>a</sup>	557 <sup>a</sup>	566 <sup>a</sup>	638 <sup>a</sup>	648 <sup>a</sup>	526 <sup>a</sup>	536 <sup>a</sup>
<b>Manitoba 10,000+</b>	<b>404<sup>a</sup></b>	<b>418<sup>a</sup></b>	<b>534<sup>a</sup></b>	<b>552<sup>a</sup></b>	<b>669<sup>a</sup></b>	<b>692<sup>a</sup></b>	<b>784<sup>a</sup></b>	<b>823<sup>a</sup></b>	<b>584<sup>a</sup></b>	<b>602<sup>a</sup></b>

The following letter codes are used to indicate the reliability of the estimates (cv = coefficient of variation):

a – Excellent ( $0 \leq cv \leq 2.5$ ), b – Very good ( $2.5 < cv \leq 5$ ), c – Good ( $5 < cv \leq 7.5$ )

d – Fair (Use with Caution) ( $7.5 < cv \leq 10$ )

\*\* Data suppressed to protect confidentiality or data is not statistically reliable

n/u: No units exist in universe for this category n/s: No units exist in the sample for this category n/a: Not applicable

Source: Canadian Mortgage and Housing Corporation [20]).

Likewise, Manitoba has seen an increase in real estate market prices, particularly in the 24 months January 2006-December 2007 [22]. Average prices in 2007 were 16% above the 2006 level, and are predicted to rise equally fast in the months to come. The higher prices make it more difficult to get into the market and buy a first house, and harder for people to move their families into larger or better houses. The increased prices make buying a house less affordable for everyone.

<sup>1</sup> Manitoba’s rent control guidelines allow for no more than a 2.5% increase in rent annually, unless landlords can demonstrate substantial renovations and improvements (there are other stipulations). The effects rent controls have on market economies, the vacancy rate and affordability for low-income residents is contested.





Unaffordable housing does affect health directly for those who must perpetually “borrow” from food money and incidentals to pay rent. A number of recent studies report that some women go without food to pay the rent and associated bills [5, 6]. According to McCracken and Watson, women in a focus group concurred that they paid their rent first, their utilities second, and bought food and other necessities last. “When rent is above what social assistance [provides] they told us they are regularly forced to use their food and clothing money to pay rent.” [5]. Similarly, Wiebe and Keirstead found 26 of 28 participants on social assistance in a Manitoba study did not have enough money to rent a safe place to live [6].

Women on social assistance are not the only ones who struggle to pay for rent. Pomeroy [23] ranks the largest Canadian cities according to rent affordability and the local minimum wage required to afford rent within the 30% of income guideline. Winnipeg ranks 18<sup>th</sup> of 28 cities where minimum wages are insufficient to meet housing costs. According to Pomeroy’s analysis, a minimum wage of \$8.08/hour would make a bachelor apartment affordable<sup>2</sup> in October 2006, when the minimum wage in Manitoba was \$7.60. Since the study was released Manitoba Labour has raised the minimum wage in the province to \$8.25/hour.

### The Cost of Heat

With winter temperatures below -20C regularly, the cost of heating a dwelling in poor repair is critical to the overall health of women and their families [7]. As noted, women report drawing on their food budgets to cover utility bills, especially if social assistance estimates for utilities did not equal the true costs; some women reported going without heat during Winnipeg winters because they could not pay the bill. When women have to move, they may not get more assistance to cover the cost of utility hook-ups [5]. Affordable heat is also a pressing issue in Northern Manitoba. It is ironic that many northern communities, located near hydro electric dams, do not themselves have access to hydro electricity, and rely on generators using fossil fuels.

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<sup>2</sup> Calculated based on working 40 hours per week, 52 weeks per year.





## Women in Core Housing Need in Manitoba

CMHC defines sub-standard housing as that which is not affordable, adequate or suitable; that is, fails to meet one or more of the three criteria for decent or core housing (see box). Figure 1 illustrates that in Canada, Manitoba and Winnipeg, women bear a higher burden of core housing need.

In Manitoba in 2001 there was a 20% incidence of core housing need in senior women living alone (aged 65 and older), a 36.1% incidence for households led by lone mothers, and a 20.2% incidence for non-senior women living alone (Figure 2). The results for Winnipeg sharpen the picture: 17.9% of senior women living alone, 35.2% of women-led lone parent households and 18.2% of non-senior women living alone were found to have core housing need in 2001. That is, 1/5 to 1/3 Manitoba women living alone live in homes that are not affordable, adequate or suitable.

### What is Core Housing Need?

Residents in core housing need live in dwellings that are:

**Not Affordable:** cost more than 30 percent or more of household income, **or**

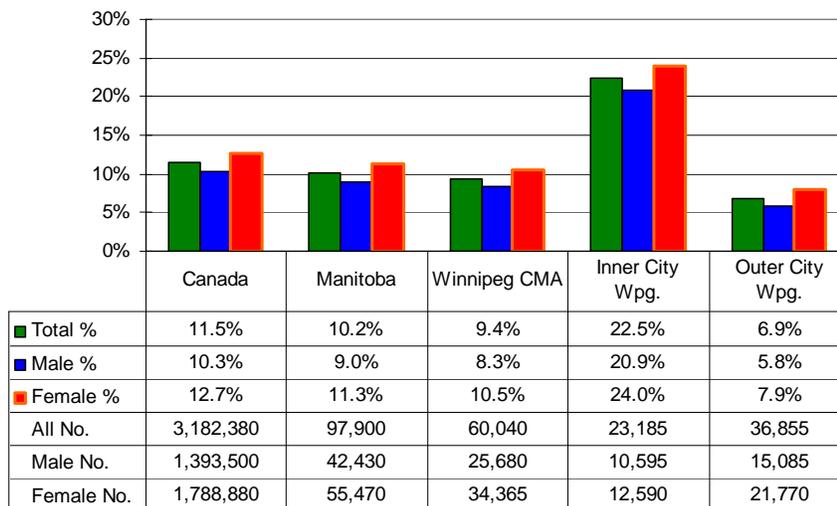
**Inadequate:** in need of “major” repair with respect to basic health and safety codes, **or**

**Unsuitable:** over-crowded, according to the age and sex of children, based on a National Occupancy Standard.

Dwellings that have any one or more of these factors represent core housing need for the inhabitants.

Source: Canadian Mortgage and Housing Corporation [24]

**Figure 1**  
**Incidence of Core Housing Need**  
**Males and Females 2001**



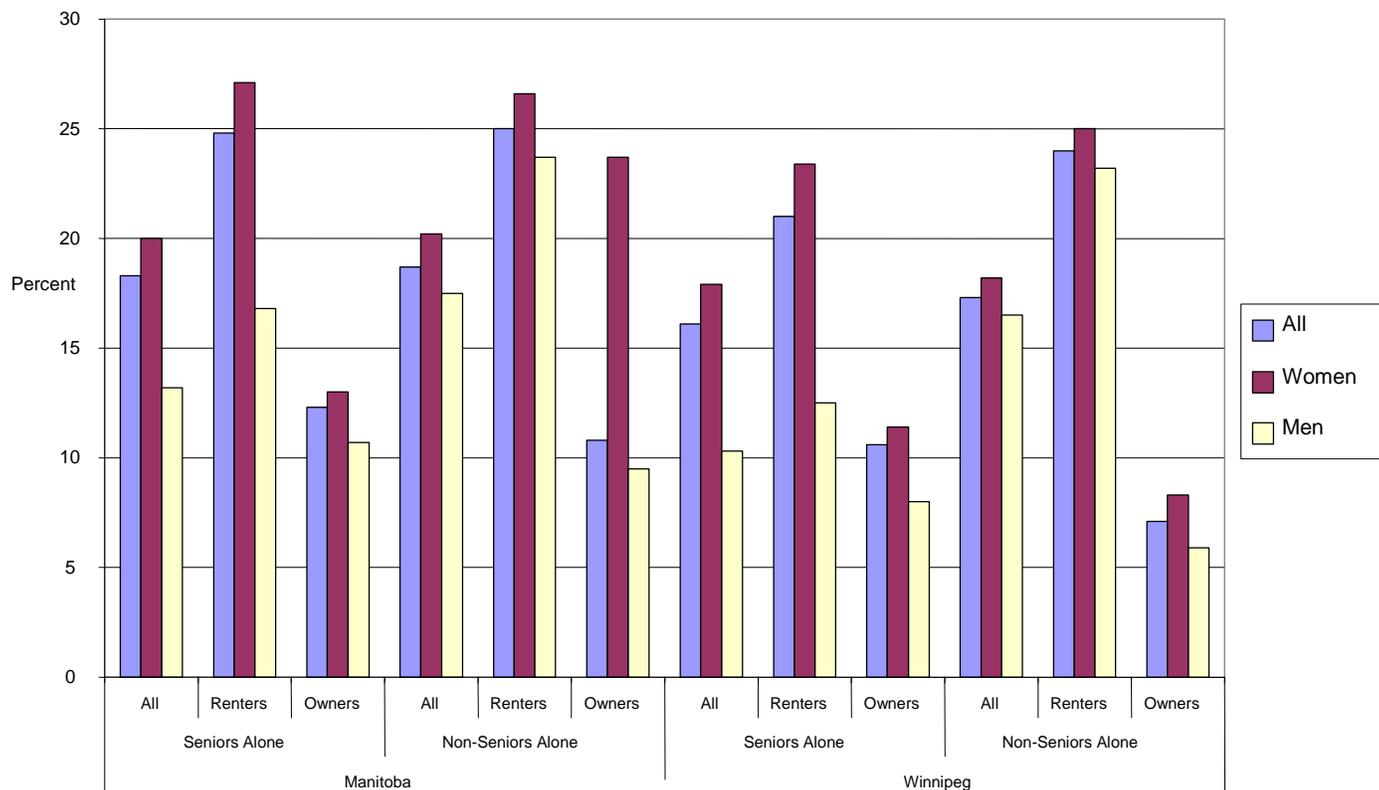
Data Source: CMHC Core Housing Need Custom Tabulation [4].





Not surprisingly, the greatest need is among women who are renters (Figure 2). Rentals include houses and apartments and may also include rooming houses.

**Figure 2. Core Housing Need for Individuals Living Alone in Manitoba and Winnipeg, 2001**



Data Source: CMHC Core Housing Need Custom Tabulation [4].

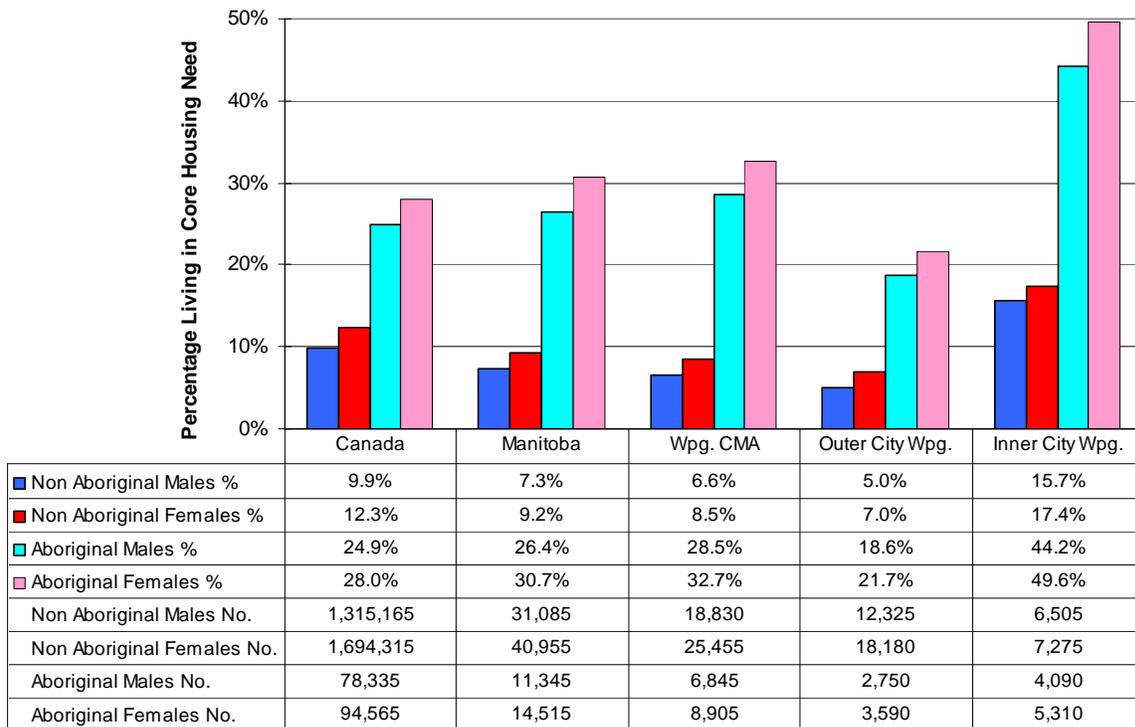
A closer look at who is in core housing need reveals that Aboriginal women (and men) are particularly vulnerable. A shocking 50% of Aboriginal women in inner city Winnipeg lived in core housing need, which is 2.85 times the number for non-Aboriginal women (Figure 3). Aboriginal men are nearly equally affected at 44.2% in core housing need. The overall core housing need for Aboriginal women living off reserve in the province is 30.7%. Measurements of core housing need by Statistics Canada exclude all people living on reserve, however the Census Metropolitan Area of Winnipeg *does* include Brokenhead First Nation.





Martens et al investigated housing conditions on First Nations in Manitoba Tribal Council Areas [25]. Using a Housing Assessment Survey from Indian and Northern Affairs Canada, the authors found that one quarter (25.8%) of housing units on Manitoba reserves were either in need of major renovations or in need of replacement. Houses on reserve were also more likely to have more occupants per dwelling (an average of 4.8 persons per dwelling, compared with 2.6 persons per dwelling in the general Manitoba population).

**Figure 3**  
**Incidence of Core Housing Need**  
**Aboriginal & Non-Aboriginal Manitobans 2001**



Data Source: CMHC Custom Tabulation [8]

However when the authors then considered only the number of dwellings that were habitable (not needing major renovations or replacement) the potential for overcrowding increased sharply, with an average of 7.6 persons per dwelling on reserve [25]. Finally, the authors noted that there was wide variation among Tribal Council areas in how many houses had hot and cold running water and adequate sanitation, with as many as 95% of homes on some reserves without modern plumbing (see Potable Water and Adequate Sanitation) [25].

Nationally, on-reserve crowding was found to be most common in isolated and semi-isolated communities, and among people with the lowest incomes, who were not working for pay, who were under 55 years of age and with lower education levels (had not graduated from high school). Over-

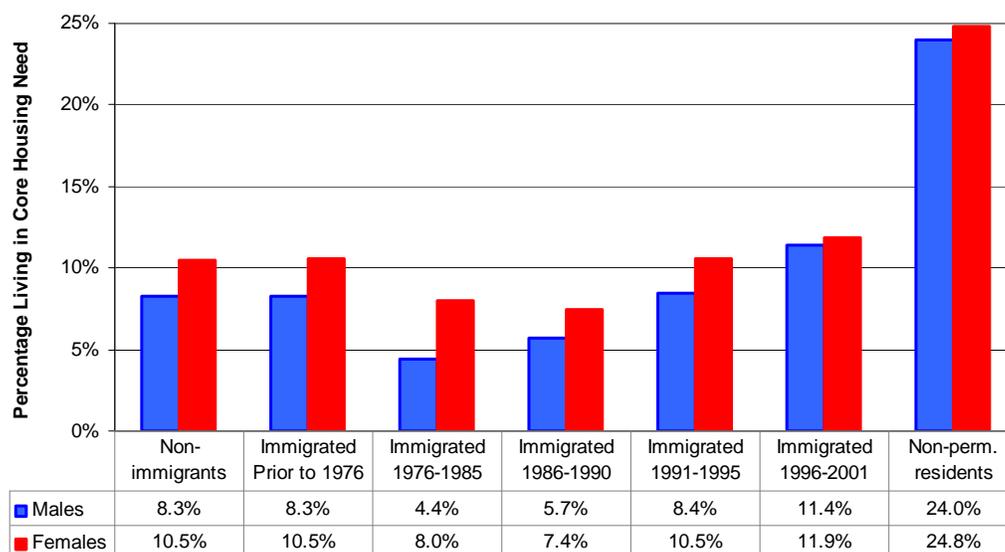




crowding was also found to be more common in homes that also required major repairs [26]. Clearly, as the federal government acknowledges:

*“Although housing conditions have improved, there is still work to be done. The lack of adequate, affordable housing is a great challenge for many First Nations.” [27].*

**Figure 4**  
**Incidence of Core Housing Need**  
**Winnipeg CMA**  
**Males & Females by Immigration Status**



Data Source: CMHC Custom Tabulation from Donner [37]

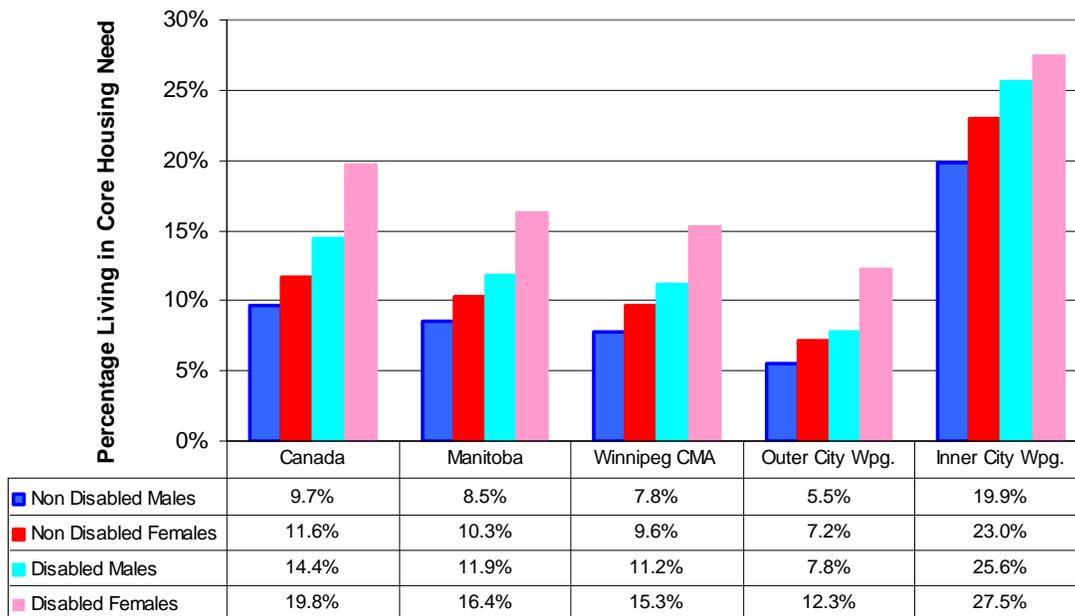
Among immigrants, as among other Manitobans, women are more likely to live in core housing need (Figure 4). Women who are most recently arrived (1996-2001) show an 11.9% core housing need which is not much higher than the 10.5% for non-immigrant women in the City of Winnipeg. Women who have lived in Canada for 20 years or more show the lowest core housing need overall, suggesting that most long-time residents have become financially secure and have a stable, safe and adequate place to live.

Women with disabilities are among the poorest of Manitoba’s poor. Figure 5 illustrates how critical the housing need is for women with disabilities, particularly in inner-city Winnipeg. In Canada, Manitoba and Winnipeg, women with disabilities were more likely to live in core housing need than either their male counterparts or other women.





**Figure 5**  
**Incidence of Core Housing Need**  
**Males & Females by Disability Status 2001**



Data Source: CMHC Custom Tabulation, from Donner [37]

## Discussion

In a 2004 study of Winnipeg women, McCracken and Watson found that safety, affordability and suitability were the most important housing concerns for low-income women [5]. The women who participated in the study sought housing that had smoke alarms, working door and window locks, apartments that were not on the ground or basement levels, and that were free of harassment from landlords and superintendents. Women also noted that the ability to afford a telephone in their home was essential to feeling safe.

Neighbourhoods are also critical to physical and mental well-being. Molougheny [2] and Bryant [3] note that to truly understand housing and health, neighbourhood safety and conditions must also be considered. Beyond the doors and windows, women were also concerned about neighbourhood gangs, the presence of drug dealing and dealers,, women sought familiar and trusted neighbours, and safe and well-lit streets and corridors [5]. Women in Winnipeg reported anxiety about their children’s exposure to neighbourhood violence [6], sexual harassment, and the common occurrence of finding used syringes and condoms on sidewalks, streets and in back lanes and yards. Women also commented on needing fences to prevent strangers from coming right up to their buildings [5].

The threat of violence is not just outside women’s home doors. Many women must flee physical and sexual abuse in their own homes, seeking temporary shelter and then having to find second-stage housing and ultimately somewhere to call home. Brownridge [28] investigated the relationship between housing tenure (owning or renting) and violence against women. Canadian women living in rental housing were





twice as likely as women who owned their own home to experience violence, however the risk of violence for women is intersected by life-course and the controlling behaviours of the men in their lives.

A study of immigrant women’s experience of violence and homelessness examines how gender and culture intersect. Many of the women in the pan-Canadian study (which included Winnipeg) had never lived alone before leaving an abusive situation. They had never before had to search for housing, or had to contend with the many aspects of running the household finances. The study authors found that there were both systemic and individual factors at play in how women came to be homeless (after fleeing violence) and then in how they were able to find new housing. Housing insecurity was in fact more critical for these women than absolute homelessness [18].

As a Toronto study demonstrates, however, “the full extent of women’s homelessness is severely underestimated because of a failure to understand the continuum of women’s homelessness.” The study notes that there is a high incidence of “*Hidden Homelessness which includes women who are temporarily staying with friends or family or are staying with a man only in order to obtain shelter, and those living in households where they are subject to family conflict or violence. Hidden Homelessness also includes situations where women are paying so much of their income that they cannot afford other necessities of life such as food; those who are at risk of eviction; and those living in illegal or physically unsafe buildings or overcrowded households.*” [4]

This definition is supported by the study by Thurston et al [18] in which women found temporary housing with friends or family, in emergency shelters or second stage shelters, with no clear idea about where to go next. Many women continued to have unstable housing for six months or more, until, with the help of advocates and counselling, they could find a place to live. Rising rents and neighbourhood safety were a concern for the women in the study, as for those who participated in other related research [18].

### Women Reclaiming their Neighbourhoods

Manitoba women know how crucial a safe neighbourhood is for them and their families. Women are leading a number of new campaigns to take back their neighbourhoods and communities:

The women of **North Point Douglas** in Winnipeg have come together to create a new Women’s Centre, Sisters Initiating Steps Towards a Renewed Society (SISTARS), the North End Housing Project and the North End Community Renewal Corporation, getting rid of crack houses and walking in the local park every night to keep it safer for residents.

Women in **Lord Selkirk Park** have developed and acted upon a model of Adult Learning Centre Circles of Support, with neighbourhood places to learn and the supports women need for education, starting with child care.

Similarly, women in **Cross Lake** have hosted summer camps for more than five years, bringing women, children and families to the beach to sleep, eat and join together. The benefits are far-reaching and have helped make the Cross Lake neighbourhoods safer places to live.





Recent studies of the particular housing needs in prairie cities confirm that getting and retaining good housing is especially difficult for Aboriginal populations [29, 21]. CMHC noted that Aboriginal people (the information is not disaggregated by sex) in Winnipeg are generally younger than the general population and have lower incomes and less education, and thus experience higher rates of poverty<sup>3</sup> [29]. Survey respondents and key informants pointed to the compounding effects of unstable employment (due to lack of skills) and low wages that made it very difficult to afford decent housing. Their unstable income also contributed to the likelihood that the study participants would not have established histories with banks and with landlords, making them appear to be “unreliable” tenants.

However, it is important to note that the respondents also reported that discrimination was a factor in their lack of bank and renting history: “[they]... felt discriminated against by banks and other financial institutions.”<sup>4</sup> The study authors note “The literature reviewed, key informants and household survey respondents all reported that discrimination affects the housing options available to Aboriginal households.” The authors note that there has been little research investigating the nature of the discrimination [29].

Aboriginal respondents in the CMHC study noted that average rent costs are too high and that besides the lack of available affordable housing, many Aboriginal families’ homes are overcrowded. There are few housing units with 3 or more bedrooms available, which is problematic for large and extended families [30]. In particular, Aboriginal women have described they regularly are asked to accommodate visitors from remote and rural communities (pers comments). These disadvantages leave some Aboriginal households vulnerable to homelessness. CMHC recommends that as the urban Aboriginal population grows, there will be a much greater need for affordable housing [29].

Renters who identified as Aboriginal were most likely to live in older established but unsafe (due to crime) neighbourhoods. Aboriginal homeowners, in contrast, had adequate space, felt safe in their neighbourhood and were generally satisfied with their housing. Rent-subsidized units were, on average, more recently built than either private market rentals or houses owned by Aboriginal respondents [29].

On reserve housing is managed by individual First Nations in agreements with Indian and Northern Affairs and CMHC [27]. The federal government has increased funding and mechanisms to improve housing conditions on reserves in successive years, but housing remains a grave concern and an international embarrassment for Canada.

First Nations women living on reserve have, for years, been demanding changes to rectify jurisdictional disputes that prevent women from their share and entitlement to marital shared property. The federal *Indian Act* governs Status (Registered) people and the Reserve lands, but there is no provision made for equitable and equal distribution of shared property in marital breakdown, as there have been in provincial

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<sup>3</sup> This was also true for the city of Edmonton.

<sup>4</sup> See as an example a compelling story in the [2007 State of the Inner City Report from CCPA-Manitoba \(page 29\)](#).





family law reforms [31]. Thus a woman is denied any right to claim ownership of a house and property, if the home is in her husband's name<sup>5</sup> [32, 33].

“... To date, the [federal] government has sought to frustrate NWAC's<sup>6</sup> ability to assert Aboriginal rights, by challenging NWAC's standing to bring a case challenging the Constitution, and by arguing that there is no Aboriginal right to remain secure in the community after marriage breakdown.” [34]

FAFIA, the Feminist Alliance for International Action, goes on to point out that the federal government is failing to uphold its constitutional and international obligations to ensure equality for Aboriginal women [34]. NWAC has published a series of recommendations to move to rectifying this critical inequity, starting with appropriate and adequate community consultation and involvement [32].

## Policy Implications

The housing shortage for low-income women in Manitoba has been “critical” for more than 20 years, and perhaps can be characterized more aptly as *desperate*.

A tri-level agreement between Canada, Manitoba and Winnipeg signed in 2002 has brought some improvement, through new programs to encourage semi-public and private groups to invest in repairing or building new houses for low-income families. FAFIA notes that the federal government's 2001 framework for federal-provincial affordable housing initiatives and agreements contains no preconditions or requirements that some proportion of the funds be used for those with core housing needs, nor any provisions to ensure that women do not face discrimination in applying for housing they need [34].

More recently Manitoba Family Services and Housing has taken steps to address the need for repairs to provincially-owned public housing. In December 2007 the Manitoba government announced planned funding for repairs, bulk purchases for appliances, and a new community-relations office, as well as \$600,000 for new playgrounds. At the same time the government also announced plans to merge Manitoba Housing Renewal Corporation with the Manitoba Housing Authority (see box on page 2-14 above) [35]. The Province announced its plans to improve the conditions of the social housing in Gilbert Park in Winnipeg in February 2008 [36].

The provincial government's intentions to reduce crime in public housing neighbourhoods by evicting anyone convicted of a criminal offence [35], bears further scrutiny and gender-based analysis. Manitoba should consider and examine the likelihood that women will be inequitably affected by this security

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<sup>5</sup> Real property on reserve may be held through a Certificate of Ownership. Even if the Certificate is held jointly, there is no provision for one spouse or the other to necessarily share in the proceeds of “ownership” when the relationship comes to an end. Native Women's Association of Canada and other agencies confirm that women are most likely to lose their home, and indeed have to move off the reserve altogether [29].

<sup>6</sup> NWAC is Native Women's Association of Canada.





initiative as it relates to those women in public housing who turn to survival sex trade work or other illegal acts, or women who live with other adults or minors who are in trouble with the law.

If women are to be able to keep themselves healthy, raise their children in safe and affordable homes, and take advantage of education and employment opportunities then we must ensure that they are adequately housed. As one woman from a remote community remarked: *“How can I move to Thompson to go to school, when there is nowhere for me to live?”* The Manitoba Right to Housing Coalition recommends a minimum 1% investment of the provincial budget annually to develop 300 new rent-geared to income units each year to begin to address Manitoba’s housing shortage [38].

The Manitoba government is making important first steps to improving the scarcity of affordable housing in the province. Further investment in this basic necessity will go a long way to improving women’s lives and their health and to enhancing life in Manitoba for all. In particular these important steps are needed to accommodate Manitoba’s growing population and anticipated immigration to the province (see Chapter One).

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# Potable Water and Adequate Sanitation

## Introduction

The availability of potable water is a critical factor for the health of all people. However for women, the relative ease of retrieving drinking water affects their daily work loads, and for girls in many parts of the world it is an important factor in whether or not they attend school, since getting water is so often women's work.

Manitoba boasts over 100,000 freshwater lakes scattered throughout the province, covering over 16% of the land. Most Manitobans outside the City of Winnipeg receive their domestic water from surface water and groundwater aquifers, and the quality of the water for drinking depends on the cleanliness at the source. Wastewater disposal for a community can affect its water supply, but drinking water quality can be affected by other environmental conditions. (Wastewater disposal can also affect any downstream community.) For most of the Manitoba population, getting clean drinking water is a matter of turning on a tap and most homes have flush toilets hooked to a public disposal system. According to the provincial government, over 99% of Manitoba citizens have potable water available, as well as adequate sanitation [1]. However, given the geography, weather, politics, and status of some communities, not everyone is so fortunate.

## Access to Potable Water

There is no measure of household access to potable water for Manitoba. There are numerous laws that protect the public and are intended to protect groundwater supplies [2, 3], and all public drinking water systems must be licensed by the Province. The Manitoba Departments of Health and Water Stewardship collaborate to test water quality and to advise citizens of public or semi-public water which is not safe for human consumption. Rural households often have private wells. The quality of the drinking water for these homes and farms is the responsibility of the owner. Manitoba Aboriginal and Northern Affairs prepared profiles of First Nations communities in the province in 2003 which included information about water supplies. Most houses in these communities receive treated, chlorinated water that is piped or brought by truck to homes; however

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### What is Potable Water?

Water of sufficient quality to serve as drinking water is called *potable water* whether it is used as such or not.

In Manitoba there are three categories: *Public* – those systems with 15 or more service connections or those that have been designated as such;

*Semi-public* – those systems with fewer than 15 connections, or those that provide drinking water to the public exclusively from a well;

*Private* – those which supply water to only one private residence, or those which have been designed as such. [1]





villages with fewer than 100 residents are likely to have central stand pipes or to use direct collection from local water bodies [4].<sup>1</sup>

On any given day, however, there may be more than 45 boil-water advisories for Manitoba communities [5]. For example, much of southern Manitoba lies in a flood plain, and spring flooding can lead to the contamination of the drinking water supply for those who rely on groundwater. The advisories are typically issued by the province's Medical Officer of Health and then it is the responsibility of the Province to collaborate with the local municipal government to rectify the problem.

Not all problems are dealt with promptly. The arms-length Clean Environment Commission may be instructed by the Minister of Conservation to hear and mediate on unresolved issues, including drinking water disputes and licensing issues.

Inadequate access to potable water has been a concern for Aboriginal and First Nations people for years. It gained recent attention nation-wide when the residents of a northern Reserve in Ontario were evacuated because of their hazardous water supply [6]. In fact, Aboriginal people have been trying to draw public and political attention to the matter for over 20 years.<sup>2</sup> [7]

Finally, fluoride in water is considered important to promoting good dental and oral health, because it stems or prevents tooth decay. The City of Winnipeg and other smaller towns have added fluoride to water supplies to improve oral and dental health. Manitoba provides resources and technologies to assist communities to provide fluoride to residents, including First Nations Reserves [8, 9]. This is an important consideration for women since dental health services are not publicly funded. It is also a prime example of the Manitoba government providing services to *all* residents.

## Adequate Sanitation

Most Manitoba households are part of public wastewater systems, providing high quality sanitation. There are, both in the cities and beyond, homes which use semi-public or private wastewater collection systems (such as septic fields). All of these sewage and sanitation systems are governed by provincial quality standards and guidelines [2, 3]. The First Nations community profiles list wastewater treatment where it exists, and as with drinking water, the smallest villages are least likely to have anything more than septic fields and holding tanks [4]. The national Assembly of First Nations and the National Aboriginal Health Organization continue to put drinking water and wastewater treatment on their agendas for government attention and action [7].

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<sup>1</sup> Note that Martens et al found up to 95% of homes on some reserves without modern plumbing [11].

<sup>2</sup> It is interesting to note that issues of jurisdiction arise in this area as they do for health services: “Depending on the source water used by a community, (some) federal departments ... and a number of other provincial agencies may also be involved, or have ‘responsibility’ for that water at some point before it reaches the individual. Other communities, for which the federal government has not taken responsibility (e.g. Métis settlements in Alberta, the Métis of Labrador, and the Innu, among others) are also penalized by the assumption that all aboriginal peoples are served through the federal government” [6].





## Women and Water

At first glance the availability of potable water is not a clear gender-based issue in Manitoba. Rural, remote and northern living women and communities are most likely to be affected when water supplies are contaminated by flooding or inadequate water treatment. Those who live in the cities are largely oblivious to how adequate water and sanitation are provided to their homes.

For those under boil-water advisories the issues are more obvious. Advisories are usually for drinking water only; the water can still be used for general domestic purposes including bathing, washing dishes and laundry. Water to be consumed must be boiled, including water used for infant formulas, cooking, ice, washing fruits and vegetables and brushing teeth [5]. As women are still responsible for most domestic duties in a household, it is likely that they must oversee these tasks and are responsible for reminding other household members to do the same.

Recent events and media coverage have pointed out, however, that in many First Nations Reserves good quality drinking water is **not** available. Some First Nations and Inuit communities in Canada have been coping with bad housing and poor drinking water supplies for decades. Communicable diseases such as *Giardiasis* and *Shigellosis* can be traced to poor water quality on Reserves [7]. While data are difficult to find, and communities are becoming more vocal about the problems, it is women who must cope with the day-to-day management of a household without adequate water supplies and sanitation.

Potable water and adequate sanitation are of prime importance to women's health as well as to the amount of work women do, but even when water is available and safe the ordinary task of household laundry gets overlooked. Many rented flats, apartments and houses in Manitoba provide semi-public laundry facilities. For other tenants (as well as home owners) however, laundry must be done off-site in a public facility (for a fee). With a climate that includes over six months of deep cold, getting the laundry done is a chore for Manitoba women, but can also be a great expense. Women and their families must first get to a facility, which can entail paying for public transport, seeking child care or taking small children along. Women must also have sufficient spare money to pay for using laundry machines. Often saving some money by hanging clothes to dry is not possible.

### Policy Implications

The availability of good drinking water cannot be taken for granted in Manitoba, even though access to clean drinking water and safe sewage disposal are generally well established. Potable water and adequate sanitation are, and will increasingly be, important indicators of women's health and women's work loads. The water situation is already poor (or worse) on some Reserves and for other Aboriginal and rural communities. Manitoba's abundant freshwater is at risk from toxins and other pollution, overuse and wastage in some regions, and inadequate sewage containment. There are high level debates about selling water to other jurisdictions as well as concerns about water being diverted to Manitoba [10].

Building on the final report from the drinking Water Advisory Committee (2000) [8] Manitoba enacted the Drinking Water Safety Act in 2004. The law provides for greater coordination of testing and





monitoring the quality of drinking water in the province, as well as more careful planning and monitoring of sewage and wastewater disposal. The outcomes of these measures must be assessed to ensure they meet the needs of the population.

Manitoba's water fluoridation programs are invaluable, particularly as fluoride provides immediate dental health preventative care for those most vulnerable, who cannot afford dental care.

While there is no way to measure this indicator in Manitoba yet, it will be important to find some means to set and measure access to potable water in the very near future [9].

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# Domestic and Sexual Violence Against Women

## Introduction

Violence is an important factor in women’s health and well-being, and a critical public health issue. Women and men tend to be exposed to different types of violence and in many respects, men suffer greater victimization. For example, in Manitoba, men generally have two to three times the risk of assault causing hospitalization or death than women [1]. However, over three decades of systematic data collection has shown that women are more likely to experience violence in intimate relationships and sexual violence. Marginalized groups of women are particularly vulnerable to violence.

Violence is repeatedly mentioned by women themselves as one of their most critical health issues. Acts of violence harm women, but the threat of violence and attendant fear affect women daily. This section provides selected prevalence data from victimization surveys and police reports on spousal violence, sexual assault, spousal homicide, and violence against Aboriginal and senior women in Manitoba. As violence against women stems from social, economic and political inequality of women in Canadian society, it is also important to look at the context and nature of violence against women.

## Spousal Violence

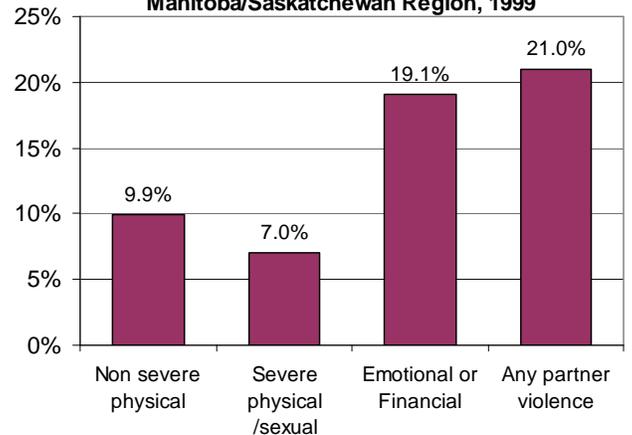
### Prevalence

Spousal violence<sup>1</sup> includes a wide range of behaviour: physical and sexual violence, threats, controlling behaviour, other emotionally abusive acts, and financial abuse, which restricts a partner’s access to income or other household resources. The 2004 General Social Survey (GSS) estimated that approximately 8% of women in Manitoba experienced at least one incident of physical or sexual violence by a current or former partner in the five years preceding the survey [2]. This rate reached 21% when the definition of abuse was broadened to include emotional and financial abuse, as seen in 1999 GSS data for Manitoba/Saskatchewan women [3].

<sup>1</sup> Includes people who are married, in a common-law union, or in a same-sex partnership.

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**Figure 1**  
**Prevalence of Spousal Violence Against Women Within Past Five Years by Type of Violence, Manitoba/Saskatchewan Region, 1999**



Source: Cohen & Maclean, 2003.





## Women at Risk

Among women, rates of spousal violence vary by personal characteristics and life circumstances. Young women, aged 15 through 24, women living in short-term, common-law relationships, Aboriginal<sup>2</sup> women, and women whose partners are frequent, heavy drinkers had the greatest risk of spousal violence. Other factors, like education level, urban/rural residence and household income had little effect on the rates of spousal violence [2], though other analyses have found a relationship between household income and rates of spousal violence against women in Manitoba and other provinces [3].

Aboriginal women in Canada were three times as likely as non-Aboriginal women to report spousal violence (24% versus 7% within the previous five years) The GSS does not distinguish lesbian rates from those of gay men, but homosexual Canadians may have experienced twice the rate of spousal violence as heterosexuals (15% versus 7%) [2].

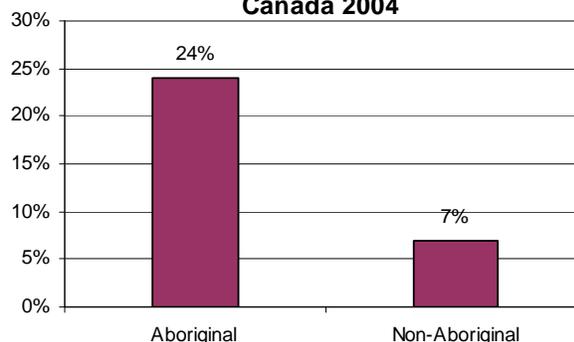
## Severity

Though there is little difference between Manitoba women and men in rates of self-reported spousal violence within the previous five years (8% and 7%<sup>3</sup> respectively), there is evidence that women suffer more severe and repeated violence than men. Canadian women who have been victimized by a partner are more likely to have been beaten, choked, or threatened with a gun or knife (23% versus 15%). Women are also far more likely to have been sexually assaulted than male victims of spousal violence. Repeated victimization is common for both male and female victims, yet women are nearly twice as likely to report being victimized 10 or more times by a partner in the past five years (21% versus 11%) [2].

<sup>2</sup> Based on self-identification as Aboriginal (North American Indian, Métis, or Inuit) by survey respondents.

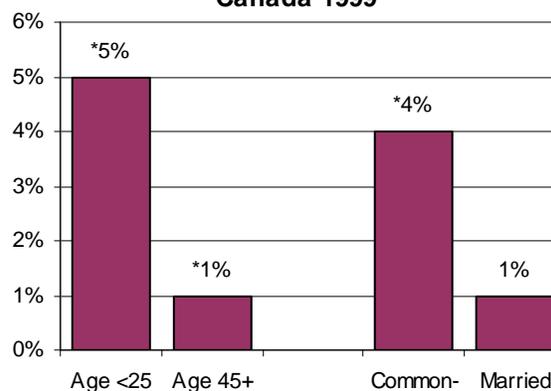
<sup>3</sup> Interpret prevalence for males with caution. Coefficient of variation 16.6% to 33.3%.

**Figure 2**  
Prevalence of Spousal Violence Against Women within Past Five Years, Canada 2004



Source: Statistics Canada, General Social Survey, 2004.  
Note: Does not include residents of NWT, Yukon, Nunavut, Reserves, military bases, long term care Institutions or prisons. Reflects self-reports of physical/sexual violence.

**Figure 3**  
Prevalence of Spousal Violence Against Women within Past 12 Months, Canada 1999



Source: Statistics Canada, GSS, 1999.  
Note: \* Interpret with caution. Coefficient of variation is high (16.6% to 33.3%).





## Spousal Homicide

Spousal homicide is of particular concern in Manitoba. From 1974 to 2000, there were 161 victims of spousal homicide in Manitoba, of which 117 (73%) were women. This is equivalent to an annual rate of 1.61 murders of women per 100,000 couples, the highest rate among the provinces for this period [4]. However, Canadian spousal homicide rates are now half what they were 30 years ago, and the rate for Manitoba women declined significantly over this period. The average rate of spousal homicide against Manitobans (men and women) for 1994 to 2003 was 0.58 per 100,000 couples, which is lower than for other western provinces but exceeds the national rate by about 20%. Despite this improvement, it is important to recognize that Canadian women were still four times more likely to be murdered by their spouse than are men [2].

Rates of spousal homicide are very high among Aboriginal women.<sup>4</sup> Provincial rates are not available, however Canadian data for the 1990s show that Aboriginal women were more than eight times as likely as non-Aboriginal women to be murdered by a spouse (4.72 versus 0.58 per 100,000 couples) [4]. Young women were also at greater risk of spousal homicide. For every 100,000 Canadian wives aged 18 to 24, an average of 2.25 were murdered in the 1994 to 2003 period, which was nearly three times the rate for women overall and 2.6 times the rate for young men [2].

## Sexual Assault

Sexual assault is a crime in Canada and includes conduct ranging from unwanted sexual touching to sexual violence resulting in serious injury to the victim [4]. In 2002, the rate of police-reported sexual assaults in Manitoba was 129 per 100,000 population. This rate ranked second highest among the provinces and was 65% higher than the national average [5]. Unfortunately, provincial rates specific to women were not published. Because only 10% or fewer women report sexual assault to the police [4], this rate offers only a starting point for assessing the burden of sexual assault for women.

A more complete story of women's experiences comes from victimization data. Based on the 1999 survey, an estimated 10.2%, or 1 in 10 women in Manitoba or Saskatchewan have been sexually assaulted in their lifetime, by someone other than a spouse [3]. When sexual assaults by spouses, boyfriends and others are considered—as was done in a comprehensive 1993 survey—as many as 39% of Canadian women report having been victims of at least one sexual assault since the age of 16 [4]. Though rates vary by definition, Canadian women consistently report much higher rates of sexual assault than men. In 1999, 3.3% of Canadian women surveyed by the GSS reported having been sexually assaulted during the previous year compared to 0.8% of men [6].

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<sup>4</sup> Homicide survey relies on police reporting of Aboriginal ancestry on Victim Survey.





## Violence against Senior Women

Seniors' self-reported abuse and police-reported violence give basic estimates of the extent of violence experienced by senior women, though provincial figures and some sex-specific rates are lacking. A small proportion (1%) of Canadian seniors report physical or sexual abuse, though financial and emotional abuse are more common (6% and 9% respectively, 1994-1999). Most often, the abuse is perpetrated by spouses. However, isolation also affects seniors' exposure to abuse. The GSS found that seniors who were divorced, separated or rural residents more often reported abuse than those who lived with a spouse or in an urban community [7].

Police-reported data also show that senior women in Canada have a low risk of violent victimization overall. In 2003, senior women were victimized at a rate of 119 per 100,000, which amounts to a small fraction of the rate for young women and 55% less than the rate for senior men. However, as for all women, senior women are more likely to be victimized by a family member than are men (39% versus 20%). The majority (85%) of their abuse within the family is perpetrated by a male, whether a present or former spouse or a son. Still, over half of all violent incidents reported by senior women involve violent acts committed by non-family members. Most often these are robberies (35%) or common assault (26%) [2].

Theorists generally explain violence against seniors as the consequence of the history of spousal or family violence, psychological problems of an abuser, such as caregiver stress, physical and emotional dependency of many seniors, or the social marginalization of the elderly [3]. Senior women's risk of victimization may be affected by both gender and age-based social biases.

## Aboriginal Women and Violence

The heavy burden of violence for Aboriginal women was confirmed in the 1991 Aboriginal Justice Inquiry, which estimated that 33% of Aboriginal women have been victims of violence. A report by the Ontario Native Women's Association placed this estimate as high as 80% [8]. A study of women attending an inner-city Winnipeg health clinic, 44% of whom were Aboriginal, found that 21% of the clients had been physically assaulted, 19.2% had been sexually abused by the age of 18, and 15.5% had been raped [9]. Local research with Aboriginal women who have survived abuse and who live in high risk circumstances attests to the severity and pervasiveness of violence in their lives. All of these women attributed feelings of isolation and of being unsafe to their experiences of sexual abuse, domestic violence, neglect, and emotional abuse [10]. Aboriginal women have emphasized the widespread and systemic nature of their abuse in Canadian society. They suffer gender-based violence and are victimized as members of a subjugated culture [11].

In October 2004 Amnesty International released a report entitled *Stolen Sisters: A Human Rights Response to Discrimination and Violence Against Indigenous Women in Canada*. The report linked the high levels of violence experienced by Aboriginal women and girls in Canada to deeply rooted patterns of marginalization and discrimination. Aboriginal women and girls experience much higher rates of violence, violent acts of hatred, and are denied adequate protection by the law and "society as a whole" [12]. The report decried the indifference of most Canadians to violence against Aboriginal women, especially the murder and





disappearance of women and girls for over thirty years. A second report, issued one year later, pointed out that there were “still significant, unacceptable gaps in the protections afforded Indigenous women in Canada” [13]. Amnesty International urged all levels of government to:

- gather and keep reliable and comprehensive statistics about the nature and scope of violence against Aboriginal women
- develop effective police protocols to respond to reports of missing women and cases of violence against Aboriginal women
- provide adequate and sustained support to programs that help Aboriginal women escape from harm
- address the extreme social and economic marginalization that put Aboriginal women at risk<sup>5</sup>

The *Stolen Sisters* campaign continues in Canada to draw attention to the seriousness of the situation for Aboriginal women and girls. In 2006 Native Women’s Transition Centre (Winnipeg) hosted a research study that examined the supports available to Aboriginal women who are victims of sexual violence [32]. Their detailed recommendations include the need for action to be swiftly taken to provide holistic, culturally appropriate counselling and other services for Aboriginal women who have been sexually abused<sup>6</sup>. The report recommends a human rights framework for action that recognizes the systemic oppression, racism and discrimination that is at the root of sexual violence against Aboriginal women.

### Other Women at Risk

Three trends regarding young women’s vulnerability to violence may be important in Manitoba, particularly in cities. Firstly, increasing numbers of girls have been observed among homeless youth in Winnipeg. Homeless youth are known to have a high risk of violent victimization, and often have a history of abuse [14]. Secondly, the sexual exploitation of youth, whether on the streets or by way of the Internet, is a growing issue of concern in the province. In a given year, approximately 400 children aged 13 to 17 are exploited in Winnipeg’s visible sex trade. Children’s advocates describe a rapid growth in child prostitution and increasingly younger girls being solicited by men [15]. Finally, anecdotal reports point to an increasing trend of dating violence among girls as young as 12 or 13, which accompanies a trend toward earlier maturation and sexual involvement [11].

Other groups where the risk of violence is high or increasing among Manitoba women include women with disabilities, pregnant women, and immigrant women. The Roehrer Institute reports that women with a disability are roughly one-third more likely than non-disabled, female counterparts to be victims of physical or sexual abuse by a partner [16]. National research and reports by Winnipeg police authorities

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<sup>5</sup> Adapted from Amnesty International 2005.

<sup>6</sup> There are 12 priorities for action recommended in the report. There were two consultations with community agencies in January and February 2007 which moved the recommendations to concrete action to be taken.



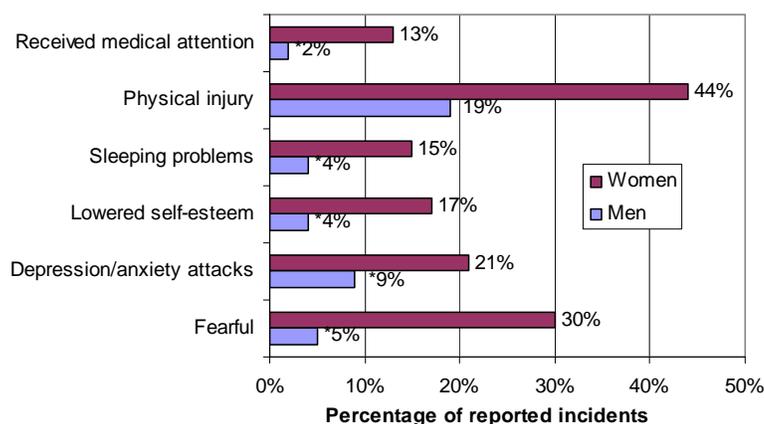


have described pregnant women as having an increased risk of spousal violence [4, 17]. There is also evidence that immigrant women from developing nations have higher risks of spousal violence than Canadian born women or other immigrants [18]. Recent and projected growth in the immigrant and refugee population in Manitoba, together with anecdotal reports from local service providers, supports the need to view these as key risk groups [11].

## Health Effects of Violence Against Women

A consensus statement recently released by the Society of Obstetricians and Gynaecologists of Canada (SOGC) identifies violence as a significant cause of morbidity and mortality for women [19]. The World Bank has estimated that sexual assault and domestic violence take away one in five healthy years of life for women aged 15 through 44 in industrialized nations [20].

**Figure 4**  
**Prevalence of the Consequences of Spousal Violence By Sex**



**Source:** Statistics Canada, General Social Survey, 2004.

**Note:** \* Interpret with caution. Coefficient of variation is high (16.6% to 33.3%).

The SOGC's critical review of recent evidence concerning violence against women concluded that women who experience violence have an increased risk for substance abuse, mental disorders, chronic physical disorders, and sexual health complaints [19]. Considerable research links women's experiences of violence and abuse to poor mental health outcomes, especially depression [21]. According to the World Health Organization, women who suffer intimate partner violence report poorer health overall and are more likely to engage in practices that are harmful to their health and experience difficulties accessing health care [22].

Women and girls who have been sexually assaulted have an increased risk of attempting suicide and engaging in risk-taking behaviours, such as smoking or drug use, which have known health risks [23, 24]. Several physical illnesses have been linked to women's experience of sexual assault or abuse, including pelvic inflammatory disease, sexually transmitted infections, HIV/AIDS, bladder infections, and chronic pelvic pain [25]. Abuse during pregnancy is also a factor in miscarriage, neonatal deaths, and low birth weight outcomes [26]. The nature of injuries presented by women who have been assaulted most often include injuries to the eyes, ears, head, neck, breasts and abdomen, especially during pregnancy, while sexual assaults commonly result in bruising, tears, and lacerations to the vaginal area and anus [27]. These and several other health impacts are known to be closely tied to violence against women, while indirect effects of violence on health are rarely accounted for, including the financial impacts of violence on women's health. For example, women whose victimization results in injury may be unable to work or may avoid the workplace where evident injuries could gain unwanted attention. This could affect their income and job security, with further implications for their social and physical welfare.





Estimates have placed the total measurable costs of violence against women, relating to health and well-being, to more than \$1.5 billion per year. These calculations account for immediate effects (medical, dental, workplace costs), long-term effects (psychiatric, workplace), existing community responses (transition houses, crisis centres), and provincial and territorial prevention and treatment initiatives. As measurable costs only relate to visible physical or sexual violence and do not include other forms of abuse, such as emotional or financial abuse, this estimate is recognized to be only the tip of an iceberg [28].

According to the GSS, women are more likely to suffer injuries and lasting emotional consequences resulting from spousal violence. They are more than twice as likely to be physically injured by a partner and several times more likely to need medical attention than are male victims. Women are also much more likely to report negative emotional and health outcomes of violence than men, including general fearfulness, depression or anxiety attacks, sleeping problems, and lowered self esteem. Compared to their male counterparts, female victims are also more likely to take time off from their daily activities (29% versus 10%) [2]. For women living in Manitoba or Saskatchewan, the 1999 GSS revealed that 17% of those who suffered any partner violence used prescription drugs for anxiety, depression, or sleep [3].

## Summary

The indicators presented in this chapter describe a high rate of violence against women in Manitoba. Violence against women often occurs within the family, among intimate partners, and in private. This debunks the myth of 'stranger violence' commonly feared by women and propagated by media, while emphasizing the need to address the relatively frequent occurrence of violence against women by family members and intimate partners.

Not only are women more likely to be injured in violent confrontations with men [3], but social aspects of gender relations are also important to consider. Typically, women will endure 35 episodes of spousal violence before seeking help from anyone, often as violence and associated harm escalates [11]. Consequently, the police data record only a fraction of violence in households and primarily the advanced stages of violence in a prolonged cycle of abuse. Many factors reduce the likelihood that women will report violence to the police, including fear of reprisal, economic dependence on men, shame and secrecy surrounding the often intimate context of violence, trivialization of violence against women, or fear that reports will not be taken seriously [27].

Women may also internalize abuse, accept it as part of their role as women, and engage in self-destructive behaviors. A tragic example of this circumstance for women was noted in a study of self-harm among Manitoba women involved with the criminal justice system. An estimated 59% of incarcerated women in Canada have harmed themselves. The study noted reports of an increasing incidence of self-harm among inmates in Manitoba (who are disproportionately of Aboriginal descent) and, through qualitative research methods, linked self-harm to women's histories of violent abuse [29].

Women's experience of violence is rooted in women's limited social and economic power relative to men. Cross cultural research shows that gender inequality is the most significant cause of men's violence





against women [30]. Until women attain equal status in society, they are likely to continue to suffer greater and more serious violence, the consequences of which many will endure in silence. The nature and social dynamics of violence against women results in delayed intervention not only by the justice system, but also social and health services. Health care providers must account for women's past experience of abuse, which is known to deter many from seeking routine and preventive health services, with consequences for their health outcomes [31].

## Policy Implications

The women's movement in Manitoba has made violence against women a priority issue for over thirty years. These efforts have led to legal, policy and procedural changes by all levels of government. They have also led to the funding of governmental and community based violence prevention programs. The WHO has identified four "Principles of Good Practice" in developing programs to combat violence by intimate partners, all of which are applicable to the situation in Manitoba. These are:

- Actions to address violence should take place at both national and local level.
- The involvement of women in the development and implementation of projects and the safety of women should guide all decisions relating to interventions.
- Efforts to reform the response of institutions – including the police, health care workers and the judiciary – should extend beyond training to changing institutional cultures.
- Interventions should cover and be coordinated between a range of different sectors [31]

There is currently no database that consistently records Manitoba women's experiences of domestic and sexual violence, nor the resulting injuries and long term trauma. It is not possible to record and retrieve data at the provincial or regional health authority levels. Since violence is such an important factor in the lives of so many women, and since women confirm that violence and threats are a pressing health concern, new provincial health indicators and data sets need to include appropriate measures of assaults, the resulting physical and mental injuries, as well as some method to measure how well social and political programs are succeeding in reducing violence against women.

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# Literacy and Education

## Introduction

Both literacy and education have been consistently linked to health behaviours and health care utilization, demonstrating that individuals with lower education and literacy are more likely to suffer poorer health and well-being and have unhealthy lifestyle habits, such as increased smoking, poorer nutrition and increased inactivity [1, 2]. Low literacy has been negatively associated with many aspects of health, including morbidity and mortality, low birth weights, teen pregnancies, injuries and accidents, and a wide range of diseases such as diabetes, cardiovascular disease and rheumatoid arthritis [2]. People who do not have the minimum literacy skills required for coping with the demands of everyday life circumstances are more likely to have difficulty understanding and interpreting health-related information, thus increasing their likelihood of health risks [1].

Similarly, literacy and education can be predictors of one's ability to secure stable employment that provides a sustaining livelihood and income. Individuals with lower education levels are more likely to have lower paying jobs and be unemployed, thus increasing their likelihood of poverty. For women then, educational attainment, and hence increased access to a sustaining source of income, is of particular importance to their health and well-being.

## What is Literacy?

Aside from oral communication, written text has been the primary source of information sharing. Therefore, literacy has been historically the ability to read and write. However, with the development of new communication means, and particularly the development of information and computer technology, additional types of literacy have evolved, including media literacy, computer literacy, technology literacy and health literacy, to name a few [3].

Given its multiple forms and complexity, literacy has become somewhat difficult to define. Nevertheless, there is a common chord: literacy involves much more than just knowing how to read and write; it involves being able to understand, interpret and apply written and oral information to daily living [2, 4]. Internationally, literacy has been defined as “the ability to understand and employ (use) printed information in daily activities – at home, at work and in the community – to achieve one's goals and develop one's knowledge and potential (to be the best one can be)” [5]. In its broadest sense then, literacy can be defined in relation to one's ability to gain meaning from a wide variety of sources and to understand the messages that are being conveyed by these sources [3].

Just as there are different types of literacy, there are different ways in which literacy can be measured. The International Adult Literacy and Skills Survey (IALSS), the first internationally comparative survey of adult skills, was designed to measure prose literacy, document literacy, numeracy and problem-solving among individuals aged 16 to 65 years. Literacy skills were determined by using examples of real-life situations, ranging from simple to complex. To illustrate, respondents were asked to look at a real medicine label and determine the correct amount of medicine to give a child. Other examples included the





ability to read and understand a bus schedule, various types of instructions, forms, and charts such as a newspaper weather chart [2]. On this basis, respondents were placed into one of five levels of literacy ranging from lowest to highest, with Level 1 representing the lowest literacy skills and Level 5 representing the highest literacy skills. Level 3 was deemed to be the minimum threshold for Canadian adults to adequately cope with society's skills demands.

Literacy has also been measured within the context of education. For instance, a component of the Canada Census was designed to measure the educational characteristics of the Canadian population through a series of survey questions related to their educational achievements, number of years of schooling, school attendance and the like. Census questions pertaining to education have changed substantially over the years, primarily to reflect developments in Canada's education system, making the data more useful to governmental departments, businesses, educational institutions, researchers and academics [6, 7].

Statistical analyses of Census data have suggested that higher levels of education will result in higher literacy levels. This pattern was also evident after findings from the 2003 IALSS which revealed that one-half of the individuals who scored at the lowest proficiency levels on the prose component had not completed high school [8]. Still, while the connection between education and literacy is strong, it is not exclusive. In fact, one-third of the Canadian population does not fit this general pattern [2]. The 2005 International Study of Reading Skills (ISRS), a follow-up survey to the Canadian component of the 2003 IALSS, revealed that most individuals who scored in the lowest levels of the IALSS also scored in the lowest reading classes of the ISRS. However, while a large proportion of these individuals had low education levels, many did manage to complete high school, despite their reading difficulties [8].

## Literacy in Canada and Manitoba

Despite Canada's intent to make 12 years (grades) of education available to all citizens, not all individuals in Canada have achieved the same levels of literacy. The 2003 IALSS revealed that approximately 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 [9]. Approximately 22% of Canadian adults had a limited ability to deal with much of the written material they encounter in their everyday lives, and thus, fell into the lowest level of literacy (Level 1). A further 26% scored at Level 2. While these individuals could read, they were only able to deal with written material that was simple, clearly laid out, and in a context with which they were familiar. On the basis of these findings, which have remained relatively constant since 1994 when the study was initially conducted, it was concluded that *almost half of the Canadian population has difficulty with reading materials encountered in everyday life*, and consequently many individuals will avoid reading, except for material that is relatively simple and familiar to them [2]. Figure 1 illustrates the proportion of Canadian women who have very limited reading skills.





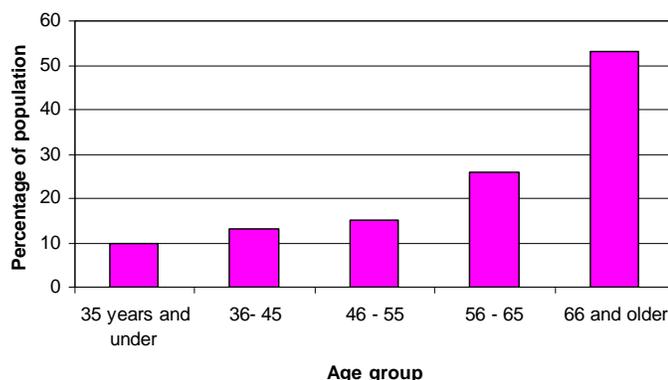
Province to province as many as 38% of young adults between the ages of 16 and 25 years have not achieved the minimum literacy skills required to get by in today's workplace. A significantly higher proportion of working-age (16 to 65 years) immigrants in Canada have lower literacy skills than their Canadian-born counterparts (60% and 37%, respectively)[9].

Among Canadians over the age of 65 years, 53% scored at Level 1 on the IALSS, while another 27% scored at Level 2. Of these senior Canadians, slightly less than 19% demonstrated the minimum literacy skills necessary to function in their daily activities, and consequently, many seniors reported having to depend upon others for assistance in meeting their daily literacy requirements [2]. Senior women are much more likely than younger women to have difficulties with literacy and slightly more likely than their male counterparts to have literacy problems, with 49% of men over 65 years, as compared to 53% of women in this age range, having limited reading skills [10].

Likewise 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, according to the IALSS (Figures 2 and 3). With regard to the health risks faced by senior women, these statistics are alarming, considering the fact that women generally have a longer life expectancy than men, and thus they are more likely to be living alone, with limited assistance in carrying out daily tasks.

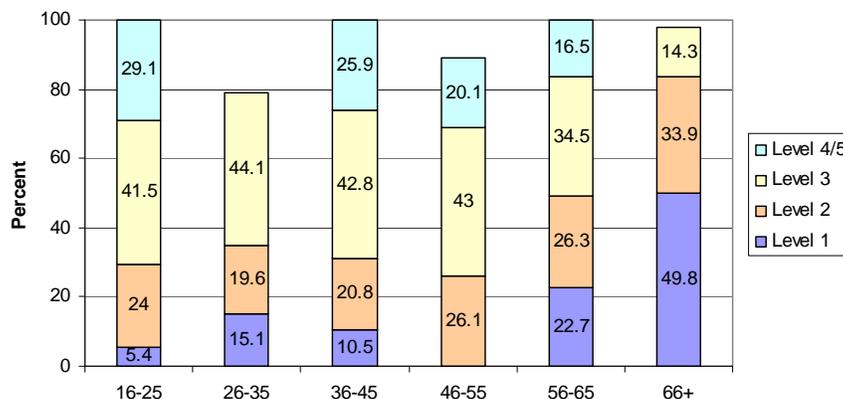
The Canadian component of the Programme for International Student Assessment (PISA), a series of international assessments that focused on the reading, mathematics and science literacy of 15-year-old students, also found sex differences: girls out-performed boys in reading, while boys out-performed girls in mathematics. However, the gap in the scores between girls and boys was much larger in reading than it was in mathematics. While girls demonstrated better performance at identifying scientific questions

**Figure 1. Proportion of females with limited reading skills, by age, Canada, 2005**



Source: International Survey of Reading Skills, 2005

**Figure 2. Literacy Levels by Age, Manitoba Females, 2001**



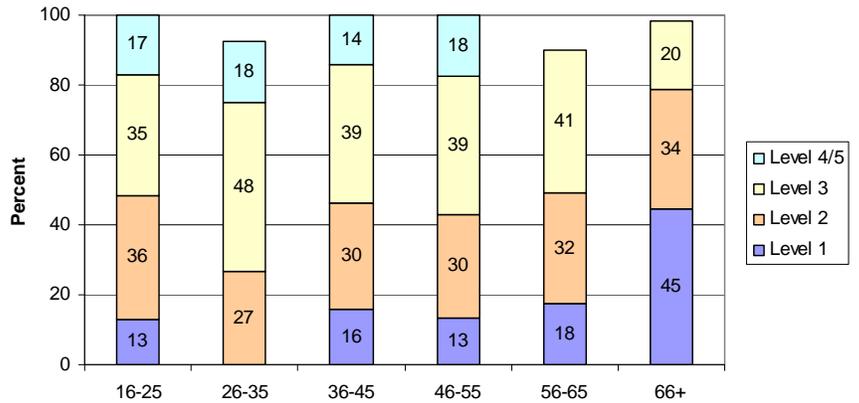
Source: International Adult Literacy and Skills Survey, 2003  
Data are suppressed where numbers are too small to include.





arising from a given situation, boys demonstrated better performance at mastering scientific knowledge [11]. The differences in literacy skills between girls and boys tend to diminish as they become adults [12], and on average, women have higher literacy levels than men. In 2003, 19% of women and 16% of men aged 16 years and over performed at the highest levels of literacy proficiency. Still, about the same proportion of women and men had very limited reading skills, with 20% of both the female and male populations only being able to perform simple reading tasks, such as locating one piece of information in a written text [10].

**Figure 3. Literacy Levels by Age  
Manitoba Males, 2001**



Source: International Adult Literacy and Skills Survey, 2003  
Data are suppressed where numbers are small to include.

There also appear to be disparities between the literacy rates of younger and older age cohorts. A recent Canadian study reported that in 2003, individuals who were 35 years of age had approximately the same literacy scores as 25-year-olds in the same survey, suggesting that the older individuals had lost some of their literacy skills since the time they had left school. While there was a general tendency for literacy skills to decrease with age, this effect differed depending upon level of schooling. That is, age had no effect on individuals with high school education or less, but for people with university education, literacy evidently declined with age, suggesting that there is little loss of very basic literacy skills with age. Consistent with other research, the study concluded that literacy increases strongly with years of schooling, and parental education levels have a strong effect on literacy, with the mother’s level of education being of particular significance to the educational attainment of her children (see below)[13].

Not only are literacy and education indicators of one’s ability to read and write, but they play a significant factor in determining economic success. A 25-point increase in the average literacy score had an effect on earnings that was equivalent to an extra year of schooling. Further, approximately one-fifth of the effect of schooling on earnings arose because schooling generated higher levels of literacy [13]. Completion of Grade 12 is a requirement for most jobs in Canada, and many positions require post-secondary education or training. The Conference Board of Canada reports that corporations expect 92% of new employees to have high school certification, while another 23% are expected to have community college diplomas and 24% are expected to have university degrees [14].





## Educational Attainment

As noted, literacy is not synonymous with educational attainment, but there is much evidence to suggest that it does increase with education. As such, it has generally been agreed that the completion of Grade 9 is an indicator of basic functional literacy [14], since many people who do not reach this minimal level of education do experience difficulty in meeting the daily demands of our complex society.

Educational attainment among the Canadian population has dramatically improved over the last 50 years. From 1951 to 1991, the proportion of Canadians aged 15 years and over with more than a Grade 9 education increased from 48% to 86%, and the proportion of Canadians with university degrees increased fivefold [15]. In 2001, nearly 77% of Canada’s younger population had obtained a high school diploma and approximately 62% of these individuals had gone on to a post-secondary program [16]. By 2006, slightly less than 24% of adults aged 25 to 64 years had a high school diploma only, while just 15% did not complete high school. These individuals who did not complete high school were concentrated in the older age groups, suggesting that more and more young people are pursuing their education. In this case, 11% of individuals in the 25 to 34-year age range and 23% of individuals in the 55 to 64-year age range did not complete high school by 2006.

The number of adults aged 25-64 who had a university degree in 2006 increased by 24% from 2001, much higher than the 7% population increase. Nevertheless, the number of adults who did not have a university degree increased by only 2%. For young adults aged 25 to 34 years, 29% had a university degree. This was well above the 18% proportion of individuals aged 55 to 64 years with a university degree. The largest increase since 2001 occurred in the number of adults who had a master’s degree, and the smallest increase occurred in the number of adults with medical-related degrees (Table 1) [6].

**Table 1. Total Population aged 25 to 64 years, by Level of University Attainment, Canada, 2001 and 2006**

	2001	2006	% increase
<b>Total</b>	<b>16,288,310</b>	<b>17,382,115</b>	<b>7</b>
No university degree	13,080,875	13,396,370	2
Subtotal – University degree	3,207,440	3,985,745	24
University – Bachelor level	2,079,650	2,538,355	22
University – above Bachelor level	331,285	416,815	26
Degree in medicine, dentistry, veterinary medicine or optometry	102,340	113,740	11
Master’s degree	584,745	774,655	32
Earned doctorate	109,420	142,180	30

Source: Statistics Canada, 2001 and 2006 Census





There has been remarkable progress made over the past few decades in closing the gender gap in formal educational attainment. In fact, Canadian girls are now more likely than their male counterparts to complete high school, and women are more likely than men to have a bachelor's or master's level university degree [6]. The Pan-Canadian Education Indicators Program (PCEIP), a joint venture of Statistics Canada and the Council of Ministers of Education reported that in 2002-03, high school graduation rates were higher for females than for males, with 78% and 70%, respectively. Further, while women were the majority of full-time undergraduate students in recent years, their total enrolment at the graduate level was now equal to men [17].

By 2006, there were approximately 778,305 more university graduates throughout Canada than there were in 2001, and women accounted for nearly three-quarters of the increase: 33% of women aged 25 to 34 years and 24% of women aged 35 to 44 years had a university degree, compared to 25% of their male counterparts, in each of these age groups [6]. These statistics present some cause for celebration as more and more women are welcoming and taking advantage of the numerous government initiatives and opportunities made available to assist them in balancing their complex lives, while acquiring the education and skills they need to succeed in today's labour force.

## Manitoba Women

Census data from Manitoba show that in 2006, one in four adults (25%, women and men) had a high school diploma as their highest level of educational attainment, while 20% of the adult population in Manitoba had not completed high school. Further, approximately 11% of Manitoba adults aged 25 to 64 years had a trades certificate, the lowest proportion of all western provinces, and one in five individuals with a trades certificate studied in the Mechanic and Repair Technologies/ Technicians field. The number of post-secondary graduates in Manitoba increased in recent years, with 19% of the working-age population having a college diploma and slightly less than 20% having a university degree at the Bachelor's level or higher.

In 2006, Manitoba had 31,955 more university graduates between the ages of 25 and 64 years than it did in 2001, and women accounted for approximately two-thirds of this increase; of the 115,750 university graduates in Manitoba, in 2006, approximately 61,495 were women (Table 2) [6]. This increase in the number of female university graduates in Manitoba may be reflective of a number of ACCESS programs implemented to enhance accessibility and the successful completion of post-secondary education for individuals who traditionally had been under-represented in post-secondary education, including Aboriginal people, immigrants and people living in poverty [18].

For example, the Winnipeg Education Centre (WEC) offers degree programs in Social Work through the University of Manitoba and in Education through the University of Winnipeg. In 2003, an estimated 80% to 90% of WEC students were female, all were mature students, the majority were single-parents, and all were living under the poverty line. The retention rate at WEC was approximately 70%, which is high for any university program, and the rate of employment in the field of study after graduation was reported to be excellent, with at least 80% of Social Work students securing employment in social work occupations and another 10% pursuing graduate studies following graduation from their undergraduate program [18].





**Table 2. Highest Level of Educational Attainment, by Sex,  
Population aged 25 to 64 years, Manitoba, 2001 and 2006**

	Females				Males				Both sexes			
	2001 (n, %)		2006 (n, %)		2001 (n, %)		2006 (n, %)		2001 (n, %)		2006 (n, %)	
	Less than high school	77,565	26.9	55,855	18.5	85,035	30.1	65,630	24.4	162,600	28.4	121,485
High school	67,340	23.3	78,575	26.0	61,230	21.6	72,625	24.7	128,575	22.5	151,200	25.4
Trades	28,330	9.8	25,985	8.6	46,530	16.4	41,415	14.1	74,855	13.1	67,405	11.1
College	57,035	19.8	64,250	21.2	36,175	12.8	47,240	16.1	93,215	16.3	111,495	18.7
University – below Bachelor level			16,185	5.4			12,410	4.2			28,600	4.8
University – Bachelor level and above	58,475	20.3	61,495	20.3	53,920	19.1	54,255	18.5	112,395	19.7	115,750	19.4
Total population aged 25 to 64 years	288,745	100	302,360	100	282,895	100	29,3580	100	571,640	100	595,935	100

Note: Recent changes to the 2006 Census included more precise information on the level of education attainment and fields of study. Questions pertaining to university degrees attained in 2006 were similar to those asked in 2001; however, the 2006 Census collected information on non-university certification differently than in 2001.

Source: Statistics Canada, 2001 and 2006 Census, highlight tables

At the other end of the spectrum, a total of 151,200 individuals aged 25 to 64 years in Manitoba had only completed high school by 2006, while another 121,485 individuals had less than high school education. Women comprised 26% of the individuals who had completed high school and slightly more than 18% of the individuals with less than high school. By comparison, men comprised approximately 25% of each of these education levels [6], confirming that women are more likely than men to complete their high school education.

Like the general population, the educational profile of Canada’s Aboriginal people is improving, but it still lags significantly behind that of other Canadians [14]. The PCEIP reported that in 2001, the proportion of Canada’s Aboriginal<sup>1</sup> people with less than high school education decreased substantially from 45% to 39% five years later. Between 1996 and 2001, the proportion of Aboriginal people with a high school diploma increased from 21% to 23%, and the proportion with post-secondary qualifications increased from 33% to 38%, with 8% of Canada’s Aboriginal population aged 25 to 64 years holding a university degree in 2001. Post-secondary credentials were noticeably higher among younger age cohorts, and Aboriginal women were more likely than their male counterparts to have college diplomas (18% and 11%, respectively) or university degrees (9% and 6%, respectively); Aboriginal men were more likely to have trade certificates, with 20% as compared to 12% for women (Table 3) [17].

<sup>1</sup> In this case “Total Aboriginal” identity includes those people who identified themselves as belonging to any one or more of the Aboriginal groups (North American Indian, Métis and Inuit).





**Table 3. Highest Level of Educational Attainment, by Sex, Aboriginal Identity Population aged 25 to 64 years, Canada, 1996 and 2001**

	Females				Males				Both sexes			
	1996		2001		1996		2001		1996		2001	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Less than high school	79,415	43.3	85,255	36.4	77,180	47.3	86,495	41.3	156,605	45.2	171,725	38.7
High school	41,610	22.7	55,575	23.8	32,490	19.9	45,770	21.8	74,105	21.4	101,365	22.9
Trades	19,480	10.6	27,940	11.9	29,360	18.0	41,340	19.7	48,845	14.1	69,265	15.6
College	29,585	16.1	43,225	18.5	16,175	9.9	23,580	11.2	45,755	13.2	66,805	15.1
University	13,135	7.2	22,015	9.4	8,045	4.9	12,440	5.9	21,180	6.1	34,465	7.8
All trades, college and university	62,200	33.9	93,180	39.8	53,580	32.8	77,360	36.9	115,780	33.4	170,535	38.4
Total population aged 25 to 64 years	183,225	100	233,980	100	163,250	100	209,625	100	346,490	100	443,625	100

Source: Statistics Canada, 1996 and 2001 Census

By 2006, one in three (34%) Aboriginal<sup>2</sup> persons had not completed high school, and 21% had a high school diploma as their highest level of education. Approximately 44% of the Aboriginal population in Canada were post-secondary graduates, with a college diploma being the most common post-secondary credential: 14% had trade credentials, 19% had a college diploma and 8% had a university degree. Nevertheless, Aboriginal people were much less likely to complete university than their non-Aboriginal counterparts, with 6% of the Aboriginal population as compared to 20% of the non-Aboriginal population holding university credentials [6].

In 2001 Manitoba ranked lowest among all other provinces for high school completion rates for Canada's Aboriginal peoples. Only 37.1% of Manitoba's Aboriginal population aged 15 to 29 years had completed high school, while another 54.2% had some high school. Among the Aboriginal population aged 50 years and over, only 32% had completed high school [14]. Among Manitobans aged 15 to 29 years, Aboriginal<sup>3</sup> people are six times as likely as non-Aboriginal people to have less than a Grade 9 education, (12.4% and 1.9%, respectively) [19]. What is more, 17% of Manitoba's Aboriginal peoples compared to 6% of the non-Aboriginal population between the ages of 15 and 49 years either had no formal schooling at all or had less than a Grade 9 education [9].

<sup>2</sup> In this cited study two concepts are used: Aboriginal identity and Registered or Treaty Indian. The educational characteristics of the overall Aboriginal population are described using the Aboriginal identity concept. Separate data are presented for each of the three Aboriginal identity groups: Inuit, Métis and First Nations people. Data are also presented for the First Nations identity population living on and off reserve. This report also presents education data for the Registered Indian population living on and off reserve [6].

<sup>3</sup> People who have self-identified as status and non-status Indians, Métis and Inuit.





Winnipeg is home to the highest concentration of Aboriginal people in any Canadian city, with the Aboriginal population in Winnipeg being disproportionately concentrated in the city's north end and inner city areas [19]. Thus the low rates of education attainment are cause for concern [14].

Further, the Aboriginal population in Winnipeg's inner city is considerably younger than the non-Aboriginal population, and the youth are quickly approaching employment age and are expected to join the labour market over the next 20 years (Table 4) [20]. Accordingly, meeting the educational needs of Manitoba's Aboriginal people and investing in appropriate Aboriginal education is an investment in the economic future of the city and the province [19].

**Table 4. Aboriginal Identity Population, by Age Group and Sex, Manitoba, 2006**

Percentage	Females	Males	Both sexes
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
0 to 14 years	31.3	35.2	33.2
15 to 24 years	18.7	18.0	18.3
25 to 34 years	13.9	13.3	13.6
35 to 44 years	14.3	12.7	13.5
45 to 54 years	11.3	10.6	11.0
25 to 64 years	39.5	36.5	38.1
55 to 64 years	6.2	6.3	6.2
65 years and over	4.4	4.0	4.2

Source: Statistics Canada, 2006 Census, highlight tables

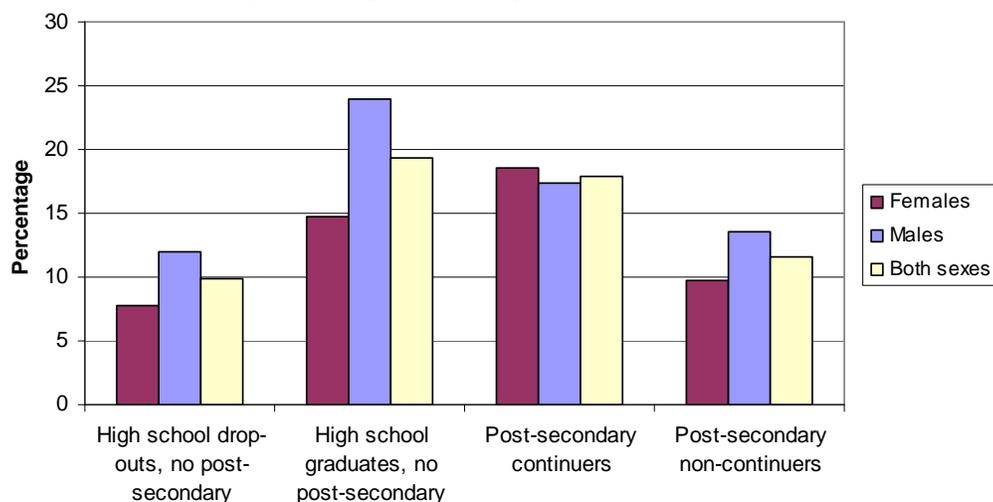
## Educational Pathways after High School

Manitoba's youth take many different educational pathways from high school to the labour market, and it is not uncommon for young people to take time off after high school graduation before continuing in a post-secondary education program. However, in many instances, youth who take time off between high school and post-secondary schooling do not return to their studies. The 2004 Youth in Transition Survey (YITS), a longitudinal survey designed to examine major transitions regarding education, training and work in the lives of Canada's youth between the ages of 15 and 24 years, reported on its findings between gappers (youth who delayed starting their post-secondary studies for more than four months following high school graduation) and non-gappers (youth who continued with their post-secondary studies within four-months of graduating from high school) [21].





**Figure 4. Post-secondary Education Status, by Sex, Population Aged 22 to 24 years, Manitoba 2003**



Source: Statistics Canada, Youth in Transition Survey, Cycle 3

In Manitoba, 17.9% of the population aged 22 to 24 years had continued directly into post-secondary studies following completion of high school in 2003, while 11.6% delayed their studies. Women were 18.5% of the individuals who continued directly into a post-secondary program and 9.7% of the individuals who did not directly continue their post-secondary studies. By comparison, men were 17.4% and 13.6%, respectively. Another 14.7% of women and 23.9% of men did not enter post-secondary studies at all following high school graduation. In addition, 7.8% of women and 12% of men did not complete their high school education nor did they continue with any post-secondary programming (Figure 4) [22].

The 2004 YITS also reported that the presence of a long-term physical or mental condition or health problem that reportedly limited the kind or amount of activity youth could do at school (or at work) hindered their post-secondary education: 25% of youth with long-term limiting conditions were less likely to go directly onto post-secondary education following high school graduation, as compared to 40% of youth without long-term limiting conditions [21].

There appeared to be a strong intergenerational link in the educational pathways young people take: 50% of youth whose parents had less than high school did not pursue an education beyond high school. For the youth whose parents did complete post-secondary education, almost 50% went directly onto a post-secondary program, while 33% pursued their post-secondary education eventually [21]. Literacy Partners of Manitoba reported that youth whose parents are jobless and did not graduate from high school are five times less likely to graduate than youth whose parents are employed and have completed high school [11, 23]. Findings from the 2006 Programme for International Student Assessment (PISA) also found that parents play an important role the life transitions of youth and how they learn. Youth with at least one parent who had post-secondary education out-performed their peers whose parents had only high school education or less [11].





A study on the educational circumstances of Aboriginal students in Winnipeg inner city high schools found similar results, but with negative outcomes. Finding from the study revealed that just over one in four (27%) of the men interviewed and one in three (33%) of the women interviewed had a least one parent who had attended residential school, while more than half (57%) of the students had a least one grandparent who attended residential school. The legacy of residential schooling created devastating and negative perceptions about formal education, along with a high degree of mistrust and dislike for predominantly euro-centric, middle class educational institutions with predominantly non-Aboriginal teachers. Students reported experiencing a cultural/class divide with schools and teachers. Aboriginal parents also experienced this negative divide, along with unbalanced power relations, making it difficult to provide support for their children in the schools, as they did not feel welcome [19].

In addition to an intergenerational education link, the 2004 YITS found that factors such as academic performance, the high school attended and parental expectations during high school had a significant effect on later educational outcomes of youth. For instance, almost 90% of Canadian youth with a grade-point average less than 60% did not continue their education beyond high school, while the same proportion of youth with a grade-point average above 80% went on to post-secondary studies; 59% of these students continued their studies, without delay [21].

The amount of time that youth spent in the labour market during their last year of high school also determined the educational pathways taken by youth. Approximately 46% of youth in Canada who worked less than 10 hours per week during their last year of high school continued their post-secondary studies without delay, while 40% of youth who worked more than 20 hours per week delayed their studies. Not surprisingly, many youth who worked a large number of hours per week avoided post-secondary studies altogether [21].

Other analyses of the YITS support these conclusions. Almost 80% of youth who reported that it was “not at all” important to their parents whether they pursued a post-secondary education had not gone on to post-secondary studies, while only 20% of youth who reported that it was “very important” to their parents for them to continue their schooling had neglected to do so by the time they reached 22 to 24 years of age. In fact, students who believed that it was important to their parents that they continue with post-secondary studies had higher aspirations, and if their parents had higher education, they too desired more education. What is more, the study findings revealed that, in many instances, mothers were seen as educational role models to their daughters, but not to their sons. For girls, educational aspirations were based upon the relevance of education to employment, and consequently, on personal efforts for improved academic performance [24]. Accordingly, youth who did continue their studies after high school were more likely to follow the non-gapper route, if they had parents with high academic expectations [21].

Interestingly there is only weak evidence that financial constraints were a direct barrier to attending university. Rather, the likelihood of young people attending university was almost entirely associated with differences in academic performance and parental influences. Just over half of the young people from families at the top of the income distribution attended university at age 19 years, compared to less than one-third of youth from families in the lowest 25% income distribution; only 12% of this gap in university





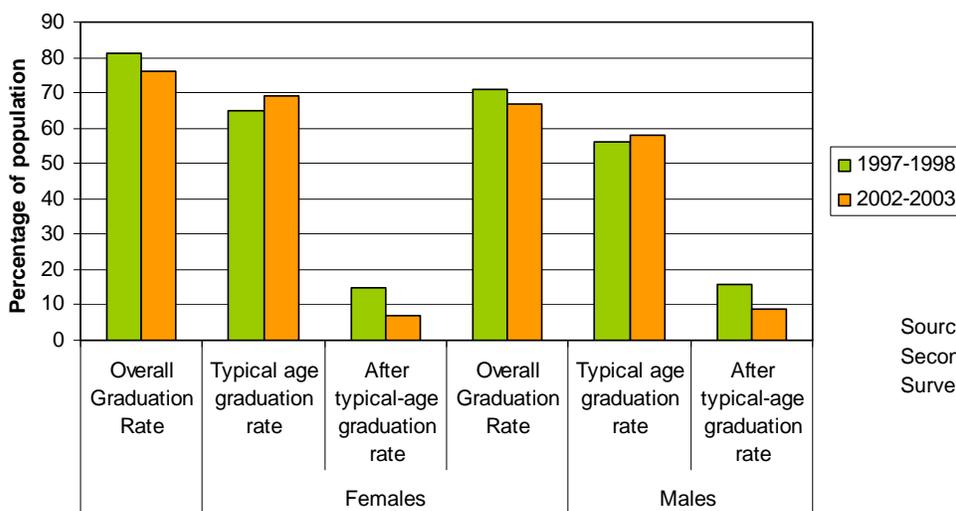
attendance was related to higher incidence of financial constraints among lower-income youth. Weaker academic performance accounted for just over one-third of the gap; 30% was related to lower education levels for the parents of lower income youth; and approximately 12% of the gap was associated with lower educational expectations of parents upon lower-income youth. The study concluded that the divide in university attendance was largely due to factors present in the lives of youth, well in advance of even considering whether to attend a post-secondary program [16].

## Dropping-Out

High school diplomas can open doors to post-secondary education and pave the way to meaningful employment. In 2004, the unemployment rate for individuals between the ages of 25 and 44 years who did not have a high school diploma was 12.2%, while it was only 6.8% for individuals who did have a diploma. Indeed, there is evidence to suggest that more and more of Canada’s young people are deciding to stay in school, as school attendance rates have dramatically improved over the last 25 years and drop-out rates have declined considerably [25]. Nevertheless, while drop-out rates have been on the decline throughout Canada, there are still pockets where dropping out is relatively high, such as in some Manitoba small towns [25].

In 2003, approximately 8% of women in Manitoba aged 22 to 24 years dropped out of high school, compared with 12% of men. Of the individuals aged 18 to 20 years who had dropped out of high school in 1999, 34.9% of women (and 20.2% of men) had completed their high school education and had either graduated from a post-secondary program, or were in the midst of post-secondary studies, by December 2003 [22]. Figure 5 illustrates that a small percentage of the population does return and graduate from high-school in the years following, somewhat later than their peers.

**Figure 5. High school graduation rates relative to typical age of graduation by sex, Manitoba, 1997-98 and 2002-03**



Source: Statistics Canada, Secondary School Graduates Survey





Youth at risk for dropping out of school fit a well-established profile: they are more likely to live in blended families and single-parent households than youth who complete high school; they are less likely to have at least one parent who completed post-secondary education; they are more likely to have worked in the labour market for more than 30 hours per week during their last year of school; and for females, they are more likely to be single-parents [15].

The Manitoba Child Health Atlas reported the education data for Winnipeg students from Kindergarten through Grade 12. The study found that 85% of children attend school close to where they live. Residential areas identified as being lower socio-economic status areas were confirmed to have higher rates of unemployment, more lone-parent families, fewer adults with high school education and fewer women in the work force than higher socio-economic status areas. The study found that in 2001 92% of Grade 12 students who lived in the higher socio-economic status areas passed their Language Arts standards test, as compared to 75% of students from lower socio-economic status areas. Closer examination of who should have been writing the test revealed a very different story [26].

Of the students counted, 84% were born in Manitoba in 1984 and remained in Manitoba until 2001-2002. For those students residing in Winnipeg, researchers estimated where these students should have been in the school system at the time of the testing by calculating what should have been the last year of school for these students. Results from the new calculations revealed that only 27% of youth who lived in lower socio-economic status areas and who should have been writing the standards tests in 2001, actually wrote and passed the standards tests. Further, 36% of students from the lower socio-economic status areas were behind in their academic studies by at least one year, and almost 20% of these young people had withdrawn from school and had not been in school for at least two years, prior to taking their tests. Thus, many of the youth from the lower socio-economic status areas had not yet made it to Grade 12, and almost one in five were not in school at all [26].

Researchers also tracked Grade 9 students for five years, beginning in 1997. Only 37% of the students from the lower socio-economic areas graduated within five years: One in four students had withdrawn before completing high school, and an additional 20% were still in school after five years, but they had not yet made it to Grade 12. In contrast, 81% students from the higher socio-economic areas had completed high school within five years, and less than 5% had withdrawn from school [26]. Differences between girls and boys were not reported.

Indeed, the evidence suggests that youth from less advantaged families are at greater risk of school failure than their more-advantaged counterparts, and this is understandable, given that children growing up in less advantaged neighborhoods are more likely to experience familial difficulties such as poverty, domestic violence, and ill health. They are more likely to miss meals and go hungry than children growing up in more-advantaged neighborhoods, and they are more likely to experience inadequate housing conditions, frequent moves and academic disruption as a result of having to transfer from one school to another with each move. ABC Canada reported that between 22% and 50% of adults with lower literacy levels live in low-income households, compared with only 8% of adults with higher literacy skills [9].





The 2001 Aboriginal Peoples Survey investigated the reasons why Canada's Aboriginal youth between the ages of 15 and 19 years leave school. For Aboriginal females, 25% reported leaving school due to pregnancy or the need to take care of children and 15% reported dropping out because of boredom [9]. These findings are consistent with the Youth in Transition Survey (YITS) in which young men reported wanting to work and earn money as their motive for dropping out of high school; teenage pregnancy played a larger role in young women's decision to drop out of school. In fact, data from the Labour Force Survey revealed that almost four in ten female drop-outs had children and were heading a household [25].

Manitoba has one of the highest teen pregnancy rates in Canada (see Chapter Four). In fact, in 2003, the Manitoba Human Rights Commission reported that every day, six Manitoba teenagers and children become pregnant, and 90% of the teenagers who deliver babies keep them [27]. A recent study based on the parenting support and education needs of 40 young Manitoba women between the ages of 15 to 24 years found that a number of young women will subsequently give birth to a second child within one or two years after their first child is born. Teenage births put stress on young women through the disruption of child care and living arrangements, causing young women further delay in returning to their academic studies until their children reach school age. Understandably, many young women face an uphill struggle in terms of parenting, education and acquiring financial security for themselves and their children. As such, women who become pregnant at an early age have a significant need for support and education [28]. They face many challenges in providing for their children, but balancing an education with parental responsibilities is one of the most difficult aspects of teen motherhood. In fact, the study found that many of the young women who participated in the study were not using the support services from school guidance counsellors fully because of lack of understanding and assistance from teachers they encountered. Accordingly, the study pointed to the need for greater sensitivity to be directed to interactions involving young women [28]. 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 [18], and the subsequent detrimental effects on their health.

Just as the amount of time that youth spend in the labour market during their last year of high school can affect their likelihood of continuing directly onto post-secondary education, the same holds true for drop-out rates; there is a link between the number of hours worked while in school and drop-out rates. Youth who work a moderate number of hours each week while in school are less likely to withdraw than students who either work many hours each week or none at all, and the lowest proportion of drop-outs, regardless of sex, were individuals who worked fewer than 20 hours per week [29].

In 2004-2005, the unemployment rate for drop-outs was 19.4%, double the rate for all individuals aged 20 to 24 years. Nevertheless, approximately 61.7% of drop-outs were employed in 2004-2005, a considerable increase from the employment rate of 54.4% in 1996-1997. Still, although the employment rate for drop-outs has increased, it remains well below the employment rate of 67.8% for individuals 20 to 24 years, as a whole [29].





## Policy Implications

Women in Manitoba have made remarkable progress over the past few decades toward minimizing the gender gap in literacy and education. They have now surpassed men in terms of higher academic credentials, such as at the master's level which was, not so long ago, dominated by men. Higher earnings by women with university degrees, and increasing educational parity between women and men are signs of progress that may have positive health outcomes for women. Nevertheless, not all degrees are created equal; having a university degree does not necessarily mean that equity and opportunity for employment will follow, or that being employed means making use of the degree earned. In many instances, promising jobs may not be available, even for well-qualified female graduates [1].

Still, educational attainment is an important indicator of women's health. It is a key factor to improved employment and income for women, and it facilitates better access, understanding and use of health-related information by women. As such, attention must be directed toward improving the education system, so that all young women in Manitoba may be provided the opportunity to continue their education. Specifically, policies and practices geared toward increasing high school graduation rates, as well as access to and completion of post-secondary programs must be implemented [15].

In like manner, attention must continue to be directed toward meeting the needs of Aboriginal people, particularly Aboriginal women who are, without doubt, among the poorest of the poor and are struggling to survive. Recent research cites childcare responsibilities as a primary reason for many young Aboriginal women dropping out of high school. The research also points to the lack of support systems and adequate daycare as major challenges facing young women who have had to leave school to tend to their childcare responsibilities.

This calls attention to the need for further community-based studies designed to get up-close and personal with young women in Manitoba, to generate new information about what is really going on in their often-complex lives, and consequently, clearly identify the challenges they face, their need requirements in fulfilling their academic aspirations and how best to address these needs. In like manner, attention must be directed toward gaining a better understanding of the issues affecting the education of individuals from disadvantaged groups, and the Aboriginal population, in particular.

Numerous government initiatives and community programs have been implemented to assist these women in balancing their personal situations and the education, but more needs to be done to meet the needs of Aboriginal women and children. Still, many Aboriginal women have come to the realization that they want to make a better life for themselves and their children, and they are taking advantage of the education sponsorships inherent in their Treaty rights.

Stay-in-school initiatives and school re-entry programs for drop-outs have been implemented in Manitoba; however, these initiatives will require further investigation to evaluate their success. The notion of community involvement and familial relationships could also be explored further to gain an adequate understanding of the variables at hand and how they are linked to the educational attainment, and hence literacy levels, of women. Indeed, literacy and education among women in Manitoba could





stand to improve, if appropriate attention is directed to identifying and understanding the reasons that women leave high school, as well as those hindering their return.

## Conclusion

While data specific to the literacy levels of women in Manitoba are limited, recent education statistics indicate that women's levels of education have dramatically improved over the past few decades, and women have higher levels of educational attainment than ever before. Since the latest findings from the International Adult Literacy and Skills Survey were released, much has been done in Manitoba to create awareness and address the issues around the fact that nearly one-half of the Canadian population do not have the minimum literacy skills to adequately cope with the demands of Canadian society.

There have been many calls for public investment in raising adult reading skill levels. However, as suggested by Statistics Canada, this investment first would require identifying the different types of adult reading challenges. Further, decisions would need to be made to determine the types of programs needed to serve adults with reading challenges, where the programs would be offered and the manner with which to motivate participation in these programs [30].

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# Labour Force Participation, Employment and Unemployment

## Introduction

Labour force participation, employment and unemployment affect women's health, both because of the important connections between income and health and because the terms and conditions of women's work (including occupational hazards, stress, women's greater burden of informal caregiving, workplace harassment and systemic sexism) can make work healthier or less healthy:

*“Higher employment can contribute positively to income equity, financial security, social support and health for women. However, poor work conditions, lack of job security or control at work, sexual harassment, overwork, and other job characteristics may undermine health [1]”*

Whether women are supporting only themselves or a family, whether or not they are the sole wage earners in their family, employment plays a large role in determining women's quality of life and that of those who depend on them.

Women still face discrimination in matters related to employment and labour force participation, despite a long history of advocacy for women's economic equality.<sup>1</sup> As Kathleen Lahey writes:

*“Discriminatory attitudes toward hiring women or doing business with women reduce women's chances of obtaining incomes in the first place... Women's low incomes flow from a variety of interlinked phenomena: gender barriers to paid work, occupational segregation, low wages, work-family conflicts, difficulty in escaping part-time, seasonal or intermittent work, declining access to full-time work, the smaller value of women's employment benefits, the*

**Labour Force Participation** includes only civilians not living in institutions, aged 15 years or older, who were employed, or unemployed during the week prior to the 2001 Census of Canada.

**Employed** - persons 15 years and older, who, during the week prior to the 2001 Census:

1. did any work for pay or in self-employment, or without pay in a family farm, business or professional practice; or
2. were absent from their work with or without pay, due to illness, vacation or labour dispute or any other reason.

**Unemployed** – persons 15 years and older, who were without paid work or without self-employment work and were available for work and either:

1. had actively looked for paid work in the past four weeks; or
2. were on temporary lay-off and expected to return to their job; or
3. had definite arrangements to start a new job in four weeks or less.

**Not in the Labour Force** - persons who were neither employed nor unemployed, using the above definitions.

**Labour Force Participation Rate** - the number of people who participate in the labour force, expressed as a percentage of the population 15 years of age and over. [2]

<sup>1</sup> Such attempts include the 1967 *Report of the Royal Commission on the Status of Women*, the successful campaign to include gender equality in the *Canadian Charter of Rights and Freedoms*, and federal and provincial legislation prohibiting discrimination based on sex. International commitments include the 1979 *United Nations Convention on the Elimination of All Forms of Discrimination Against Women* and the 1995 *United Nations Beijing Platform for Action*.



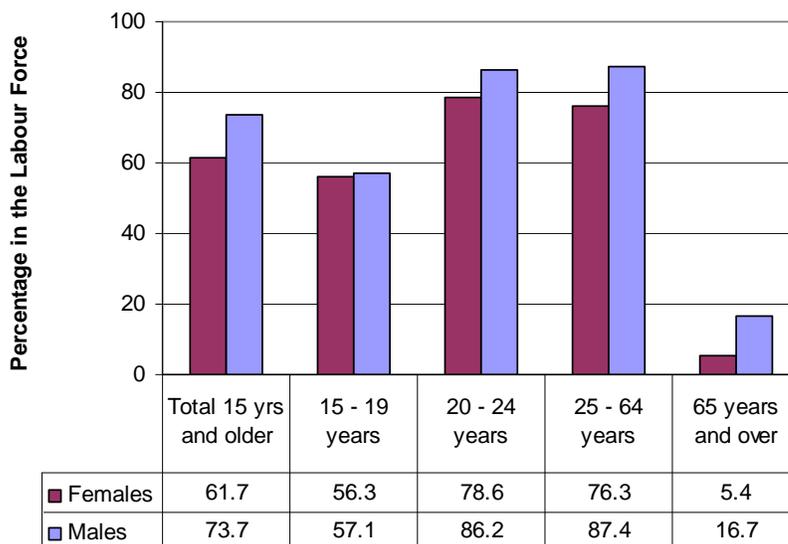


*gendered impact of unemployment... the inadequacies of (un)employment insurance schemes in meeting the needs of women and barriers to obtaining venture capital financing for women-owned businesses.”[3]*

## Labour Force Participation

Participation in the labour force is an important indicator of women’s economic participation. Indeed the massive increase in women’s participation in the labour force is one of the most important economic and social changes of the past 40 years. The proportion of women in the Canadian labour force has more than doubled from 27% in 1961 to 60% in 2001 [1]. In Manitoba 73.7% of males and 61.7% of females aged 15 and older reported being in the labour force during the 2001 Census (Figure 1). Manitobans, both male and female, were more likely to be in the labour force than the Canadian average. Across Canada in 2001, 72.7% of males and 60.5% of females were in the labour force [4].

**Figure 1**  
**Labour Force Participation**  
**Manitobans Aged 15 and Older 2001**



Source: Census of Canada 2001, Custom Tabulation [4]

Women’s increased labour force participation is due to a number of reasons including women’s drive for economic independence; increasing numbers of women with post secondary education; and changing economic and family structures, including the economic needs of single mothers, the increasing necessity of two incomes in two-parent households, and a trend to some families relying more on a female partner’s income [5].

Figure 1 shows labour force participation by age and sex in Manitoba in 2001. The male/female difference in labour force participation, 12% or 35,285 potential labour force participants, means women were less likely to be employed or looking for work than their male counterparts. The gap was about the same for those in their prime earning years, ages 25 to 64, when 87.4% of men were in the labour force compared to 76.3% of women. It is noteworthy that the gender gap in labour force participation was greatest among seniors. Among Manitobans aged 65 years and older, 16.7% of men and 5.4% of women were in the labour force [4].

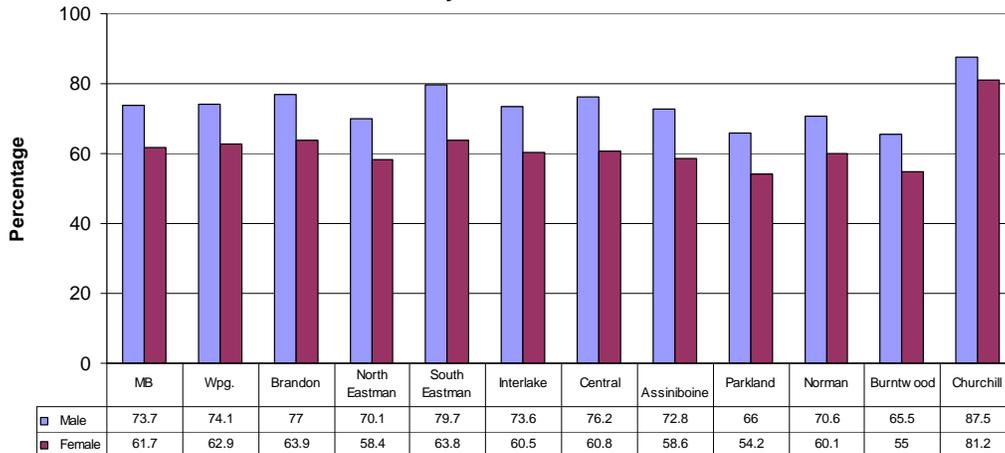




## Regional Differences in Labour Force Participation

In every Regional Health Authority (RHA), women's labour force participation rates were lower than that of the men in their region (Figure 2).

**Figure 2**  
**Labour Force Participation**  
**Manitobans 15 Years and Older**  
**by RHA - 2001**



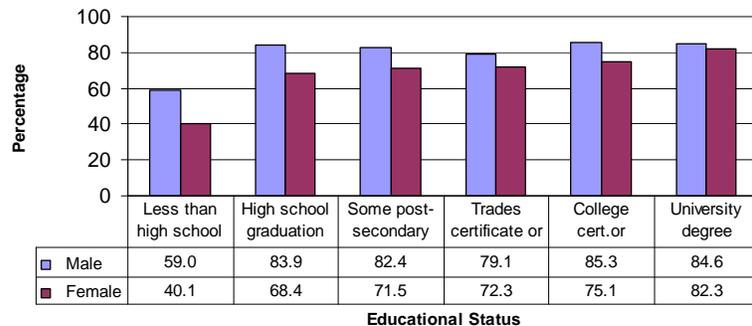
Source: Census of Canada 2001, Custom Tabulation [4]

Among both women and men, participation rates were highest in the Churchill RHA, a small region with a total population of less than 1,000 people, fewer than 600 of whom were in the labour force. For women and men, excluding Churchill, participation rates were highest in the South Eastman and Brandon RHAs and lowest in the Burntwood and Parkland RHAs, perhaps reflecting the more limited opportunities for paid employment in those two regions.

## Education & Labour Force Participation

Labour force participation increases with education. Women and men with higher levels of education are more likely to be in the labour force. The sex difference in labour force participation is highest among those with less than high school education. Among those in this group, only 59% of men and 40.1% of women in Manitoba in 2001 were active in the labour force (Figure 3). Among those with high school only, 83.9%

**Figure 3**  
**Labour Force Participation Rate by Sex and**  
**Education, 2001**



Source: Census of Canada 2001, Custom Tabulation [4]





of men and 68.4% of women participated in the labour force. The gap narrows with each increased level of education. Among those with university degrees the gender gap was the smallest, with 82.3% of women and 84.6% of men active in the labour force.

Approximately 20% of Manitobans have a university degree, and among these, the proportion of women continues to increase. In 2001, there were 2,690 more Manitoba women with university degrees than there were men [4]. Based on current rates of university enrolment, this trend is expected to continue to increase. In 2003/04 there were 22,430 women in university (16,050 full time and 6,380 part-time) compared to 15,615 men (11,795 full time and 3,820 part time) [6, 7]. See previous section for more about Manitoba women's education.

## Aboriginal Women & Labour Force Participation

Aboriginal women lived in fully functioning non-market economies prior to the arrival of European settlers. Aboriginal peoples' marginalization from today's economy is tied to the legacy of colonization and persistent racism [8, 9, 10].

One manifestation of this is the low labour force participation rate of Aboriginal women in Manitoba. In 2001, only 53.8% of Aboriginal women aged 15 years and older were in the labour force, compared to 64.8% of Aboriginal men, 62.7% of non-Aboriginal women and 74.8% of non-Aboriginal men (Figure 4).

Educational attainment in the Aboriginal population is low, stemming from years of both neglect and forced assimilation [11]. Until only 20 to 25 years ago many Aboriginal children were forced to attend residential schools “whose primary objective was to erase Aboriginal cultures and languages, and certainly not to set high expectations for academic achievement” [11]. Alternatively, some children may have benefited from a traditional education but did not have experience with classroom education [11]. Either way, formal Canadian school systems have failed Aboriginal people because of inappropriate teaching and intent, as well as inadequate funding [11]. Aboriginal people living off-reserve “are generally better educated than their on-reserve counterparts” [12]. Because access to employment is often based on attainment in the education system, low levels of education have serious implications for earning potential and income as well as for health.

In this section, we use the Census 2001 definition of “Aboriginal Identity”, as follows:

**Aboriginal** – those persons who reported identifying with at least one Aboriginal group, i.e. Inuit, North American Indian, or Métis, and/or those who reported being a Treaty Indian or a Registered Indian as defined by the Indian Act of Canada and/or who were members of an Indian Band or First Nation.

**Registered** - those who reported being a Treaty Indian or a Registered Indian as defined by the *Indian Act* of Canada and/or who were members of an Indian Band or First Nation.

**Not-Registered** - those who identified themselves as having Aboriginal identity and who were not Registered Indians as defined above.

**Non Aboriginal** – Census respondents who did not identify themselves as being of Aboriginal ancestry [2].

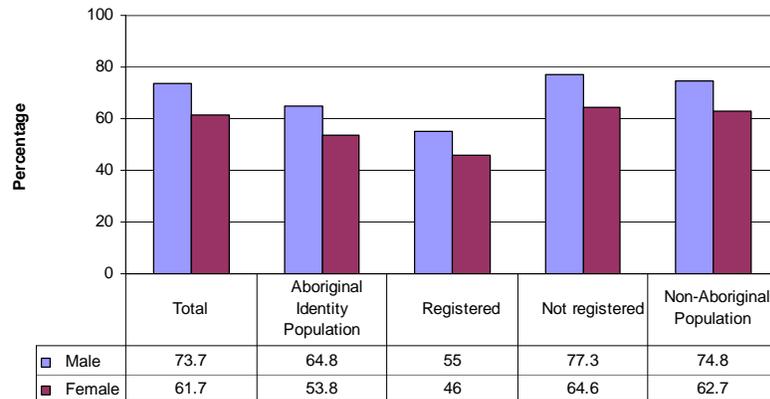




According to Dion Stout et al, “...Aboriginal women, while faring substantially worse than the non-Aboriginal female population, are nonetheless more likely than their male counterparts to possess a university degree, or to have pursued some post-secondary or secondary studies.” These authors found that across Canada Aboriginal women experience lower levels of unemployment than men in all age groups [8] and this is consistent with our findings for Manitoba (Figure 10). Indeed, within the Aboriginal population, Aboriginal women were more likely to have completed university than were Aboriginal men, holding 65% of university degrees among Aboriginal Manitobans in 2001 [12]. However, only 8% of Aboriginal Manitobans held university degrees in 2001, compared to 10.3% of all Manitobans.

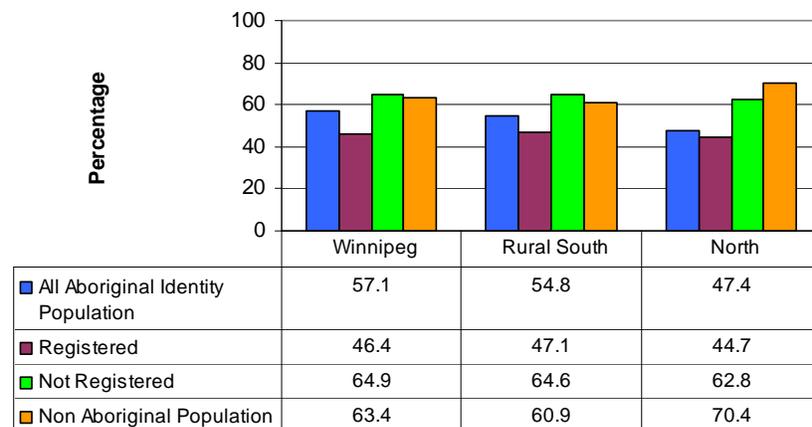
An advantage of using the Census definition of Aboriginal Identity is that it allows us to examine differences among Aboriginal Manitobans. Aboriginal women who identified as Registered Indians had the lowest labour force participation rate (46%), compared with a 64.6% participation rate among those who were not Registered. In fact, women who identified themselves as having Aboriginal identity, but not as Registered Indians, were more likely to be labour force participants than were non-Aboriginal women. Note that these rates are not age-adjusted and that the Aboriginal population in Manitoba includes more young people and fewer seniors than the non-Aboriginal population.

**Figure 4**  
**Labour Force Participation Rate**  
**Aboriginal and Non Aboriginal Manitobans**  
**2001**



Source: Census of Canada 2001, Custom Tabulation [4]

**Figure 5**  
**Labour Force Participation Rate**  
**Aboriginal and Non Aboriginal Manitoba Women 2001**



Source: Census of Canada 2001, Custom Tabulation [4]





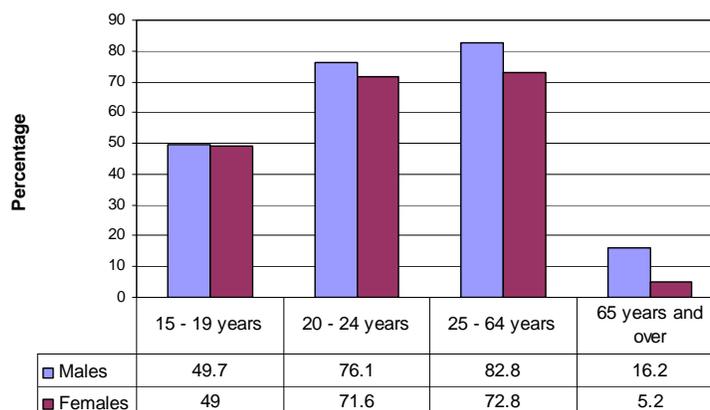
Like other Manitoba women, Aboriginal women’s labour force participation varied by region.<sup>2</sup> In every region of Manitoba Aboriginal women were less likely to be in the labour force than were other Manitoba women (Figure 5). The gap was the greatest in Northern Manitoba, where Aboriginal women were 1.5 times less likely to be in the labour force than were non-Aboriginal women. The labour force participation rate of non-Registered Aboriginal women in northern Manitoba was also much higher than that of women who identified as Registered Indians. Women who identified as Registered Indians in northern Manitoba were more likely to have lived in First Nations communities (“on reserve”), where employment opportunities are likely very limited.

Further exploration [12] finds young Aboriginal women (age 20-24) have a much lower labour force participation rate compared with non-Aboriginal young women, partly because of personal and family reasons. As Chapter Four shows, Manitoba Aboriginal women tend to have children when they are younger than non-Aboriginal women and to have more children, both of which may lower their participation in the labour force.

## Employment & Unemployment

Employed women and men are defined as those people, aged 15 years and older, who were employed during the week prior to the 2001 Census, including those who worked for wages and salaries, those who were self-employed and those working without pay on family farms or businesses. It also includes those who were absent due to illness, vacation, labour dispute or other reasons [2].

**Figure 6**  
**Employment**  
**Manitobans Aged 15 and Older 2001**



Source: Census of Canada 2001, Custom Tabulation [4]

In 2001, there were 288,350 males and 257,010 females employed in Manitoba [4]. In almost every age group, women were less likely to be employed than men (Figure 6). Consistent with labour force participation, the gender gap in employment is smallest among the youngest age group and the greatest among those aged 65 years and older. This is a result of the changing socio-economic trends described above, and indicates that in the future, the gender gap may not be as great among middle-aged and older women and men as it is now.

<sup>2</sup> The Rural South Region includes the RHAs of Assiniboine, Brandon, Central, Interlake, North Eastman, Parkland and South Eastman. The North Region includes the RHAs of Burntwood, Churchill and Nor-Man.





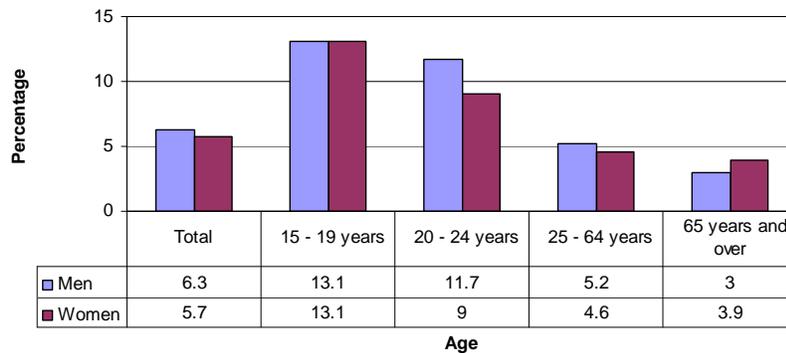
## Official and Comprehensive Measures of Unemployment

Using the **official measure** of unemployment, unemployed women and men were those people, aged 15 years and older, who were without paid work or self-employment and who were available for work and either:

- had actively looked for paid work in the past four weeks; or
- were on temporary lay-off and expected to return to their job; or
- had definite arrangements to start a new job in four weeks or less [1].

Overall, Canadian female labour force participants are less likely to be unemployed than their male counterparts [5]. In Manitoba, unemployment rates were higher among men than women in every age group, with the exception of those aged 65 years or older (Figure 7). While it appears that in 2001 women had lower unemployment rates than men, certain women (e.g. discouraged searchers, involuntary part-timers, and those not seeking employment) were not considered “unemployed” as a result of the definition used in the official measure of unemployment (see box on first page of this section). Because of these limitations, we present below information using a more **comprehensive measure** of unemployment, developed by Statistics Canada.

**Figure 7**  
**Unemployment Rates by Age and Sex**  
**Manitoba 2001**



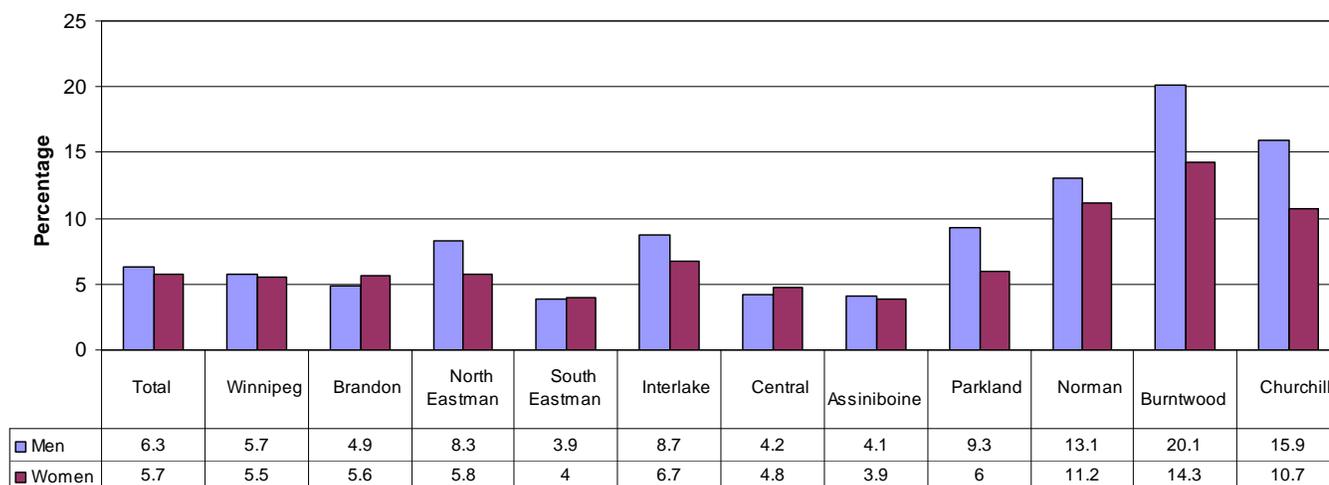
Source: Census of Canada 2001, Custom Tabulation [4]

Statistics Canada’s official rate of unemployment counts only those who are actively looking for work or who are starting a job shortly. In 2001, using this official measure, Manitoba men had an unemployment rate of 6.3% and women 5.7% (Figure 8). Although official unemployment rates varied only slightly by sex in some RHAs, overall, men were more likely to be counted as unemployed. While official unemployment rates for women and men were almost the same in Winnipeg, South Eastman and Assiniboine, women living in northern RHAs were substantially less likely to be unemployed though more likely to be employed than men in that region (Figure 8).





**Figure 8**  
**Official Unemployment Rates in Manitoba, 2001**  
**by RHA and Sex, aged 15 and over**



Regional Health Authority

Source: Census of Canada 2001, Custom Tabulation [4]

This official measure of unemployment does not comprehensively portray unemployment in Manitoba, nor does it accurately portray differences in male and female unemployment for three reasons:

1. Women are more likely than men to have left the labour force because of caregiving responsibilities;
2. It excludes workers who have been discouraged and are not actively searching for work; and
3. It excludes involuntary part-time workers.

Thus, the measure may be an underestimation of employment in women. These gaps can be addressed by using different measurements of unemployment. Statistics Canada states that:

*“...supplementary measures can shed light on the amount of labour market slack and the extent of hardship associated with unemployment. For example, during prolonged downturns in the economy, or in communities where job opportunities are chronically scarce, people who want work may not be looking for a job because they believe there are no suitable opportunities in their labour market...they are not counted among the unemployed.” [13]*

**Comprehensive rate of unemployment (R8)** includes all those normally classified as “unemployed” plus

**1) Discouraged searchers-** people who have stopped looking for work because they believe no work is available;

**2) People who are waiting to start a job-** those who are waiting for a reply, waiting for recall to a former job or people who will begin work in more than 4 weeks; and

**3) Involuntary part-timers/ Underemployed-** people who would be working full time, if full-time work were available [11].

Statistics Canada therefore also calculates a more comprehensive definition of unemployment (see box).

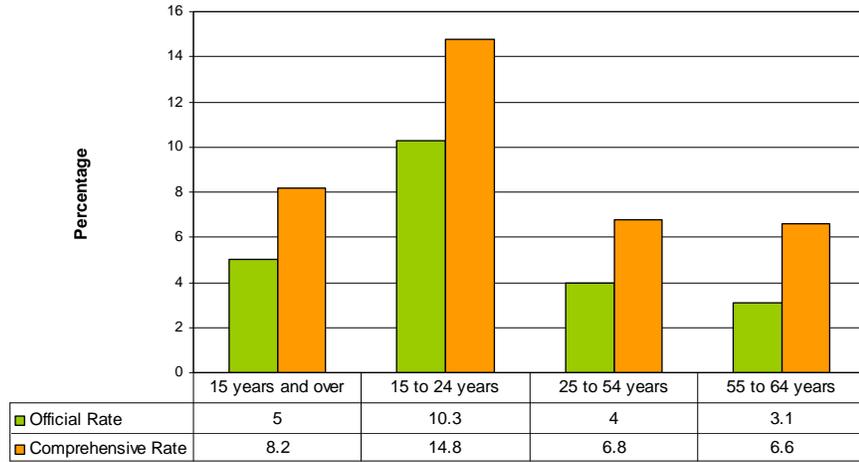




In 2004, 8.2% of Manitoban women were unemployed according to Statistics Canada's comprehensive definition, compared with 5.7% using their official definition (Figure 9). Among younger women aged 15 - 24 the official rate was 10.3% and the comprehensive rate 14.8%. Women aged 25 - 54 have 4% official and 6.8% comprehensive unemployment rates.

Women aged 55 - 64 have the lowest official and comprehensive rates at 3.1% and 6.6% respectively. The comprehensive rate also includes those involuntarily working part-time. Since women constitute 67% of involuntary part-time workers, the comprehensive measure more accurately represents women's underemployment than does the official measure of unemployment.

**Figure 9**  
Unemployment among Manitoba Women by Age  
Official and Comprehensive Rates, 2004

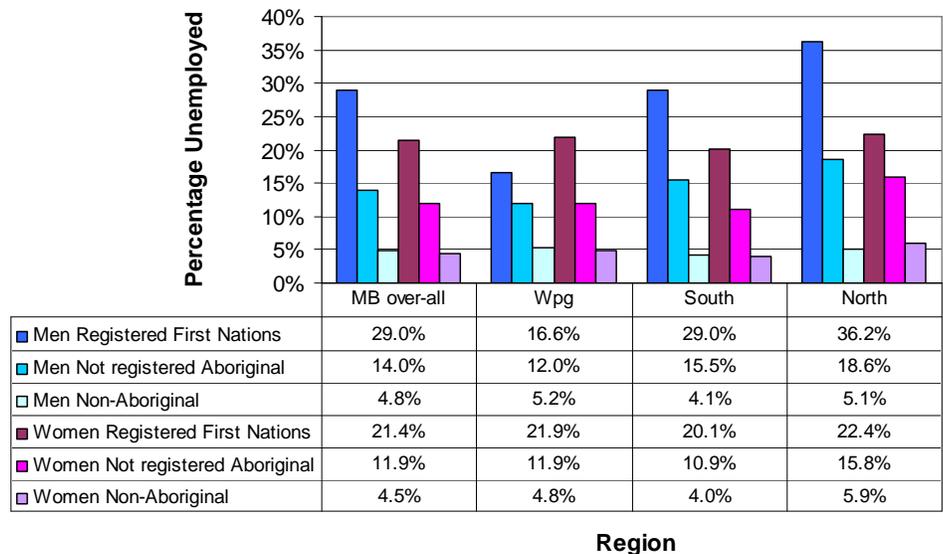


Source: Labour Force Survey 2004, Custom Tabulation [14]

## Unemployment among Aboriginal Women

Not only are Aboriginal women less likely to be in the labour force than their non-Aboriginal counterparts, but once in the labour force, they are more likely to be unemployed. Using the official rate of unemployment, Aboriginal people living in Manitoba face substantially higher rates of unemployment than do non-Aboriginal populations. Figure 10 compares unemployment among Aboriginal men (Registered and not Registered), non-

**Figure 10**  
Official Unemployment Rate by Sex and Status  
Manitoba, 2001



Source: Statistics Canada 2001 Census Custom Tabulation [4]





Aboriginal men, Aboriginal women (Registered and not Registered), and non-Aboriginal women. The unemployment rates for Registered and non-Registered women were two to three times higher than the average for their non-Aboriginal counterparts, but lower than those of Aboriginal men (Figure 10). Approximately 29% of Registered men and 21% of Registered women were unemployed, as were 14% of non-Registered Aboriginal men and 11.9% of non-Registered Aboriginal women. The unemployment rates among non-Aboriginal men and women were 4.8% and 4.5% respectively.

Unemployment rates for Aboriginal women in Winnipeg were typically lower than in the southern and northern regions; however, 21.9% of Registered Aboriginal women living in Winnipeg were unemployed. Among women, Registered women living in the north had the highest rates of unemployment with 22.4% of women considered unemployed. Registered men had the highest unemployment rate of all at 36.2%.

Since these rates have been calculated using the official measure of unemployment, they understate the true extent of unemployment among Aboriginal women. The extent to which the use of the official measure masks differences in true unemployment between Aboriginal and non-Aboriginal women is not included here.

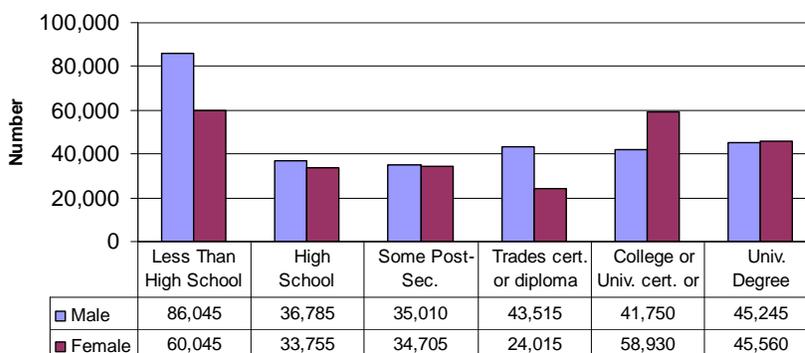
In the following pages, we discuss key issues in women’s employment, the ways in which women’s and men’s patterns of employment differ, and some of the factors influencing women’s employment, including education and caring for young children. Male/female differences in part-time work are also discussed.

## Education as a Factor in Employment & Unemployment

Education and employment are intrinsically connected. The type and level of education held by a woman determines in large part the type of employment she will have. Higher levels of education lead to both increased opportunities for finding work and higher incomes [5]. As described above (Education and Labour Force Participation), women and men with higher levels of education were more likely to be in the labour force and therefore more likely to be employed [15].

Figure 11 illustrates the number of Manitoba men and women employed by their highest level of educational attainment in 2001. Among employed Manitobans, there were more women than men with university degrees or certificates, or college certificates or diplomas. Fewer women than men, however, had trade certificates or diplomas. Women are more likely to complete high

**Figure 11**  
Number of Manitobans Employed by Sex & Educational Attainment 2001



Source: Census of Canada 2001, Custom Tabulation [4]





school than men, but for those who do not complete, men are more likely to be employed.

Figure 12 reveals the differences in unemployment among women and men with differing levels of educational attainment. Among those with lower levels of education (less than high school, completed high school and incomplete post-secondary education) men were more likely to be unemployed, while among those with higher levels of education (college or university certificates or diplomas and university degrees) women were more likely to be unemployed.

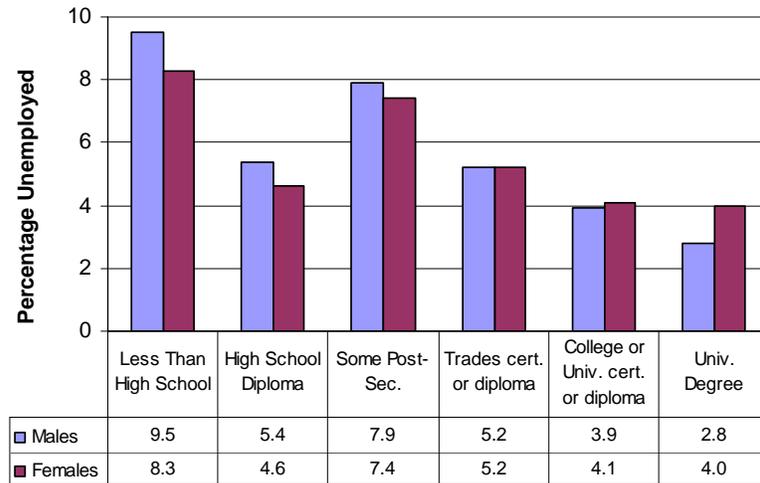
Among those with lower levels of education, women's lower risk of unemployment is connected to their lower labour force participation rates (that is, they are not looking for work and therefore are not counted as unemployed). While education is an important factor in increasing women's labour force participation and income, women who have completed college and university still face systemic discrimination in the labour market, making them more likely to be unemployed than their male counterparts [3]

Manitoba data are not available on the occupations of women with different levels of education, however we know that Canadian women enrolled in post-secondary institutions during the 2001 Census continue to be concentrated in traditionally female fields of study: education, health and related studies; fine and applied arts; social sciences, humanities and agriculture, with less than 30% representation in mathematics, physical sciences and engineering [15]. Thus women are disproportionately represented in public and service-sectors, and under-represented in private and goods-producing sectors, factors that can influence the wages women receive.

## The Gender Influences of Mothering & Unpaid Work on Labour Force Participation and Employment

While labour force participation among women has increased dramatically in recent decades, women are still less likely than men to be active in the labour force [15]. One significant reason for this lower labour force participation is family caregiving. Women may leave the labour force, delay labour force entry, or not enter the labour force at all, in order to have and to raise children, or in later life to care for aging or disabled family members in need of care.

**Figure 12**  
**Unemployment by Educational Attainment**  
**Manitobans Aged 15 and Older 2001**



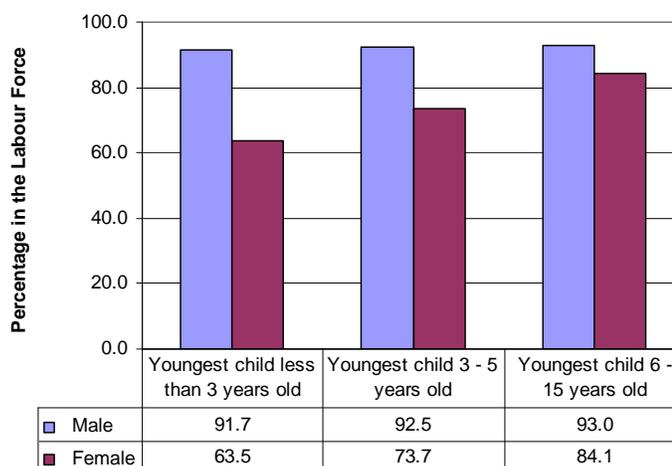
Source: Census of Canada 2001, Custom Tabulation [4]





Among Manitoba women, in 2001, the age of their youngest child was a major factor in their labour force participation. As shown in Figure 13, among those with a youngest child under the age of 3 years, 63.5% were in the labour force, compared to 73.7% of women with children aged 3 to 5 years and 84.1% of women with children aged 6 to 15 years.<sup>3</sup> Labour force participation rates for fathers, on the other hand, did not vary with the age of their youngest child, demonstrating that women are more likely to leave the labour force to care for their children [4]. The importance of women’s caregiving responsibilities, and their consequences for health, are discussed in more detail in the section on *Unpaid Work*.

**Figure 13**  
**Labour Force Participation by Age of Youngest Child**  
**Manitoba 2001**



Source: Census of Canada 2001, Custom Tabulation [4]

These data do not allow us to understand to what extent mothers have exited the labour market because they chose to do so, are discouraged from finding work, or are unable to find suitable childcare in order to work for pay. Women who exit the labour market forego earnings, employability and pension contributions and are more likely to be dependant on a partner’s earnings both immediately and in the future.

Access to child care is essential to enable mothers to enter or return to the labour force. The demand for childcare is high, far outstripping the supply of licensed, affordable childcare spaces. One recent study found that there were 14,758 children on waiting lists for childcare centres in Winnipeg alone; the number of children on waiting lists exceeded the total number of licensed childcare spaces available [16]. Since childcare programs are not centrally planned and organized, access in rural and remote areas of the province can be an even bigger challenge for parents [17].

Despite the numerous studies that find high quality childcare is important for early childhood learning [18], contributes substantially to the local economy and job creation [17], and enables parents’

<sup>3</sup> Children includes children by birth, adoption and step children, regardless of their age or marital status, who, at the time of the 2001 Census, lived in the same dwelling as their parent(s). It also includes grandchildren in households where there are no parents present. Sons and daughters who are living with their spouse or common-law partner, or with one or more of their own children, are not considered to be members of the census family of their parent(s), even if they are living in the same dwelling [2].





employment [19], the establishment of a Canadian child care system has been elusive. In 2006 the federal government changed childcare funding policy, withdrawing \$26 million dollars in funding for childcare in Manitoba. The new policy created an allowance, the Universal Child Care Benefit (UCCB), of \$100 per month per child under six years of age. This benefit is taxed as income received by the lower-income parent (if a two-parent family), diminishing its value to lower-income households [20]. The older, income-related Child Tax Benefit included a Young Child Supplement valued at \$249/year in 2006, which was abolished with the establishment of the UCCB [20]. The new allowance does not cover the full cost of childcare – for example, parents of toddlers in Manitoba spend as much as \$500 per month for licensed childcare – unless they are eligible for income-related provincial fee subsidies. Furthermore, the UCCB is payable only for children under the age of 6, ignoring the very real need for before- and after-school care for children aged 6 to 12 years.

### Reasons for Part-Time Work by Sex & Age

In Canada, women are substantially more likely to work part-time than men [14]. Since the 1970's, women have accounted for approximately 70% of all part-time employees, and in 2004, 27% of the total female workforce were part-time employees, compared to only 11% of men [5].

Women and men tend to have different reasons for working part-time (fewer than 30 hours per week). In 2001, 18% of employed women in Canada said they worked part-time because of child, personal, and family responsibilities compared to only 2% of men. These women and men were considered to be **voluntary** part-time workers by Statistics Canada. While women were more likely than men to cite “personal preference” as their reason for working part-time (27% vs. 23%), men were more likely to cite “going to school” (42% vs. 25%) [5].

#### Reasons for part-time work

Statistics Canada asked Census respondents who were employed and working less than 30 hours per week at their main job, if they would like to work more or fewer hours per week and their reasons why.

Responses were categorized as own illness, personal or family responsibilities, and going to school. If they responded “business conditions” or “could not find work for 30 or more hours per week”, they were then asked if they looked for work with more than 30 hours per week. If they had, only then they were considered to be involuntary part-time workers [1].

The reasons for working part-time also varied among Manitoban women, most notably by age (Figure 14). In 2006, the majority (74%) of young women aged 15 to 24 cited “going to school” as their reason for working part-time. Approximately 38% of women aged 25-54 reported working part-time because of child and family responsibilities, and 27% of this age group cited “personal preference” as their reason for working part-time. For older women (55-64 years), the most commonly cited reason for working part-time was “personal preference” (70%) but 11.3% reported “lack of opportunity”. The differences between age groups reflect typical life course events that affect women’s ability to work full-time. The many younger women (15-24) working part-time while attending high-school or university is likely not a concern, since their education will probably contribute to better employment opportunities and higher life time earnings and opportunities.



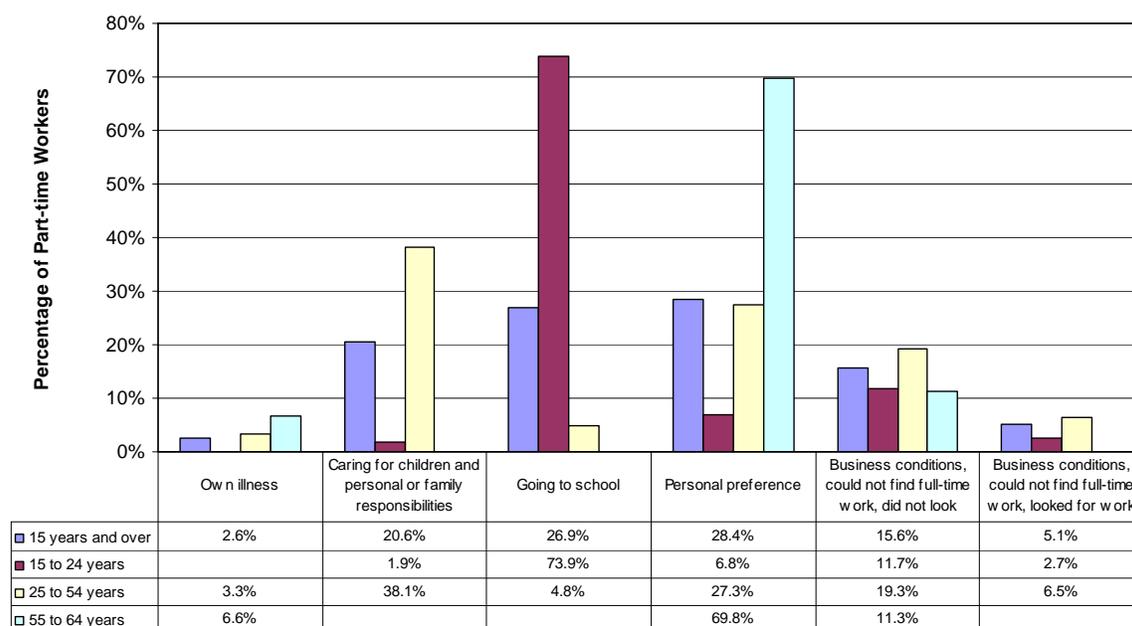


Almost half of part-time women workers aged 25 to 44 and about 40% of those aged 25 to 54, reported working part-time in order to care for their children and other family members. Although rapid social change over the last 30 years has dramatically increased the number of women with young children who are in the paid labour force (see Figure 13), many women do not choose to be employed full-time at this stage in their children’s lives, but many also cannot find the childcare and other supports they need if they wish to have or seek full-time employment [17].

Approximately 20% of Manitoban women aged 15 or older reported working part-time because of business conditions or the inability to find full-time work. Of those, 15.6% had not looked for work in the past month, while 5.1% reported looking for full-time work to no avail. Women aged 25 to 54 were the most likely to have reported looking for full-time work (6.5% vs. 2.7%), and therefore represented the majority of involuntary part-time workers in Manitoba. According to Statistics Canada:

*Involuntary part-time work is defined as a job involving less than 30 hours a week which is held by a worker who has been unable to find full-time employment. These workers are dealing with an under-employment problem in that they cannot perform to their full capacity even though they are available on a full-time basis. In addition, the loss of potential additional income resulting from the shortage of hours of work leads them to find additional part-time jobs which, in certain instances, result in significant overload in their work week. These “moonlighters” remain involuntary part-time workers who are holding down two jobs. [22]*

**Figure 14**  
**Part-Time Work by Reason and Age**  
**Manitoba Women, 2006**



**Source:** Labour Force Survey 2006, Custom Tabulation [21]

Note: Percentages in blank cells have been suppressed to meet the confidentiality requirements of the Statistics Act.





Provincial and federal employment standards legislation and regulations set minimum standards in employment including minimum wages, hours of work and compensation for overtime, and vacation pay [23]. Part-time employees are entitled to these on a pro-rated basis. However, there are no statutory requirements to provide other benefits such as extended health or dental benefits to part-time workers. In many work places, part-time workers (mostly women) do not get these additional benefits. Moreover, women in part-time work often lack job security, may be paid lower hourly wages than full-time employees, and are therefore at greater risk feeling dissatisfied with their jobs [1]. Finally, there are also long-term financial consequences for women who work part-time, including reduced retirement savings and pension income.

## The Gender Wage Gap & Women's Occupations

The wage gap measures the difference in wages between women and men. While the wage gap has slowly narrowed over time, women still earn lower wages than men, however this is measured.

In 2004, Manitoba women's average hourly earnings were 87.1% of men's. Manitoba has a smaller wage gap than the Canadian average hourly earnings gap, which was 83.3% in 2004. Full-time, employed women fared the best when considering their average hourly wage rate; they earned 89% of men's wages. The average weekly wage gap for women working full time is 83.2%. Men's average longer working hours per week likely explain the larger gap for this indicator.

**Wage gap:** ratio between women and men's wages. The indicator of the wage gap considered to be most conservative and accurate is the average hourly wage since women average fewer paid weekly hours than men. Men often work longer hours than women, and more women work part time, therefore the hourly wage rate avoids the amount of time worked and looks only at the hourly rate of pay [1].

Notably, between 2003 and 2004 the wage gap was reduced by 3.5% for average hourly wages for all employees. The wage gap was reduced in every other category listed above from 2003 to 2004, a promising trend.





Table 1: Manitoba Gender Wage Gap 1997 – 2004: average hourly wage rate, all employees; median hourly wage rate, all employees; average hourly wage rate, full time employees; and average weekly wage rate, full time employees.

	Year	1997	1998	1999	2000	2001	2002	2003	2004
<b>Wage rates</b>									
<b>Average hourly wage rate All employees</b>	Men	15.12	15.5	16.12	16.55	16.78	17.17	17.47	17.91
	Women	12.23	12.36	12.69	13.29	13.84	14.27	14.61	15.6
	<b>F:M ratio</b>	<b>80.9%</b>	<b>79.7%</b>	<b>78.7%</b>	<b>80.3%</b>	<b>82.5%</b>	<b>83.1%</b>	<b>83.6%</b>	<b>87.1%</b>
<b>Median hourly wage rate All employees</b>									
<b>Median hourly wage rate All employees</b>	Men	14	14.21	14.8	15	15	15.5	16	16
	Women	10.96	11	11.03	11.66	12	12.4	12.54	13.25
	<b>F:M ratio</b>	<b>78.3%</b>	<b>77.4%</b>	<b>74.5%</b>	<b>77.7%</b>	<b>80.0%</b>	<b>80.0%</b>	<b>78.4%</b>	<b>82.8%</b>
<b>Average hourly wage rate Full time employees</b>									
<b>Average hourly wage rate Full time employees</b>	Men	15.84	16.2	16.84	17.3	17.55	18.01	18.29	18.69
	Women	12.98	13.12	13.4	14.1	14.68	15.3	15.53	16.63
	<b>F:M ratio</b>	<b>81.9%</b>	<b>81.0%</b>	<b>79.6%</b>	<b>81.5%</b>	<b>83.6%</b>	<b>85.0%</b>	<b>84.9%</b>	<b>89.0%</b>
<b>Average weekly wage rate Full time employees</b>									
<b>Average weekly wage rate Full time employees</b>	Men	653.61	664.58	687.81	705.59	714.43	732.79	744.26	760.11
	Women	495.23	500.04	512.28	536.48	559.06	582.78	592.07	632.04
	<b>F:M ratio</b>	<b>75.8%</b>	<b>75.2%</b>	<b>74.5%</b>	<b>76.0%</b>	<b>78.3%</b>	<b>79.5%</b>	<b>79.6%</b>	<b>83.2%</b>

Source: Statistics Canada Labour Force Historical Review 2004 [24, based on Colman [1]

Note: The median wage is an estimate of the mid-point of the wage range - 50% above, and 50% below.

A Statistics Canada study found that where employees work, their industry and occupation, accounted for more of the wage gap than the combined pay differential for worker characteristics, tasks, and contact between the worker and the workplace [25, 26]. Disaggregating the wage gap by industry type for full and part-time workers tells a more detailed story of the gender wage gap, as can be seen in the Table 2.





**Table 2: Manitoba Gender Wage Gap 1997 – 2004: Goods-producing and Services-producing industries average hourly wage rates, full-time and part time.**

			1997	1998	1999	2000	2001	2002	2003	2004
Goods: average hourly wage rate	Men	Full-time	15.14	15.58	15.98	16.35	16.88	17.31	17.59	17.76
	Women	Full-time	10.69	10.87	10.97	11.87	12.46	13.03	13.21	13.73
		<b>F:M ratio</b>	<b>71%</b>	<b>70%</b>	<b>69%</b>	<b>73%</b>	<b>74%</b>	<b>75%</b>	<b>75%</b>	<b>77%</b>
	Men	Part-time	9.05	9.53	9.82	9.95	10.03	10.03	11.64	12.81
	Women	Part-time	9.58	10.28	9.21	11.20	10.93	10.41	11.51	12.37
		<b>F:M ratio</b>	<b>105.9%</b>	<b>107.9%</b>	<b>93.8%</b>	<b>112.5%</b>	<b>109.0%</b>	<b>103.8%</b>	<b>98.9%</b>	<b>96.6%</b>
Services: average hourly wage rate	Men	Full-time	16.25	16.57	17.35	17.91	17.96	18.40	18.68	19.21
	Women	Full-time	13.34	13.49	13.78	14.45	15.02	15.63	15.87	17.08
		<b>F:M ratio</b>	<b>82.1%</b>	<b>81.5%</b>	<b>79.4%</b>	<b>80.7%</b>	<b>83.7%</b>	<b>85.0%</b>	<b>85.0%</b>	<b>88.9%</b>
	Men	Part-time	8.30	8.58	9.76	9.79	10.44	10.42	10.79	11.20
	Women	Part-time	10.53	10.56	11.00	11.11	11.68	11.76	12.18	12.80
		<b>F:M ratio</b>	<b>78.8%</b>	<b>81.3%</b>	<b>88.7%</b>	<b>88.1%</b>	<b>89.4%</b>	<b>88.6%</b>	<b>88.5%</b>	<b>87.5%</b>

**Source:** Statistics Canada Labour Force Historical Review 2004 [24].

Notes: Goods-producing sector includes: agriculture, forestry, fishing, mining, utilities, construction and manufacturing. Services sector includes: trade, transportation, finance, business, education, health, culture, recreation, accommodations, food and public administration.

Women are highly concentrated in the services sector, and less likely to be working in the goods-producing sector [25]. Table 2 points to a distinct wage disadvantage for women working full-time in the goods-producing sector; in 2004, women earned 77% of men’s wages. This higher wage gap in the goods-producing sector is a reflection of the sector having more male-dominated professions, and private industry, with lower rates of unionization, especially for positions traditionally occupied by women such as those providing administrative support.

The wage gap for part-time workers in the goods sector is small, oscillating between men and women’s advantage between 1997 and 2004.

In the services sector, the wage gap for full-time workers follows the trend seen in with the overall wage gap presented in Table 1. Interestingly, the wage gap shows a disadvantage for men for part time workers in services – they earned 114% of women’s earnings in 2004. One possible explanation for men’s lower earnings is men’s concentration in low-wage consumer services (24%), and other service occupations (24%) [26]. While women working part time are also concentrated in consumer services (33%) and low wage clerical work (27%), a high proportion of women work part-time in natural science occupations (29%) brings the average hourly wage up for women [26].

In recent years women have increased their representation in several occupational fields. There has also been a long-term increase in women employed in managerial positions. In 2001, 37% of all those employed in managerial positions were women, up from 30% in 1987 [5]. Women currently make up over half those employed in both diagnostic and treatment positions in medicine, in related health professions and in business and financial professional positions [5]. One of the major changes in the health services over the





last 30 years has been the increasing number of women physicians in Canada, now numbering about 30% of physicians in practice [27]. Women have increased their presence in all specialty groups. However, higher proportions of women were found in general and family practice (GP/FPs) compared to medical specialties. Surgical specialties had the lowest proportion of women in practice [28, 29].

However, the majority of employed women continue to work in occupations in which women have traditionally been concentrated. Two-thirds of all employed women worked in a small number of occupations: teaching, in nursing and related health occupations, clerical or other administrative positions, and sales and service occupations [5]. In fact, there has been no change in the proportion of women employed in these traditionally female-dominated occupations over the past decade [1]. As well, among managers, more women are in lower-level positions [1]. Women also remain very much a minority among professionals employed in the natural sciences, engineering and mathematics [1].

The traditional explanation of the gender wage gap is women's different participation in the labour force from men's. Women exit and enter the labour force more often over their lives because of childbirth, childrearing, and unpaid care-giving responsibilities. Less time spent in the labour force means that women are less likely to be promoted, which leads to fewer pay increases and depreciation in skills when out of the labour force. Women may postpone training, or take jobs with no penalties for withdrawing from the labour force because they anticipate exiting for a period of time [12]. Additionally as noted, women may be exiting the labour force to have and raise children, when their male counterparts are establishing their careers. Other reasons for the wage gap include men's concentration in managerial and supervisory roles, men's likelihood to be involved in self-directed work groups, larger firms and foreign-owned firms which pay more [23].

However Colman writes:

*“After taking into account a wide range of employment characteristics and socio-demographic factors, including education, field of study, hours worked, full-time or part-time status, work experience, job tenure, industry, occupation, job duties and supervisory role, firm size, union membership and age of children, Statistics Canada analysts have concluded that ‘roughly one-half to three-quarters of the gender wage gap cannot be explained’ [1, citing 25 & 26].*

That is, it could not be explained without considering systemic discrimination against women, as described by Lahey on page 1 of this section. Women still face persistent discrimination in the paid work force, such as unequal pay for work of equal value, glass ceilings that prevent women from higher paid positions, and other forms of gender discrimination [1, also 26].

## Pay Equity

One strategy to combat systemic differences in wage for work of equal value is through pay equity legislation and policies, based on the premise that pay should be equal based on level of skill, effort,





responsibility and working conditions.<sup>4</sup> Women’s work has been undervalued because of discrimination and a lack of recognition of the importance of work women have traditionally done such as care giving, clerical work, teaching, and cleaning.

For workers under federal jurisdiction<sup>5</sup> (about 10% of the total Canadian workforce ), pay equity is governed by the *Canadian Human Rights Act* and the Equal Wages Guidelines [30]. This is a complaint-based process, and it is not proactive. Neither does it address the systemic nature of the barriers to fair compensation faced by women, such as occupational segregation. In the most well-known case under the federal legislation, 4,776 Bell Telephone operators and the Communications Energy and Paperworkers Union of Canada reached a settlement with Bell Canada in 2006, some 14 years after the first complaint was laid. During this time, the company argued that the Human Rights Commission should not have jurisdiction in this matter, taking their case all the way to the Supreme Court of Canada, which upheld the legislation. The settlement was valued at over 104 million dollars [31].

The federal government’s Pay Equity Task Force released its recommendations in 2004. The report concluded that pay equity is a fundamental human right, and recommended a proactive pay equity law be applied to women, Aboriginal and visible minority workers, and workers with disabilities [32]. The federal government has not adopted the Task Force’s recommendations [33].

Manitoba’s Pay Equity Act applies only to workers employed in the provincial public sector, and does not require other employers to examine their pay structures for systemic gender discrimination in wages.

The International Labour Organization reviewed different schemes to eliminate gender-based wage discrimination and concluded that proactive legislation such as that in Québec and Sweden, which require employers to carry out a pay equity exercises, to be the most effective [31].

## Unionization

Union membership and coverage by collective agreement have many benefits for workers. They enjoy higher wages: the average wage of a union member is \$21.00 per hour compared to \$16.65 per hour for non-unionized workers. They also tend to have better benefit packages such as pensions, extended health care benefits and paid leave. Unionization can elevate the wages of workers in traditionally low-paying female sectors, for example unionized childcare workers earn \$5.31 per hour more than non-unionized childcare providers [34]. Research has shown that membership in a union has an estimated 7.7% higher wage after adjusting for worker and job characteristics [35]. Unionized women workers earn 92% of the wages of their male counterparts [36].

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<sup>4</sup> Note: The federal pay equity legislation includes “skill, effort, responsibility and working conditions”. The Manitoba Pay Equity Act includes “skill, effort and responsibility”, *not* working conditions.

<sup>5</sup> These include employees of the federal government, federal crown corporations, those involved in banking, communications, inter-provincial and international transportation and the nuclear industry





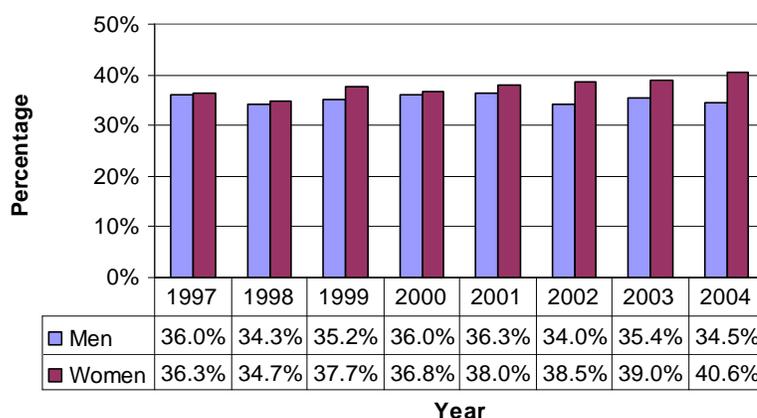
**Unionization rates:** the proportion of employees that are members of a union, or covered by a collective bargaining agreement, as a proportion of the total number of employees [2].

Other studies by Statistics Canada (e.g. Survey of Work History) have defined those covered by a collective agreement, but not union members, as non-unionized. This difference accounts for a 2.1% higher unionization rate if the people covered under collective bargaining agreement are counted. The data for Manitoba from Statistics Canada’s Labour Force Survey used here include both union members and non-members whose wages and conditions of work are determined by a collective agreement.

While rates of unionization among Canadian women have increased, unionization among men in Canada has declined since the 1980s, from 38% of male workers in 1981 to 31% in 2004 [37]. Declines in unionization affect low-wage workers the most – for both women and men, declines were greatest among workers earning \$15.00 to \$19.99 dollars per hour [37]. It is this decline in the number of jobs occupied by unionized men that has contributed the most to closing the gap in the rate of unionization between women and men. As seen in Figure 15, working women in Manitoba are now more likely to be unionized than their male counterparts. This could be one of the reasons for the observed decrease in the gender wage gap described above.

The decline in unionized women and men can be attributed to economic trends in the past twenty years. Protracted depressions in the 1980s and 1990s, economic changes brought about by trade agreements such as NAFTA<sup>6</sup>, and changes in industrial and occupational composition of employment have reduced the proportion of unionized workers [38]. Notably Manitoba still has a unionization rate above the national average [37].

**Figure 15**  
**Union and Collective Agreement Coverage in Manitoba by Sex 1997 - 2004**



Source: Statistics Canada Labour Force Historical Review 2004.

The increase in women’s unionization rates can be traced to women’s increased employment in the public sector from 45% in 1976 to 61% in 2003 [36]. Statistics Canada reports an increase in unionization of women in the public sector in Canada and a small increase in the private sector. Manitoba is consistent with these trends. The unionization rate of women in the public sector (78.9%) exceeded that of men

<sup>6</sup> North American Free Trade Agreement





(74.8%), reflecting the gendered dimensions of public administration, teaching and health professions [39]. However in the private sector, only 18.2% of women were unionized, compared to 22.5% of men, attributable to women's lack of representation in unionized private industries [39].

In the goods-producing sector, 34.8% of men and 28.4% of women were unionized in 2004. Most women were located and also unionized in the manufacturing sector; women are heavily under-represented in forestry, mining, fishing, utilities and construction. In the services-producing sector, women have higher unionization rates than men, due to the feminization of this area, and their under-representation in male dominated, non-unionized, senior management positions: 42% of women in the public sector are unionized compared to 34.3% of men.

## Summary

Labour force participation, employment and unemployment, and the pay women receive all affect women's health because of the important connections between income and health, and the conditions under which women may seek and participate in paid work. The dramatic increase in the number of women engaged in paid work, in addition to the wide range of occupations they hold, reflect substantial changes in the nature of the Manitoba workforce.

The experiences of Manitoba women in work, both paid and un-paid, are also important indicators of women's position in society. While women have certainly come a long way in terms of educational attainment, securing jobs traditionally held by men, and overall participation in the workforce, gender inequalities still pervade the realm of paid work. As this section has shown, women still fare worse than their male counterparts, and Aboriginal women shoulder the greater burden of inequity.

Women in Manitoba have higher labour force participation rates than ever, however the rates are still substantially lower than for men, due to factors such as unpaid care giving responsibilities. In every RHA, women's labour force participation rate was lower than that of the men of the same age. Fewer Aboriginal women are part of the labour force, compared to the rest of the population, with Registered Aboriginal<sup>7</sup> women being the least likely to be in the labour force. Women with higher levels of education are more likely to be in the labour force

The current measure of unemployment does not capture the full picture of women's unemployment. When considering the official unemployment rate, women and men's unemployment are fairly even, however women's unemployment rate is higher than men's when discouraged women workers and lack of job opportunities are taken into consideration.

Aboriginal people have higher unemployment rates than the rest of Manitobans. For Registered First Nations women there is a larger discrepancy based on region. In Winnipeg, Aboriginal women have higher rates of unemployment than Aboriginal men (21.9% vs. 16.6%). However Registered First Nations

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<sup>7</sup> See definitions used by Statistics Canada in box on page 5.





men in the south (29%) and the north (36.2%) have higher rates of unemployment than Registered First Nations women (20.1% and 22.4% respectively).

Women who are employed are more likely to work part-time than men. Involuntary part-time workers are more likely to be women, because they cannot find full-time work or have inadequate care available for their children.

Despite progress, a gender gap in wages earned persists. In 2004 the average hourly wage earned by women was 87% of that earned by men.

Unionization can improve wages for women in particular sectors. Over time, the number of women in unions has increased, while the number of unionized men has decreased, bringing the numbers of women and men closer together. Women's higher representation in the public sector and its unions, with pay equity benefits for women and better wages, may be part of the reason for the observed decrease in the gender wage gap.

## Policy Implications

Women's participation rate in the labour force is reduced during the childbearing and child rearing years. Although this may be by choice, women and their families require readily available and affordable childcare for each child for the first 12 years, if they wish to (re)enter the labour force. Women who have children at a younger age may have lower education attainments and are more likely to persistently have lower wages and earnings throughout their working lives. That is, women are effectively penalized for joining the labour force when they are older, because they have been raising their children first.

Manitoba and Canada have not wholly instituted policies that recognize the value of parenting and the inherent value of children to our society as a whole. This lack of supportive policies and programs (including universal, high quality child care) create penalties for women who take time out of the labour market to care for their children. Recent changes in federal Employment Insurance, including the extension of parental leave within EI to one year, although inadequate, have been an important illustration that Canadian society is more willing to value the role of child-rearing as a contribution to the economy (and society as a whole). Similarly, job protection rights under provincial employment standards legislation also demonstrate greater recognition of the value of raising children.

Women who are employed part-time may be taking reduced hours involuntarily, and are interested in economic opportunities for full-time work, with corresponding needs for child care.

Aboriginal women, especially Registered women (i.e. First Nations with Status), have lower labour force participation rates and higher rates of unemployment. This suggests that Aboriginal women need culturally appropriate supports such as education and training available to them in their home communities.





Improving women's educational attainment past the high school level is essential to supporting women's labour force participation. Employment supports for young people, as well supports to go to school are important to address the lower levels of employment among young women.

The institution of proactive pay equity legislation would improve women's incomes in all sectors.

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# Occupational Health

## Introduction

Women's occupational health is an integral and often over-looked element of women's health. The ways in which work and working conditions influence women's health are complex. Women's work includes formal and informal types of work, both paid and unpaid. This discussion is limited to women's formal, paid employment. It does not discuss the hazards of unpaid work and caregiving (see Unpaid work in this chapter), nor the highly dangerous, informal work of women in the sex trades and other unregulated work.

In 2001, about 62% of Manitoba women aged 15 and older were in the labour force (see Labour Force Participation in this chapter). Paid work is an important determinant of women's and men's relative wealth, power and prestige. It therefore has the potential both to contribute to, and to ameliorate, gender inequalities. Work can contribute to women's health, through increased income, self-esteem and social support. However, workplace hazards both physical (such as repetitive motions, night and shift work, on-the-job exposure to violence, noise, heat, cold and toxic chemicals) and psychosocial (such as work stress, lack of control over one's work, discrimination and harassment) can impair women's health [1].

Although labour market discrimination against women has decreased, women still tend to occupy certain sectoral and occupational "niches". In 2006, Canadian women held 75% of clerical and administrative jobs, 71% of professional jobs in the social sciences and religion and 64% of teaching jobs, but only 6% of jobs in the trades, transportation and construction, 20% in primary industries and 26% in senior management[2].

These employment conditions influence *gender* differences in exposures to occupational hazards in several ways. Firstly, gender segregation in the labour market leads to differences in workplace exposures between women and men. Secondly, differences in social perceptions of men and women can affect the extent to which these hazards are recognized as occupational in origin, and therefore the appropriate steps to take for injury prevention [3]. When female-dominated occupations and industries are excluded from research in occupational health, the risks of their work are overlooked. This contributes to a vicious circle – there is little evidence of harm, therefore potentially false assumptions about the safety of women's work are made. Work that is presumed "safe" is not given priority for research [3, 5]. Biological sex differences in women's and men's responses to workplace exposures have also been overlooked [1, 5]. In some circumstances biological differences have been used to justify job segregation of women, erroneously defined as "prevention"[3].

Increasing numbers of women work in non-standard, casual or precarious work. These forms of work have increased, along with global competitive pressures, and result in increased symptoms related to stress, such as disrupted sleep, fatigue, tension and irritability [1, 4]. Women have borne the greater brunt of these changes, with negative consequences for their health [1, 5].





## Research About Women’s Occupational Health

The study of occupational health began in 1700, when the Italian physician Bernardino Ramazzini published *De Morbis Artificum* (“Diseases of Workers”). Ramazzini called on physicians to add to their standard history-taking a question about the occupation of their patients [1]. Studies of the hazards of women’s working conditions dating back to the early 20<sup>th</sup> century. In the mid-1920s Dr. Alice Hamilton, and others, raised the case of the “radium girls”. These young women were doing the “women’s work” of hand painting watch dials with luminescent radioactive paint. Many became ill and died as the result of these exposures [7].

Despite this history, women’s occupational health remains an under-studied field of research [1,3,8,9]. Studies of women’s occupational health have focused on the health of health care workers, where women predominate. The other occupations most common

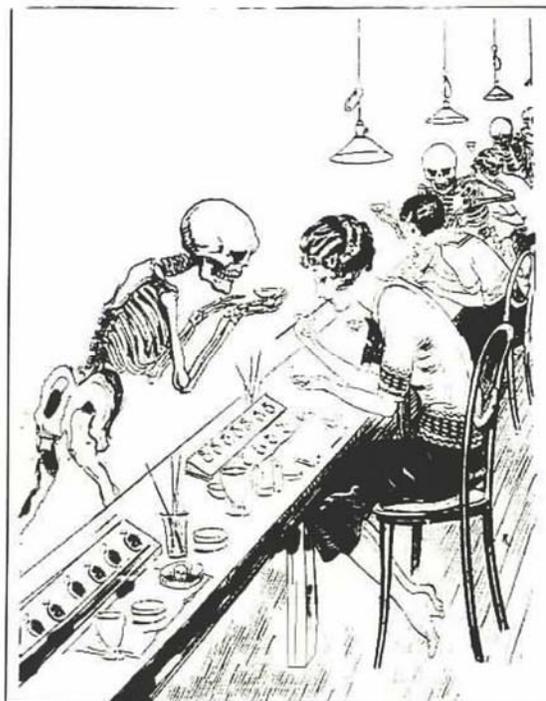
among women, such as retail sales clerks, secretaries, cashiers, teachers, office clerks and receptionists, are not the subject of occupational health research in Canada [8].

*What* has been studied in the area of women’s occupational health is as problematic as *who* has been studied. Psychological exposures, such as stress, have been much more frequently studied than ergonomics and toxic exposures [1,8].

There is one area where the occupational health of women has received more attention than that of men – reproduction. Women’s occupational reproductive health is often conceived of only as the health of pregnant women, and more particularly, of fetal health. Pregnant and breastfeeding workers in Québec, and those whose work is federally regulated and governed by the Canada Labour Code have the right to “protective reassignment” to protect the health of their fetuses and nursing infants [10]. This legislation was, and remains, a step forward. However, when occupational reproductive health is treated as a “pregnant women’s issue”, important issues such as reduced fertility and genetic damage as the result of workplace exposures, in women and men are ignored [1].

## Legislation Governing Women’s Occupational Health in Manitoba

The occupational health of approximately 90% of Manitoba workers is governed by the provisions of the *Workplace Safety and Health Act*. The Act was first passed in 1976, following extensive lobbying and political action by Manitoba unions and the Manitoba Federation of Labour. The objects and purposes of the *Act* are to protect workers and others from risks to their safety, health and welfare arising out of, or in connection with, workplaces. Specifically, the *Act* has among its purposes:



Cartoon from the *American Weekly*, February, 1926, highlighting the plight of New Jersey’s “Radium Girls” <http://www.gvsu.edu/english/cummings/radium.jpg>





- promoting maintaining the highest degree of physical, mental and social well-being of workers;
- preventing ill health caused by working conditions;
- protecting workers factors promoting ill health; and
- placing and maintaining workers in an occupational environment adapted to their physiological and psychological condition [11].

The remaining 10% of Manitoba workers work in industries under federal jurisdiction. These include employees of the federal government, federal crown corporations, those involved in banking, communications, inter-provincial and international transportation, and the nuclear industry. The legislation governing their occupational health and safety at work is Part IV of the Canada Labour Code.

In 2006, there were 571,150 people employed in Manitoba, including 271,380 women [12]. Of the total employed, about 393,000 (or 69%) were covered by the *Workers Compensation Act* [13].

The workers compensation system has existed in its current form in Manitoba since 1920. The basic elements of this system are:

1. It is governed by the *Manitoba Workers Compensation Act*, which specifies which industries are covered by the Act, as well as the terms and conditions under which benefits are payable to injured workers, and, in the case of death, to their surviving spouses and children. Workers in industries not specifically included in the Act are not entitled to the benefits of the Act, unless their employer voluntary opts for coverage.
2. It is administered by a provincial government body, with representatives of labour, management, and the public, on its governing board.
3. It is fully funded by employers.
4. Workers covered by the Act are prohibited from suing employers for working conditions leading to occupational illnesses and injuries [14].

These elements constitute what is known as “the historic compromise” of Workers Compensation. Employers are protected from lawsuits through the collective liability; workers are entitled to no-fault benefits for occupational injuries and illnesses “arising out of and in the course of employment” [15].

## Measuring the Extent of Workplace Injuries and Illnesses in Manitoba

Workers compensation data are not a comprehensive accounting of all occupational illnesses and injuries in Manitoba. As noted above, approximately 30% of Manitoba workers were not covered by the Act. Secondly, it is acknowledged that workers compensation systems in Canada, as elsewhere, under-recognize the extent of occupational injuries and especially of illnesses. Research in other countries has shown that women’s occupational injuries and illnesses are more seriously underestimated than those of men [4]. “Women’s work” has fewer obvious visible physical hazards than traditional “men’s work”. The heavy physical demands of mining and forestry, for example, are well-understood, whereas the physical demands of lifting patients in health care settings, for instance, are less often seen as an occupational





hazard [1]. Working women in Manitoba are also more likely than men to work in industries without mandatory workers compensation coverage [16].

While not a complete inventory of occupational illnesses and injuries, workers compensation data do allow us to illuminate the hazards of work in Manitoba. In this section, we discuss women's Workers Compensation claims in Manitoba, and how these differ from those of men. Note that while the Manitoba WCB administers claims made in Manitoba for federally regulated workers, these claims are not included in the data in this chapter [17].

There are three main types of claims in the WCB system: time-loss claims, no-time loss claims and fatality claims, where a worker dies as the result of an occupational injury or illness. From 2000 to 2007, there were 94,137 claims for Workers Compensation made by women workers to the Manitoba WCB. Of these, 78,172 (or 83%) were accepted by the Board. Women were more likely than men to have their claims for WC benefits rejected. The rejection rate for claims from women was 17% over this seven year period, compared to 14.9% of the 227,450 claims made by men [18]. A higher rejection rate for women's claims has also been found in claims for occupational injuries and diseases in Sweden and Québec [1, 19, 20].

Tragically, from 1995 to 2005, there was an average of 34 work-related fatalities each year. About 60% of fatality claims for both men and women were due to acute hazards, resulting in death, and about 40% were due to occupational diseases [1]. Women accounted for just 2% of those with fatality claims [21].

"Time loss" claims involve situations where workers are absent from work due to the effects of the injury or disease for which they are claiming compensation. "No time loss" claims are for situations where, despite the injury or illness, the worker has not missed time from work. Generally, these are filed so that the costs of health care (including physiotherapy, chiropractic care and prescription drugs) will be paid by the WCB, rather than by the worker.

While women represent about 47% of employed workers in Manitoba, claims from women accounted for just 30.3% of time loss injuries and 26.6% of no time loss injuries between 2000 and 2006 [13,22].

Figure 1 shows the total number of claims filed, and claims accepted, for women and men from 2000 to 2006. As Figure 1 shows there was a gradual decrease in the numbers of claims from men, both claims filed and those accepted by the WCB, and an approximately constant number of female claims both filed and accepted [18]. The WCB attributes the drop in claims from men largely to improvements in working conditions in the manufacturing sector. Such changes in the conditions of female-dominated occupations were not observed during this time [16].

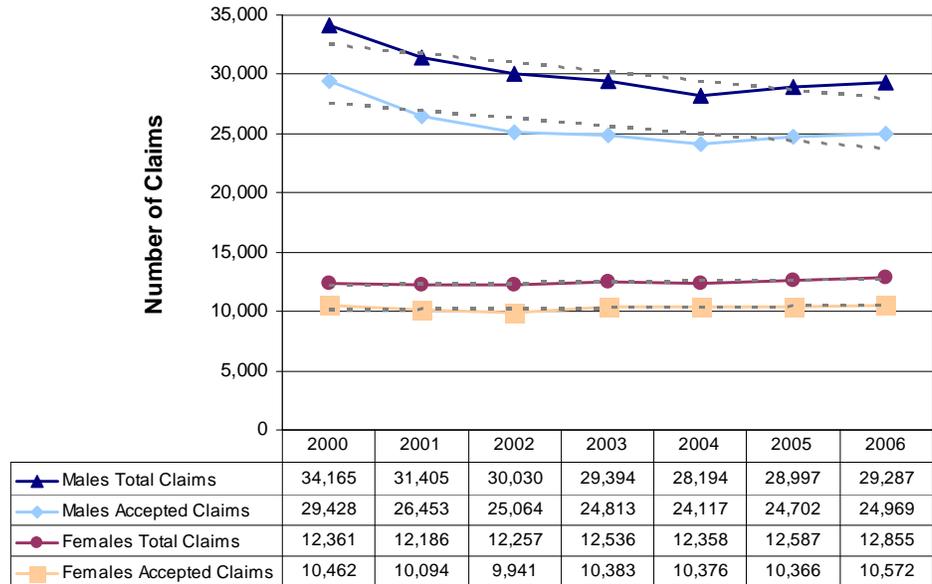




Figure 2 shows the number of accepted “time loss” claims from men and women from 2000 to 2006. The number of these decreased for men, but did not decrease for women, during these years [18].

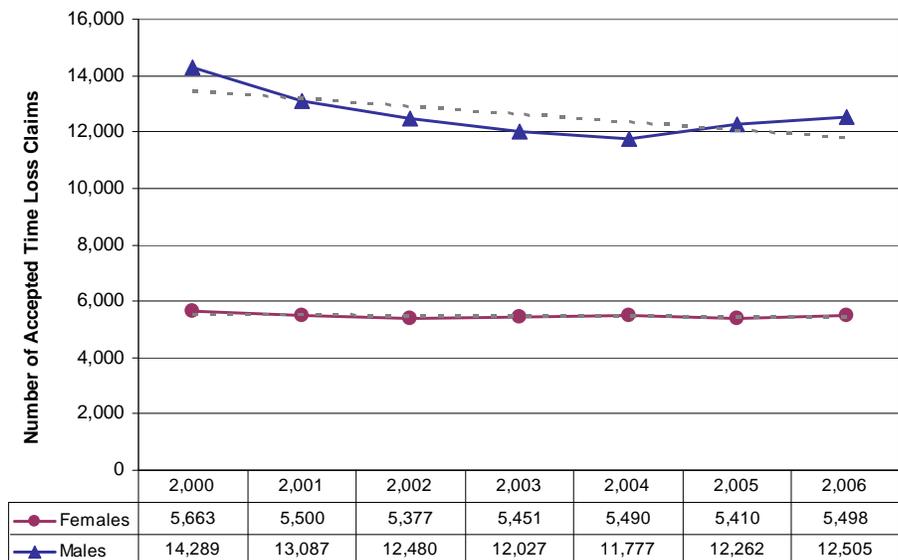
As noted, despite gains made towards women’s economic and social equality with men, labour market discrimination and segregation still exist. These affect both the occupations and the industries in which women and men work. Structural differences also influence the differences observed between women and men who were injured on the job. Almost half of all men with accepted time loss claims from 2000 to 2006 worked in the trades, in transport, or as equipment operators, compared with just 7% of women. About 33% of injured women worked in sales and service, and a further 27% worked in health occupations [17].

**Figure 1**  
**Manitoba WCB Accepted Claims & Total Claims**  
**2000 to 2006**



Source: Workers Compensation Board of Manitoba [18]  
Trend lines are indicated by-----.

**Figure 2**  
**Manitoba WCB Accepted Time Loss Claims**  
**2000 to 2006**



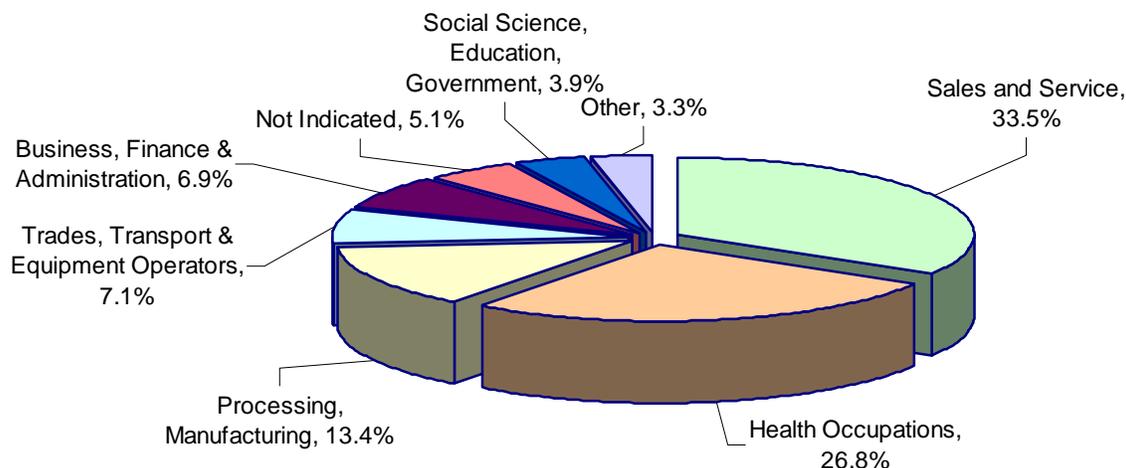
Source: Workers Compensation Board of Manitoba [18]  
Trend lines are indicated by-----.





Figure 3 shows the distribution of time loss claims by occupational group among women injured from 2000 to 2006. From 2000 to 2005, accepted time loss injuries among sales and service workers, the largest group of women claimants, decreased by 8.5%. However, during this time, accepted time loss claims among health care workers increased by 11%, while employment in these occupations increased by 23% [17].

**Figure 3**  
**Time Loss Claims by Occupational Group**  
**Manitoba Women 2000 to 2006**



Source: Workers Compensation Board of Manitoba [18]

For both women and men, “sprains, strains and tears” were the most common type of injuries sustained (57.7% of accepted time loss injuries to women and 48.2% to men) [18]. However, as shown in Table 1 below, there are some interesting differences between women and men in the distribution of claims. Women are less likely than men to have had injury claims accepted, other than for sprains, strains and tears.

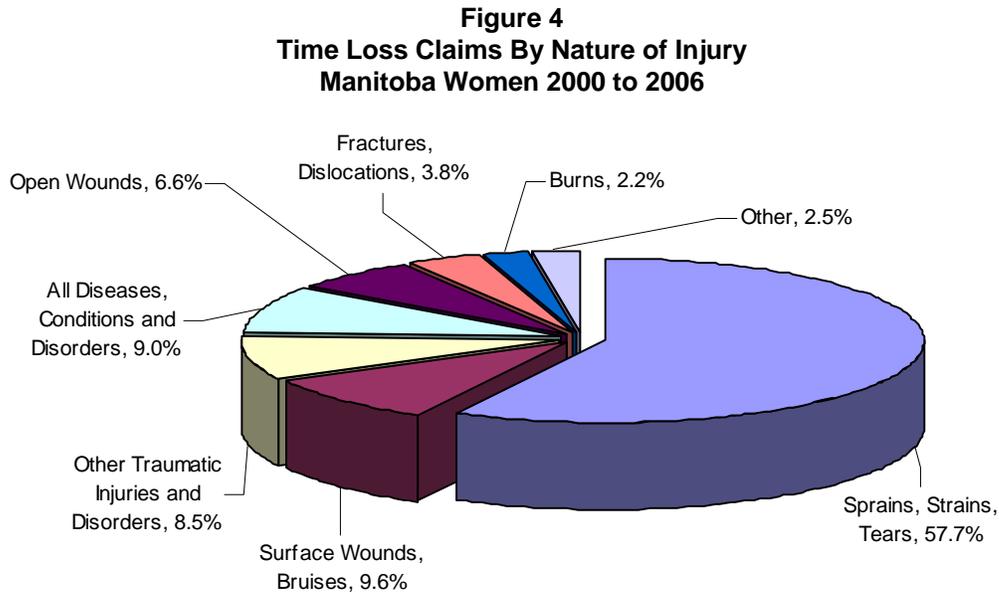
Table 1		
Nature of Injury - Accepted Time Loss Claims		
Manitoba Males & Females 2000 to 2006		
	Females	Males
Sprains, Strains, Tears	57.7%	48.2%
Surface Wounds, Bruises	9.6%	13.4%
Other Traumatic Injuries and Disorders	8.5%	12.2%
All Diseases, Conditions and Disorders	9.0%	8.9%
Open Wounds	6.6%	7.7%
Fractures, Dislocations	3.8%	5.8%
Burns	2.2%	1.9%
Other	2.5%	1.9%

Source: Workers Compensation Board of Manitoba [18]





Figure 4 shows the nature of injuries suffered by working women on the job, with compensable time loss injuries, from 2000 to 2006.



Source: Workers Compensation Board of Manitoba [18]

## Workplace Stress

Workplace stress is understood to occur when the demands of the work environment are greater than an employee's ability to cope with (or control) them. This definition focuses on the work-related causes of stress and the steps needed to control them, rather than on perceived individual weaknesses [3].

Workplace stress can cause emotional, cognitive, behavioural and physiological reactions, with detrimental consequences for health.

Both women and men report experiencing work-related stress [2, 3]. The concentration of women in certain occupations means that they are more likely to be exposed to certain stressors. These include emotionally demanding work, and work in low-status jobs with little or no control over how work is done. Discrimination and sexual harassment are also sources of stress that women face more than men [3].

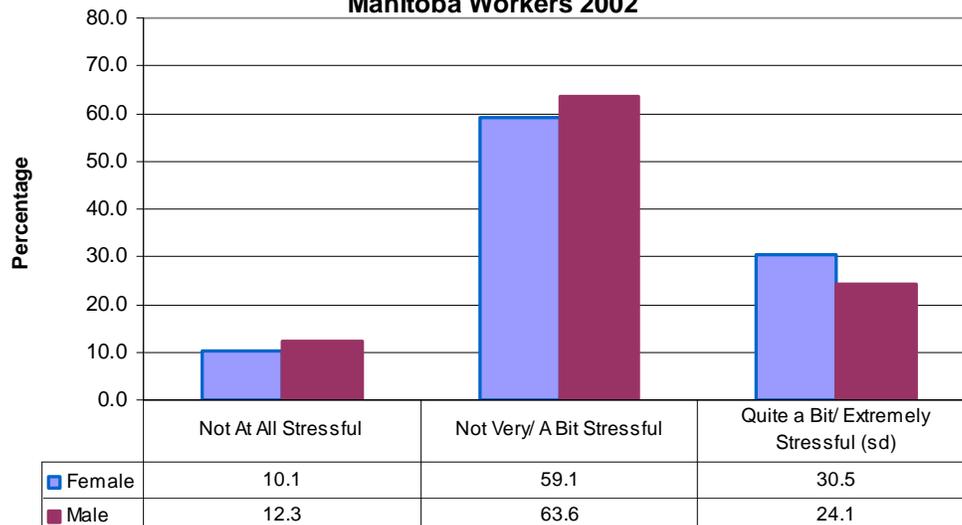
The double burden of paid work and unpaid work in the home also creates stress for women and means that they are less likely to recover quickly at the end of the work day from the effects of occupational stress [1].

Manitoba women were significantly more likely than their male counterparts to report that their work was "quite a bit" or "extremely" stressful [23].





**Figure 5**  
**Self-Perceived Work Stress**  
**Manitoba Workers 2002**



Source: Canadian Community Health Survey 1.2. sd indicates differences in rates between males and females were statistically significant.

## Discussion

What do we know about women’s workplace health? Surprisingly little. In a 2006 review of current Canadian literature on women and occupational health, Messing and Stellman found few projects that were specific to women, articulated, pursued and reported on male-female comparisons, or considered gender dimensions and pathways. Most research they found was from psycho-social disciplines, with relatively few from the natural and biomedical sciences [8].

According to Messing and Östlin [1], the lack of information about women’s health risks in the work place internationally is due to a number of factors. Historically research has been gender blind, results were reported as sex-adjusted and the research was written up in gender-neutral terms. And this, of course, pertains to research that involved women at all. The authors point out that illuminating sex differences in work place safety and health have been further hampered by considering the working conditions of males as the norm. Occupational health standards have often used males as the model for measurements. Toxicological data, for instance, were frequently gathered on men only, and sex differences in toxin metabolism were not considered [1].

Where sex has been considered in research, it may be too narrow – accounting only for women’s reproductive health in pregnancy and sidestepping important debates about the primary source of workplace hazards – or not specific enough -- with no real articulation about the biochemical or mechanical pathways that put women’s health at risk [24].





## Policy Implications

*The sexual division of labour is sometimes thought to obey “natural” laws, so that women do jobs that are more appropriate for their bodies and social roles. If so, the division of labour would be good for women’s health. But, if that were true, women would not be found in health care jobs that require them to lift heavy weights (patients) and to work at night. They would not be found in microelectronics plants that expose them to known reproductive hazards (Huel et al., 1990), and they would not be forced to work irregular, unpredictable schedules that seriously interfere with their family lives (Prévost and Messing, 2001). Their gender does not keep women from being exposed to hazards, but it does condition the types of exposures they experience (Messing et al., 1994a; Kennedy and Koehoorn, 2003). [1, page 4]*

The conditions of women’s work are a major determinant of women’s health, but are under-represented in both the literature about women’s health and the literature about occupational health.

For women, perhaps more than for men, the relationship between paid and unpaid work, and their interactions, are important influences on women’s health (refer to section on unpaid work and caregiving). Messing and Östlin note that:

*The focus in occupational health research on paid employment fails to detect interactions between health hazards within the workplace and outside of it. For example, there is evidence that women with small children experience more stress at work compared to women with no such responsibilities (Coser, 1974). The research effort to include women in occupational health studies and trying to understand women’s work-related health using solely a structural framework for paid employment, has proved not to be adequate. Women’s work related health cannot be understood without adding other frameworks related to gender roles and women’s work in the domestic sphere (Doyal, 1995, Orth-Gomér et al., 2000, Wamala et al., 2000) [quoted from 1, page 25].*

It is important to consider sex and gender differences within the complexities of the determinants of occupational health (such as work organization, socioeconomic status, age, and women’s greater burden of unpaid work).

Workplace health and safety regulators must consider that women’s occupational health, like that of men, will require safe and healthy workplaces for all, not simply the occupational segregation of women, where certain women (usually those who are pregnant or breastfeeding) are removed from certain exposures under the guise of “prevention”[5].

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# Unpaid Work and Consequences for Women's Health

## Introduction

Unpaid work, including housework and the care of children and the elderly, represents both a considerable portion of women's daily labour and an essential contribution to our communities and society. Women's traditional work in domestic and community spheres has largely been excluded from measurements of work and economic productivity in post-industrial cash-based societies. As a result, this work long remained invisible in studies of the health consequences of work.

While women's participation in the paid labour force has increased dramatically over the past quarter century, the slowly decreasing share of unpaid work has not kept pace [1]. At the same time, health care services systems have shifted care from hospitals to communities, where women assume greater responsibilities for the welfare of family members [2]. Thus, the health impacts of work must account for women's total workload, reflecting their participation in both paid and unpaid work [1]. Often referred to as women's 'double shift', these demands on women's time particularly affect working mothers, though must be balanced against social and economic benefits of additional roles.

The relationships between unpaid work and women's financial status, perceived stress, and available time for leisure and self-care emerge as critical areas of concern with regard to women's health. As well, the gendered nature of unpaid work and role complexity warrant our increased attention.

## Data Sources and Limitations

Beginning in the 1990s, measurement of unpaid work by Statistics Canada provided information on unpaid work for the first time. A prime source of data on unpaid work is the 2001 Census of Canada. The Census collected data on two of the most common domestic responsibilities, housework and the care of children. The General Social Survey (GSS) also provided data that measured different aspects of unpaid work. The 1996 GSS measured the prevalence of caregiving to chronically ill or disabled individuals. As part of a survey on aging and social support, the 2002 GSS provided information specific to the prevalence

### What is Unpaid Work?

The 2001 Census included unpaid housework or child care in its definition of unpaid work.

The 2005 General Social Survey included household work and related activities and civic or volunteer activities as unpaid work. Household work included cooking/washing up, housekeeping, maintenance and repair, other household work, shopping for goods and services, and child care.

The 1996 GSS measured the prevalence of help given or received during temporary difficult times or due to long-term health problems or physical limitations.

The 2002 GSS measured the prevalence of informal, unpaid caregiving to seniors provided by individuals aged 45 and over. This included assistance with every day activities provided to spouses, partners, household or family members, individuals outside of the household, close friends, neighbours and co-workers.





of unpaid and informal care given to seniors. The GSS also provided time use data for household tasks and volunteer activities, which were distinguished from time spent on paid work, education, self care and leisure activities. These data allow for comparisons between the time use of parents and non-parents, and individuals with and without paid work. The 2005 GSS provides the most recent time use data for which provincial and national time use data are available.

Methods of data collection and data quality issues differ for the Census and GSS. As the GSS was based on telephone interviews of household residents, it excluded a small percentage (estimated to be 5%) of the population who had no phones or who exclusively used cellular phones. The use of telephone interviews may bias these survey results, as individuals engaged in paid and unpaid work may differ in their access to a phone. GSS data collection on time use relied upon a respondent's diary information for the previous day. Thus, the quality of time use data is likely affected by the accuracy of recall and a respondent's ability to answer questions completely. Census data were collected using self-enumeration, where a household member reported on the time spent on unpaid activities by all household members aged 15 years and older. Consequently, census data may also be affected by the accuracy of recall. The GSS sample was evenly distributed over a 12 month period and the days of the week to offset the effect of seasonal and daily variations. However, seasonal aspects may affect Census results as the reference period of the questions on unpaid work was limited to the week preceding the census in May 2001 [22].

## An Overview of Time Use

How women spend their time carries implications for their quality of life and well-being. The balance between time spent on work—paid and/or unpaid—and time spent on leisure and personal care both affects and is affected by income, time and resources available for healthy activity, and opportunities for social support, to name only a few recognized social determinants of health. Consequently, surveys of time use have become important sources of public health information.

### **Biases in the Measurement of Time Use**

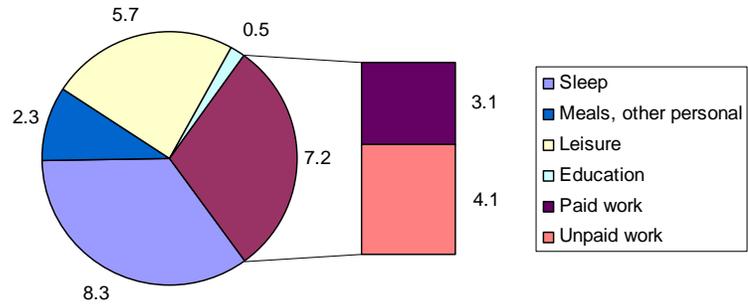
Experts in the field of time-use research caution that paid and unpaid categories of work cannot be fairly compared or summed to create a measure of 'total work'. The problem stems from differences in how data are collected for the two types of work. Many unpaid tasks tend to go unacknowledged and unmeasured. For example, part of household management, emotional work and secondary child care are missing from accounts of unpaid work. Further, breaks and down time are generally not included in time estimates for this work. In contrast, all time spent at paid work is counted as work, including coffee breaks and socializing. Thus measures of time use tend to over-estimate the burden of time for individuals who have paid work [3]. As women tend to perform more unpaid work, this bias would result in a larger underestimate of their total working hours.



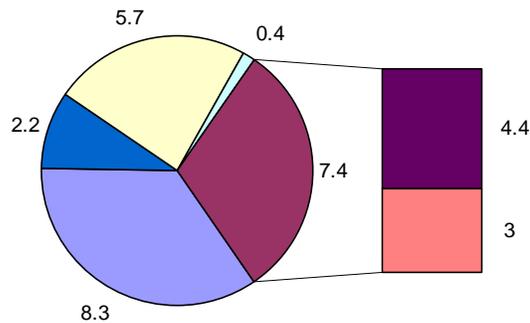


In 2005, the GSS found that 91% of Manitoba women aged 15 and older participated in unpaid work on the day they were surveyed (versus 83% of men), while 41% participated in paid work (versus 50% of men). Though all women (and men) devoted some time to basic personal care activities, not all enjoyed any free time (only 96%). Women and men reported similar patterns of time use, with the exception of the working portion of their days (See Figure 1.). While women spent nearly as much time as men on all work<sup>1,2</sup> (7.2 versus 7.4 hours), a greater proportion of women’s time was spent on unpaid work. Women spent 4.1 hours per day on unpaid work, or an equivalent of 28.7 hours in a 50.4 hour work week. Compared to men, women devoted nearly 8 hours more per week—another full work day—on a variety of unpaid tasks. Their greater contributions were primarily reported for such tasks as housekeeping, cooking and childcare. Unpaid work consumed more than one quarter of women’s waking hours [3]. The data indicate that unpaid work represents an important area of activity for women and raise concerns for the potential consequences for women’s economic and social well-being, and for their health.

**Figure 1: Time Spent on Various Activities**  
**a) Manitoba Women Age 15+, 2005**



**b) Manitoba Men Age 15+, 2005**



**Source:** General Social Survey, 2005. [3]

**Notes:** Time spent on activities represents the time spent per day (averaged for a 7 day week) for the total population of women and men aged 15 and over, including those who did not participate in the activity (e.g. performed no paid work because they were not employed during the time of the survey), both of which affect the overall average time spent on any activity.

**Paid work** includes related activities, primarily commuting.

<sup>E</sup> Figures to be used with caution. The coefficient of variation of the estimate is between 16.6% and 33.3%.

<sup>1</sup> All work is defined here as paid work and unpaid work.

<sup>2</sup> Paid work includes all functions directed toward market activity including commuting to and from work, and other related activities including looking for employment, as per the 2005 GSS definition.

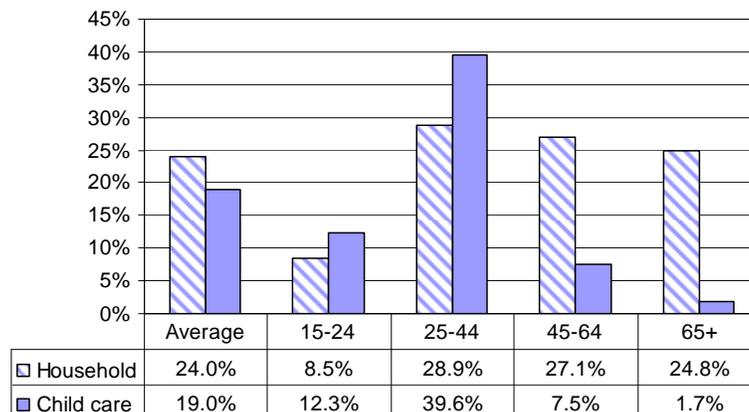




## Women’s Unpaid Work by Age & Role

Many women contribute a large proportion of their work week to unpaid work. According to the 2001 Census, 24% of Manitoba women performed 30 or more hours of unpaid housework in a week and 19% spent these many hours caring for children (Figure 2). Women aged 25 to 44 were most likely to devote long hours to household work and especially to child care. Thus, during some of the most economically productive years of life, many women also invest a great deal of time in unpaid work. With advancing age, women are much less likely to care for children, though women continue to devote many hours to unpaid household work in their older age [4, 5].

**Figure 2: Prevalence of 30+ Hours/Week Unpaid Household Work & Child Care by Age, Manitoba Women, 2001**

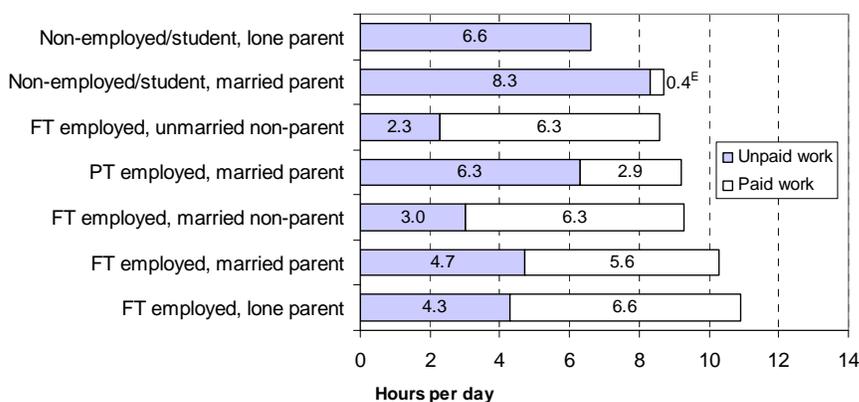


Source: Statistics Canada. 2001 Census of Canada. [4, 5].

Unpaid work, in itself, is not detrimental to women’s well-being. While role strain theory has done much to raise awareness that women’s multiple and competing roles may result in role conflict and harmful effects on mental and physical health, other theories have broadened understanding of the potential benefits of added roles for women.

Working outside the home has proven beneficial to women’s mental health, which may result from increased social contact and self esteem. There is now recognition that women’s involvement in each role brings both harmful and beneficial consequences, their balance depending on role characteristics, combinations and socioeconomic contexts. Other than circumstances of paid employment, key factors in determining this balance are the number of children women have and whether they have a spouse or partner to contribute social and financial resources [6].

**Figure 3: Time Spent on Unpaid and Paid Work\* by Role, Canadian Women Aged 25-44, 2005**



Source: General Social Survey, 2005 [3]. Note: Unpaid work includes household work and related activities, and civic and voluntary activities. Hours are averaged over a seven day week.

Notes: \*Paid work includes related activities, which primarily include commuting.

<sup>E</sup> Figures to be used with caution. The coefficient of variation of the estimate is between 16.6% and 33.3%.





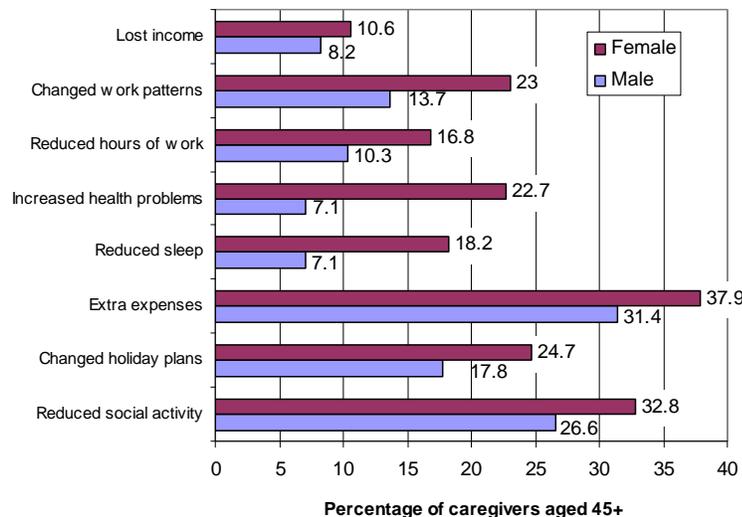
Canadian survey data show that the time women devote to unpaid activities and a total work load varies considerably by additional roles. In 2005, among women aged 25 to 44, the average time spent in a day on unpaid work ranged from under 2.3 hours a day for unmarried non-parents with full-time employment, to 8.3 hours for married parents without paid work. Women who were both mothers and participated full-time in the market economy still devoted a considerable amount of time to unpaid activities, and more so than fathers with full-time paid work (4.7 versus 3.1 hours per day for women and men aged 25-44). When time spent on unpaid and paid activities were both accounted for, it became apparent that workloads were especially heavy for mothers with full-time employment, especially single mothers (Figure 3). Working single mothers in this age range also reported the least amount of time spent on leisure activities (3.4 hours per day) and on personal care (9.7 hours) compared to women with other role characteristics [3].

### Caregiving and its Consequences

Women carry a disproportionate share of informal, unpaid care provided to family or friends. According to the 1996 GSS, the first national survey on caregiving, approximately 16% of Manitoba women over the age of 15 cared for people with long-term health problems or physical limitations. This compares with 9% of Manitoba men who provided care. Women who carried added responsibility for paid employment were no less likely to provide care, as 18% of these women also served as caregivers. Older women are often the greatest contributors to caregiving. Among women aged 45 to 64, 27% were caregivers [7]. Similarly, the 2002 GSS found that, in the Prairie provinces, women aged 45 to 54 were more likely to devote time to the care of seniors than men and women of other ages. The survey also found that Prairie women are more likely than other Canadian women to act as caregivers for older family members or friends [8].

Caregiving often provides personally meaningful and rewarding work, which enriches human relationships, builds a sense of connectedness in families and communities, and is essential to the development of emotionally and physically healthy children. The majority of Canadians who reported having provided informal care in 2002 agreed that there were positive consequences to their caregiving duties, such as strengthened relationships and an opportunity to give back relative to the social support they themselves have

**Figure 4: Percentage of Caregivers Reporting Consequences of Informal Caregiving; Prairie Provinces, 2002**



Source: Statistics Canada. 2002 General Social Survey, Cycle 16. [8]





received [9]. However, research has revealed significant negative effects of caregiving on the physical, emotional, financial and social well-being of caregivers, many of which have the greatest impact on women. A national survey found that among caregivers in the Prairie provinces, women were at higher risk than men for all consequences of caregiving (Figure 4). Added expenses and reduced social activity were most commonly reported by caregivers.

The greatest disparities for women relative to men were the health consequences to the caregiver and reduced sleep, which were 3 and 2.6 times more prevalent for women [8]. The seriousness of these consequences raises particular concern for the wellbeing of women aged 45 to 64, who represent a large proportion of caregivers.

Increased social isolation and stress are two commonly reported consequences of caregiving. National survey results have shown stress to be a frequent consequence for 39% of caregivers and a constant factor for 15%. Over twice the proportion of women as men (27% vs. 12%) reported worsened health, and women were somewhat more likely to report repercussions at work (55% vs. 45%) [10]. A Manitoba study of 322 informal caregivers found higher levels of caregiver burden among women than men, an association between providing care to elders with cognitive impairment and depression, and greater health impacts where caregiving was added to other major responsibilities [11]. The effects of caregiving often vary according to an individual caregiver's situation, particularly with employment status, marital status, having children, and socioeconomic status [1]. Older care givers are also generally more vulnerable, and have reported increased stress, high blood pressure, fatigue, exhaustion and susceptibility to illness [2]. As the number of seniors increases, the effects of informal caregiving on the health of the population will also grow in importance [12].

## **The Impact of Health Care Reforms on Caregiving**

Health care reforms in the 1990s resulted in a shift of caregiving responsibilities from formal systems to family caregivers, the majority of whom are women. Paid and unpaid caregivers have reported physical, emotional and financial distress consequent to these reforms. Unpaid caregivers have attributed increased stress to having a caregiving role imposed upon them, having to perform medical tasks for which they had not been trained, and carrying responsibility for potentially serious health outcomes for their relatives [13]. The increasing need for complex treatment skills in home caring environments, a trend identified by The Charlottetown Declaration on the Right to Care, raises added concerns [14]. For example, certain procedures that until recently could only be done in hospital, such as peritoneal dialysis, can now be done at home, to the benefit of those who require these treatments. Women's health researchers and advocates contend that health care policy reforms have expected women to shoulder the burden of supplementing health services in the home with no additional support or protection to do so. Their caution to policy makers is that this is likely to have detrimental impacts on the health of caregivers and the quality of care [2].





## Time Stress

Time stress is a serious concern for women, with consequences for mental and physical health. Though provincial data on time stress are lacking, the 2005 GSS found that 18.3% of women living in the Prairie provinces were severely time stressed (Figure 5). Women more often reported severe time stress than men, which held true in all but the 25 to 34 age category. The greatest difference between women and men was found among young adults (15-24) and middle aged women (45-54). However, women aged 35 to 44 were the most severely time stressed (27.4%) [15]. Stress among young women in Manitoba appears to have lessened since 1998, when 23% of women age 15 to 24 reported experiencing severe stress [16]. High stress levels among young women may be particularly concerning, as harmful behavioural strategies for coping with stress that are adopted in youth may introduce long-term exposure to additional risk factors. For example, smoking is a key stress relief strategy among young women, with serious implications for health [1, 17].

When Prairie women's roles as parents, partners and employed persons were considered, it became clear that women with children<sup>3</sup> and working full time, whether single or partnered, were most severely time stressed (Figure 6)[15], which has also been found in national survey data [6]. Half of the time stress results for Prairie men by role produced rates that were too small and statistically unreliable to report, specifically for unemployed or single fathers. Otherwise, men were less likely to report severe time stress than women of the same role [15].

<sup>3</sup> Defined as women with children under 19 years of age who lived in the same household.

### What is Time Stress?

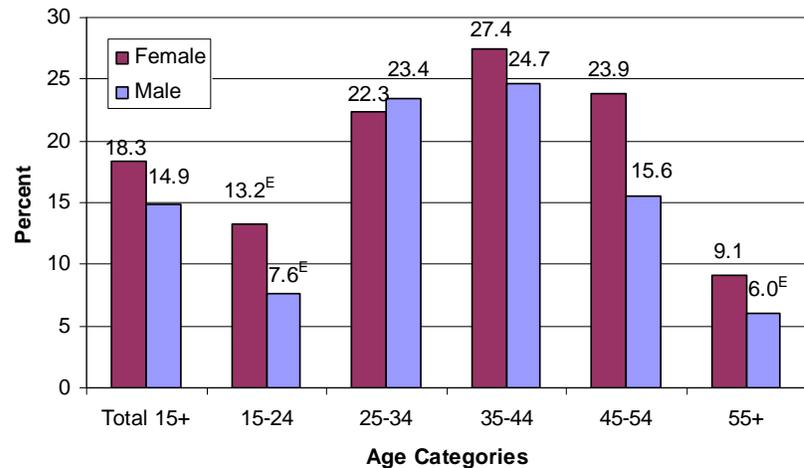
The General Social Survey measures time stress based upon ten questions on the perception of time. Those who agreed with 7 or more questions were considered to have high levels of time stress. Examples of questions include:

Do you consider yourself a workaholic?

Do you worry that you don't spend enough time with your family and friends?

Do you feel that you're constantly under stress trying to accomplish more than you can handle?

**Figure 5: Prevalence of Severe Time Stress by Age & Sex Prairie Provinces, 2005**



**Source:** Statistics Canada, Custom Tabulation, General Social Survey, 2005 [15].

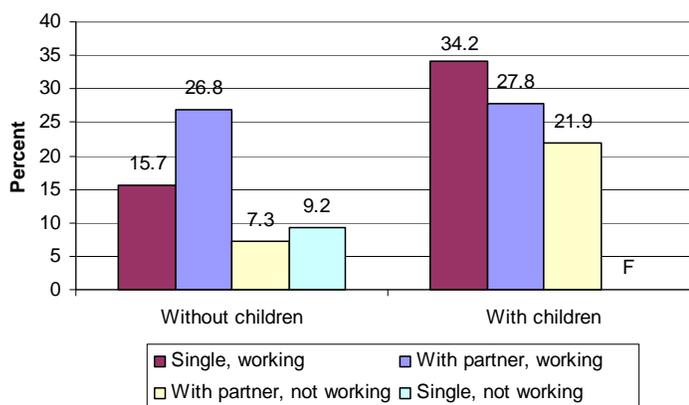
**Notes:** <sup>E</sup> Estimate to be used with caution. The coefficient of variation of the estimate is between 16.6% and 33.3%.





An association has been drawn between time stress and the erosion of free time and time for personal care (e.g. sleeping and eating). Sufficient sleep is known to be necessary for good health and adequate free time and personal care buffer stress. The long term trend toward the erosion of free time particularly affects working mothers [1]. Compared to women with no children, women with children and full time work are known to spend more time on childcare, curtail leisure far more, and be more severely time stressed [12]. In 2005, among Canadian women aged 25 to 44, full time working mothers, both single and partnered, reported an average of only 3.4 hours of free time per day. This was balanced against a work day which averaged 10 to 11 hours long [3].

**Figure 6: Prevalence of Severe Time Stress by Role, Prairie Women Aged 15+, 2005**



**Source:** Statistics Canada, Custom Tabulation, General Social Survey, 2005 [15].

**Notes:** With children is defined as parents having children under the age of 19 years living in the same household.

<sup>F</sup> The figure is too small to publish. The coefficient of variation is over 33.3%.

Higher rates of time stress for women have been attributed to an unequal division of labour in the household [1]. As well, the inequity in unpaid work is a better predictor of depression for women than is the absolute time women spend on unpaid work [6]. Although the gender division of labour is gradually narrowing, as men continue to spend more time on unpaid work, women still perform more unpaid household work than men and women’s paid work day lengthens [18]. Another noteworthy trend has been the increase in the number of single mothers working for pay, which raises concern despite the benefit of reduced rates of low-income, as this also results in reduced parenting time and added time stress [1].

The distinct nature and intensity of women’s and men’s unpaid work may also account for greater time stress for women than men. One study found that wives and daughters carried out the more demanding, daily and weekly caregiving duties, while husbands and sons were more likely to help with sporadic tasks [10]. A study which explored new parents’ time scarcity found that women who had become parents within the past five years were more time stressed than before they had children, whereas men’s time stress was high before parenthood and appeared not significantly altered by the transition. Mothers with children under age five who worked full-time were much more likely to be time stressed than their male counterparts. The differences between men and women were attributed to such factors as women performing more intensive, primary-activity<sup>4</sup> child care and physical child care<sup>5</sup> than men and other factors indicative of greater role complexity among mothers than fathers [19].

<sup>4</sup> Primary-activity child care includes such activities as teaching, playing, reading, and talking with children.





## Gender, Economics & Unpaid Work

The health consequences of women's unpaid and total work burdens must be understood in relation to closely tied economic factors. Women's greater role in unpaid caring and household work is related to gender discrimination, as are the low wages paid to those who do the work of caring and household chores in the paid labour force. Unpaid work perpetuates women's economic dependency, as the performance of these activities interferes with the ability to work in the paid labour force [1]. Women's socialization encourages their fulfillment of family caregiving roles at the expense of economic gains. The literature demonstrates, as one example, that elder care is significantly related to family responsibilities interfering with work for women but not for men. Financial loss and poverty are recurrent themes in the literature concerning the effects of caregiving. As described earlier, the direct financial consequences of providing care have been demonstrated by survey results that found that the most common negative consequence to Prairie women caregivers aged 45 and older was the added financial expense incurred in carrying out their duties, which was reported by 37.9% of respondents [8]. The economic costs of women's unpaid work may have lasting effects on women when missed opportunities for training, promotions and pension plan credits are considered [10]. Persistent wage discrimination against women in the labour market also limits women's ability to afford added expenses often associated with providing care, or the ability to pay others (usually low paid women) to do this work. As low income and poverty contribute to poor health outcomes for women [20], the health consequences of unpaid work can partly be understood as the result of the economic deprivation associated with these activities.

## Women's Diversity & Impacts of Unpaid Work

Women are known to have varying risk of experiencing the health consequences of unpaid work, so that it is important to consider diversity among women. Immigrant women, rural women, and women living in poverty are particularly vulnerable to time stress and health consequences of unpaid work. Many immigrant women try to balance traditional role expectations for heavy domestic workloads and a Canadian lifestyle that includes paid work, while the stress of conflicting values compound risks for depression [6]. In some ethnic, racial and linguistic minority groups, women are relied upon more heavily for unpaid home care where culturally sensitive services are lacking or language barriers may affect the quality of institutional care for family members [10]. In rural contexts, social services cut backs and depopulation in farm communities has increased demands for caregiving and community volunteerism. This has placed greater responsibility on farm women, many of whom carry triple work loads with responsibility for farm labour and paid work off the farm, as well as unpaid work in the home and community. Canadian farm women work an average of 2.5 hours more and have 2.2 hours less leisure time than the average Canadian woman age 35 to 44, resulting in a decreased quality of life for farm women.[21]. As well, women living in poverty and older women on fixed incomes lack financial resources to support caregiving activities or to gain respite when necessary [2]. A lack of time saving devices and easy access to food and transportation, among other factors, increase the demands placed on women caring for children in poverty, with detriments for both women and their young children.

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<sup>5</sup> Physical child care includes looking after infants, bathing and putting children to bed.





## Summary and Conclusions

Many women devote a significant amount of time to unpaid work. Despite the narrowing gender gap in the domestic sphere, women in Manitoba, as in Canada, are still more likely than men to do unpaid work and to devote more time to the care of children and the elderly, and routine household chores. At the same time, women's participation and time spent in the paid workforce also grows. The nature and conditions of unpaid work, like paid work, may have direct health consequences which deserve further attention. The consequences of women's total workload must also be accounted for, particularly where women carry roles as mothers and full-time work force participants, which create role conflict and stress with known, serious impacts on mental and physical health. The evidence for this strain is seen in women's reported time stress which is high among women as young as 25 to 34, and high relative to men in all age groups, but particularly among young women. Even women who carry the same work and parental roles as men report greater stress. Time spent on paid and unpaid work also leaves less time for leisure and personal care, which removes a buffer against stress and protection against harmful mental and physical health consequences. Women's unpaid work also limits or erodes women's earnings and long-term financial security, which creates barriers to participation in leisure activities, reduces access to nutritious food, and increases stress while limiting buffers to stress.

Women's contributions to family and community life carry significant social and personal rewards and are of benefit to many others. Caregiving can bring personal satisfaction to both caregivers and to those being cared for. Mothering, and fathering, that is raising children to be healthy, happy and productive adults, is much more than just unpaid work. While women have been socialized to value these over monetary gain, their own well-being may suffer as a result, because of the lack of societal recognition and valuation of this work.

Single, working mothers, other working mothers with dependent children, and middle-aged to older women who provide caregiving may be at the greatest risks for adverse consequences of unpaid work. Single mothers increasingly work for pay but lack support to carry out unpaid work or for respite. In Manitoba, the average work day for single mothers approaches 11 hours on a given day of the week, which leaves little for self-care and leisure. In the area of caregiving, several social, financial and self-care costs and consequences have been demonstrated to have greater impacts for women than men. Though flex-time jobs, affordable and quality child-care, and work site child-care may offset some of these stressors for women, more progress is needed, particularly for the most vulnerable socio-economic and social groups among women. The gendered experience of roles and complexity of women's roles are increasingly understood to account for some of the persistent differences in unpaid work consequences between women and men. Time devoted to unpaid caregiving may only be the most easily measured indicator, while the nature, degree or complexity of women's unpaid work and roles are more difficult to quantify and discern.





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## CHAPTER THREE

# Health Behaviours and Lifestyle Determinants of Health

There are many factors and determinants that influence a woman's health, and there is no doubt that some have to do with personal behaviours and lifestyle. Federal and Manitoba policies and announcements in the past five or more years have emphasized and promoted the need for healthy living and what people can do to improve their own health, prevent injury, and reduce excess body weight.

In this chapter we examine women's physical activity and nutrition, as well as smoking tobacco, drinking alcohol and illicit drug use patterns. As the gender-based analysis of the indicators demonstrate, while these are indeed personal choices for most Manitoba women, for some vulnerable women, coping behaviour and lifestyle are affected by external factors that reduce women's true choice.

This chapter includes information about:

1. Nutrition and Food Choices
2. Physical Activity
3. Healthy Body Weight
4. Tobacco Smoking
5. Drinking Alcohol
6. Illicit Drug Use





# Nutrition and Food Choices

## Introduction

Consuming a healthy diet and having access to a nutritious supply of food are important to good health, as good nutrition is a key factor in the overall health and well being of women.

In 2007, Health Canada issued a revised *Canada's Food Guide* (CFG). This new guide encourages Canadians to consume more fresh fruit and vegetables, fewer grain products, and minimize salt intake (Figure 1). For the first time, it also offers age and sex specific recommendations, as well as the first-ever national guide for First Nations, Inuit and Métis people [4]. The content of the earlier version (1992) was revised to reflect changes in eating patterns, food supply and diets, and advances in nutritional science [3].

While it is difficult to determine an individual's dietary needs since different life events and activity levels will influence recommended nutritional intake, research demonstrates that those who have poor nutrition have an increased risk of developing major chronic diseases, disability and premature death [5]. Poor nutrition can lead to both increased 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 [6]. Overweight and obesity are also signs of poor nutrition and are often related to the over-consumption of high calorie foods that are low in nutritional value.

### What is a Nutritious Diet?

Canada's Food Guide to Healthy Eating (2007) defines a nutritious diet as one that includes a variety of foods that emphasize vegetables and fruit, cereals, breads and grain products, in addition to lower-fat dairy products, leaner meats and food prepared with little or no fat. It also recommends that salt, high-fat foods, alcohol and caffeine should be limited [1].

Canada's Food Guide to Healthy Eating recommended servings for women aged 19 to 50, who are neither pregnant nor lactating:

Vegetables and Fruit: 7 - 8 servings per day  
(1 serving = 1 medium apple)

Grain Products: 6 -7 servings per day  
(1 serving = 1 slice of bread)

Milk and Alternatives: 2 servings per day  
(1 serving = 1 cup of milk)

Meat and Alternatives: 2 servings per day  
(1 serving = 1-2 eggs)

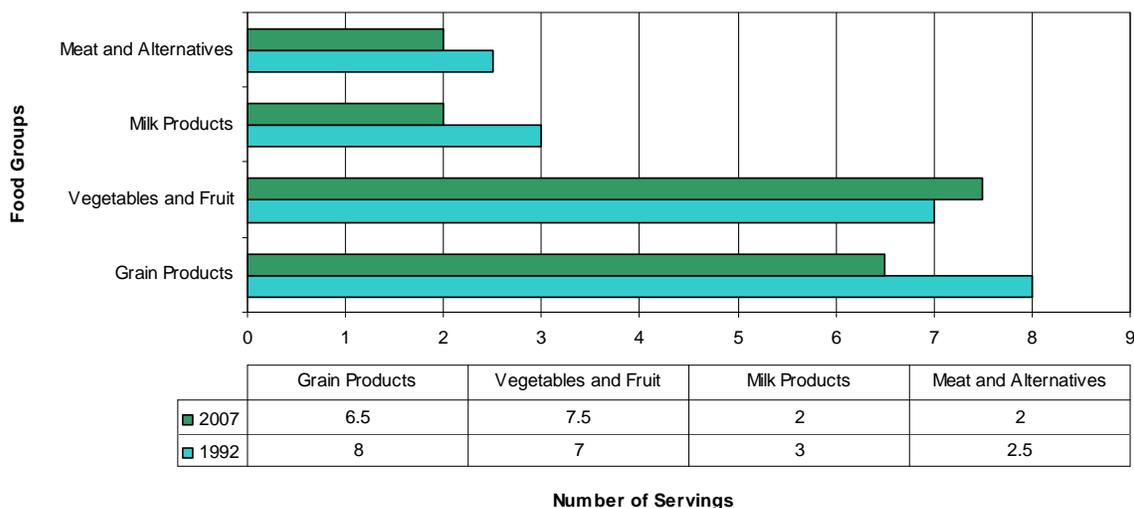
Oils and Fats: 30 to 45 ml of unsaturated fat  
(margarine, olive oil, mayonnaise)

Source: Health Canada [2]





**Figure 1**  
**Canada's Food Guide to Healthy Eating**  
**Recommendations, 1992 (Men and Women) and 2007 (Women aged 19 to 50)**



Source: Health Canada [2]

There are sex-specific health risks linked to poor nutrition. Women have a greater chance of developing osteoporosis, a disease linked to inadequate calcium and vitamin D intake [7]. Women are also at greater risk than men of developing iron and/or vitamin deficiency anemia, as a result of blood and iron loss during menstruation and increased blood volume during pregnancy [8]. As another example, 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 [9].

## Measuring Nutrition

This indicator uses information from a report on the 2004 *Canadian Community Health Survey (CCHS, cycle 2.2)*, entitled *Overview of Canadian’s Eating Habits*. The CCHS 2.2<sup>1</sup> was a one-time survey used to gather information at the provincial level on the overall nutritional status of Canadians. The questionnaire was divided into two components: 1) general health, and 2) 24 hour dietary recall. The general health component was designed to include factors such as height, weight and food security. The 24 hour dietary recall component asked respondents to recall their food consumption in the day preceding the interview from midnight to midnight. Respondents were interviewed in person, and specifically asked to recall food consumption for each of the four food groups in the 1992 version of *Canada’s Food Guide to Healthy Eating*, in addition to “other foods” such as alcohol or condiments, and any meals consumed outside of the home. Although most of the data available are limited to Canada and the Prairies (Manitoba, Saskatchewan, Alberta), we have, wherever possible, included data about Manitoba alone. Additionally, our ability to report sex-disaggregated data was limited, as several variables were excluded from the Public Use Microdata File. Again, wherever possible, sex-disaggregated data have been reported. To address the

<sup>1</sup> The CCHS does not include residents from Nunavut, Yukon, or Northwest Territories, First Nations Reserves, Crown lands, residents of institutions, full-time members of the Canadian Forces, and residents of some remote regions.





CCHS' shortcomings related to First Nations people, and to those living in Northern regions, we have used two other sources: the report *An Update on Nutrition Surveys in Isolated Northern Communities* and the *First Nations Regional Longitudinal Health Survey*, which measured the nutritional status of residents of several Inuit and First Nations communities [10, 14]. Note that both of these sources used the nutritional standards recommended in the *Food Guide* of 1992.

## Calorie Intake by Age & Sex

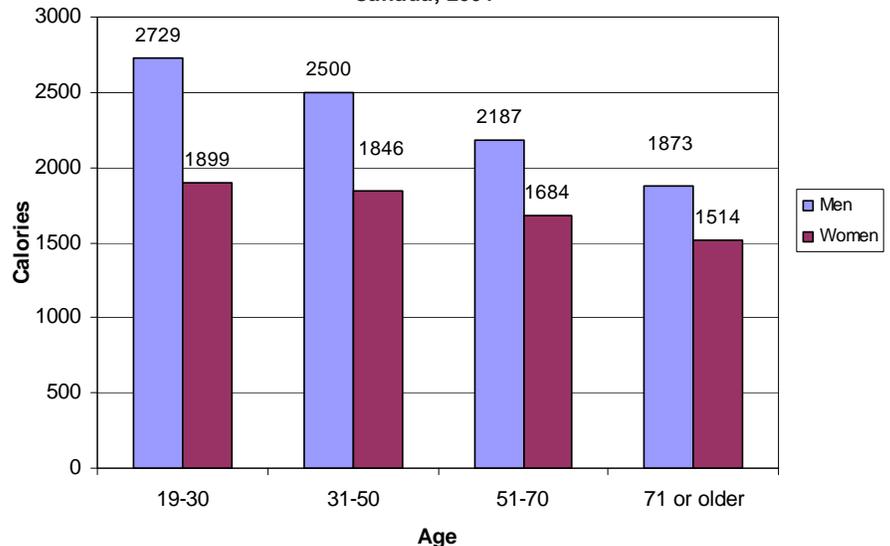
With the exception of some individuals<sup>2</sup>, overall, Canadians consume enough calories. An individual's daily caloric requirements depends on several factors including height, weight, age, sex, and activity level. For women, caloric needs increase during pregnancy and breastfeeding [1]. Results from the CCHS indicate that caloric intake is highest in adolescence, and decreases with age (Figure 2). Canadian males between the ages of 12 and 64 averaged approximately 2600 calories a day, and females, 1900 calories. Males over the age of 65 averaged 1948 calories a day, and females in the same age group averaged 1544. In all age groups men consistently consumed more calories than females [11].

In Canada, where overweight and obesity are on the rise, excessive food consumption is constantly under scrutiny (see Healthy Body Weight section). Nonetheless, it is important to remember that a number of people voluntarily *deprive* themselves of food. Women who diet are at risk for malnutrition, in addition to serious clinical eating disorders such as

anorexia nervosa and bulimia nervosa [12]. These disorders are linked to a number of adverse health conditions such as depression, mood swings, heart problems, reduced sexual interest, and in extreme cases—death. 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 [12]. Women are 20 times more likely than men to develop anorexia nervosa, and 10 times more likely than men to develop bulimia nervosa [12]. Higher rates among women are largely attributable to the cultural value placed upon thinness, a standard that rarely extends to men. Eating disorders will continue to present themselves as predominantly a women's health issue, so long as women continue to be judged by the shape of their bodies. When discussing nutrition in the Canadian context, it is therefore important to acknowledge self-deprivation and over-consumption, as both are detrimental to women's health.

<sup>2</sup> See the section on food insecurity, this chapter.

**Figure 2**  
Average Daily Calorie Consumption by Age and Sex  
Canada, 2004



Source: Overview of Canadians' Eating Habits, 2004 [11]



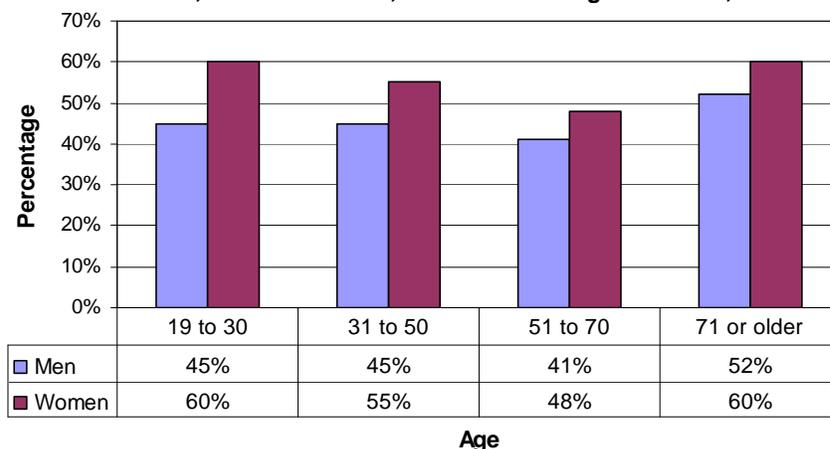


## Eating a Balanced Diet

People who eat a variety of foods are more likely to have a balanced diet [11]. Because the new version of the CFG was released in 2007, the CCHS used the nutritional standards recommended in the 1992 version of the Guide, which was widely and freely available from 1992-2007. The 1992 Guide separated food groups into four categories; fruits and vegetables, meat and alternatives, milk products, and grain products such as breads and cereals. A fifth category - “other foods” - included fats, oils, sugars and condiments. The CCHS survey used the 24-hour dietary recall described above to measure respondents’ daily caloric intake in each of these food groups. Grain products provided the most energy for adults, representing 28.5% for those 19 or older, men and women combined.

Although the *Food Guide* recommended a minimum of 5 servings of vegetables a day, only half of Canadians reported eating this much (Figure 3). Among those aged 14 or older, females were significantly less likely than males to report eating more than 5 servings of vegetables a day. In the prairies, 57% of people 19 or older did not eat the recommended amount of fruits and vegetables. Canadians consumed at least one serving a day of meat and alternatives regardless of age, although men consistently consumed more meat than women at all ages. Females of all ages were also more likely than men to consume fewer than the recommended servings of grain products. Over 65% of females aged 71 or older, and 43% of males in the same age group consumed fewer than the recommended serving of grain products. Consumption of milk products was also low with 66% of males and 75% of females over the age of 17 having fewer than the recommended daily servings. In addition, 83% of girls between the ages of 10 and 16 did not meet their recommended minimum of 3 daily servings of milk products.

**Figure 3**  
Percentage of Canadians Consuming Fewer than Recommended Servings of Vegetables and Fruit, by Age and Sex, Men and Women, Canada Excluding Territories, 2004



Source: Overview of Canadians’ Eating Habits, 2004 [11]

Table 1. Women’s consumption of “other foods”

Food/Drink	% of “other food” calories
Soft drinks	11.3
Salad dressing	9.4
Sugars, syrups, preserves	8.7
Beer	8.2
Fruit drinks	6.1
Vegetable oil, animal fats, shortening	5.8
Margarine	5.3
Chocolate bars	4.8
Potato chips	4.7
Butter	3.9
<i>Note: Excludes women who were pregnant or breastfeeding.</i>	
<i>Data source: 2004 Canadian Community Health Survey: Nutrition</i>	



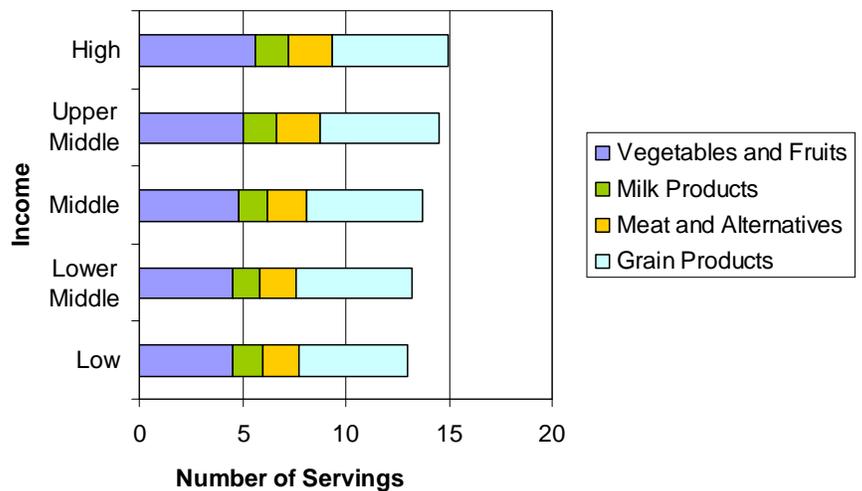


“Other foods”, a category created to include items such as jam, candy, chips, soft drinks, coffee and alcohol represented the second largest (!) source of energy, accounting for 22% of the total calories consumed by Canadians [11]. Listed are the top ten items that make up the “other foods” category (see Table 1). Considering their high sugar and fat content, it is no surprise they constitute the second largest source of energy [11].

The report also found that many Canadians exceeded the upper recommended limit of fat consumption. While it is important to have some fat in the diet, when fat accounts for more than 35% of caloric intake, there are substantial health risks [11]. Excess fat consumption is found to be a significant problem among men and women aged 31 to 50, as a quarter of this age group derives more than 35% of their calorie intake from fat. In addition to the meat and alternatives food group, the main contributors to fat intake are items such as hot dogs, hamburgers, pizza, and cookies [11].

Consumption patterns of the four food groups also varied depending on income. Respondents who had a high income reported greater consumption of fruits, vegetables, meats and alternatives (Figure 4). Those in the upper-middle quintile however, report eating more milk and grain products than those in the highest income category. Meat, fresh fruit and vegetables are more costly than bread and dairy, which might explain why the highest income group reported greater consumption of these items. Physiological needs aside, women also reported lower consumption of these expensive food groups, which is consistent with the fact that they are more likely to suffer from poverty<sup>3</sup> and food insecurity [13].

**Figure 4**  
**Average Daily Servings From the Four Food Groups by Income, 19 or Older, Canada, 2004**



Source: Overview of Canadians' Eating Habits, 2004 [11]

### First Nations and Inuit Communities

As nutrition data on First Nation communities in Manitoba are not available, we have relied on nutrition surveys conducted by Indian and Northern Affairs Canada (INAC) and Santé Québec, in addition to the results from the *First Nations Regional Longitudinal Health Survey* (RHS) to describe the nutritional status of

<sup>3</sup> Refer to the indicator in Chapter Two on women living in poverty





several First Nation and Inuit communities across Canada<sup>4</sup>. Respondents in the survey conducted by INAC<sup>5</sup> focused on communities in Nunavut, Labrador and Ontario, and were exclusively female between the ages of 15 and 44. Respondents in the survey conducted by Santé Québec resided in Nunavik and included both men and women aged 18 to 74. Energy intake ranged from 1869 to 2763 calories, representing 98% to 145% of their recommended nutritional intake (RNI). In most communities, women obtained 16% to 21% of their energy from country foods (food obtained directly from the environment). Most did not consume the recommended amount of fruits, vegetables and dairy products, while many consumed too much fat, sugar and protein. Intake levels of calcium, magnesium, folate, vitamin C and vitamin A were also lower than recommended [14].

The RHS<sup>6</sup> conducted in 2002-2003 surveyed over 10,000 First Nations adults in all provinces and territories excluding Nunavut. Approximately 18% of adults reported consuming soft drinks several times a day, and almost 30% reported eating fast food a few times a week. Men were more likely than women to consume fast food, sweets, potato chips and fried foods once a day, although generally speaking, younger adults were more likely than older adults to report consumption of these foods [10].

In terms of traditional food items, 59% of adults reported that they often consumed fish and game, and almost 22% said they often consumed berries and other types of local vegetation. Additionally, 42% of adults often ate other traditional First Nations foods such as bannock, fry bread and corn soup. No sex, age or income differences were found in the consumption rate of traditional foods. However, adults in smaller communities (<300 residents) reported higher consumption of protein-based traditional foods (71% vs. 57%) and berries (32% vs. 20%) than respondents in larger communities (>300 residents) [10].

Although some reports suggest that Aboriginal people consume too many calories and eat less than the recommended amount from the four food groups, it is noteworthy to mention that researchers measured food consumption according to *Canada's Food Guide*, and not based on a traditional diet. Our ability to report on the nutritional status of Aboriginal people is limited, as no comprehensive study exists on food intake for these populations.

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<sup>4</sup> The reader is advised to interpret these findings with caution, since results from both studies conducted by INAC and Santé Québec were combined for the final report, and therefore include both men and women.

<sup>5</sup> These particular communities are part of the Food Mail Program, whereby INAC makes payments to Canada Post to subsidize the transportation of nutritious perishable foods to remote communities. Foods of little nutritional value do not qualify for the program. Consequently, these results may not adequately reflect the nutritional status of First Nation and Inuit communities elsewhere in Canada.

<sup>6</sup> The target population was defined as First Nations people living on-reserve within First Nations communities in 10 provinces and 2 territories. First Nations people living off-reserve, Métis and Inuit people were excluded. Fifteen communities living off-reserve temporarily or who lived nearby and used on-reserve services were included. Lack of funding is cited as the primary reason off-reserve communities were not included.





## Food Costs

The cost of food for individuals and families depends on several factors including family size, geographical location, inflation, and seasonal variations in the cost of items such as fruits and vegetables.

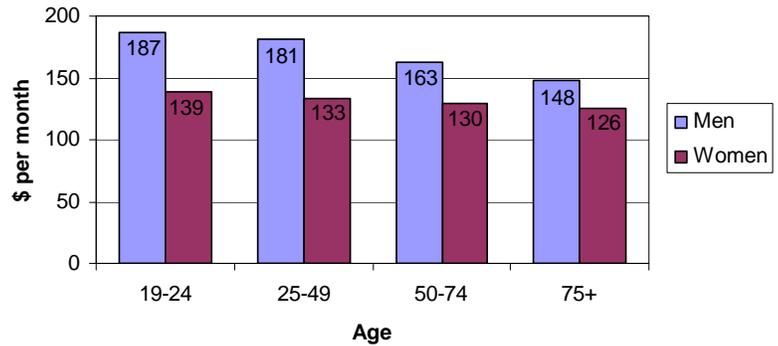
The Manitoba Department of Agriculture, Food and Rural Initiatives used the recommended feeding patterns published by the Ministry of Health in Ontario to determine the content of recommended food baskets in Manitoba<sup>7</sup>. The recommendations stem from the 1998 *Monitoring the Cost of a Nutritious Food Basket Protocol*, which based the basket's contents on *Canada's Food Guide to Healthy Eating for People Four Years Old and Over*. The food costs quoted are based on the average price at three Winnipeg supermarkets in 2004 [15]. The 2004 cost of food in Winnipeg for females aged 19 or older averaged \$132 per month, and for males \$170 per month (Figure 5). In 2004, the Manitoba Food Cost Survey reported that the cost of food for a Winnipeg family<sup>8</sup> averaged \$7,141 a year (Figure 6). In other parts of Manitoba, annual family food costs can be as high as \$7,672 in the Eastern/Interlake region, and as low as \$6,646 in the Southwest region (Brandon) [15].

Food costs in the north are substantially higher, making it difficult for residents of this region to afford nutritious foods. Greater food costs are the result of a smaller market size, carrying larger quantities of food for larger distances (transportation costs), and frequent spoilage and loss as a result of these distances [16]. Although the basic Income Assistance Rates [17] are expected to provide for housing, clothing, food and supplies, they do not reflect the true costs of running a household. Consequently, many women are forced to use some of their food and clothing money to pay rent. With only a small budget left

<sup>7</sup> This information is the most recent of its kind, as Manitoba Agriculture, Food and Rural Initiatives no longer produces these reports.

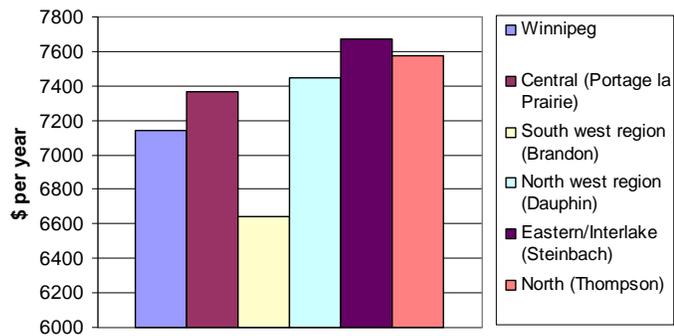
<sup>8</sup> The family used for these calculations consists of a man and a woman 25-49 years of age, a girl aged 7-9 years and a boy aged 13-15 years.

**Figure 5**  
**Cost of Food at Home, Winnipeg 2004**



Source: Family Living Costs, 2004 [15]

**Figure 6**  
**Manitoba Food Costs, 2004**



Source: Family Living Costs, 2004 [15]  
Costs for family in household





over to buy food, these women cannot buy fresh fruits and vegetables and often resort to processed and unhealthy foods that are less expensive [18]. In 2007, the provincial government announced a 30% increase in employment and income assistance for residents living in Manitoba's northern and remote communities [19] to assist with the purchase of these expensive foods, since the cost of food plays one of the largest roles in having a secure food supply. Women, children and Aboriginal peoples as a whole are some of the most economically vulnerable groups, and are therefore more likely to have an unreliable food source [13].

## Food Insecurity

Canada is a “food-rich” nation, free from the drastic levels of malnutrition seen in the most poverty stricken countries of the world. Researchers therefore use a different concept to measure the availability and accessibility of food - food security - an important determinant of health, as poor nutrition has been linked to numerous health conditions [21]. Although food costs are a burden to some, Canada has pursued a cheap food policy, which itself has contributed to declining real incomes for farm women and men [22].

### Food Insecurity

When the availability of nutritionally adequate and safe foods or the ability to acquire food in socially acceptable ways is limited or uncertain, a person is considered food insecure [20].

Various manifestations of food insecurity can be observed, and include worrying about having enough food, consuming reduced quantities or quality of food, or having an insufficient amount of food [21]. As food insecurity is defined in financial terms, it is also related to one of the most important determinants of health— income [23]. Food acquisition problems associated with food insecurity include the location of stores being too far away, no money for transport, transportation not available, and health problems including long-term disability [24]. Certain groups in Canada are particularly vulnerable, including Aboriginal people, single parent women, and children [24].

According to the CCHS cycle 2.2, only 7.5% of Canadians and 8.7% of Manitobans are food insecure, using the most widely accepted definition (see box) [20]. Although we are pleased to report that the numbers are small, food insecurity still exists in our country. Approximately 3 million Canadian households reported that they had worried food would run out, and over 2 million households reported that within the past 12 months there were times when food they had bought did not last<sup>9</sup> [25]. In addition, 2% of the population whose responses suggested they were food insecure reported not eating when they were hungry because they could not afford enough food. Of the Canadian households that were at risk for food insecurity and that had at least one member aged younger than 18, over 55,000 reported that the children did not eat enough because they could not afford enough food [25]. In Manitoba<sup>10</sup>, 11% of respondents had

<sup>9</sup> Responses were collected at the household level and therefore cannot be disaggregated by age or sex. Data should be interpreted with caution as respondents who did not own a telephone were not included in the survey, suggesting that the actual number of food insecure people and households might be higher.

<sup>10</sup> This analysis is based on Statistics Canada's Canadian Community Health Survey Cycle 2.2, Public Use Microdata file, which contains anonymous data collected in the year 2004. All computations on these Microdata were prepared by Prairie Women's Health Centre of Excellence and the responsibility for the use and interpretations of these data is entirely that of the authors.





worried food would run out, and 8% reported that the food just didn't last. Other reports<sup>11</sup> suggest that a higher percentage of women than men report food insecurity (16% vs. 13%), especially female lone parents (33%). The rate is also notably higher for off-reserve Aboriginal people (31%) [26].

The dimensions of food insecurity do not adversely affect individuals equally, nor will they contribute to the same health problems. Although concerns about having enough food may certainly cause distress, research indicates that inadequate nutrition is significantly correlated with food insecurity, suggesting that those who are food insecure have poorer nutrition, and therefore experience more nutrition-related health implications [21]. Several health problems were found to be more prevalent among food insecure households including multiple chronic conditions, distress, and depression [21]. Obesity has also been linked to food insecurity as studies have found that people living in food insecure homes are more likely to choose high calorie foods when food is available, than those in food secure homes [27]. Food insecurity has also been linked to stress, modification of eating patterns, disrupted household dynamics and distorted means of acquiring and managing food [28]. Food insecure women are also at greater risk of developing heart disease, cancer, diabetes and hypertension [29].

In Canada, one of the most common responses to food insecurity is the use of food banks [29]. Although food banks do offer immediate assistance, they fail to provide a sustainable solution to hunger and food insecurity in Canada. In 1981, a deep recession and a high rate of unemployment led to the establishment of Canada's first food bank in Edmonton. Originally, food banks were created as a temporary measure to address some of the inadequacies in existing social programs; however, growing demand prevented their closure [30]. At a time when neighbourhood stores continue to close, and there are fewer local places to buy groceries in heavily populated urban areas [31], it is unlikely that food bank use will decrease in the foreseeable future.

There are currently 649 food banks in Canada that serve over 700,000 people each month, 41% of whom are children [32]. Winnipeg Harvest is the largest of 47 food banks currently operating in Manitoba, serving over 30,000 adults and 18,000 children monthly [33]. Although food bank reliance has increased 18.3% since 2000, Manitoba did report a reduction of 3.7% in 2006 [32, 33]. Nonetheless, Manitoba food banks have more children as clients (46.6%) than food banks in any other province. This represents an increase of 5.2% since 2004 [33]. Welfare recipients, the working poor, persons with disabilities, seniors, children and lone mothers constitute the largest groups of food bank clients [13]. Food acquisition is not just an urban issue; Winnipeg Harvest also collaborates with 15 agencies in rural communities, having distributed over 400,000 pounds of food in 2005 [34]. Although 53.5% of food bank clients receive their primary source of income from social assistance, 13.4% of clients receive their primary source of income from employment [32]. This means that long-term solutions will require economic and social policy reform aimed at reducing poverty levels – an attainable goal in a country as wealthy as Canada.

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<sup>11</sup> Results are based on the 2000/2001 CCHS version 1.1. Data were limited to Canada since several variables were excluded from the Public Use Microdata File. Note that more recent reports have included a revised measure of food insecurity.





## Summary

Consuming a healthy diet and having a secure food supply are important determinants of women's health. There are sex-specific health risks to poor nutrition, and therefore ongoing surveillance of the nutritional status of women is needed. Surveillance for Aboriginal women's nutrition, particularly Métis and Inuit women would have to be improved in consultation with those populations.

In a food rich nation such as Canada, many people consume too much food and/or over-emphasize the low-nutrient foods, especially considering the recommendations outlined in *Canada's Food Guide*. Although the appropriateness of the *Food Guide* has been a source of contention, attempts to reconcile this issue have been made in the revised *Food Guide* released in February 2007. These include the addition of distinct portion sizes and more culturally specific foods. Translations of the *Food Guide* are now also available in 11 languages in print and on-line (<http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php>)

It is noteworthy to mention that changes to the *Food Guide* were met with harsh criticism, since members of the committee advising on revisions included some of the biggest food producers and manufacturers in the country. Their inclusion in the advisory committee was criticized because of the inherent conflict of interest involved. Others suggest that use of the revised version may still lead to substantial weight gain in the population [35].

Canada is a wealthy nation where the majority of people eat a nutritious diet. However, access to healthy, affordable food has been identified as a problem for several disadvantaged groups. Health Canada has identified "eating nutritiously" as one of the factors that contributes to Healthy Living, yet we observe disparities in food accessibility. Community-based responses such as soup kitchens and school meal programs are commonly referred to as "Band-Aid" solutions, because while they temporarily alleviate hunger, they do not address the root causes of food insecurity. Furthermore, they rely heavily on food producers, wholesalers and retailers in addition to community members for their donations, which can lead to inconsistencies in the availability and quality of food. Winnipeg Harvest - the largest food bank in Manitoba - is closed for the summer months, meaning families are required to find alternative solutions to acquire food in emergencies.

Although the absence of sex and age disaggregated data inhibits a gendered analysis of food security in Canada, other measures, such as reports from food banks, indicate that food banks are used most by economically vulnerable groups such as women and children, suggesting that income is related to food security. While food banks do offer immediate relief, there is evidence that women also undertake alternative means of acquiring money for food —including illegal activities such as sex-trade work— putting them at greater risk for injury, disease and death. Women as primary care givers have a large part in the preparation of food, and are therefore more likely to compromise their diet in order to provide food for children and money for rent or clothing. In addition, women bear the burden of the dual role which adds stress and may lead to overeating, eating unhealthy or eating foods away from the home, thus again compromising their health.





## Nutrition & Food Policy in Manitoba

Food insecurity is a health issue. The connection between food security and good health needs to be identified within government to ensure the development of appropriate public policy. Changes in public policy are considered “the most effective and direct route to ensuring that Canadian households and communities can be more food secure” [37]. Policies aimed at reducing food insecurity will require the provincial government to increase and index minimum wage and social assistance levels [32].

Housing costs contribute to food insecurity. Creating more affordable housing (private market, social housing, and co-operative housing) will help to ensure that women living on low incomes have sufficient money to pay for food for themselves and their children [18].

As there is a significant amount of food insecurity in northern communities, a range of strategic options will be necessary in order to reduce food costs. One such strategy – The Northern Healthy Food Initiative – aims to improve access to affordable and nutritious foods in northern communities [16].

Issues of food accessibility in Manitoba, particularly for pregnant women have been addressed with the introduction of the Healthy Baby program [36]. This two-part program funded by the provincial government is designed to provide health information and financial assistance for nutrition during pregnancy. Pregnant women who live in Manitoba and who earn less than \$32,000 are eligible in the second and third trimesters of their pregnancy for a maximum of \$81.41 per month [36]. After the baby is born, benefits are payable from the federal Child Tax Benefits (CTB) program. Unlike other provinces, Manitoba does not “claw back” CTB payments from women in receipt of income assistance. These initiatives certainly demonstrate the provincial government’s efforts to assist pregnant women in Manitoba, however the benefits are low and their duration is short. Pregnant women and breastfeeding mothers need larger benefits for longer periods of time, especially considering the changes in nutritional requirements that accompany pregnancy and lactation. Canada’s Prenatal Nutrition Program provides funding for local programs that provide food supplements and counseling for poor pregnant women, although support ends following childbirth [29].

A more recent example of the provincial government’s attempts to assist low-income families occurred in April 2007, when Family Services and Housing Minister Gord Mackintosh announced a 30% increase in employment and income assistance rates for residents of northern and remote communities in Manitoba [20]. The increase is expected to assist with the high cost of basic necessities such as nutritious foods. Garden supplies and commercial-size freezers were also shipped to these fly-in communities to help lower the cost of bringing supplies. Such initiatives must be implemented where needed to ensure that all Manitobans have a safe and secure food supply.

Policies aimed at food insecurity should take a bottom-up approach that involves the participation of groups typically excluded. Including community members in the identification of issues related to food-insecurity will likely result in realistic and sustainable solutions [37].





Although overweight and obesity are more common in “food-rich” nations such as Canada, we must not overlook self-inflicted food deprivation (dieting, anorexia nervosa, and bulimia nervosa) and its impact on women’s health.

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# Manitoba Women and Physical Activity

## Introduction

*“If exercise could be packaged into a pill, it would be the single most widely prescribed and beneficial medicine in the nation” [1]*

This statement underscores the importance of being physically active, as regular physical activity contributes to the good health and overall well-being of Canadian women (and men). People who engage in active living tend to outlive people who are physically inactive [3]. Long-term physical activity patterns are therefore an important determinant of health-related quality of life.

Research demonstrates that those who engage in regular physical activity experience numerous physical and emotional health benefits. People who are physically fit accomplish daily tasks with greater ease and comfort, and with less fatigue [4]. Regular activity is associated with higher levels of self-esteem, improved cognitive performance, and helps maintain a healthy body weight. A healthy body weight decreases the risk of several adverse health outcomes such as hypertension, coronary heart disease and premature mortality [5]. Other benefits of active living include disease prevention, reduced anxiety and stress, stronger muscles and bones and continued independent living later on in life [4].

Workplace physical activity programs are linked to higher rates of job satisfaction, resulting in reduced absenteeism due to illness, injury and stress [6]. Active individuals have more energy and better job attitudes, which in turn reduces turnover rates, in addition to disability, health care, and life insurance costs [4, 7].

For people with disabilities, active living can help with the physical and mental stresses of living with a disability by increasing mobility, improving posture, and reducing aches and pains associated with long periods of

Canada’s Physical Activity Guide (PAG) recommends doing a variety of endurance, flexibility and strength exercises on a daily basis to ensure optimal health. Adults are encouraged to engage in periods of at least 10 minutes for a total of 60 minutes of activity every day. Time needed to achieve health benefits is largely dependent on effort. As adults progress to moderate and vigorous activities, the frequency and duration of the activities may be reduced [2].

### **ACTIVITIES:**

#### **Endurance**

Walking, golfing, cycling, propelling a wheelchair

#### **Flexibility**

Gardening, vacuuming, yoga, Tai Chi

#### **Strength**

Climbing stairs, push-ups, weight-training routines

### **EFFORT:**

#### **Light effort (60 minutes, everyday):**

Light walking, stretching, easy gardening

#### **Moderate effort (30-60 minutes, 4 times per week)**

Brisk walking, biking, swimming, dancing

#### **Vigorous effort (20-30 minutes, 4 times per week)**

Aerobics, jogging, hockey, basketball

Source: Healthy Living [2]





sitting [4]. By increasing strength, regular exercise may also help people with disabilities maintain and increase their independence. Regular physical activity also reduces the risk of falls among elders, and in many cases, delays the decline in functional capacity attributable to aging [6, 8].

Physical activity reduces the risk of cardiovascular disease, and in some instances, can reduce the risk of developing colon cancer and Type 2 diabetes by as much as 50% [9, 10]. Active living improves function and relieves symptoms among those with osteoarthritis and rheumatoid arthritis to the extent that fewer medications are needed to alleviate symptoms and ease pain [1]. Among women, weight-bearing exercises such as walking decrease the risk of developing osteoporosis and related fractures by preserving bone mineral density [11]. Women who participate in physical activity programs report significantly lower levels of depression, disturbed sleep and loneliness compared to women who do not engage in regular activity [12]. Routine physical activity is also associated with a reduced risk of developing breast cancer, the most common cancer diagnosed among Canadian women. It is estimated that one in nine Canadian women will develop breast cancer, and one in 25 will succumb to this disease [13]. Since there are few modifiable behaviours that can influence breast-cancer risk [14], it is particularly important for women to stay active.

## Measuring Physical Activity

This indicator uses results from the 2007 Manitoba *In Motion* survey [15] conducted by the Health, Leisure and Human Performance Research Institute of the University of Manitoba, in addition to the 2002/2003 *Manitoba First Nations Regional Longitudinal Health Survey* (RHS) [16]. The *In Motion* survey asked Manitoban respondents to recall every activity undertaken in the past week, in order to determine whether or not they were engaging in sufficient activity to meet Health Canada's minimum PAG requirements (see box). Unlike other surveys, Manitoba data were not limited to those who reported exercising regularly, nor were respondents asked to report activities related exclusively to sports and exercise. Consistent with Health Canada's message to engage in physical activity "*at home, at school, at work, at play, or on the way!*", the Manitoba survey included all daily activities, recognizing of course that people achieve their daily requirements in a number of different ways- at work, at school and around the home. Although the all-inclusive nature of the *In Motion* survey renders it incomparable to other surveys, it is the most recent and comprehensive of its kind, and therefore the most indicative of current physical activity trends in Manitoba.

To complement the Manitoba *In Motion* survey, results from the 2002/2003 RHS were used to provide data on the physical activity levels of 26 on-reserve First Nations communities living in Manitoba. Households were randomly selected and wherever possible, two adults (1 woman, 1 man) were interviewed in-person. Note that our ability to report sex-disaggregated data was somewhat limited, as several variables were not reported disaggregated by sex in the RHS and the *In Motion* surveys.





## Physical Activity in Manitoba

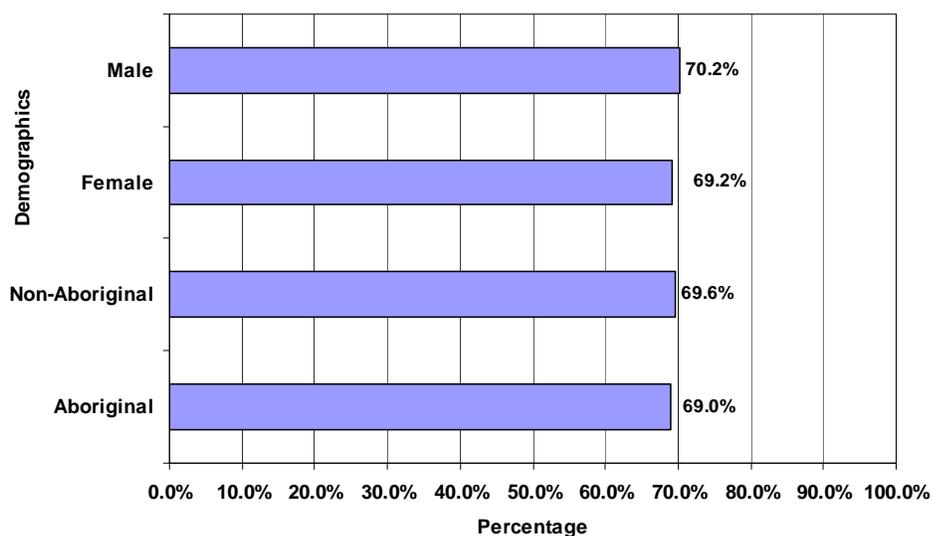
In order to determine whether or not adult women and men engage in “sufficient” activity to achieve health benefits, researchers typically express activity levels in terms of energy expenditure [15]. A person who has an average daily energy expenditure of at least 3 kilocalories per kilogram of body weight per day (KKD) is classified as ‘active’, an average daily expenditure of 1.5-2.9 KKD is considered ‘moderately active’ and ‘inactive’ corresponds to an average daily expenditure of less than 1.5 KKD. It is noteworthy to mention that only those who have an average daily expenditure equal to or greater than 3 KKD meet the *minimum* PAG requirements.

Level Of Activity	Energy Expenditure	Example
Active	≥ 3 KDD	1 hour of walking
Moderate	1.5-2.9 KDD	30 minutes of walking
Inactive	< 1.5 KDD	< 15 minutes of walking

Source: Physical activity and sport: Encouraging children to be active [17]

While a number of studies reporting exclusively on leisure-time physical activity describe alarmingly low levels of activity in Manitoba and across Canada, we are happy to report that results from the *In Motion* survey suggest otherwise. Accounting for all daily activities, *In Motion* determined that 70% of adults do in fact meet PAG requirements, and are therefore considered ‘active’. Despite the tendency to classify more female and Aboriginal respondents as ‘inactive’, results from the *In Motion* survey yielded no significant differences between men, women, Aboriginal and non-Aboriginal respondents (Figure 1).

**Figure 1**  
Percentage of Adults who meet PAG Requirements by Demographic Characteristics Manitoba, 2007



Source: Manitoba *In Motion* survey [15]

For Manitoban women and men, the likelihood of meeting minimum PAG requirements tended to decrease with age, particularly among men aged 80+ years. Contrary to a number of other reports, overall, women were more likely than men to meet minimum PAG requirements, with the exception of those aged 18-34 years (Figure 2). Older men (80+ years) were surprisingly less likely to meet minimum PAG requirements than their female counterparts. This difference is likely due to older men no longer meeting





PAG requirements through work, while older women continue meeting PAG requirements through activities around the home.

Differences between age groups reflect typical life course events that can affect people’s ability to engage in active lifestyles. Middle-aged men and women have less leisure-time than younger men and women due to work and family

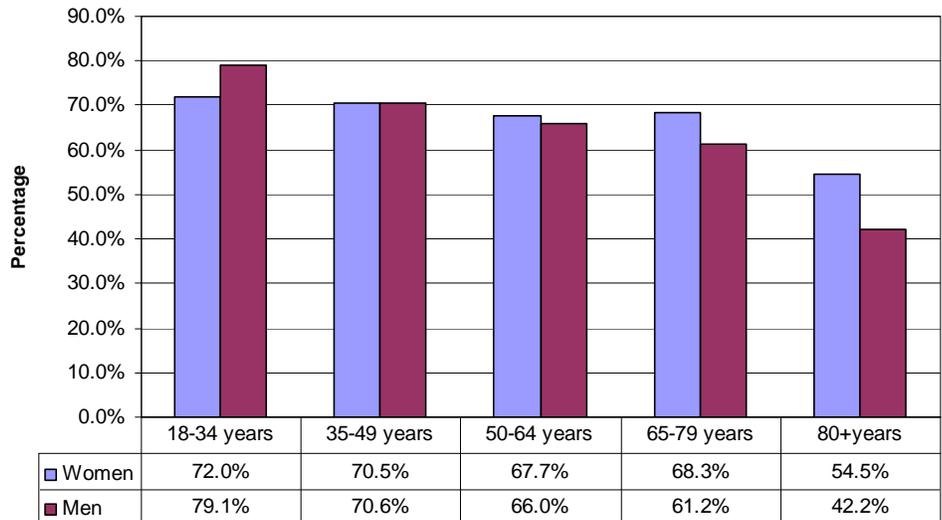
commitments, and older men and women experience more health

problems, which can lead to lower levels of activity. Low rates among older Manitobans may also reflect barriers related to knowledge of benefits to physical activity, although the elderly (particularly women) often cite “being too old” as reasons for not participating [18]. Nonetheless, sex differences in physical activity patterns cannot be explained entirely by time constraints, family roles, or health status, as even teenage girls in Manitoba (13-17 years) are less active than their male counterparts [15, 19]. We can speculate that lower levels of activity among women aged 25-34 are due to the obligations that accompany motherhood; however, at a time when most teenage girls (13-17 years) and young women (18-24 years) have fewer gender-differentiated [19] work and family responsibilities, they still report lower levels of activity than boys and men, suggesting that there are other factors that influence activity levels among these particular age groups.

Some contend that lower rates of physical activity among young women reflect the attitudes they hold towards exercise and their bodies [20]. This can lead to disordered exercising routines, which hinder rather than contribute to the good health of these women. Lower participation rates may also reflect limited access to programs that offer culture and gender-appropriate activities. Physical activity — particularly sports — tend to focus exclusively on Western, male-oriented values that emphasize strength, competition and aggression [18]. Creating a non-threatening, culture-appropriate atmosphere where women can feel safe is therefore an important step towards increasing activity levels at a young age, which in turn, increases the likelihood of maintaining an active lifestyle over the course of a lifetime.

According to the 2007 *In Motion* survey, more individuals reported getting ‘some’ or ‘lots’ of activity in their jobs (61.6%) and through transportation (68.5%), than from participating in sports (30.7%) and exercising (58.2%). A number of respondents also reported getting ‘lots’ of activity during leisure time (46.2%) and doing yard/housework (41.8%), which explains why a higher number of Manitobans met PAG requirements compared to other surveys that exclusively examined sports and exercise (Figure 3).

**Figure 2**  
Percentage of Adults who meet PAG by Age and Sex  
Manitoba, 2007



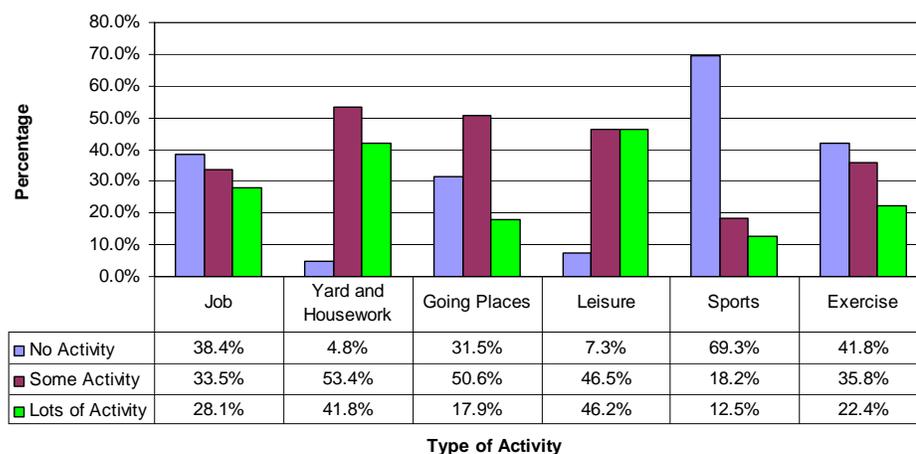
Source: Manitoba *In Motion* survey [15]





Although we are unable to provide these data disaggregated by sex, it is anticipated that as primary care givers, a number of women reported getting some or lots of activity from “yard/housework”. By recognizing that managing a household (caring for children, meal preparation, errands, yard work) is labour intensive and commands

**Figure 3**  
**Amount of Activity from Each Category of Activity**  
**Manitoba, 2005**



Source: Manitoba *In Motion* survey [15]

sufficient energy expenditure to meet minimum PAG requirements, we find that an equal number of men and women are in fact physically active. Excluding activities seldom considered “physical activity”, and more importantly, traditionally considered “woman’s work” has thus contributed to the erroneous misrepresentation of physical activity patterns among women in Manitoba.

Most Manitobans meet PAG requirements through moderate activities, though women are more likely to meet PAG requirements through light or moderate activities, and men through vigorous activities. Only 32% of younger men (18-34 years) reported no participation in sport, while over 53% of women in the same age group reported getting no activity from sport. For both women and men, sport participation declined substantially with age, and by 50-64 years, 88% of women and 71% of men reported no sport participation. Although a number of women aged 18-34 and 35-49 reported getting some or lots of activity from exercise, by age 50-64 years, more than half reported getting no activity from exercise. Results were similar for men in older age groups, although men reported getting more activity from exercise than women in all age groups.

Some of the most frequently-mentioned activities reported by Manitobans included walking (41%) and jogging (7.5%); however, a number of respondents also cited biking (8.8%), weight-lifting (8%), and using cardiovascular machines (5%) [15]. Gym memberships and sporting equipment are usually quite costly, and presumably, most often used by people in higher income groups. Higher rates of poverty among women create disparities in accessing equipment and facilities, meaning women must resort to other alternatives to stay fit. While walking and jogging are excellent, virtually cost-free alternatives to bicycles and exercise classes, they have the potential of putting women at risk, particularly low-income women who live in unsafe neighborhoods. Low-income women may not feel as protected from crime as people living in middle or high-income neighborhoods, which means they may be less likely to walk/jog for exercise or recreational purposes [21]. This is particularly concerning since mothers of young children who live in low-income households are particularly at-risk for sedentary living [3].





## First Nations and Inuit Communities

The RHS<sup>1</sup> conducted in 2002-2003 surveyed over 10,000 First Nations adults in all provinces and territories excluding Nunavut. In Manitoba, 95% indicated that they had participated in at least one type of physical activity in the past 12 months. The most commonly cited activities<sup>2</sup> were walking (90%), fishing (36%), cycling (31%), group sports (28%), skateboarding (27%) and hunting/trapping (27%) [16]. Respondents reported that on average, they participated in activities that elevated their heart rate and increased breathing four times per week. Time spent engaging in these activities ranged from none (18%) to 7+ hours (18%). At least 35% reported being physically active 1 to 2 hours per week, and 30% reported being active between 3-6 hours per week [16].

According to the *In Motion* survey (2007) 69% of Aboriginal<sup>3</sup> respondents met the minimum PAG requirements compared to 70% of non-Aboriginal respondents. Over 60% of Aboriginal respondents reported exercising regularly; however, of those who reported exercising regularly, 12.5% compared to 15% of non-Aboriginal respondents did not meet the PAG requirements. Conversely, of those who did not report exercising regularly, 19% of Aboriginal respondents and 16% of non-Aboriginal respondents did in fact meet PAG requirements [15].

While the above results suggest that most Aboriginal survey respondents are engaging in sufficient levels of physical activity to achieve health benefits, obesity rates among Aboriginal populations tend to suggest otherwise. Aboriginal people tend to have lower levels of education and higher rates of poverty, which are two factors that adversely affect physical activity levels. Moreover, residential school experiences have resulted in depression, addictions and other mental health issues, which also influence physical activity patterns among these communities [22]. That the results suggest otherwise is likely due to the fact that “exercise” was self-defined for the *In Motion* survey, all activities in the past 12 months were included, respondents overestimated their activity levels, or perhaps that a number of Aboriginal respondents did in fact meet PAG requirements through different activities than non-Aboriginal respondents.

### Physical Inactivity in Manitoba

Physical inactivity means more than simply being “out of shape”; it means failing to meet the minimum requirements of activity for optimal health. At a *minimum*, adults should strive to incorporate either 60 minutes of light exercise everyday, 30-60 minutes of moderate exercise 4 days per week, or 20-30 minutes of vigorous exercise 4 days per week [2].

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<sup>1</sup> The target population was defined as First Nations people living on-reserve within First Nations communities in 10 provinces and 2 territories. First Nations people living off-reserve, Métis and Inuit people were excluded. Fifteen communities living off-reserve temporarily or who lived nearby and used on-reserve services were included. Lack of funding is cited as the primary reason off-reserve communities were not included.

<sup>2</sup> Totals do not equal 100% as respondents were asked to list all activities

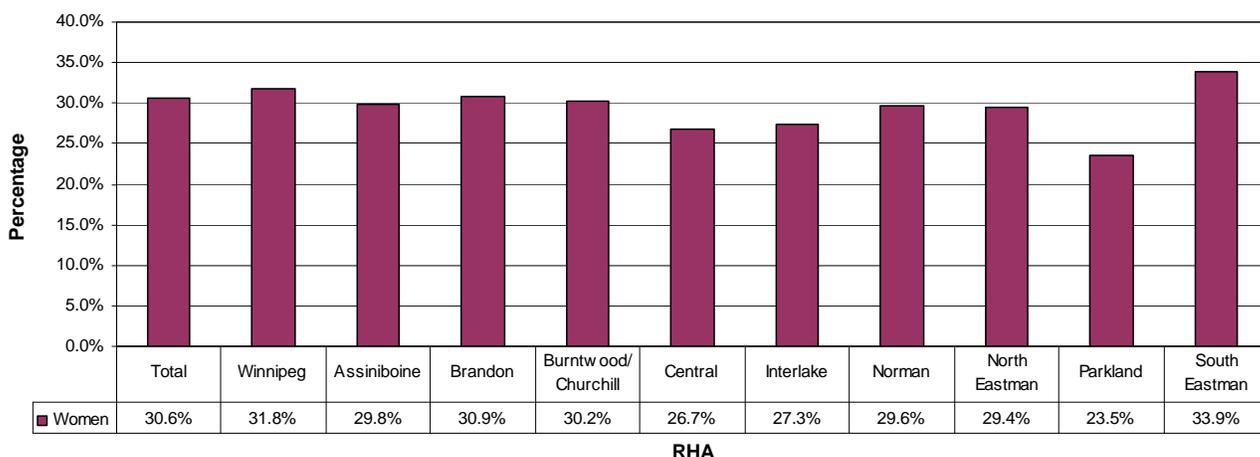
<sup>3</sup> “Aboriginal” refers to all respondents who self-identified as First Nations, Métis or Inuit.





In Manitoba, approximately 31% of women and 30% of men fell short of this criterion, and were therefore classified as inactive. Inactivity rates varied only slightly by region with the exception of South Eastman (Figure 4). Women living in the South Eastman RHA were the most likely to fall below minimum PAG requirements (33.9%), while women living in Parkland were the least likely (23.5%). With the exception of Winnipeg, Brandon and South Eastman, all other RHA's fell below the provincial average. Note that urban dwellers were more likely to be inactive than rural and northern dwellers. This contradicts findings from the *Canadian Community Health Survey (CCHS)* cycle 3.1, where rural dwellers were found to be substantially less active. This difference is likely due to the fact that the *In Motion* survey included farm work in its conceptualization of 'physical activity', whereas the CCHS did not.

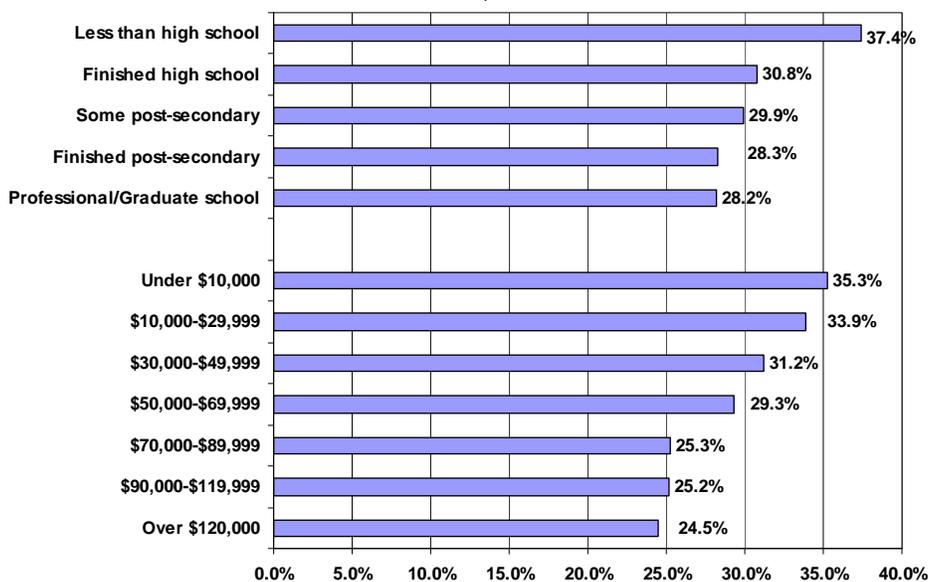
**Figure 4**  
**Inactivity: Percentage of Women who do not meet PAG by RHA**  
**Manitoba, 2005**



Source: Manitoba *In Motion* survey [15]

In 2005, physical activity patterns also varied among Manitobans depending on education and income (Figure 5). Respondents with a university degree were more likely to meet PAG requirements than those who had only completed high school. Respondents completing less than high school were least likely to meet PAG requirements.

**Figure 5**  
**Percentage of Adults who do not meet PAG by Education and Income**  
**Manitoba, 2007**



Source: Manitoba *In Motion* survey [15]





Since higher levels of education tend to command higher salaries, it is unsurprising that respondents in the highest income category were the most likely to meet PAG requirements. As income levels decreased, so too did the likelihood of meeting minimum PAG guidelines. Although we are unable to present these data disaggregated by sex, we do know that women are disproportionately affected by poverty<sup>4</sup>, and thus more likely to represent those who did not meet PAG requirements in the lower income categories. Income does not only adversely affect women’s physical activity patterns in the sense that it inhibits the purchase of sporting equipment and gym memberships; income also determines where women live and whether they can afford childcare, two factors that can conflict with active recreation.

## Barriers to Physical Activity in Manitoba

Individual and environmental determinants of physical activity vary across life situations, and thus create a number of different barriers to engaging in active lifestyles. In 2005, the *In Motion* survey asked participants “Is there anything that gets in the way of you being as physically active as you would want to be?” and grouped the responses into four categories: ‘other commitments’, ‘physical/health factors’, ‘motivation/lifestyle’, and ‘environmental factors’ (see box). While almost 20% of the total sample reported experiencing more than one barrier, over 25% reported experiencing no barriers to participating in physical activity. There were virtually no differences between Aboriginal and non-Aboriginal respondents in the percentage of barriers experienced (74% vs. 73%); however, women were more likely than men to report at least one barrier to increasing physical activity (76% vs. 69%). Overall, women and men reported similarly in the ‘motivation/lifestyle’ and ‘environmental factors categories’, however; a higher percentage of men reported ‘work/volunteering’ (27% vs. 17%), and a higher percentage of women reported ‘kids/family/household’ (16% vs. 10%) as a barrier.

Barrier Types	
Other Commitments:	<ul style="list-style-type: none"> <li>-work/volunteering</li> <li>-lack of time/busy</li> <li>-kids/family/household</li> <li>-school work</li> </ul>
Physical/Health Factors:	<ul style="list-style-type: none"> <li>-injury/medical problem</li> <li>-age/too old</li> <li>-illness</li> <li>-pregnancy</li> <li>-overweight</li> </ul>
Motivation/Lifestyle:	<ul style="list-style-type: none"> <li>-unmotivated- lazy</li> <li>-lifestyle</li> <li>-computers/TV/videogames</li> <li>-unhealthy choices</li> <li>-no one to exercise with</li> <li>-sedentary job</li> <li>-stress</li> </ul>
Environmental Factors	<ul style="list-style-type: none"> <li>-weather/mosquitoes</li> <li>-money (gym costs)</li> <li>-lack of facilities/transportation</li> <li>-poor roads/parks</li> <li>-lack of equipment</li> </ul>
Source: <i>In Motion</i> survey [15]	

<sup>4</sup> See Chapter Two.



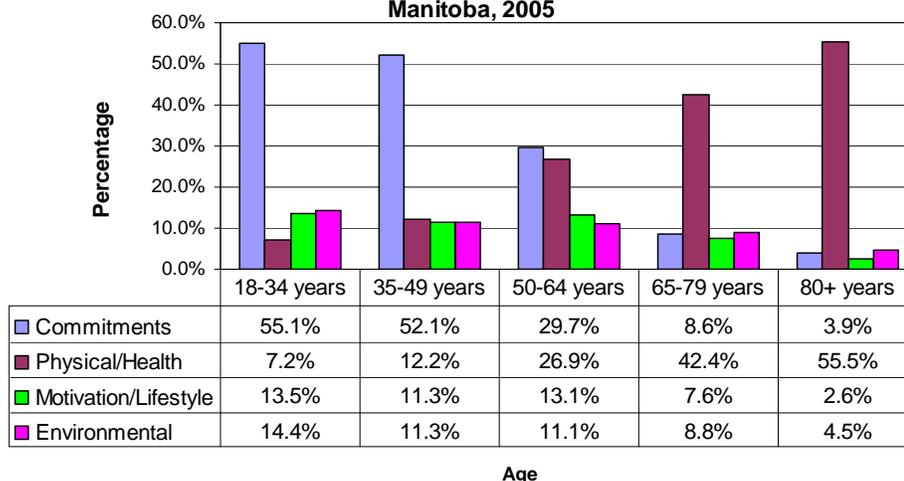


In a province as cold and mosquito laden as Manitoba, it is no surprise that a number of women and men cited ‘weather/mosquitoes’ as a barrier (8.6% and 8.5% respectively). Women were also more likely than men to report ‘money/gym’ costs (2% vs. 1%) and ‘injury/medical problems’ (19% vs. 15%). Responses for ‘work/volunteering’, ‘lack of time’, ‘kids/family/household’, ‘unmotivated/lazy’, decreased with age, and not surprisingly, ‘injury/medical problems’ increased substantially with age<sup>5</sup> (Figure 6).

Overall, significant gender differences were observed for the ‘physical/health’ barriers<sup>6</sup> and the environmental barriers,<sup>7</sup> with more women reporting these types of barriers (Figure 7).

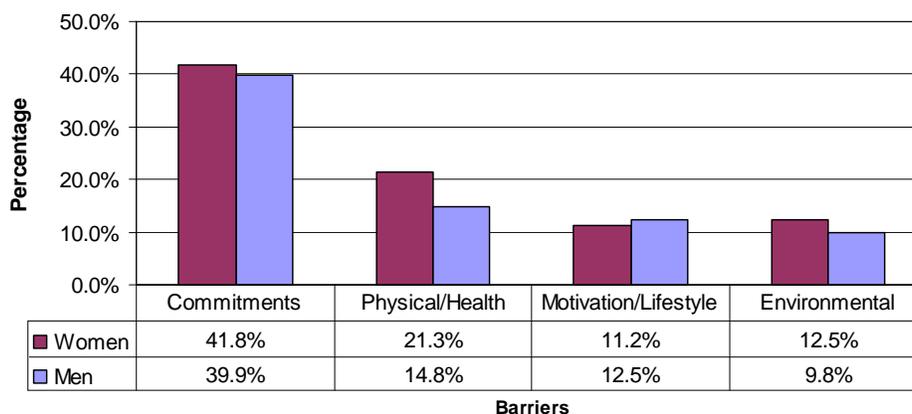
Although the most commonly reported barriers among women taking part in the *In Motion* survey were household-related tasks, other barriers often reported by women include poor perception of health, lack of social support from employers, and the perception that activity will fail to produce the desired effects [23, 24].

**Figure 6**  
Percentage of Women Reporting Barriers to Physical Activity by Age  
Manitoba, 2005



Source: Manitoba *In Motion* survey [15]

**Figure 7**  
Percentage Reporting Specific Barriers to Physical Activity by Sex  
Manitoba, 2005



Source: Manitoba *In Motion* survey [15]

<sup>5</sup> Data were not available disaggregated by age and sex

<sup>6</sup> (p<.001)

<sup>7</sup> (p<.01)





Barriers among different cultural groups may be related to a lack of knowledge of the importance of exercise, differing values placed on physical activity, and a lack of community support [24, 25, 26]. Socio-economic status and place of residence also influence activity levels, with many women lacking safe places to exercise, are too tired due to double-shifts, or lack child care resources and gender-sensitive programs [5]. Rural women also face a number of barriers to physical activity such as limited access to programs and facilities, transportation, accessibility and cost, and as a consequence, report feeling particularly unmotivated to stay active:

*“You have to be motivated in a small town, because you have to make yourself do things more. Because we don’t have gyms that we can go to, or field house or big parks like [the cities do]. We have to make do with what we have and encourage each other.”*  
[27]

Maintaining physical fitness in rural communities is also hampered by a lack of financial resources and trained personnel [27]. To access these resources, rural women must leave their communities and commute to urban centers, resulting in more out of pocket expenses and time away from friends and family. This problem persists in rural communities, forcing women to compromise their role as primary caregivers, and for some, triggering feelings of guilt, shame and selfishness [28, 29, 30].

While most acknowledge that money and illness are legitimate barriers to increasing physical activity, some researchers question whether barriers such as ‘lack of time’ are the result of poor time management or the cultural perception of physical activity as ‘play’. Characterizing active living as ‘play’ reduces its significance and gives greater importance to other daily activities such as paid work and family chores [31]. Paradoxically, there also exists the perception that physical activity is ‘work’ that depletes energy rather than an endeavor that builds vitality [31]. Increasing physical activity levels in Manitoba will therefore require a change in beliefs regarding the role of daily physical activity and the priority it receives.

## Data Discussion

Our planned data source, the 2005 *Canadian Community Health Survey* cycle 3.1, was designed to provide timely cross-sectional estimates of health determinants, health status, and health system utilization at the sub-provincial level. Interviews were conducted over the phone, and the respondents were asked to recall the type, duration and frequency of physical activity in the past three months, in addition to sedentary activities such as watching television or playing on the computer. The Physical Activity Index is a derived variable based on these responses that categorized the respondents as being “active”, “moderate” or “inactive”, depending on their total daily Energy Expenditures<sup>8</sup>. The survey focused almost entirely on leisure-time physical activity, and therefore did not include activities performed at work (physical labour), at school (physical education classes), or in the home (chores, caring for children).

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<sup>8</sup> Energy Expenditure is calculated using the frequency and duration per session of all leisure time physical activity, in addition to the metabolic equivalent (MET) of the activity. The MET is a value of metabolic energy cost expressed as a multiple of the resting metabolic rate. For example, an activity of 6 METS requires six times the amount of energy as compared to when the body is at rest [4].





Several issues arose with the CCHS data, which prevented us from using it in this report. We discovered that the word ‘moderate’ was used to describe both an individual’s activity level (moderately active) and the intensity of an activity (moderate effort). This became problematic when combining data for those who were categorized as ‘active’ and ‘moderately active’ since Health Canada states that people can meet minimum PAG requirements through ‘moderate’ activities, and yet those who were classified as ‘moderately active’ did not meet minimum PAG requirements. Since we were only interested in those who were either active (met PAG requirements) or inactive (sedentary), we chose to exclude those deemed ‘moderately active’ from the analysis. The number of Manitoban respondents classified as ‘active’ through leisure time physical activity were too few for meaningful use of these data, and consequently, we were unable to use the CCHS data for this indicator.

In Canada, physical activity studies typically use self-report measures, and are generally limited to leisure-time physical activity [17]. While there are several advantages to using tools such as pedometers to measure activity levels (objective measurement), they are limited in the sense that they underestimate activities such as skating, swimming and cycling. Whether using MET levels (Metabolic Equivalent) or perceived exertion scales, it is important to remember that most researchers acknowledge several limitations to physical activity data, particularly when using self-report measures, as respondents tend to overestimate the duration, frequency and intensity of their physical activities [15]. Moreover, studies such as the CCHS often ask questions that overlook activities undertaken by different gender, age, cultural, occupational and income groups to achieve daily requirements [5]. For example, because the CCHS did not include activities performed at work, a number of respondents who were in fact ‘active’ were most likely categorized as ‘inactive’. Nurses, home care workers, those involved in primary industries (farming, fishing, mining, forestry, etc.), labourers and others, expend a significant amount of energy on the job, and yet the CCHS would count them as ‘inactive’ due to their unlikely participation in leisure-time physical activity following such a labour-intensive workday.

Finally, by focusing entirely on leisure-time physical activity, the CCHS also risked gender-bias, since it more accurately measured vigorous activities typically undertaken by men such as sports and exercise [32]. As a consequence:

*“Such surveys may send a message to women that their time spent in household chores, caring for the family, and working to earn a living is unimportant and that these activities are unrelated to their health” [32]*

Our decision to use results from the *In Motion* survey was influenced by several factors. Most importantly, in addition to examining leisure time physical activity, the survey also asked respondents about activities performed at work, around the home and through transportation. Some may contend that by including all activities, *In Motion* has artificially inflated physical activity patterns in Manitoba, especially in light of the alarmingly low levels reported by leisure-time physical activity surveys. However, we think this is a good measure of physical activity in Manitoba that reflects the reality of women’s lives. We acknowledge that the survey has its limitations, particularly because it relied on self-report measures of physical activity, rendering it susceptible to the social desirability bias. In addition, our ability to do a gender-based





analysis was partially inhibited, as not all variables were reported disaggregated by sex. Nonetheless, we commend the research team for developing such a comprehensive and useful survey, and we are pleased to report that a second *In Motion* survey is planned for Manitoba in the near future.

Defining and measuring physical activity is not easy. In fact, some researchers contend that physical activity surveys are better measures of inactivity and barriers to physical activity than they are at measuring why active adults pursue healthy lifestyles [33]. Definitions and concepts used in self-report surveys are heavily criticized for not accurately portraying patterns of physical activity among women, particularly because these measures do not account for the light or moderate activities more commonly undertaken by women around the home. Finally, physical inactivity is typically defined as the negation of physical activity, and consequently, blames the individual for leading an inactive life while ignoring the social inequalities that restrict access to physical activity [34]. Recognizing that women's participation in physical activity is limited by their secondary social status is therefore essential to ensuring they maintain an active lifestyle.

## Physical Activity Guide

In addition to making the healthy choice to quit smoking and eat nutritiously, Health Canada has identified “physical activity” as one of the factors that contributes to Healthy Living. The Healthy Living Unit is responsible for the federal government's role in increasing physical activity among Canadians, and in 2007, released a number of initiatives to help Canadians incorporate activity into their daily lives: *Canada's Physical Activity Guide (PAG)*, *Business Case for Active Living at Work*, and *Stairway to Health*. In response to the confusion some Canadians had about how much physical activity was needed to achieve better health, the PAG outlines a number of activities, in addition to the duration and frequency required to maintain good health. Although a number of guides were released for different age groups (children, youth, adult, older adult), all four subscribe to the same message- “*Build physical activity into your daily life at home, at school, at work, at play, on the way!*” The PAG offers pragmatic solutions to incorporating activity in everyday life, lists the benefits of active living in addition to the consequences of inactivity, and most importantly— it is free of charge.

Although the PAG offers age-specific recommendations for physical activity, it does not offer sex-specific recommendations, due largely to the fact that distinct requirements for women are poorly established [35]. Researchers have recently developed a nomogram<sup>9</sup>, an instrument used to predict exercise capacity<sup>10</sup> for women by age, in addition to their likelihood of survival for all-cause mortality. The risk of death among women 35+ whose exercise capacity was lower than 85% of the predicted value for age was twice as high as those whose exercise capacity was higher than 85% of the predicted value [35]. Note that this study

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<sup>9</sup> A graph containing three parallel scales graduated for different variables so that when a straight line connects values of any two, the related value may be read directly from the third at the point intersected by the line. Use of the nomogram for the percentage of predicted exercise capacity for age requires only the woman's age and exercise capacity achieved in MET on the exercise stress test [35].

<sup>10</sup> Predicted MET= 14.7- (0.13 x age) - equation for predicted exercise capacity on the basis of age.





differed from others, in that it examined the *intensity* rather than the *duration* of physical activity and its relationship to good health.

While a nomogram had been established for men, no such instrument had been developed for women. Findings suggest that the newly developed nomogram is a more accurate assessment of women's long-term prognosis than the men's nomogram. When shown side by side, the predicted exercise capacity for men at all ages is higher than women, particularly among women and men 50+ years. In other words, the difference between women and men for the predicted exercise capacity by age is substantially higher among men, meaning men must exercise at a higher intensity to achieve the same health benefits as women in the same age group. This discovery warrants additional analysis, considering the current PAG requirements do not address the unique physical activity needs of women and men.

### Children's Fitness Tax Credit

In an attempt to get children more active, the 2006 federal budget proposed the creation of the Children's Fitness Tax Credit to cover eligible fees up to \$500<sup>11</sup> for each child under the age of 16 enrolled in a physical activity program. An eligible program of activity is defined as "*An ongoing program, suitable for children, in which substantially all of the activities undertaken include a significant amount of physical activity that contributes to cardio-respiratory endurance, plus one or more of: muscular strength, muscular endurance, flexibility, and balance*" [36]. Effective January 1, 2007, the credit is aimed at improving access for children and youth to physical activity, in hopes of reducing the incidence of inactivity and childhood obesity. Encouraging children- particularly young girls- to participate in physical activity is important considering girls who do not participate in sport by the age of 10 have only a 10% chance of being physically active when they are 25 years old [37]. Although the Expert Panel in charge of outlining the terms of reference did not propose that the credit would eradicate the problem of childhood obesity in Canada, it did anticipate that it would encourage children to become more physically active, and thus increase the likelihood that they would remain active throughout adulthood.

Critics of this initiative contend that while reducing the rate of childhood obesity is an important policy objective, it is unlikely that the Children's Fitness Tax Credit will address this growing epidemic. The credit does not support informal activities, nor does it take into account the fact that boys tend to engage in more physical activity than girls, meaning boys' activities will disproportionately receive support [38]. Parents must have sufficient taxable income for it to be of any value and for those whose income is not taxable (e.g those on social assistance) the program will have no purpose. Income and socio-economic status are important predictors of participation in organized physical activity, and yet it appears that the credit will have little benefit to low-income families. This is particularly concerning, since children in low-income homes are less likely to be active, and thus more likely to be overweight or obese [38].

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<sup>11</sup> Note- This does not mean that a parents' taxes are reduced by \$500, but rather that the maximum value of the non-refundable tax credit is equal to \$500 multiplied by 15.5% (the lowest tax rate in 2007). Thus, the maximum value is \$77.50 per child, for eligible activities costing \$500 or more.





## *Mothers In Motion*

Most health promotion strategies designed to increase physical activity levels in the Canadian population have not taken into account what restricts women's participation in physical activity [20]. In response, The Canadian Association for the Advancement of Women and Sport and Physical Activity (CAAWS) initiated *Mothers In Motion*, a strategy that encourages women "to lead a healthy lifestyle and mentor their children to do the same". *Mothers In Motion* targets three specific groups- mothers of new babies and toddlers, mothers of preschoolers, and mothers of school-age children. Physical activity guidelines for different stages of motherhood including pregnancy and shortly following childbirth are provided free of charge in both French and English. A comprehensive guide to activities, groups, clubs and sport teams across Canada enable moms and their children to take part in activities that are gender-sensitive and culturally appropriate. Mothers are encouraged to serve as mentors for their children by taking part in activities with the entire family, and a number of practical solutions to barriers most typically experienced by women are offered to assist new moms with becoming more active [39].

### **Manitoba's *In Motion* Strategy**

A number of strategies at the provincial and national level have been implemented in response to low levels of activity and increasingly high levels of obesity. *In Motion* is a provincial strategy that aims to assist Manitobans with the integration of physical activity into their daily lives by building partnerships, increasing awareness, developing strategies and subsequently measuring their success [40]. The objective of the *In Motion* strategy is to increase physical activity in Manitoba by 10 percentage points by the year 2010. Schools are encouraged to become *Healthy Schools In Motion* by incorporating 30 minutes of physical activity every day for every student through physical education, physical activity breaks, physical activity programs, intramurals, and various events. In Manitoba, physical education is only mandatory for students in grades K-8. Students must complete 55 hours of physical education per year in grades 9 and 10, and by grade 11 and 12, physical education becomes optional<sup>12</sup> [41]. This is problematic since we know active children are more likely to be active adults [37]. Nonetheless, we are pleased to report that as of August 2006, 340 (40%) schools in Manitoba were registered for the *Healthy Schools In motion* program, demonstrating the commitment of many Manitoba educators to take part in active living.

### **Summary**

Physical inactivity is a critical public health issue for Manitoban women. Most Manitobans meet the basic PAG requirements but greater participation in physical activity leads to greater health benefits [15]. Contemporary lifestyles and conveniences cause most of us to lead sedentary lives, but even small improvements in physical activity levels are associated with health benefits. It is thus essential for people to maintain an active lifestyle.

Disease associated with a sedentary lifestyle creates significant economic and social burdens [43]. Physical activity throughout the lifespan may independently enhance women's and girl's health through the reduction of chronic disease risk and improved quality of life [42]. Physical *in*activity and obesity are

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<sup>12</sup> Since the time of writing, Manitoba Education has reinstated mandatory physical education for grades 11 and 12.





also important as interdependent risk factors for the development of many chronic diseases that affect women, placing a substantial burden on the health care system. Physical activity has been identified as a modifiable risk factor for obesity, since it has one of the largest impacts on energy balance [5]

Participating in sport and physical activity is one of the ways in which women and girls can experience success and increase self-esteem levels. Participation in physical activity is essential to maintaining a good body image and discouraging disordered eating and smoking. Involvement in physical activity is closely intertwined with the social, economic and health status of women. Although women and girls understand the importance of physical activity, their participation remains low due to social and systemic barriers. It cannot be assumed that mothers can take time away from their children to be active. Classes that run concurrently for mother and child, or more classes for mother and child fitness to take place at the same time may be suitable alternatives. Rather than placing the expectations on women to leave their families to be active, we must focus on activities that can be done with the entire family. Walking is one of the most popular, accessible, inexpensive, and available forms of physical activity [21].

### Physical Activity Policy for Manitoba Women

Increasing physical activity levels among women requires an examination of gender and how it operates in relationship to physical activity, rather than individual-based studies and interventions [34]. Many fitness, recreation and sport organizations across Canada unfairly allocate resources, programs and decision making to boys and men, leaving women and girls with fewer opportunities to use equipment and facilities.

A recent study on the economic burden of physical inactivity concluded that 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 II diabetes, colon cancer, breast cancer and osteoporosis [44]. There must be a community-based, holistic approach to First Nations children's fitness within and meaningful engagement of First Nations governments in related federal, provincial and territorial initiatives [45].

The federal tax credit needs to be evaluated for its ability to really encourage low-income families to have their children in sports, or whether it only succeeds in getting money back into the pockets of those who can already afford sports costs. If we really want to assist with accessibility issues in terms of physical activity, then we need to fund communities to transform facilities, as well as assist individuals.

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# Healthy Body Weight

## Introduction

In Manitoba relative affluence assures most people of a secure food supply, and sedentary work and leisure are both socially valued. Poverty here differs from the developing world, as individuals living on low-incomes have reduced access to high quality foods but easier access to low-cost, high calorie foods. Besides legitimate concerns about the links between health and overweight, Canadian culture idealizes thinness and fuels discrimination against larger body types; there is a preoccupation with weight, with consequences for psychological health. Thus, excess weight represents the focus of much Canadian research and policy regarding health and body weight.

Material in this section was previously produced in *Manitoba Field Testing of Gender-Sensitive Core Set of Leading Health Indicators*, by Donner, Haworth-Brockman and Isfeld (2006). The authors are grateful to the WHO Kobe Centre for technical assistance.

Research has shown the relationship between body weight and mortality is represented by a U-shaped curve, with increased risks of mortality for both high and low body weight classes. There are demonstrated links between obesity and increased risk of illness and death due to high blood pressure, Type 2 diabetes, coronary heart disease, congestive heart failure, stroke, gallstones, osteoarthritis, sleep apnea, and some cancers. Some sex specific health risks of obesity have also been found. Obese women are at increased risk of endometrial cancer and postmenopausal breast cancer, and have a greater chance than men of becoming ill with arthritis and high blood pressure. Overweight has also been associated with several chronic health conditions including asthma, arthritis, back problems, high blood pressure, type II diabetes, thyroid problems, activity limitations, repetitive strain injuries and depression.

Underweight also confers health risks and has been associated with ulcers and depression, as well as more complications and poorer prognosis for hypertension, diabetes and hyperlipidemia. Extreme low weight resulting from disordered eating confers additional health problems including death from associated complications [1]. Thus, an unhealthy body weight can have serious consequences for physical and psychological health.

### **BMI Classification for Adults**

The body mass index (BMI) is a method of classifying body weight according to health risks that have been demonstrated through research. BMI is calculated by dividing a person's weight, in kilograms, by their height, in metres, squared (unit of measurement - kg/m<sup>2</sup>).

Based on the 2003 Canadian Guidelines for Body Weight Classification in Adults, the index values are:

- Underweight = less than 18.5
- Normal weight = 18.5 - 24.9
- Overweight = 25.0 - 29.9
- Obese = 30.0 or greater

Classes within the obese category include:

- Obese Class I = 30.0 - 34.9
- Obese Class II = 35.0 - 39.9
- Obese Class III = 40 or greater [2]





## Measuring Body Weight

This indicator uses information from the 2004 *Canadian Community Health Survey Nutrition (CCHS)*, a one-time survey that directly measured height and weight of respondents in order to accurately calculate Body Mass Index (BMI). It included respondents aged 2 and older, and analyzed results for children and adolescents based upon distinct BMI guidelines. This method yielded higher rates of obesity and overweight than previous cycles of the CCHS which relied on self-reported data. Pregnant women and persons less than 3 feet tall (0.914 metres) or greater than 6 feet 11 inches tall (2.108 metres) were excluded as the BMI is not an appropriate measure of their body weight<sup>1</sup> [2]. BMI as a measure of relative weight is debated (see Data Limitations).

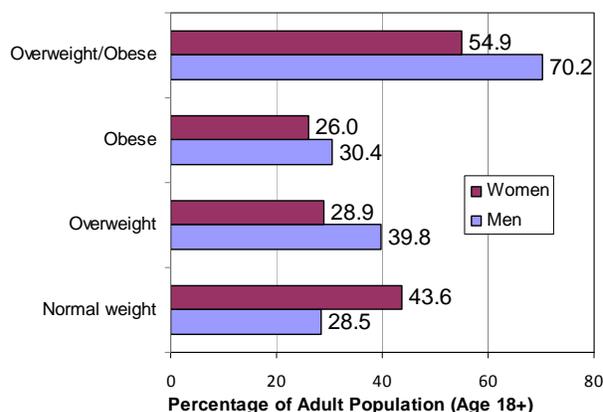
## Adult Body Weight by Sex

Based upon the 2004 CCHS, 43.6% of women and 28.5% of men in Manitoba had a body weight that fell within a healthy range (BMI = 18.5-24.9). The majority of men and women had weights that exceeded this range and would be considered unhealthy. Fifty-five percent of women were either overweight (28.9%) or obese (26%). Seventy percent of men carried excessive weight, classified either as overweight (39.8%) or obese (30.4%). Women and men did not differ significantly in the prevalence of obesity, though men were more likely to be overweight than women [2].

Because of the small sample sizes, comparisons of the degrees of obesity could not be made for Manitoba. Across Canada, a significantly higher percentage of women than men were designated with the highest obesity classification, which is associated with extremely high risks to health. Canadian women were also more likely to be underweight than men (2.5% versus 1.4%\*<sup>2</sup>), which is also associated with an increased risk of developing health problems [2].

Provincial data on the prevalence of underweight among women and men are not available due to small sample sizes.

**Figure 1**  
**Body Weight Classification (BMI) Prevalence for Manitoba Adults by Sex, 2004**



Source: Statistics Canada, 2004 Canadian Community Health Survey: Nutrition. [2]

Note: Estimates for the prevalence of underweight among Manitoba women and men were too unreliable to publish.

<sup>1</sup> The CCHS does not cover the Nunavut, Yukon, or Northwest Territories, First Nations Reserves, residents of institutions or Canadian Forces Bases. This analysis is based on Statistics Canada's Canadian Community Health Survey, Cycle 1.1., Public Use Microdata file, which contains anonymized data collected in the year 2000/2001. All computations on these microdata were prepared by Prairie Women's Health Centre of Excellence and the responsibility for the use and interpretation of these data is entirely that of the authors.

<sup>2</sup> The asterisk indicates a prevalence with a coefficient of variation (CV) from 16.6% to 33.3%. Such results should be interpreted with caution.





## Women’s Body Weight by Age

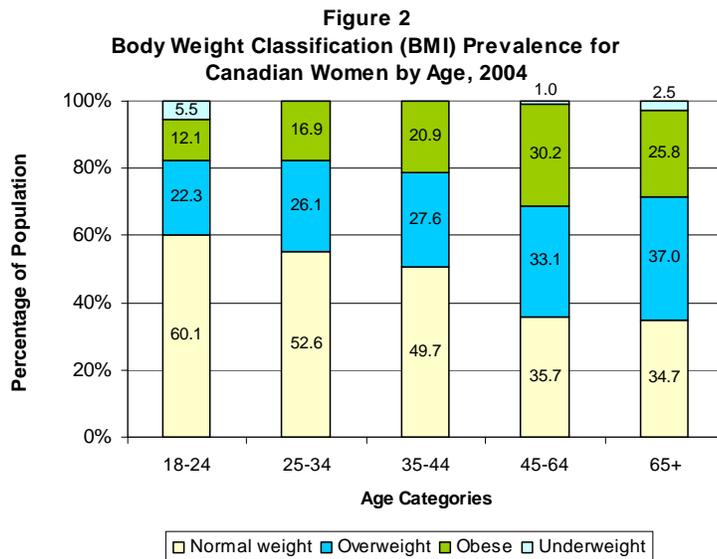
As age and sex-specific BMIs for Manitobans were not available for this report, this discussion of age is limited to all Canadian women. BMI increases with age for Canadian women. By the time women reach adulthood, 33% have an unhealthy body weight (12% obese and 22% overweight), which increases to over 60% for women aged 45 and older. The prevalence of overweight for men exceeds that for women in all age categories (by as much as 5-17 percentage points). However, women more closely resemble men’s age-specific rates of obesity [3].

Underweight affects a small proportion of Canadians, though it disproportionately affects the young and old. Unfortunately, data about underweight are not available for those under the age of 17, as the classification system for children and youth did not include this concept. Though underweight, often associated with disordered eating (e.g. anorexia or bulimia), is most common for girls, underweight also affects women in old age. The CCHS found larger proportions of underweight Canadian women than men, both among young adults (5.5% versus 3.5%), and seniors (2.5% versus 1.2%) [3].

### BMI Classification for Children & Adolescents

The body mass index (BMI) for children and adolescents is different from that of adults as they are still maturing. It is also not clear whether health risks are associated with particular BMI levels at young ages. Following the approach taken by the International Obesity Task Force, the 2004 CCHS adopted distinct criteria for classifying BMI for children and adolescents.

The measured BMI were classified as 'obese' or 'overweight' according to age-and-sex-specific BMI cut-off points developed by Cole and others. The Cole cut-off points are based on pooled international data (Brazil, Great Britain, Hong Kong, Netherlands, Singapore and United States) for BMI and linked to the internationally accepted adult BMI cut-off points of 25 (overweight) and 30 (obese). Respondents who do not fall within the categories of 'obese' or 'overweight' have been classified by the CCHS as 'neither overweight nor obese'. [5]



**Source:** Statistics Canada, 2004 Canadian Community Health Survey: Nutrition. [3]





## Body Weight in Girls

In 2004, nearly one-third (31.3%) of girls in Manitoba (aged 2 through 17) carried excess weight for their height and age. This included 9.9% who were obese and 21.4% who were overweight. Unlike the profile for adults, the prevalence of excessive weight was similar for boys in the province (30.4%), among whom 8.1% were obese and 22.3% were overweight. The prevalence of excessive weight appears higher for girls and boys in Manitoba than average Canadian rates for girls and boys [4].

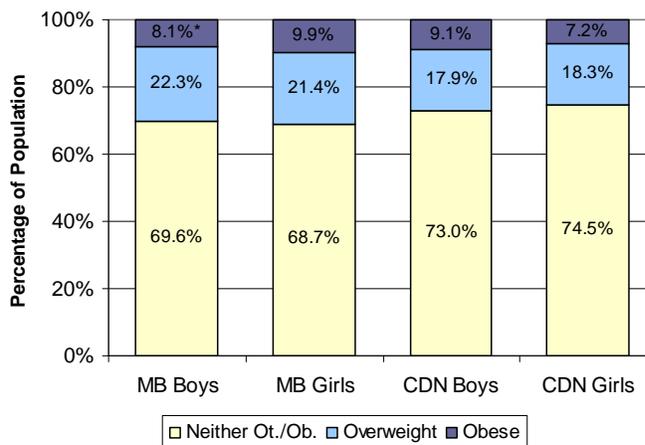
Although the *CCHS* did not provide separate body weight data for Aboriginal children in Manitoba, national data may provide some insight on an important segment of the provincial population. The survey found that Aboriginal young people (limited to those living off Reserve) in Canada had a significantly higher combined overweight/obesity rate (41% versus 26%) and obesity rate (20% versus 8%) than the national average. These differences persisted when age and socioeconomic factors were taken into account [4].

## Data Limitations

There are important limitations to BMI data that are relevant to analyses of women's body weights. Though the BMI is a simple and convenient measure of relative weight, it does not directly measure body fat or composition. As only weight and height are accounted for, the method cannot distinguish between very muscular individuals and those with excess fat. As men, on average, are more muscular than women, the BMI tends to be biased toward underestimating overweight and obesity among women and overestimating these conditions among men [1]. Recent Health Canada guidelines on the BMI have recommended combining the BMI with a waistline measurement to better distinguish excess fat from muscle weight [6]. This composite measure was not included in the 2004 *CCHS* survey.

Other concerns regarding the BMI have emerged with the recent adoption by Health Canada of new index cutoff values for some BMI categories. One concern raised by Lemieux and colleagues is that a reduction in the underweight cutoff from 20 to 18.5 kg/m<sup>2</sup> may delay identification of individuals, primarily young women, in the early stages of anorexia nervosa, and of malnutrition among the elderly. The authors have also expressed concern for the decrease in the overweight cutoff from 27 to 25 kg/m<sup>2</sup>. They argue that health risks have not yet been demonstrated for the 25-27 range of BMI measurements where waistline

**Figure 3**  
**Body Weight Classification (BMI)**  
**Prevalence for Manitoba Children (Age 2–17), 2004**



Source: Statistics Canada, 2004 *Canadian Community Health Survey: Nutrition*. [4]

Note: \* Interpret with caution. Coefficient of variation is high (16.6% to 33.3%)





measurements are not high. Categorizing these individuals as overweight may unnecessarily heighten excessive concern about body weight, primarily among women, leading to lower self-esteem, and unhealthy weight loss [7].

The BMI may also not be an equally representative measure of body weight for individuals with different racial or ancestral origins, as genetic differences predispose people of certain backgrounds to be more prone to store fat and put on weight. An American study of differences in body composition between blacks and whites found differences in fat-free body mass, fat patterning, and body dimensions and proportions, which may introduce systematic error in the estimation of relative body weight and classification of obesity for blacks [8]. Another study found that the BMI is not an equally representative measure of body fat for children and adolescents of different races (i.e. for equivalent BMI, whites have higher body fat than blacks). As well, the BMI tends to underestimate the body fat of girls and individuals with a more central distribution of fat [9].

The BMI is most applicable for non-pregnant and non-breast feeding women, less than moderately active individuals, and adults aged 20 to 60 (June 29, 2005 meeting with SL Kirby; unreferenced). Thus, any population health analysis of body weight based on the BMI classification system should account for its limited applicability, despite its widespread acceptance.

## Discussion

Sex-specific and gender-based analyses raise several important issues related to body weight that show the need for a broader consideration of health impacts than the predominant biomedical focus on body weight accommodates.

The social desirability of lower body weight in Canadian culture, particularly thinness for women, has important implications for psychological and physical health. Independent of actual body weight, women's perception of their success in achieving a socially desirable weight and body type has health consequences. Women are more likely than men to equate self-worth with what they think they look like and what they believe other people think they look like [10]. For all weight categories, except underweight, women experience more dissatisfaction with their body weight and shape than men do and more frequently engage in weight loss efforts [11].

Obsessive body image concerns, and excessive concern with weight loss, can lead to dangerous weight control practices such as exercise addiction and or disordered eating [10]. Chronic dieting is common among North American women and perceived as normal [1]. Disproportionate attention is paid to the health risks associated with obesity relative to the risks associated with dieting. While there are well-documented links in the literature between obesity and increased mortality, some research also suggests that a rapid change in body weight may also be associated with increased mortality [12].

A common theme and misconception found among women is that thinness is more important than health or that a thin body is a healthy body [10]. Public health strategies can broaden the approach taken to health and body weight beyond a focus on the BMI measure and cross-sectional data to better account for





women's experience of weight fluctuation, the impact of dieting behavior, underweight, disordered eating, and the close association with self-image. Also, as health is not directly related to body weight, it is more useful to consider body weight together with other related factors, including diet, exercise, body-image and the interaction of social variables, specific to gender, age, socio-economic, and culture groups.

The relationship between gender and body weight is further complicated by socioeconomic status. Analysis of the 2004 CCHS found that women in the middle and upper-middle income households had higher obesity rates than women in the highest income households [2]. Research has shown that individuals in low-income circumstances tend to experience more food insecurity and have higher rates of obesity, which may be a consequence of higher average cost of quality food items, like fruits and vegetables, in lower income neighbourhoods. Food insecurity disproportionately affects women (see Nutrition, this chapter), as women, on average, earn a lower wage (87% of men's hourly wage) and more often live in low-income households. Food insecurity particularly affects single mothers, who most commonly live in low-income circumstances and who are likely to compromise their own diet to provide sufficient food for their children. In contrast, men in low-income households may be buffered from the effects low income has on food security and obesity, as they tend to have occupations that incorporate more physical activity and are more active at home than men who work as higher paid professionals [13]. The lower obesity rates among women in high-income households may reflect their greater access to high quality food and physical recreation facilities. Thus, for women with more economic resources, socially desirable thinness may be more easily achieved than for women in low-income circumstances.

## Policy Implications

Body weight, together with lifestyle factors that influence body weight and social-psychological factors that affect its impact on women and men, holds importance for health policy, particularly as a large proportion of health resources are invested in chronic disease. Gender sensitive health promotion and preventive health measures are particularly important areas requiring further development. Gender sensitive socioeconomic policy is also implicated by differences in the relationship between income and obesity for men and women. Other relevant policy areas include city/municipal planning, which affects food security and opportunities for physical activity.

A gender-sensitive analysis of the issue should incorporate information on physical activity levels, healthy dietary practices, and the impact of dieting and body image. Underweight and disordered eating, which disproportionately affect women, should also be addressed. Caution should also be applied, as the BMI does not provide an unbiased comparison of body weight by sex, age, or ancestry. As well, the BMI is only an indirect measure of other physiological causes of disease and death.

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## Tobacco Use Among Manitoba Women

Smoking is a major contributing factor to poor health and is linked to many forms of illness, including several cancers and cardiovascular disease, the leading cause of death among both Canadian women and men. Although a documented decline in smoking in Manitoba demonstrates progress in prevention efforts, less improvement has been observed for women than for men and the trends among young women are different from those for men. A distinct physiological vulnerability to nicotine and unique social and economic influences on women's lives affect smoking behaviour, particularly for young women and some sub-populations.

### Manitoba Smokers<sup>1</sup>

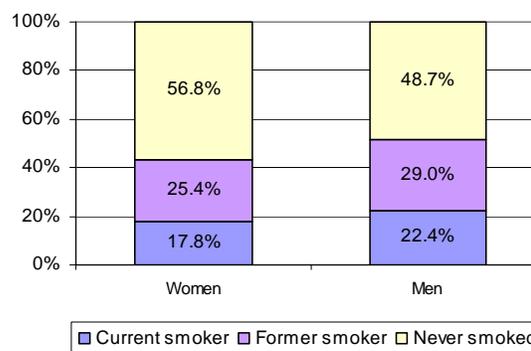
According to the *Canadian Tobacco Use Monitoring Survey* for 2006, 17.8% of women in Manitoba smoke (daily or occasionally), another 25.4% are former smokers, while 56.8% have never smoked. Manitoba women, on average, are still less likely to smoke than men in the province, 22.4% of whom currently

smoke. Women's rate of cigarette consumption remains lower than that for men by a margin of 4.5 cigarettes (11.7 versus 16.2 cigarettes per day, on average) [1].

A small decrease in the prevalence of smoking among women in the province has been observed over the past eight years. Over the same period, smoking has seen a somewhat greater decline among men. The trends have led to more similar rates of smoking among women and men [1, 2, 3, 4, 5, 6, 7, 8].

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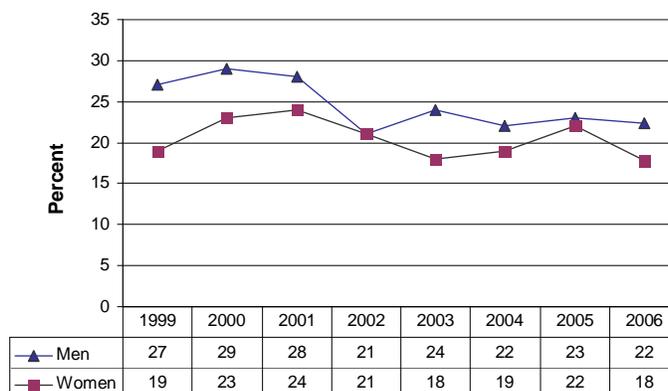
**Smoking Status for Women and Men Aged 15+, Manitoba 2006**



Source: Health Canada, CTUMS Annual, 2006.

Note: Current smoker includes daily and occasional smokers.

**Prevalence of Smoking in Manitoba Among Women and Men Aged 15+, 1999 - 2006**



Source: Health Canada, CTUMS Annuals, 1999 through 2006.

<sup>1</sup>Information provided in this chapter is taken from two surveys that asked Canadians about their smoking behavior, Health Canada's Canadian Tobacco Use Monitoring Survey (CTUMS) and the Canadian Community Health Survey (CCHS). The former is more recent and rigorous, benefiting from a larger sample size, while the latter provides greater distinctions in age groupings for observations concerning youth smoking.





Young women’s smoking behaviour resembles men’s more closely than does the behaviour of older women. In 2006, 24.1% of women aged 15 to 24 were current smokers, and their average rate of cigarette consumption was only 2 cigarettes per day less than for men of the same age (10.0 versus 12.2 cigarettes). Women aged 25 and older in 2006 were not as likely to smoke as men, were less likely to have smoked in the past, and consumed five fewer cigarettes per day, on average, than men (12.1 versus 17.1 cigarettes per day)[1].

The rate of smoking among young women actually matched or exceeded rates for young men in five of the last eight annual tobacco use surveys (CTUMS) conducted in the province [1, 2, 3, 4, 5, 6, 7, 8]. According to the Canadian

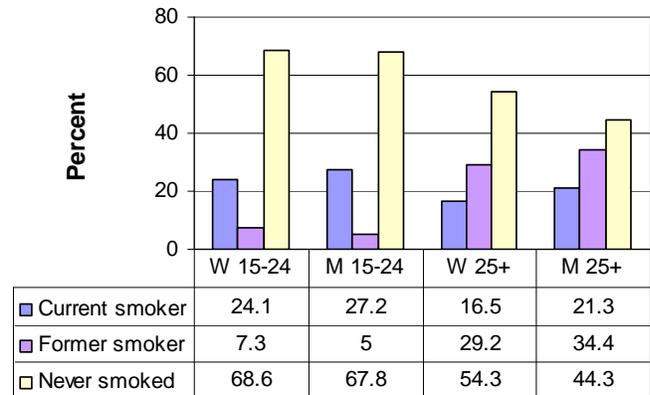
Community Health Survey (CCHS), which collects smoking information from individuals as young as age 12, in some teen and young adult age categories, females have been more likely to smoke than males. In 2000, 21.3% of young women aged 15 to 19 in Manitoba were current smokers compared to 12.7% of men their age, revealing substantial differences by sex, which may be obscured in data grouped by larger age cohorts [9]. The most recent survey recorded similar rates of smoking among females and males in the two youngest age cohorts (1.26 vs. 1.62 for ages 12-14; 9.83 vs. 9.96 for ages 15-17) [10].

In recent years, the greatest declines in smoking among Canadians have been recorded for teens and young adults. This finding holds importance for future improvements among older adults, because smokers generally start smoking before they are 18, and it is relatively rare for adults to take up smoking [11]. Nevertheless, until reductions in youth smoking can be observed over a longer term in Manitoba, the current profile of young women’s smoking continues to raise concern for future trends in women’s tobacco use.

### Regional Variation

Women living in the northernmost regions are more likely to smoke than women living in southern regions of the province. According to the 2005 CCHS, rates of smoking among women ranged from 17% in the Central region, to 26% for a group of regions that included Burntwood, Churchill, Norman, and Parkland [10]. The grouped rates likely obscure large differences in rates among these regions, as demonstrated in ungrouped data from the 2003 CCHS. At that time, the prevalence of smoking among women living in the Burtwood/Churchill region approached twice the rate reported in the Parkland region [12].

**Smoking Status by Age and Sex  
Manitoba, 2006**



**Source:** Health Canada, CTUMS Annual, 2006.

**Note:** Moderately high sampling variability was associated with the prevalence of former smokers among women and men aged 15-24. Interpret those results with caution.

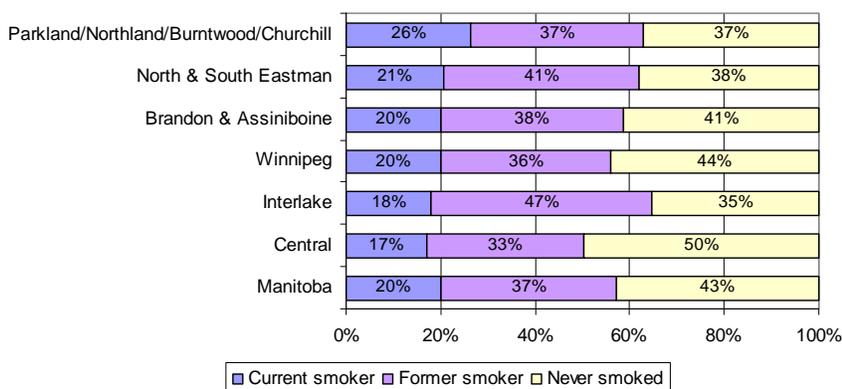




## Discussion

The gender patterns described for Manitoba women are familiar throughout Canada and the industrialized world, while developing nations brace for similar though intensified increases in women’s rates of smoking [13]. To fully appreciate the seriousness of the situation for female smokers, one has to delve deeper into the differential risks and effects of smoking on women, and among sub-groups of women.

**Smoking Status by Region  
Manitoba Women (15+, 2005)**



Notes: Current smoker includes daily and occasional smokers. The 2005 CCHS grouped smoking status data for health regions with populations below 70,000 in order to reduce variation in rates due to sampling variability.

## Prevalence & Risks

Overall, a significant decrease in the prevalence of smoking among Manitoba’s men and women has been well established from 1985 to 2001 [14]. In the past six years, a new era in tobacco control has been marked by a continued decline in smoking in the general population, though in smaller increments. However, official statistics have inadequately reflected the experience of many high risk groups, including women living in poverty, with low education, or on First Nations reserves. Off-reserve, Aboriginal females aged 12 and older are more than twice as likely to report daily or occasional smoking as non-Aboriginal women (55% versus 20%) [15]. 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 who have low levels of education have greater risks [16, 17]. 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 [17].

## Physiological and Social Challenges for Women

Physiological differences are known to make quitting harder for women and withdrawal symptoms more severe than for men. Both women and youth are more sensitive to nicotine, more vulnerable to physical dependency, and need fewer cigarettes to become dependent. Lower body weight and differences in how women’s bodies metabolize nicotine have been blamed [18, 19]. Social factors also play an important part. Nicotine replacement therapies are less effective in women, which may be because men use tobacco primarily to deliver nicotine, whereas women smoke more for psychological and social reasons [20].

Smoking relates to body image and self-conception and women’s experience of gender specific problems in quitting or resisting smoking often relate to their socialization in this respect. Girls are more likely than boys to perceive that smoking will help in controlling their weight and negative moods [18]. The tobacco





industry has exploited these concerns by emphasizing the weight control benefits of smoking which, according to clinicians in the field, has measurably increased women's smoking [21].

Women are also recognized as having greater difficulties quitting smoking because of high levels of stress. Isolation, lack of social support, poor socio-economic status, and high demands of unpaid and paid work loads, increase women's psychological dependency on cigarettes, making smoking appear too difficult to stop [13]. Poor women face unique and intensified stressors and often smoke to cope with negative emotions induced by their lower status and the systemic discrimination and negative attitudes that they experience [22].

### Health Consequences

There is strong evidence that smoking is related to more than two dozen diseases and conditions that affect women and men. It is the main risk factor associated with lung cancer, and an important factor in heart disease and stroke (cardiovascular disease) and respiratory diseases. It is linked to several other cancers, including cancer of the mouth, throat, larynx, esophagus, pancreas, kidney and bladder. However, the role of smoking as a risk factor for these diseases in women is known to differ from men in some instances, though biomedical research has not yet fully explored such differences.

Smoking is particularly important as a cause of cardiovascular disease in women—now the leading cause of death for Canadian women—and increases women's risks for the disease more than for men [18, 26]. Also, women who smoke and use oral contraceptives are especially vulnerable to heart disease, with 20 to 40 fold greater risks compared to those who neither smoke nor use oral contraceptives. [26]. There is also evidence that women smokers are more susceptible to asthma and the carcinogenic effects of cigarettes on the lungs than men [18]. Research has shown that, given the same lifetime exposure to cigarette smoke, women's risk of developing lung cancer is up to three times higher than for men, and the added risks are almost entirely related to tobacco use [21].

Relative to non-smoking women, smokers also have increased risks for serious reproductive health problems—including infertility, early menopause, and menstrual problems [25]. Recent evidence has also demonstrated that second-hand smoke is equally harmful to women's fertility [27]. Pregnant women who smoke have higher risks of miscarriage, stillborn babies, premature birth, low birth weight babies, and babies who die of Sudden Infant Death Syndrome [28]. As well, women who smoke have higher rates of cancer of the cervix and osteoporosis [17, 18].

Despite the importance of these serious health consequences of smoking for women, there is also a need to recognize shorter term, non chronic health consequences that affect the quality of daily living for women, including young and middle-aged women. One recent study found that women smokers reported greater restriction of activities, poorer mental health and more chronic health conditions than men who smoked. Also, despite their relatively high levels of contact with health care providers, twice as many women as men felt that they had unaddressed health care needs[17]. For young women, there is some evidence of smokers experiencing more nervousness, depression and sleep problems, as well as an association with other health damaging behaviours including alcohol and drug use [18].





An estimated 17% of all female deaths in Canada are attributable to smoking [23]. In Manitoba, an estimated 635 women die from smoking related illnesses in a year. The number of deaths from smoking-related illnesses has increased in Canada in recent decades, with a major proportion of the increase having occurred among women. From 1985 to 1996, deaths among women attributable to smoking increased by 77%, which reflects their increased rates of smoking in previous decades. While men have seen a peak and subsequent decline in smoking related deaths, women lag about 20 years behind in this trend [17]. Women's lung cancer mortality rates alone more than quadrupled between 1969 to 1998 [23]. Although women were more than twice as likely to die of breast cancer than lung cancer in the mid 1970s, since 1993, lung cancer has exceeded breast cancer as the leading cause of cancer deaths for Canadian women (39.6 versus 24.0 per 100,000 in 2005 [24]).

## Policy Implications

Despite a provincial ban on smoking in public places and ever-growing intolerance of smokers in some social circles, nearly one in four young women (15-24) in the province smokes, and more than half of women in some sub-populations smoke. In itself, this signals a need for improved intervention geared to women. Smoking must be viewed in relation to the stressful circumstances of women's lives and their lack of social and economic power. Women's greater social and psychological motivations for smoking, as well as physiological vulnerabilities to nicotine, need to be adequately addressed and appreciated by health care providers and policy makers. Policy must also keep in step with the growing health care needs of the increasing number of women who are developing chronic diseases as a result of smoking. Although women in Manitoba still do not smoke as much as men, sex differences are no longer great and trends among youth cause concern.

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# Heavy Drinking

## Introduction

Men are more likely to engage in heavy drinking than are women in Manitoba. However, women have particular vulnerabilities to alcohol consumption that should not be overlooked. The adverse consequences of alcohol misuse are often greater for women and experienced at lower levels of consumption. The physical consequences of heavy drinking in women are exacerbated by limited social and economic resources. There are also important reproductive health effects of alcohol consumption during pregnancy. Children born to women who have consumed alcohol while pregnant are at risk of Fetal Alcohol Spectrum Disorder (also known as Fetal Alcohol Syndrome or Fetal Alcohol Effects), resulting in irreparable brain damage. Further, the coexistence of mental health issues, trauma and substance use is a critical area of concern for women.

## Drinking & Heavy Drinking in Manitoba<sup>1,2</sup>

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. Surveys may underestimate heavy drinking due to the social disapproval of this behaviour perceived by respondents and the desire to present an image of self that conforms to cultural expectations. Furthermore, some of the heaviest users may be missed in survey data because they are itinerant and without regular phone service.

### Definitions

Research has determined that drinking to the point of intoxication and long-term, elevated alcohol consumption increase risks of health and social harms. Based on these findings, heavy or “high-risk drinking” has been defined as regularly consuming five or more drinks on a single occasion, and many countries use this as an indicator of hazardous drinking practices [1]

### Heavy Drinking

Statistics Canada and the Canadian Institute of Health Information define heavy drinking as the population aged 12 years and over who are *current drinkers* (that is, they drank alcohol during the previous year) and who reported drinking 5 or more drinks on one occasion, 12 or more times in the past 12 months [2].

### Current Drinkers

The CCHS defined current drinkers as those who reported consuming alcohol (beer, wine, liquor or any other alcoholic beverage) in the past 12 months.

<sup>1</sup> This analysis is based on Statistics Canada’s Canadian Community Health Survey, Cycle 3.1., Public Use Microdata file, which contains anonymized data collected in the year 2005. All computations on these microdata were prepared by Prairie Women’s Health Centre of Excellence and the responsibility for the use and interpretation of these data is entirely that of the authors.

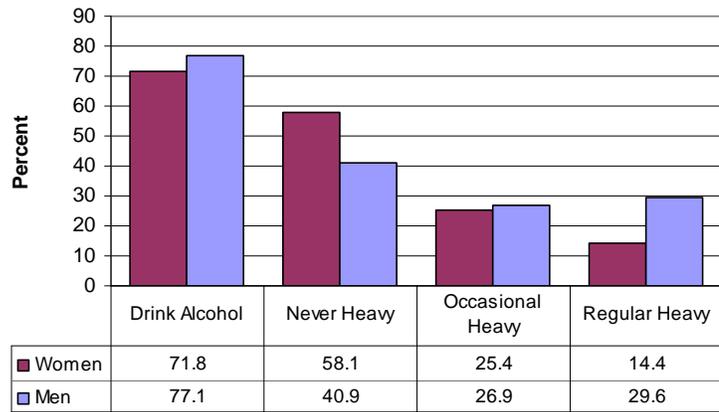
<sup>2</sup> The prevalence of Heavy Drinking is expressed as a percentage of those who are current drinkers, which is consistent with the Canadian Community Health Survey definition.





Women in Manitoba are nearly as likely as men to consume alcohol. According to the 2005 Canadian Community Health Survey, 71.8% of women aged 12 years and over reported drinking alcohol in the preceding 12 months compared to 77.1% of men. However, men were twice as likely as women to regularly engage in heavy drinking. Among women who were current drinkers, 14.4% (equivalent to 10.5% of all women aged 12+) reported drinking heavily compared to 29.6% among men. This is comparable to the proportions of heavy drinkers among Canadian women and men (12.6% and 30.5%) [3].

**Figure 1: Prevalence of Drinking and Heavy Drinking By Sex, Manitoba 2005**

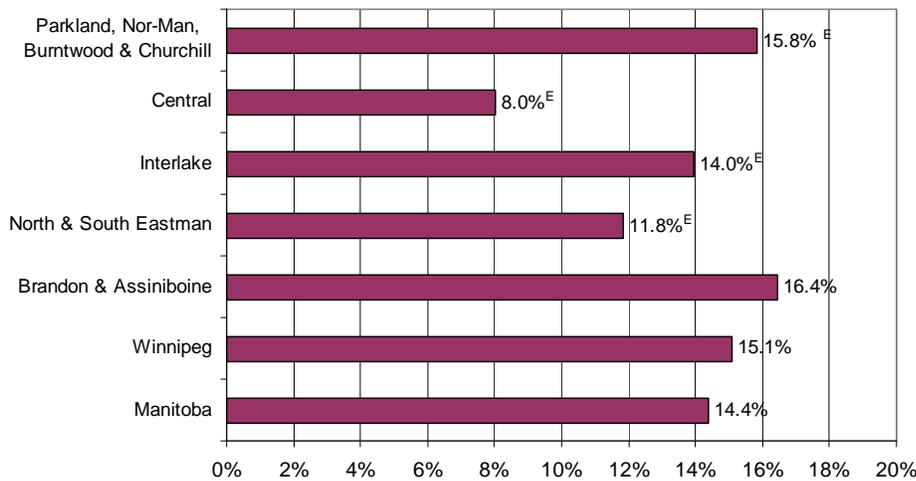


**Source:** Canadian Community Health Survey, 2005 (PUMF).

**Notes:** Drink Alcohol - Consumed alcohol in the past year. Never Heavy - Never drank five or more drinks on one occasion. Occasional Heavy - Drank five or more drinks on one occasion, less than monthly. Regular Heavy - Drank five or more drinks on one occasion, at least 12 times per year. 2.1% of responses to the question regarding heavy drinking were: not-stated, don't know, or refusals.

Rates of drinking and heavy drinking vary considerably by region<sup>3</sup>. For example, in 2005, only 65% of women in the Central region drank, of whom 8%<sup>E,4</sup> drank heavily. Twice the rate of heavy drinking was reported by women residing in the combined regions of Brandon/Assiniboine and Parkland, Nor-Man, Burntwood & Churchill [3].

**Figure 2: Prevalence of Heavy Drinking by Region Among Women Age 12+ Who Drank, 2005**



**Source:** Canadian Community Health Survey, 2005 (PUMF).

<sup>3</sup> The CCHS 2005 (PUMF) grouped data for some regions to ensure regions met a minimum population size of approximately 70,000.

<sup>4</sup> A superscript 'E' signifies that the estimate may not be reliable, due to high sampling variability.



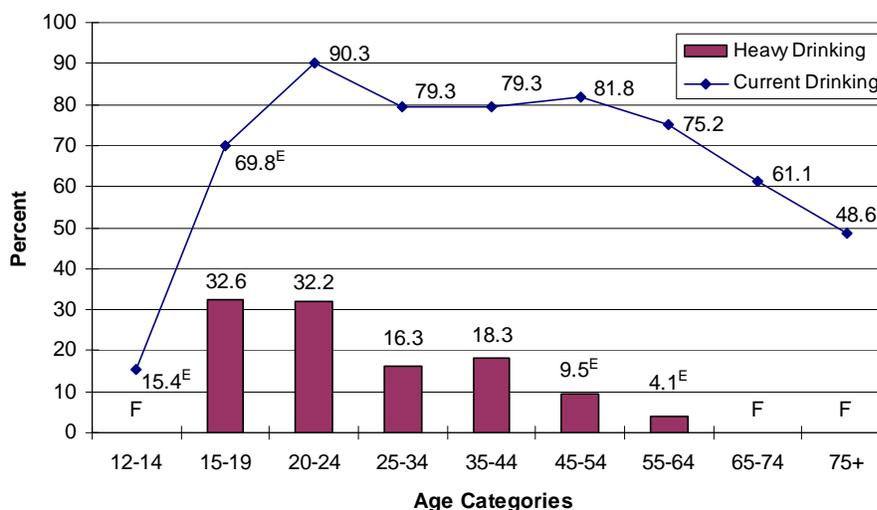


The CCHS 2005 off-reserve Aboriginal profile found heavy drinking to be much more common among women who drank and who identified as Aboriginal than among non-Aboriginal women. Among Manitoba women living off-reserve, 30.0% Aboriginal women who drank were heavy drinkers, compared to 13.2% on non-Aboriginal women who drank. Rates of heavy drinking among Manitobans were somewhat higher than average for all (off-reserve) Canadians (24.1% Aboriginal women; 12.6% non-Aboriginal women [4]).

The First Nations Regional Longitudinal Health Survey (RHS) provided the first national baseline on substance use in this population. The survey, conducted in 2002/2003, found that residents of First Nations communities were more likely to abstain from alcohol and less likely to drink on a daily or weekly basis than the total population of women in Canada. However, of the population who did drink, a much higher proportion of the First Nations population engaged in heavy drinking compared to Canadians overall [5]. Among First Nations women aged 18 and older, only 61.7% reported alcohol consumption in the past year, compared to 76.8% of women aged 15 and older in the total population. Monthly or more frequent heavy drinking was reported by 56.6% of First Nations women, compared to 17.0% of all Canadian women [5, 6]. According to the RHS, current evidence suggests that effective treatment programs with First Nations incorporate cultural and spiritual healing practices, address historical trauma and abuse issues, are managed and delivered by First Nations, address social determinants of health (e.g. poverty), and are tied to broader initiatives for self-governance [5].

Drinking behaviour also varies widely by age. Young adult women (age 20-24) are more likely to drink and to drink heavily than women of other ages. In Manitoba, 90% of women aged 20 to 24 reported drinking in the past year, nearly one third (32.2%) of whom drank heavily. While fewer women age 15 to 19 drank (69.8% of the population), a similar proportion drank heavily, though more than half of the women in this age category were legally underage to drink. Males aged 20 to 24 were most likely to report heavy drinking (61% of those who drank). Men of all ages were more likely to be heavy drinkers than women [3].

**Figure 3: Prevalence of Drinking & Heavy Drinking by Age, Manitoba Women, 2005**



Sources:

Current drinking: Canadian Community Health Survey, 2005 (PUMF)

Heavy drinking: Canadian Community Health Survey, 2005 (CANSIM)

Notes:

Heavy drinking refers to *regular* heavy drinking, that is, five or more drinks on one occasion, 12 or more times (monthly) in the past year.

"E" signifies that estimates may not be reliable, due to high sampling variability.

"F" signifies that estimates were too unreliable to publish.





## Discussion

There has been a lack of attention given to women's high risk drinking and its impacts. Partly, this has been because men are more likely to engage in heavy drinking than are women. The emphasis on male substance use has perpetuated a lack of research, and limited the development of prevention and treatment options that respond to women's distinct issues. Some note that a "male as norm" bias is present in the culture of treatment, which has judged women who require treatment more harshly, and limited the exploration of gender-specific treatment approaches [7]. Fortunately, awareness has grown for the complex and distinct nature of women's experience of substance use.

It is well documented that health outcomes associated with alcohol use are more prevalent among men than women. Based on an analysis of 12 alcohol-related causes of mortality, Canadian men are approximately seven times more likely to die from alcohol-related causes than are women [1]. A greater proportion of men than women also report more alcohol-related harm, for example, harm to relationships and social life and to physical health. However, when men and women drink the same quantity, there is no significant difference in the likelihood of alcohol-related harm by sex [6].

Research has also found that women report alcohol-related harm at lower consumption levels than men. Research among Canadian university students found that women who typically drink four drinks on one occasion have a similar likelihood of experiencing drinking-related problems as men who typically drink five drinks on one occasion [8]. These findings support the application of sex-specific criteria of heavy drinking that provide a more sensitive measure of the extent to which harmful levels of consumption occur among women. The four-drink criteria for high risk drinking among women has been adopted by some national surveys (e.g. The Canadian Addiction Survey), though the CCHS continues to apply a uniform five-drink criterion for both men and women.

Studies of sex differences in the metabolism of alcohol have established women's greater physiological sensitivity to alcohol. Women metabolize alcohol more slowly than do men, prolonging the exposure of the body to harmful metabolites. Blood alcohol concentrations are higher for women than men who consume the same quantity of alcohol, even when differences in body weight are accounted for [9, 10, 11]. Physiological differences contribute to more severe and earlier development of some health consequences for women than men. Research has demonstrated that the average duration of excessive drinking before first signs of liver disorders, hypertension, obesity, anemia, malnutrition, gastrointestinal hemorrhage and ulcers requiring surgery appear, is much shorter for women than for men. Other health effects for women include increased risks of HIV (due to increased unprotected sex while intoxicated), osteoporosis, coronary disease, and adverse impacts on reproductive health. Women's sensitivity to alcohol also makes them more vulnerable to dependency on alcohol [7].

The risks of Fetal Alcohol Syndrome (FAS) or Fetal Alcohol Effects (FAE) and other alcohol related birth defects for children of mothers who consume alcohol during pregnancy have been well documented. Particularly harmful effects have been found where expectant mothers also suffer from poor nutrition, poor general health, experience trauma and mental health problems, and lack prenatal care [9]. Thus, there is a need to consider the complexity of issues facing women who engage in substance abuse,





including their history of abuse or violence, together with the health outcomes of children. A holistic, women-centred approach, which collaborates with child welfare and other sectors to balance the needs of affected women and children, is advocated for in the literature [12, 13].

Considerable research is focused on heavy drinking among youth. A survey of Manitoba teenage alcohol and drug use found that 20% of grade 12 girls engaged in binge drinking, defined as eight or more drinks at one time, at least once a year. This was half the prevalence of binge drinking reported by grade 12 boys. While the survey showed that the number of teens who drink has not increased in the last decade, the amount they drink is increasing, a trend which has also been found among Canadians overall from 1994 to 2003 [14, 1]. The Manitoba survey found 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 [14].

Research on the alcohol use of women and girls is raising awareness for some important social themes for women. The levels and types of alcohol use by women vary by age, ethnicity, income, ability, occupation or mother roles and other variables. Alcohol is the most common substance used by women and is on the rise in Canada, and internationally, over the past decade. Women tend to use alcohol to “improve mood, increase confidence, reduce tension, cope with problems, lose inhibitions, enhance sex or lose weight. These emotional and relationship reasons can keep them in a destructive cycle in the absence of more adaptive supports and changes” [10].

The coexistence of mental health issues, trauma, and substance abuse is important to an analysis of the health consequences of alcohol for women. As many as two thirds of women with substance misuse problems have a concurrent mental health problem, such as depression, post-traumatic stress disorder, panic disorder, or an eating disorder. A large proportion of these women have also been victims of violence [9]. Sexual and physical abuse, which girls/women are more likely to experience than boys/men, are strongly related to substance abuse. Girls who have been abused are more likely to misuse substances and to use them in greater quantities [10]. One study found that although men were more than twice as likely to be regular heavy drinkers as women, male and female heavy drinkers were as likely to be classified as alcohol-dependent. Moreover, alcohol-dependent women were almost twice as likely as men to have experienced at least one depressive episode [15].

## Policy Implications

Heavy drinking is associated with harmful consequences, including both health and social harms. In Canada, the prevalence of heavy drinking has implications for policies regarding the regulation and control of alcohol, blood alcohol content laws for drivers, and drivers’ licensing and suspension policies. Manitoba also has a program in place for training doctors and health care practitioners in brief interventions for at-risk alcohol use [1]. Many programs have either universal application, or target young adults.

The responses to women’s substance use problems have often been punitive or have overlooked the compounding effects of coexisting mental health issues, victimization, income, and women’s fear of





having a child apprehended [9]. Health policy commonly focuses not on the dangers of alcohol to women themselves, but to their children and families. Research on the experiences of pregnant women with substance misuse problems and the views of service providers has demonstrated many barriers for treatment and a need for gender sensitive programs and policy [16]. Important among the barriers are prevalent attitudes toward these women. A strong stigma leveled against alcohol consumption by pregnant women likely prevents them from accessing treatment [10]. The so-called ‘G Case’ which saw a woman who was addicted and pregnant issued a court order of confinement and treatment (see Illicit Drug use section for details), illustrates the extent of punitive measures that have been put forward to address substance use by women. The case raised concerns among women’s health advocates that public health responses are not addressing the broader social issues contributing to women’s addiction, while legal action threatens to undermine women’s civil liberties [17].

Gender sensitive policy is needed to adequately address the associations between alcohol abuse and victimization, depression, and other mental health issues, particularly for women. Social and family services policy must be sensitive to women’s fear of having a child apprehended and the stigma that is placed on pregnant women who misuse alcohol. Policy should account for differences among girls and women in socio-economic status, family roles, child care responsibilities, pregnancy status, and vulnerability to violence.

Manitoba has taken important steps to address the health and social well-being of women together with the health of their children, with positive impacts for women with substance use issues. The Healthy Baby program provides financial assistance and community outreach supports to pregnant women that help them to make nutritional and healthy choices for themselves and their children [18]. As well, the inter-departmental FAS Initiatives, led by Healthy Child Manitoba, include a complement of prevention and intervention efforts, which include personalized supports for women who have used alcohol and or drugs heavily during a pregnancy. Manitoba also participates in the Canada Northwest FASD Partnership, an inter-provincial/territorial initiative focused on sharing best practices and resources on FAS and related disorders [19]. On a national level, Health Canada has produced three key documents which provide demonstrated best practices for prevention of FAS/FAE and early intervention and treatment for women with substance abuse issues [9, 11, 7].

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# Illicit Drug Use

## Introduction

Surveys indicate that illicit drug use is uncommon among women overall. However, concerns have arisen that the gender gap in illicit drug use has narrowed as, in many provinces, the use of cannabis has increased and the serious health effects of crystal methamphetamines are raising the urgency for addressing drug use issues. As well, certain sub-populations among women—including sex trade workers, women in custody, and street involved youth—are known to have elevated risks for drug use and its health effects through pathways that may involve victimization, mental health challenges, sexual exploitation, cultural alienation, and disempowered social and economic status. Though information on marginalized women is often not captured in population health data sets, their ‘invisibility’ only increases their need for gender-sensitive supports and resources. The risk of HIV infection through injection drug use is one critical issue which illustrates the complexity and seriousness of drug use for women. The gendered nature of many intervening variables that contribute to drug use and affect its physical and social effects bolster the argument for gender-sensitive prevention, treatment and harm reduction strategies.

## Prevalence of Drug Use<sup>1,2</sup>

As illicit drug use is not a socially and legally sanctioned behaviour, survey respondents who use drugs may be reluctant to report this drug use, which affects the validity of their results. The greater stigma placed upon women who use drugs, particularly pregnant or parenting women, may also lead to greater biases in reporting. Further, the Canadian Community Health Survey (CCHS), the primary

Material in this section was previously produced for the World Health Organization in *Manitoba Field Testing of Gender-Sensitive Core Set of Leading Health Indicators*, by Donner, Haworth-Brockman and Isfeld (2006). The authors are grateful to the World Health Organization for technical assistance.

### Definition of Illicit Drug Use

The 2002 Canadian Community Health Survey (CCHS) collected data on the use of cannabis, cocaine or crack, ecstasy, amphetamines (speed), hallucinogens (PSP, LSD), heroin, steroids, and inhalants (sniffing glue, gasoline, or other solvents).

### Illicit Drug Use

Illicit drug use refers to the current (within the past year) or lifetime use of any of the above.

### Any Illicit Drug Use

The CCHS asked respondents about their use of each of these drugs and substances, and created a combined category for use of any of them. [1]

<sup>1</sup> This analysis is based on Statistics Canada’s Canadian Community Health Survey, Cycle 2.1, Public Use Microdata File, which contains anonymized data collected in the year 2002. All computations on these microdata were prepared by Prairie Women’s Health Centre of Excellence and the responsibility for the use and interpretation of these data is entirely that of the authors.

<sup>2</sup> All CCHS data, for both current and lifetime use, excludes one time use of cannabis.

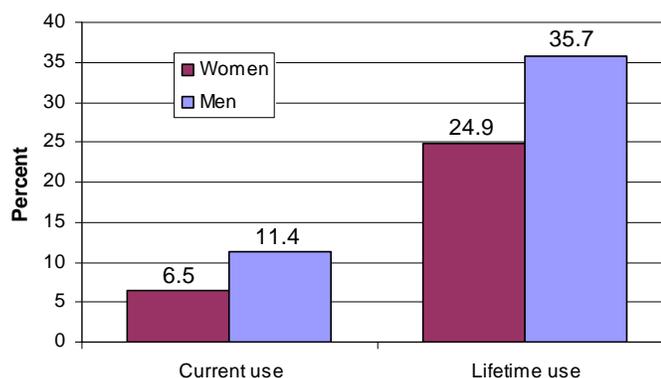




source of illicit drug use data, did not cover homeless and institutionalized populations, who are thought to have high rates of drug use. Therefore, the prevalence of illicit drug use can be interpreted as only a conservative estimate of the actual rate of drug use among Manitobans.

Overall, illicit drug use is relatively rare among women in Manitoba. Women are less likely to engage in illicit drug use than are men. According to the 2002 CCHS, 6.5% of Manitoba women aged 15 years and older reported use of an illicit drug in the past year, compared to 11.4% of men. Experimentation with drugs was more common, as 24.9% of women and 35.7% of men reported some drug use within their lifetime [2].

**Figure 1: Prevalence of Illicit Drug Use By Sex, Manitoba 2002**



**Source:** Canadian Community Health Survey (Cycle 2.1), 2002. Lifetime use= any time in life

Women aged 20 to 24 reported the highest rate of drug use, 23.4%<sup>E</sup>, compared to women of other ages. However, 32.9% of men in this age range reported drug use in the preceding year, the highest rate of any age-sex group. When young adults were asked about any past use within their lifetime, the rates grew to 50% for women, and nearly 60% for men. The prevalence of drug use among teens (aged 15 through 19) lagged only 7 to 8 percentage points behind that for 20 to 24 year olds (i.e. 16.3% and 25.2% respectively for women and men). Rates of drug use decreased dramatically with increased age, and current drug use was nearly non-existent among women after age 45 [2].

In Canada, cannabis and cocaine or crack cocaine are the most commonly used drugs and are of primary interest for data collection. Again, men are much more likely to use cannabis than are women. In Manitoba, 6.2% of women and 11.1% of men reported current use of cannabis, which accounted for nearly all of the prevalence of drug use for any of eight illicit drugs for which information was collected [2]. Among Canadians, the prevalence of cannabis use doubled from 6.5% in 1989 to 12.2% in 2002, with the greatest increases reported by teens. This increase was not observed in Manitoba, and the provincial rate for 2002 is significantly lower than the average national rate of cannabis use [3].

Although cocaine/crack cocaine is the second most commonly used illicit drug in the province, less than 1% of Manitobans reported its use to the 2002 CCHS. Rates of cocaine use for Manitobans by sex, age and regional sub-groups are too unreliable to publish, as they are associated with high sampling errors. However, 0.7% of Canadian women and 1.9% of men reported using cocaine or crack within the past year. Young men were most likely to engage in cocaine use, with a peak prevalence of 6% among 20 to 24 year olds, while the highest rate among women was 2.7%, again in the 20 to 24 age group [2]. Unfortunately, at the provincial level, published data on women's use of specific drugs other than cannabis are lacking because small survey samples do not provide reliable estimates of events as infrequent as reported drug use.





The First Nations Regional Longitudinal Health Survey (RHS), a First Nations directed survey conducted in 2002/2003, provided national baseline data for substance use among First Nations women and men. The RHS found a higher prevalence of drug use among First Nations compared to the overall Canadian population, as reported by the 2004 Canadian Addiction Survey. First Nations were more likely than Canadians overall to report cannabis use (26.7% versus 14.1%) and use of one or more of five other illicit drugs<sup>3</sup> recognized as ‘hard drugs’ (7.3% versus 3%). Among women alone, the relative disparity between First Nations and the Canadian population was somewhat greater, 5.3% of First Nations women having reported any hard drug use within the year compared to 1.8% of Canadian women [4]. Unfortunately, Manitoba First Nations survey results on drug use were not available by sex. Overall, 30% of Manitoba First Nations reported use of any illicit drugs in the past 12 months, 23.1% reported use of cannabis, and 3.6% used cocaine, crack or heroin [5].

## Discussion

### Trends & Emergent Issues in Illicit Drug Use

There has been dramatic growth in cannabis use over the past 10 years, particularly among young Canadians, although Manitoba’s rates have not changed significantly [3, 6]. Increased rates of reported cannabis use may be related to the 2001 legislation that permitted cannabis possession and production for medicinal purposes in Canada, perhaps encouraging a perception that cannabis is not harmful, or increasing individuals’ willingness to report their use of cannabis. However, the current federal government (2007) has announced that it will not re-introduce the previous government’s proposed legislation to decriminalize possession of small amounts of cannabis.

Sex differences in the prevalence of illicit drug use are well established [7]. Males are more likely to have tried drugs, to currently use them, and to use them more frequently than women [3]. Men are also more likely to have a dependence on illicit drugs [8] and to die of causes related to drug use (85.8% of deaths attributable to illicit drugs occurred among men) [9]. However, there is some evidence of a narrowing gender gap in the prevalence of drug use and similar concerns have been expressed internationally (e.g. Australia, United States, countries in the European Union). Comparisons between the 1994 Canada’s Alcohol and Other Drugs Survey and the 2004 Canadian Addiction Survey (CAS) found increases in cannabis use among men and women, and a narrowed though significant gap in prevalence rates between the sexes. The CAS also found similarities in the impact of cannabis, with 16.0% females and 18.4% males (age 15+) reporting harms from their use. Though data on crystal methamphetamine (crystal meth) is very limited in Canada, a survey of Manitoba school-aged youth found low and comparable rates of use among males (2.5%) and females (1.9%). Similar proportions of men and women are seeking treatment for addictions to crystal meth in British Columbia. As well, the 2004 CAS found similar proportions of women and men reported past year use of amphetamines (0.7% and 1.0% respectively)<sup>4</sup> [10]. Crystal meth

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<sup>3</sup> The RHS published data on reported use of any of five illicit drugs which included: cocaine or crack; hallucinogens (PCP, LSD); amphetamines or ‘speed’; heroin; and ecstasy. Thus, cannabis, steroids, and inhalants were not included in the calculation of this rate.

<sup>4</sup> The broader family of drugs to which crystal meth belongs.





is of growing concern because it is highly addictive, neurotoxic and easily produced. In 2005, Manitoba launched a strategy specific to crystal meth, an intersectoral initiative involving community agencies, law enforcement, and provincial and federal governments, that is aimed at reducing the supply and demand of the drug in Manitoba [11].

### **Health and Social Impacts of Illicit Drug Use**

Illicit drug use has consequences for morbidity and life expectancy, partially attributable to more chronic conditions and injuries. Most commonly, illicit drug use is implicated in deaths resulting from suicide, opiate or cocaine poisoning, and from HIV/AIDS acquired through injection drug use. Although fewer deaths are attributed to illicit drugs than to alcohol or tobacco, the people who die are often younger [9]. Substance misuse also co-exists with mental disorders, though it is not clear which comes first [8]. Cannabis, commonly perceived as benign, has been associated with a range of health problems, including certain cancers, schizophrenia, memory loss, premature birth and low birth weight, and a temporary loss of fertility. Research has also shown it to be especially harmful during adolescence, a period of rapid physical and sexual development [13]. Furthermore, illicit drug use often acts as an intermediate factor that interacts with other determinants of health, including poor educational attainment, low economic productivity, inadequate income and social support [14]. Drug use is also well recognized as a major contributor to social harms, including disruption to friendships, marriage and employment.

There is inadequate research on sex differences in the effects of illicit drugs, though these are beginning to be documented [7]. Health effects of drug use vary by substance, frequency and amount used, and the health status of individuals. However, women are generally recognized to be more vulnerable to the health effects of illicit drugs. Differences in the effects of ecstasy for men and women have been reported, with women experiencing more perceptual changes, impaired decision making, and long term effects like depression, mood swings, paranoia and anxiety. Women also have increased risks of physical health complications from injection drug use (IDU) [10]. IDU is a key risk factor for the transmission of HIV/AIDS and other blood-borne diseases, and represents a greater risk factor for women than for men. From 1995 to 2000, IDU accounted for 45.7% of all HIV cases among women and only 25.6% of all cases among men in Canada [9]. In Manitoba, of the 240 women testing positive for HIV during the last twenty years, 30% were infected through IDU, compared to 13% among men [12]. High risk sex behaviours, including work in the sex trade, are intervening variables which increase the risk of HIV infection for female IDUs. IDU poses particularly high risks for Aboriginal women. According to national figures compiled by the Laboratory Centre for Disease Control, IDU accounts for a higher proportion of HIV infection among Aboriginal people than in the general population, and the highest proportion among Aboriginal women (54% versus 17% for women, and 18% versus 3% for men).

### **Contributing/Concurrent Psycho-Social Factors**

There is limited research on pathways to substance abuse specific to women. A comprehensive study of the issue by Columbia University identified several key risk factors for substance abuse as unique to or more serious for girls and young women. Women were found to use drugs, tobacco and alcohol for emotional and relational reasons, such as to improve mood, increase confidence, reduce tension, cope with problems, lose inhibitions, enhance sex or lose weight [10]. Women often report a sudden onset of





substance misuse, often following a traumatic event. They tend to use substances to numb emotional pain from abuse, grief over the death of a loved one, or guilt over injury to loved ones, especially children [15]. It is unknown to what extent substance use is a cause or a consequence of mental health issues. It is widely suspected that illicit drug use, as well as misuse of pharmaceuticals, is more a matter of self-medication than a cause of mental health disorders [14]. Substance use is commonly used as a coping mechanism for pain, stress, anxiety and panic. Some research has shown cannabis use to be independently predictive of depression in both male and female adolescents. Others have shown greater risks of depression for female than male adolescents [16]. Though it is difficult to resolve causality, 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. A large proportion of these women have also been victims of domestic violence, incest, rape, sexual assault and childhood physical abuse [14, 7]. Substance use and mental health challenges also put women at increasing risk of victimization. Among adolescent girls, physical and sexual violence during dating has been associated with an increased risk of substance use, among other unhealthy behaviours [17]. Thus, victimization, mental health problems, physical health problems and substance misuse interact in direct and complex, indirect ways.

Among Manitoba's First Nations and Aboriginal peoples, substance misuse must be viewed not only in relation to personal histories of childhood abuse or intimate partner violence, but also relative to a history of victimization at the level of communities and populations. For example, the RHS on First Nations health contextualized substance misuse with a history of assimilation policies, including the residential school system, which contributed to the disintegration of traditional cultural and family structures, as well as to inter-generational impacts of child abuse. Thus, substance abuse is recognized as a coping mechanism which helps individuals to deal with the loss of identity and culture [4]. The role of systemic factors earned national recognition in a report on suicide produced for the 1996 Canadian Royal Commission on Aboriginal Peoples, which linked youth suicide, mental illness, and drug and alcohol abuse to cultural alienation and stress [18].

### **Pregnancy, Parenting & Substance Misuse**

There is greater social stigma attached to illicit drug use by women than for men, particularly for pregnant or parenting women. Research on the experiences of pregnant women with substance misuse problems and the views of service providers has demonstrated many barriers for treatment and a need for gender sensitive programs and policy [19]. The response to women's substance abuse has often been punitive and, for mothers, has carried the threat of apprehension of their children by child welfare agencies. In Canada, as in other nations (e.g. UK, USA), there have been efforts to prosecute, incarcerate and force women into treatment against their will. In Manitoba, an attempt by child welfare and justice authorities to confine and require a pregnant addicted woman (given the pseudonym 'G', and the case referred to as the 'G Case') to submit to mandatory treatment was overturned by the Supreme Court of Canada, after successful interventions by women's health advocates. The Women's Health Rights Coalition argued that court ordered treatment deters women with addictions from seeking proper prenatal and postnatal care and so undermines the health and security of women. Legal action against women also fails to address





social issues that underlie substance abuse and has been disproportionately applied to women who are poor and racial minorities [20].

## Policy Implications

Though the prevalence of drug use is relatively low for women, the evidence of a narrowing gender gap and several interacting issues are of concern. Issues of concurrent mental health problems, victimization, involvement in the sex-trade, a gender power imbalance, and risks for HIV infection are particularly important. Thus, sex specific data and a gender-based analysis of illicit drug use hold importance for health promotion and disease prevention policy, particularly with respect to the prevention of addiction, HIV infection and other blood borne diseases. Prevention strategies need to look at unique motivations and pathways for substance misuse by women and men. As the onset of substance misuse is often more sudden for women than for men, early intervention may need to occur within a narrower time frame for women [15].

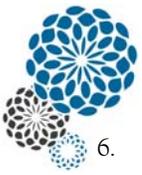
A gender sensitive approach to law-enforcement, corrections, and addictions treatment policies is also important. Harm reduction strategies that respect the self-determination of individuals while focusing on lessening harms associated with drug misuse, rather than the elimination of drug use are well regarded in Canada and central to addictions treatment. However, even in BC where harm reduction strategies are advanced, such strategies have not yet accounted for differences in risks, health concerns and barriers for vulnerable women [21]. A gender sensitive approach is important for mental health policy, where victimization and depression must be recognized as important contributing factors and consequences for women who adopt high-risk behaviours.

There is a great need for a more gender sensitive treatment of women in child welfare and reproductive health policies as these affect women substance users. In particular, the social stigma placed on women who use illicit drugs must be addressed as it impacts access to treatment and women's health outcomes, as well as those of their children.

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## CHAPTER FOUR

# Women's Sexual and Reproductive Health

Too often, discussions of “women’s health” have been limited to reproductive health. In this *Profile*, we have taken a broader approach, working within a population health framework to describe and analyze the influences of many determinants, including systemic discrimination (e.g. in employment), and socio-economic factors (such as income, domestic violence, unpaid work and so on) on the health of women. We have chosen to look at diseases and conditions common to women, the ways in which the determinants of health may operate differently for women, and the consequences of all of these factors for women’s lives.

However, sexual health is a vital and essential part of being human. The Pan American Health Organization and World Health Organization have defined sexual and reproductive health as “the experience of the ongoing process of physical, psychological and socio-cultural well being related to sexuality” [1]. Thus, no discussion of women’s health would be complete without paying careful consideration to women’s sex-specific health issues - those related to sexuality and to reproductive health, including fertility, contraception, abortion, pregnancy and childbirth.

This chapter includes information about:

1. Trends in Fertility
2. Contraception
3. Pregnancy
4. Abortion
5. Giving Birth
6. Care for Pregnant and Birthing Women
7. Medical and surgical Interventions at Birth
8. Complications of Childbirth
9. Postpartum Care and Breastfeeding
10. Menopause
11. Sexually Transmitted Infections and HIV/AIDS

Some material in this chapter was previously produced for the World Health Organization in *Manitoba Field Testing of Gender-Sensitive Core Set of Leading Health Indicators*, by Donner, Haworth-Brockman and Isfeld (2006). The authors are grateful to the World Health Organization for technical assistance.





## Trends in Fertility and Sexual Activity

Fertility rates in Canada and Manitoba declined from the time of Manitoba's entry into Confederation in 1870 to 1945. This was the result of industrialization and urbanization, improved public health (clean drinking water, sewage treatment, immunization, etc.), early birth control methods, economic depression and wars. This was followed by the "Baby Boom" of 1947 to 1966, after World War II. The most recent decline in fertility, from 1967 to the present, is the result of many factors including women's demands for gender equality, new contraceptive technologies, women's increased labour force participation and higher education, and changing family structures [2].

Declining fertility rates are also linked to women's decisions to delay motherhood, as older first-time mothers tend to have fewer children. Canada's current Total Fertility Rate<sup>1</sup> is 1.5 children per woman, below the population replacement rate of 2.1. This low rate contrasts with the expressed desires and expectations of many women and men in Canada to have two or more children [2, 3]. These issues are discussed in more detail below in Giving Birth.

While women are having fewer children on average, there is a corresponding trend to earlier sexual activity. The median age at first intercourse has steadily declined in Canada. Among those aged 15 to 24 years in 2000/01, the average age at first intercourse was 16.8. It was 17.9 among those then aged 25 to 34 years, 18.7 among those aged 35 to 44 years and 19.2 among those aged 45 to 59. Women reported beginning sexual intercourse at a later age than men – 18.8 years on average, compared to 18.0 for men. The measure of age at first intercourse is not a complete indicator of when sexual activity begins, as it excludes lesbian women and other forms of sexual expression [1].

## Contraception

Access to contraception is essential to the health and well-being of women, their families and communities [4]. From 1892 to 1969, it was illegal to advertise or sell contraceptives in Canada, and the only way in which women could have sole control over if and when to have children was to abstain from sexual intercourse [5].

The contraceptive choices that women make can have long-term consequences [6]. Access to contraception can also improve the social and economic circumstances of women and their families [7].

*For many women, the ability to control their fertility has enhanced their ability to control their lives; however, with this power has come a greater responsibility for contraception in a relationship. Given that the majority of contraceptive methods available are made to be used by women and that the consequences of*

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<sup>1</sup> Total fertility rate (TFR) is the average number of children that would be born to each woman if all women lived to the end of their childbearing years and bore children according to the fertility patterns of the current year. A TFR of 2.1 is considered to be the replacement rate for the population — i.e., the rate necessary to maintain the current population size [2, 3].





*a contraceptive failure can have a greater impact on the life and health of a woman than on her partner, this is a vital issue in women's health [6, p. 1]*

Despite the importance of contraception in the lives of women and men, comprehensive data about the use of contraceptives by Canadians are not available. Two partial data sources are available - the Canadian Community Health Survey and the Canadian Contraception Study.

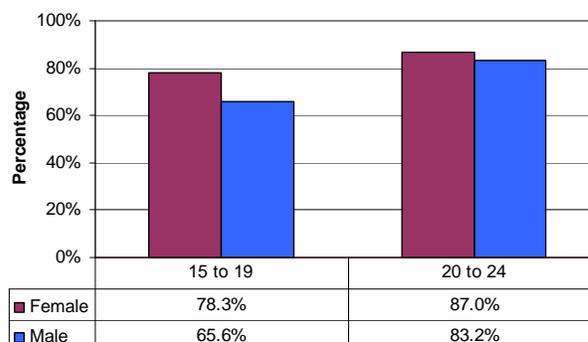
The Canadian Community Health Survey (CCHS) Cycle 2.1 included questions about the use of contraceptives among youth aged 15 to 24 years of age. This question was asked of those who reported that they had had sexual intercourse in the preceding 12 months, and who were not pregnant at the time of the interview. This question may have excluded sexually active gay and lesbian youth. While contraception is not an issue for them, safer sexual practices are. (See STIs below.) As illustrated in Figure 1,

female youth were more likely to report using contraception than male youth. About 84% of females aged 15 to 24 reported usually using some form of contraception. The rate was higher among those aged 20 to 24, than among those aged 15 to 19 [8].

Those who answered yes to this question were then asked what type of contraception they usually used. Figure 2 shows that oral contraceptives were the overwhelming choice

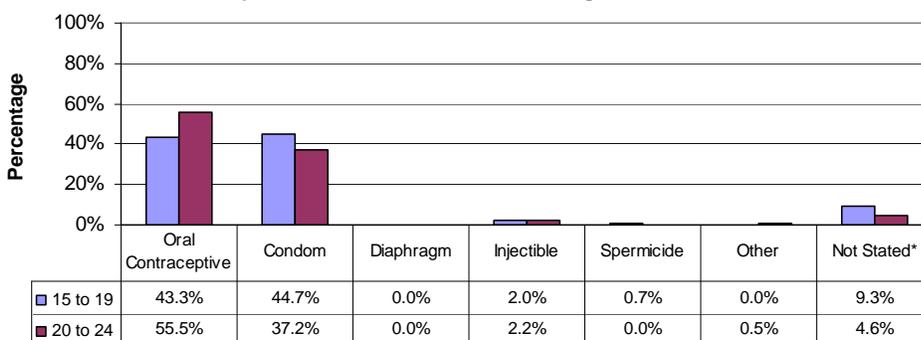
of young women aged 15 to 24. Just over half of respondents indicated that this was their usual method of contraception, followed by condoms, which was the usual method of about 40% of these young women [8]. Earlier research about the use of oral contraceptives by Ontario women showed that single women, women with higher levels of education, women with higher incomes, and those who identified themselves as “white” were more likely to have used oral contraceptives than other women [6]. Oral contraceptives are highly effective in preventing pregnancy and are solely within a woman's control. However, unlike condoms, which have a higher contraceptive failure rate, they do not protect against sexually transmitted infections.

**Figure 1**  
Percentage of Sexually Active Manitoba Youth Reporting Usually Using Contraception



Source: Canadian Community Health Survey Cycle 2.1

**Figure 2**  
Type of Contraception Usually Used Sexually Active Manitoba Females Aged 15 to 24 Years



Source: Canadian Community Health Survey Cycle 2.1

\* “Not Stated” includes those whose responses were inconsistent. All eligible female participants responded to this question.





The second major source of information about contraceptive use is the Canadian Contraception Study (CCS). The CCS is a self-reported postal survey, conducted by a private market research firm and funded by Janssen-Ortho Inc., a pharmaceutical firm that markets oral contraceptives. The most recent edition is the fourth in a series of such studies conducted from 1995 to 2002. From amongst a pre-recruited panel of households maintained by the market research firm, 3,345 women aged 15 to 44 years of age were randomly selected and mailed the questionnaire. About 47% of them responded [4]. The CCS provides more complete information than the single question asked in the CCHS. However, it is limited by the willingness of potential respondents to first be recruited by a private market research firm, and to then complete a detailed written survey about intimate matters. The women who responded to this survey were more highly educated than women in the general Canadian population [4]. The questions were asked only of women and so do not describe men's experiences of contraception.

Contraceptive prevalence results from CCS 2002 are summarized in the table below. Data are not published about individual provinces. Oral contraceptives were the most commonly used form of contraception among all women aged 18 to 34 years of age. Among women aged 35 to 44 years of age, married women were most likely to use female sterilization and unmarried women were most likely to use oral contraceptives.

**Table 1.2. Methods of Birth Control Currently Used, by Age and Marital Status, by Women Who Have Ever Had Intercourse, CCS 2002 (%)\***

Method	All Women	Married			Unmarried			
		Total	18 to 34	35 to 44	Total	15 to 17	18 to 34	35 to 44
OCs	32	21	29	13	51	65	56	17
Condom	21	15	18	12	32	42	35	11
Sterilization (male and female)	22	32	16	46	5	0	2	23
Sterilization, male	15	22	10	32	3	0	2	10
Sterilization, female	8	11	7	14	3	0	1	14
Withdrawal	6	6	8	4	7	5	8	6
Injection (DMPA)	2	1	3	0	4	7	4	4
IUD	1	1	1	2	1	0	1	2
Rhythm	2	3	5	1	1	1	0	2
Hysterectomy	3	4	1	6	1	0	0	5
Spermicides (foam, jelly, sponge)	1	1	0	1	2	0	3	2
Currently pregnant	4	6	11	1	2	0	2	2
Currently trying to become pregnant	5	7	12	3	2	0	2	2
I do not use any method	9	12	9	14	4	0	3	7
Not applicable, I am not currently having intercourse	6	1	1	2	13	13	11	26

\*Column totals may exceed 100% as women were allowed to choose more than 1 method.  
CCS: Canadian Contraception Study; OCs: oral contraceptives; DMPA: depot medroxyprogesterone acetate; IUD: intrauterine device.

Source: Fisher et al. The 2002 Canadian Contraception Study, Part 1 [4].





About 9% of Canadian women at risk of pregnancy (those who were having sexual intercourse and who were neither pregnant, nor wanting to become pregnant) reported not using any form of contraception. An additional 6% relied on male withdrawal during intercourse to prevent pregnancy [4].

This survey also shows a decrease in the use of condoms from 1995 to 2002. In 1995, 25% of all respondents reported currently using condoms; in 2002, this had decreased to 18%. In 2002, of those women who reported using oral contraceptives, only 13% reported always using condoms. This decline in condom use has not been accompanied by increases in abstinence, nor in increasing numbers of women reporting that both they and their male partners had been thoroughly tested for sexually transmitted infections. It has, however, been matched by reported increases in the prevalence of major sexually transmitted infections among women, including Chlamydia, gonorrhoea, syphilis and HIV/AIDS [4, 7].

Rates of female sterilization have also decreased from 16% of respondents to the first CCS in 1993, to 7% of respondents to the 2002 survey [4].

## Condom Use

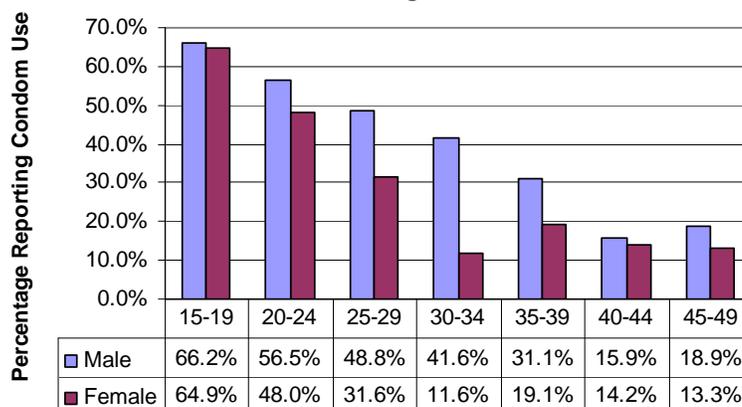
Proper condom use is an effective means of preventing STIs, such as Chlamydia, gonorrhoea, and HIV. Sexually active individuals who do not use a condom in penetrative sexual activity make decisions that fundamentally affect their lives and their health. The risks and impacts of unprotected sex are particularly great for young adults. The decision to use condoms is affected by emotional health, sexual attitudes and behaviours, and gender equity (see Sexually Transmitted Infections, this chapter.)

**Condom Use** during last intercourse, as reported by respondents of the Canadian Community Health Survey, Cycle 2.1. The question was asked only of those who were sexually active in the last year and who were either single, or if married or living common-law, identified themselves as having more than one sexual partner in the last year [9]. It therefore does not measure condom use among the entire sexually active population.

The 2003 Canadian Community Health Survey (CCHS) examined sexual activity, condom use and sexually transmitted diseases among older teens and young adults. About a third of young adults in Canada have had sex with more than one partner in the past year.

Among Canadians overall, 33.8% of women and 42.7% of men, who were at high risk (see box), reported using a condom during the last time they had sexual intercourse [10]. Interestingly, analysis of Canadian data found that non-

**Figure 3**  
Condom Use During High Risk Sex - Last Time  
Manitobans Aged 15 - 49



Source: CCHS 2.1 Custom Tabulation [10]





use of condoms increased with age among both high-risk females and males. Younger people were most likely to report using a condom, and the rate decreased with each age group<sup>2</sup> [10]. Older women and men are more likely to perceive that they are not at risk from unprotected sex. In every age group, women were less likely to report using a condom during last intercourse than were men. The question was not asked of those 50 years of age and older.

For females, but not for males, earlier first intercourse was associated with non-use of condoms. Among females whose first experience of sexual intercourse occurred at age 13 or younger, 58.8% did not use a condom at last intercourse. In comparison, the reported prevalence of non-condom use was 32.1% for their male counterparts and 36.5% for females whose first experience occurred at age 18 or older [11].

Data from the *Canadian Contraception Study 2002* show a decrease in the use of condoms from 1995 to 2002. In 1995, 25% of all women who participated in this survey reported currently using condoms; in 2002, this had decreased to 18% [4].

Despite their effectiveness as contraceptives, and in preventing STIs and HIV/AIDS, many women at risk of STIs and/or unplanned pregnancy do not use condoms. Condoms place control of contraception and the prevention of STIs in the hands of men. In situations where women have less power within relationships, this can be problematic. This is particularly true if women fear their male partners will abandon them, or if they fear violent repercussions. Power differentials and potential for violence can therefore prevent women from protecting themselves. There are risks as well for women and men who believe their sexual relationship is monogamous, when it is not. This is consistent with research and findings about the transmission of HIV/AIDS in many other parts of the world [12, 13].

While female condoms are available in Canada, they have not been well received by women, because of difficulty in use and expense [14].

Public education about the advantages of condoms is not consistent, and is typically directed to teenagers. Manitoba's community health centres, and other public health organizations, have had long-standing public awareness campaigns to increase condom use. They also make condoms freely available to clients.

While public education campaigns to date have been focused on younger women and men, these data illustrate the need to provide education on the ongoing need for safer sex among women and men in their middle years and older. The Women's Health Clinic (Winnipeg) and the Manitoba Sexuality Education Resource Centre have responded to this need, by jointly developing a program promoting safe sex among older Manitobans. The program includes a poster with a bouncing condom, and a caption that reads "Will you still need me when you're 64?" [15].

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<sup>2</sup> This analysis is based on Statistics Canada's Canadian Community Health Survey, Cycle 2.1., Public Use Microdata file, which contains anonymized data collected in the year 2003. All computations on these microdata were prepared by Prairie Women's Health Centre of Excellence and the responsibility for the use and interpretation of these data is entirely that of the authors.





## Pregnancy

Each year, about 18,000 Manitoba women become pregnant. In 2003, about three-quarters of these pregnancies resulted in a live birth; 4% ended due to fetal loss (stillbirths and miscarriages) and about 20% ended in therapeutic abortion. In 2003, Manitoba women had the highest pregnancy rate of women living in all ten provinces (64.3/1,000 compared to a Canadian average of 55.2/1,000) [16].

From 1974 to 2002, the pregnancy rate among Manitoba women declined by 25%, from 84.5/1,000 females per year to 63.1/1,000. In Canada as a whole, pregnancy rates declined by 27%, from 76/1,000 in 1974 to 55 per 1,000 in 2002. Pregnancy rates rose slightly, for the first time in many years, in both Manitoba and Canada in 2003 [16].

Since 1994, teen pregnancies in Manitoba and in Canada have been decreasing. However, in 2003, Manitoba still had the highest rate of teenage pregnancy in Canada (45.2/1,000 females aged less than 20, compared to 27.1 for all of Canada). In 2003, 2,212 girls and young women under the age of 20 became pregnant. Of these, 40 were under the age of 15 years, 744 were aged 15 to 17 and 1,428 were aged 18 to 19 [16]. It is noteworthy that while age at first pregnancy has increased, age at first sexual intercourse has lowered over time. In 2000/01, the average age of first intercourse was 16.8 among those who were between 15 to 24 years at that time, 17.9 among those aged 25 to 34, 18.7 among those aged 35 to 44 and 19.2 among those aged 45 to 59 [1].<sup>3</sup>

While teen pregnancies have declined, pregnancies among Manitoba women aged 35 and older have been increasing, as some women postpone motherhood to concentrate on more education and/or building a career and income base. In 2003, 12.4% of pregnancies occurred among women aged 35 and older, compared to 8.9% a decade earlier. Pregnancy rates have remained highest among women aged 25 to 29 and in 2003, 27.4% of pregnancies (5,019) occurred among women in this age group [16].

Pregnancy rates also vary among Manitoba's Regional Health Authorities (RHAs). Figure 4 shows the age at first pregnancy of Manitoba women from April 1, 2001 to March 31, 2004<sup>4</sup>. Northern women were more likely than women in other parts of Manitoba to have their first pregnancy younger than 21 years of age. Winnipeg women were the most likely to have their first pregnancy at age 30 and older [17].

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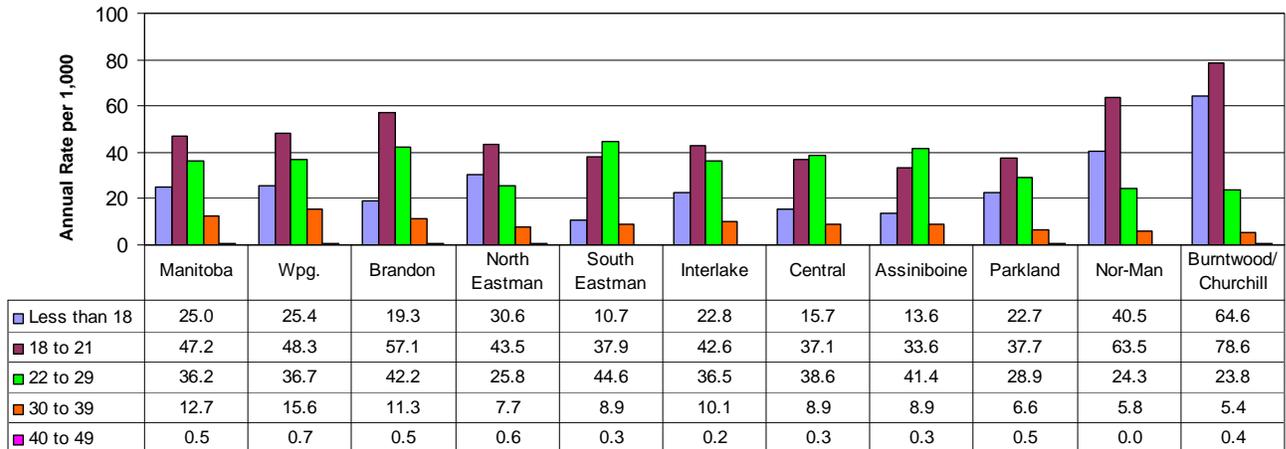
<sup>3</sup> Age at first intercourse, while important as a measure of risk of pregnancy and sexually transmitted infections, is limited because it excludes the sexual lives of lesbian and transgendered women, and defines sexual activity as only vaginal intercourse.

<sup>4</sup> Note that only those pregnancies that resulted in hospitalization for either a live birth or an abortion are included. Those pregnancies that resulted in fetal deaths (either stillbirths or miscarriages) or those that were terminated by abortion at a clinic are not included. Home births are also excluded.





**Figure 4**  
**Age at First Pregnancy \* - Manitoba Women**  
**2001/02 to 2003/04**



\* See Footnote 4.

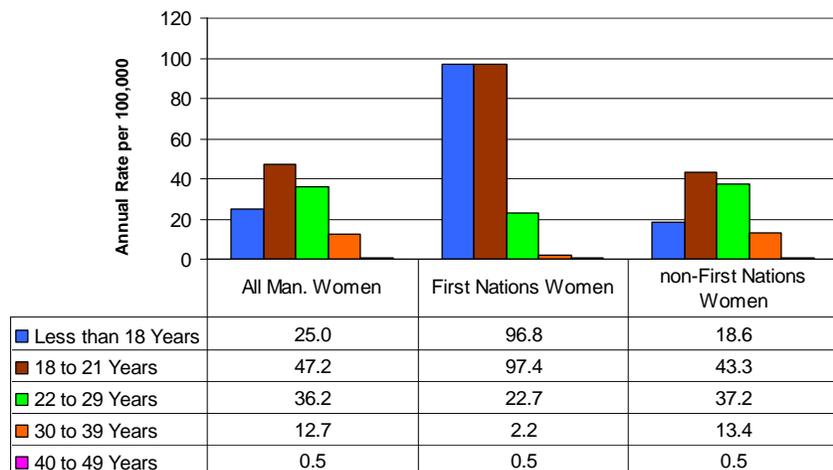
Source: Manitoba Health, Health Information Management, Custom Tabulation [17]

About 10% of women who experienced their first pregnancy during the three years from April 2001 to March 2004 were First Nations women. As

illustrated by Figure 5, First Nations women<sup>5</sup> also tend to be younger at the time of their first pregnancy than are non-First Nations women.

Before and during pregnancy, women's exposure to nutritional, infectious, and other environmental factors, such as radiation, pharmaceuticals, and toxic chemicals may influence their own health and that of their infants. Some of these exposures contribute to the total incidence of birth

**Figure 5**  
**Age at First Pregnancy - First Nations and non-First Nations Women**  
**Manitoba 2001/02 to 2003/04**



\* See Footnote 4

Source: Manitoba Health, Health Information Management, Custom Tabulation [18]

<sup>5</sup> Manitoba Health includes in its definition of First Nations people all those who, through self-declaration, have advised Manitoba Health that they are residents with Treaty Status. This system includes Manitobans living both on and off of Reserves. It is a voluntary system, which therefore does not include all First Nations people. From 1992 to 2001, the average annual number of First Nations people in this data set was 73,591. In 1998, there were approximately 85,959 First Nations people in Manitoba. Therefore, the Manitoba Health First Nations data set represented about 86% of the total First Nations population at that time [19]. All Manitobans who have not declared to Manitoba Health that they are First Nations people are considered to be non-First Nations. This includes, for example, Aboriginal people who are Métis.





defects; however, the percentage attributable to each is unknown. It is now believed that most birth defects are the result of multiple factors such as an interaction between one or more genes and the prenatal or pre-conceptual environment [20].

Although there is no routine surveillance of women's exposure to hazardous substances during pregnancy, we do have survey data about two exposures – tobacco smoking and alcohol consumption.

In addition to the health risks of smoking for women, tobacco smoking during pregnancy can have adverse health effects on the fetus and child. It increases the risks of low birth weight, preterm birth, miscarriage, stillbirth, sudden infant death syndrome and other illnesses [21]. As these risks have become better known and understood, the rate of smoking during pregnancy has decreased [21]. Among Manitoba women who gave birth from 1997 to 2002, 65% reported not smoking during their pregnancy, while 17% reported smoking daily and 17% reported smoking occasionally<sup>6</sup> [22]. Younger women, women with lower levels of education, unmarried women and women living in low-income neighbourhoods are more likely to smoke during pregnancy than are other women [23]. There is also evidence that the interplay between biological, genetic, and social factors can determine tobacco smoking and nicotine dependency among women [24].

Traditional smoking cessation programs for pregnant women have focussed on fetal health. These have not been resoundingly successful. The need for women-centred smoking cessation programs that incorporate an understanding of the social environments in which women live (including the smoking behaviours of their partners) as well as harm reduction and stigma reduction, is described in Chapter Three [24].

Similarly, alcohol consumption during pregnancy poses risks for both women and their infants. Alcohol consumption by pregnant women can result in Fetal Alcohol Spectrum Disorder (FASD), which includes irreversible neurodevelopmental, behavioural and cognitive abnormalities. No safe level of alcohol consumption during pregnancy has been determined, and Health Canada recommends that women who are pregnant, or who may become pregnant, should not consume alcohol [21]. As with smoking cessation programs aimed at pregnant women, FASD prevention programs have traditionally focused on fetal health alone.

*To be effective in FASD prevention efforts, we need to move from a focus on women's alcohol use alone to increased understanding of related health and social problems experienced by women that contribute to FASD, and to provide a network of supports that directly address these contributing factors. Community health policy that addresses broader determinants of health is also foundational to successful FASD prevention. [25, page 5]*

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<sup>6</sup> Data are from the Canadian Community Health Survey. Note that residents of First Nations Reserves and those living on military bases were excluded. Percentages for daily and occasional smoking should be interpreted with caution due to sampling variability.





Manitoba's Stop FAS Program is an example of this. It uses mentors to provide support through a three-year, one-to-one, intensive home visitation program. Mentors help women to identify personal goals, obtain drug and alcohol treatment, stay in recovery, get health care for themselves and their children, address housing, domestic violence and child custody problems, overcome barriers to service, and resolve other problems related to their substance abuse. Mentors continue to work with women regardless of whether or not they have custody of their child(ren). Women who relapse are not excluded from the program [26].

Among Manitoba women who gave birth from 1997 to 2002, 94% reported not consuming alcohol during their pregnancy<sup>7</sup> [22]. However, as there is a strong social stigma attached to drinking alcohol during pregnancy, this may be an understatement. (See Chapter Three for a more detailed discussion of alcohol use by women.)

## Abortion

Access to safe abortion is critical to women's health. Without safe abortions, women are at risk; 13% of maternal deaths globally result from unsafe abortions. Other women suffer long term health consequences including infertility. Unwanted pregnancies may also threaten women's mental health. In June 1999, at a Special Session of the United Nations General Assembly, the governments of the world recognized unsafe abortion as a major public health concern. They pledged their commitment to reduce the need for abortion through expanded and improved family planning services [27]. Although contraception is widely available in Canada, unwanted pregnancies still occur due to contraceptive failure, difficulties with use, non use, or as the result of sexual assault.

Abortion became legal in Canada in 1988 (see box on next page). Access to abortion services, however, remains uneven. In many provinces, abortions remain available only in hospitals. In Manitoba, abortions have been available as an insured benefit through the Medicare system, but only in hospitals, and only in Winnipeg and Brandon. Women residing outside of these cities must travel long distances to obtain an abortion, often hundreds of kilometres. Northern women's travel costs are covered through the Northern Patient Transportation Program.

The Morgentaler Clinic in Winnipeg operated privately from 1983 until 2004, at which time it became a community owned non-profit clinic, renamed Jane's Clinic. In 2005, Jane's became part of the Women's Health Clinic of Winnipeg, a well-established community health centre. Abortions at the Clinic are now funded through the medicare system, in the same manner as abortions taking place in hospital. While the legal issue has been settled for almost 20 years, some opponents of abortion continue to challenge women's right to these services.

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<sup>7</sup> Data are from the Canadian Community Health Survey. Note that residents of First Nations Reserves and those living on military bases were excluded.





## Reporting Abortion Information

Data about abortions in Canada are incomplete. Since 1969, Statistics Canada has published an annual Therapeutic Abortion Survey (TAS) [29]. For abortions occurring in hospitals across Canada, information is electronically abstracted from the Canadian Institute for Health Information's (CIHI) Discharge Abstract Database. However, abortions taking place in clinics are reported voluntarily, and only aggregate data are provided. CIHI has estimated that as of 2000, the TAS represents approximately 90% of all abortions performed in Canada for Canadian residents. CIHI also receives information from clinics in 13 U.S. states about abortions performed on Canadian women [30, 31].

In 2003, there were 3,670 surgical abortions performed on Manitoba women and reported through the TAS. Of these, 80% (2,935) were done in hospitals and 20% (735) in clinic. Abortions were most common among women aged 20 to 24 years of age, who had a reported abortion rate of 34.4/1,000 [32].

Manitoba reported 14.7 abortions per 1,000 females aged 15 to 44 years, the same as the Canadian average. Another way to view this is to consider the number of abortions per 100 live births. In Manitoba in 2003, there were 26.3 abortions reported for every 100 live births, lower than the Canadian average of 31.0/100 live births [32].

## New and Emerging Issues in Safe Abortion Access

There are now two alternatives to surgical abortions for women who wish to terminate unplanned pregnancies. Drugs (Methotrexate plus prostaglandins) can be used to cause medical abortions which provide women with more privacy, and are less invasive than surgical abortions. While no drugs are licensed for use as abortifacients in

### Abortion in Canada – A Brief History

In 1869, the Canadian Parliament enacted a criminal law which prohibited abortion, unless the continuation of the pregnancy threatened a woman's life. Performing or having an abortion was punishable with life imprisonment. This was followed in 1892 with a law prohibiting the sale, distribution and advertisement of contraceptives. These laws were to remain virtually unchanged until 1969 [28].

In 1969, the law was changed, and abortion became legal if a committee of at least three physicians determined that continuing the pregnancy threatened the woman's life or health. Health was defined broadly, to include mental health [28, 29].

Beginning in the late 1960s, the women's movement in Canada made access to safe abortion one of its primary goals. Dr. Henry Morgentaler, a Montréal physician, defied the law, and in 1975 he was convicted and imprisoned. Legal actions against Dr. Morgentaler and others associated with his clinics in Montréal, Toronto and Winnipeg continued until January 1988, when the Supreme Court of Canada struck down the provision of the *Criminal Code* that restricted access to safe abortions (Sec. 251). Section 7 of the *Canadian Charter of Rights and Freedoms Charter*, which had been adopted in 1982, guarantees to Canadians "life, liberty and the security of the person." The justices determined that forcing a woman to carry a pregnancy to term was a profound interference with her body, and an infringement of security of the person [28].

Abortion is now decriminalized in Canada, and has the same legal status as other surgical procedures.





Canada, we do know that there is off-label use [33]. The extent to which physicians are currently prescribing pharmaceuticals for medical abortions, and the effect of this on the published abortion rates, are not yet known. If medical abortions are an alternative to surgical abortions, then the traditionally reported abortion rate will decrease. If, on the other hand, some of the women who obtain medical abortions would not have had a surgical abortion, then the complete rate of women choosing to terminate a pregnancy would be higher.

In 2005, the federal and provincial governments acted to make Emergency Contraception (using the drug *Levonorgestrel*, commonly known as “the morning after pill,” and marketed in Canada as Plan B<sup>®</sup>) available without prescription. Plan B<sup>®</sup> is most effective if used immediately after unprotected vaginal intercourse, and must be used within 72 hours to prevent pregnancy. Removing the requirement for physician prescription has been shown to increase its use [34].

However, pharmacists are required to keep it “behind the counter” and women must ask for it. This restricted access creates unnecessary barriers, interferes with women’s privacy, and increases costs, as some pharmacists charge a “counselling fee” to dispense this medication. Privacy is of particular concern to women in rural and remote communities [35, 36]. Canadian women have responded to the increased availability of Plan B<sup>®</sup>. The manufacturer reported that sales in the first quarter of 2007 had increased 60% over the same period in 2006 [37].

## Giving Birth

### Where Birthing Mothers Live - Births by RHA

In 2003, 13,940 babies were born to Manitoba women, a slight increase from the 13,888 born in 2002. Manitoba’s birth rate steadily declined from 1921 when such data were first collected, to 2002, and increased slightly in 2003. In 2003, the birth rate among Manitoba women was 48.9/1,000 females aged 15 to 49. This was the second highest rate among the Provinces, after Saskatchewan, and higher than the Canadian average of 41.3/1,000<sup>8</sup> [16, 38].

Birth rates vary among women living in different regions of Manitoba. They are highest in northern Manitoba and lowest in Winnipeg [39]. Figure 6 shows the decline in birth rates by RHA among Manitoba women from 1988/89 to 2002/03<sup>9</sup>. Note that these data are presented by the place of residence of the mother, and not by the location of the birth.

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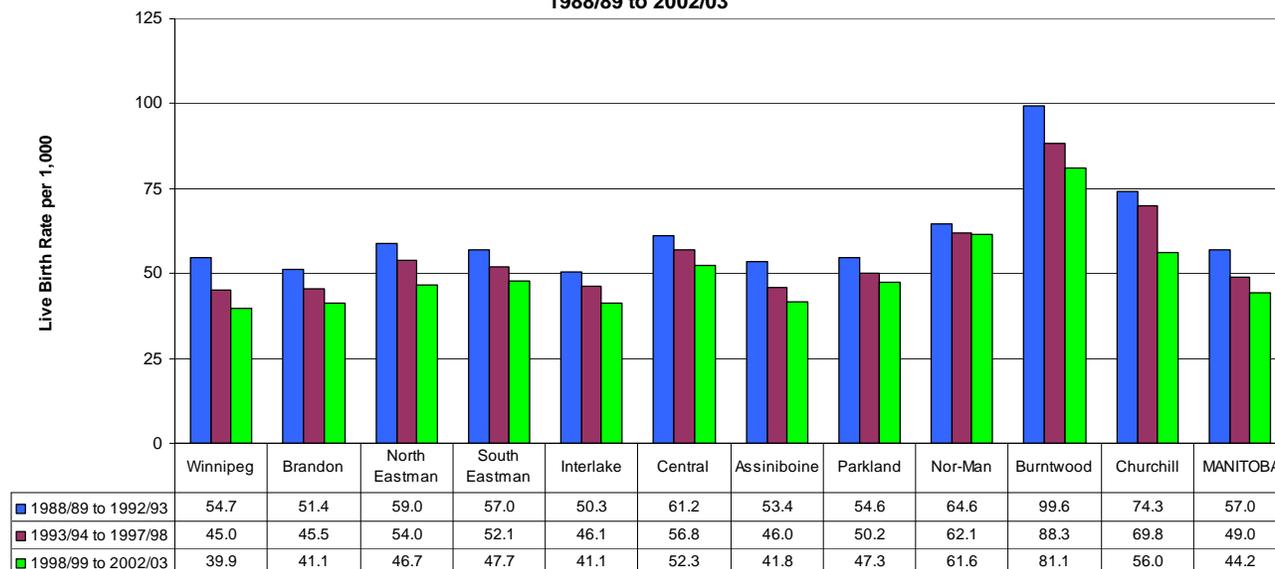
<sup>8</sup> The term “births” is used here to refer to live births. Stillbirths are not included.

<sup>9</sup> Manitoba Health calculates the birth rate as the rate per 1,000 females aged 12 to 49 years of age.





**Figure 6**  
**Birth Rates by RHA**  
**1988/89 to 2002/03**



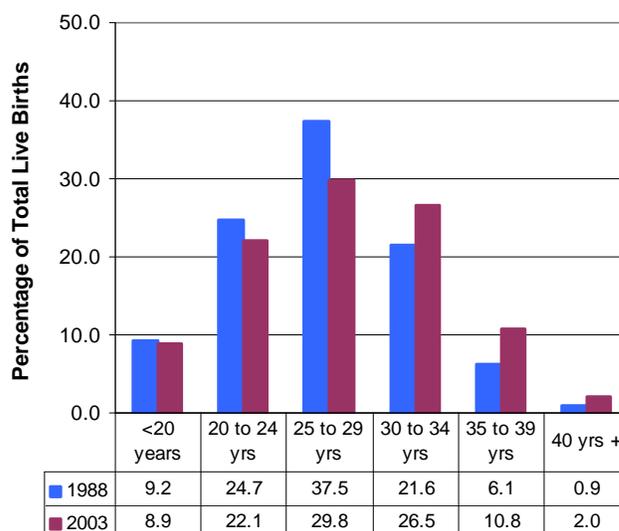
Source: Manitoba Health. Report of Manitoba Health's Ministerial Working Group on Maternal/Newborn Services [40]  
 Birth rate is rate of live births per 1,000 females aged 12 to 49.

## Trends in Birthing – Age and Socio-economic Status

One reason for Manitoba's high birth rate, compared to other provinces, is the teen birth rate, which, at 25.3/1,000 remains much higher than the Canadian average of 14.4/1,000, and second only to Saskatchewan. In 2003, 9% of Manitoba births were to girls and young women under the age of 20 years, compared to 4.5% for all of Canada. However, it is important to note that Manitoba's teen birth rate has continued to decrease from a high of 37.7/1,000 in 1991 [16].

Like women in other parts of Canada, more Manitoba women are delaying childbirth. In 2003, 12.8% of Manitoba women who gave birth were 35 years of age and older and 2% were 40 and older [16].

**Figure 7**  
**Live Births by Age Manitoba 1988 and 2003**



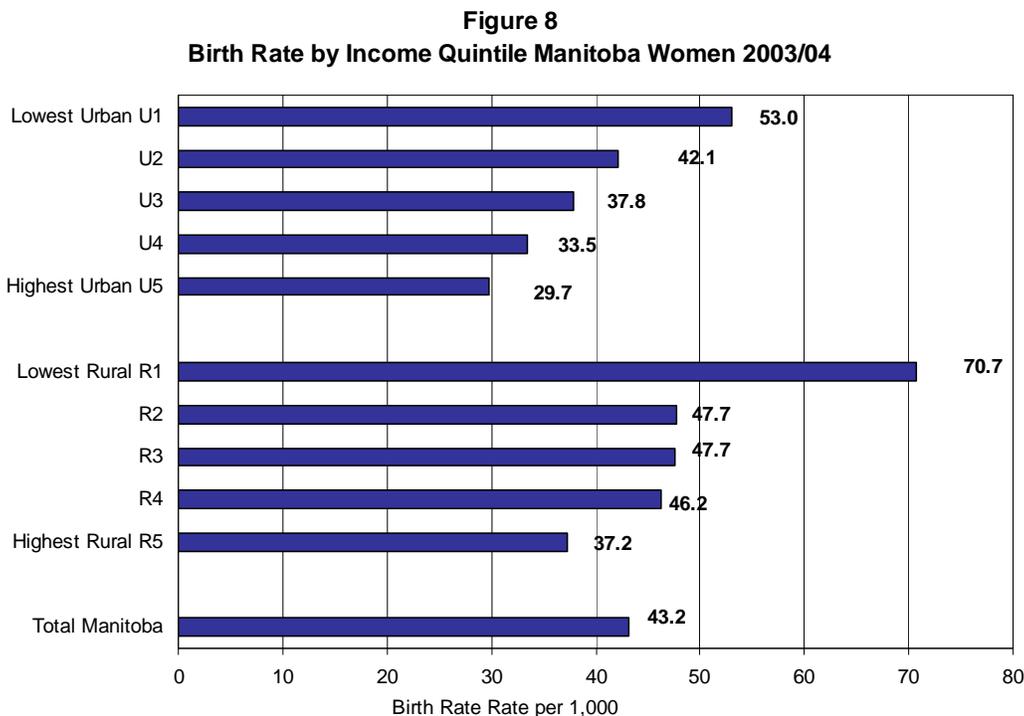
Source: Statistics Canada, CANSIM Table 106-9002 [16]





There are powerful economic incentives to delay childbirth. Increasingly, women are opting to postpone childbirth until they have completed their post-secondary education, and have become established in a career. Economically, this makes sense, since higher levels of education are linked to higher incomes, greater financial independence and increased labour force participation, all of which are associated with improved health status [3, 41]. However, older women may have more difficulty becoming pregnant. Increased maternal age is also associated with greater risk of complications during pregnancy and birth and increased risks for their babies. This presents challenges for the health care system, as well as for those women, their children and family members. Healthy behaviours during pregnancy and good care during pregnancy and birth can improve the health of older women and their babies, as for other pregnant women [21].

Canadian research has shown a growing income disparity among first time parents. First-time mothers and fathers are generally older and better educated than those of their own parents' generation. However, younger first-time parents have much lower levels of education, employment and income than those who delay childbirth, and this gap has widened over time. Women who have their first child at a younger age may curtail their education, rather than postpone it, because of the difficulties associated with trying to pursue post-secondary education while caring for children and working outside of the home, thus limiting their future economic potential. The disparities between older and younger first-time parents may contribute to increasing inequalities in Canadian society, which are also linked to poorer population health [41, 42].



Source: Manitoba Centre for Health Policy

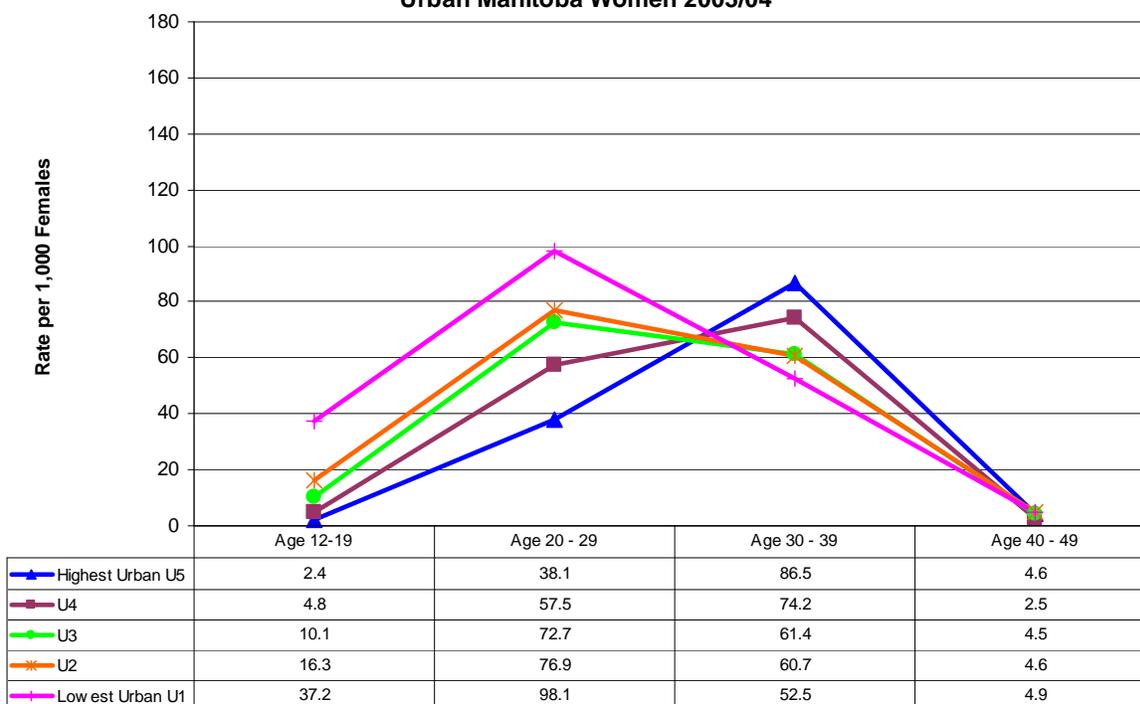




Figure 8 shows the birth rates by income quintile for urban and rural Manitoba women who gave birth in the 12 months from April 1, 2003 to March 31, 2004<sup>10</sup>. In 2003/04, about 44% of births in Manitoba were to rural women and about 56% were to urban women. Urban women have lower birth rates than their counterparts in other parts of the province, and in both rural and urban regions, increasing income is associated with lower birth rates.

When both age and socioeconomic status are considered, interesting differences emerge. Among rural women, birth rates peak in every income group among women aged 20 to 29. Among urban women, up to age 29, low income women are more likely to have babies and the income gradient as above holds. However, after age 30, the income gradient is reversed and **higher** income is associated with **higher birth rates**. This bifurcation is the result of delayed childbearing among higher income women as discussed above.

**Figure 9**  
**Birth Rates by Age & Income Quintile**  
**Urban Manitoba Women 2003/04**



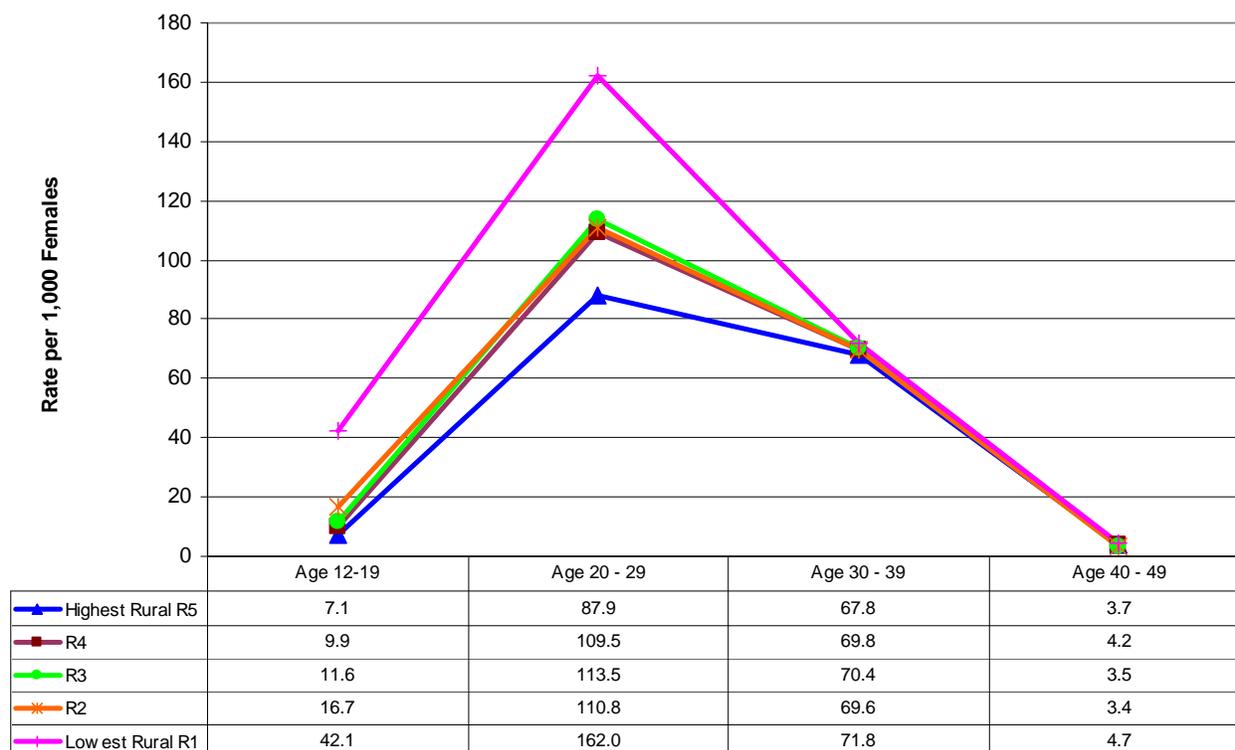
Source: Manitoba Centre for Health Policy

<sup>10</sup> “Urban” includes women in the RHAs of Winnipeg and Brandon. “Rural” includes all other RHAs.





**Figure 10**  
**Birth Rates by Age & Income Quintile**  
**Rural Manitoba Women 2003/04**



Source: Manitoba Centre for Health Policy

## First Nations Mothers

First Nations women<sup>11</sup> may follow a different path.

In 2003/04 First Nations women were more than twice as likely to give birth as were other Manitoba women. Their birth rate was 87/1,000 women compared to 39/1,000 women for other Manitoba women. Expressed another way, in 2003/04, First Nations women, representing about 7% of the population, gave birth to about 15% of the babies.

Like other Canadian women, First Nations women are having fewer babies than women of earlier generations. Across Canada, the Total Fertility Rate for First Nations women decreased from 4.4 children per woman in 1974 to 2.9 in 2000<sup>12</sup> [43].

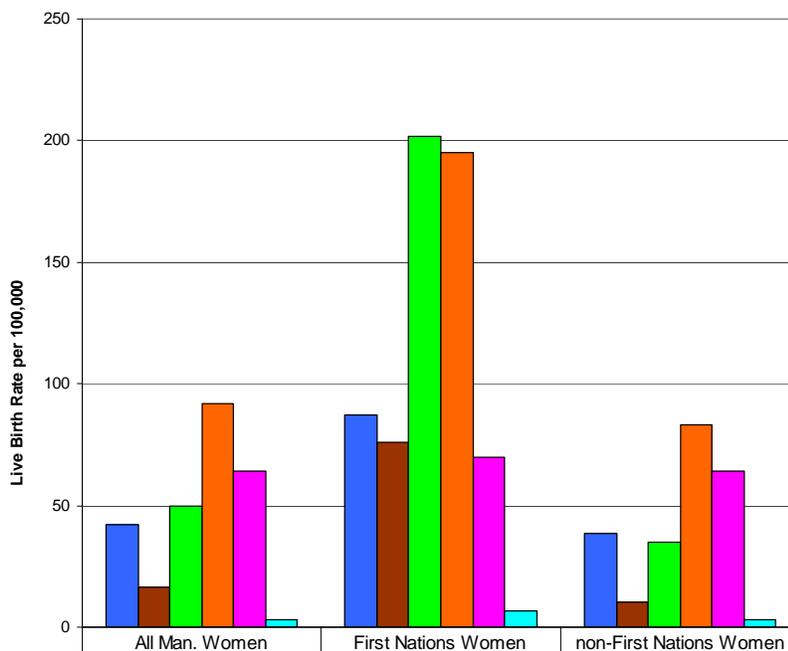
<sup>11</sup> “First Nations” refers here to women who self identified to Manitoba Health. See footnote 5.

<sup>12</sup> The Total Fertility Rate for all Canadian women is 1.5. Refer to page 2 of this chapter.





**Figure 11**  
**Maternal Age at Birth - First Nations and non-First Nations Women**  
**All Births, Manitoba 2003/04**



■ All Women	42.1	87.2	38.5
■ Less than 18 Yrs.	16.4	75.8	10.2
■ 18 to 19 Yrs.	49.8	202.0	35.0
■ Rate 20 to 29 Yrs.	92.0	195.0	83.0
■ Rate 30 to 39 Yrs.	64.3	69.6	63.9
■ Rate 40 to 49 Yrs.	3.3	6.7	3.2

Source: Manitoba Health, Health Information Management, Custom Tabulation [21]

## Care for Pregnant and Birthing Women

Maternity care is different from other health services in two important ways. First, there can be no waiting lists for maternity care – babies won't wait. Secondly, women's experiences during pregnancy and birth, good or bad, can deeply affect how they feel about their babies and about themselves as mothers. Therefore, the quality of maternity care provided to women influences the health of infants and children both directly, through the care received, and indirectly, because women's experience of pregnancy and birth have life-time effects.

We have a crisis in maternity care in Canada. Often, however, that crisis is described only as a shortage of maternity care providers, with a resulting focus on the changes needed to make maternity care more attractive and more sustainable for those who provide it. For women,

### Maternity Care

Maternity care is care related to pregnancy and childbirth. The elements of maternity care are:

**Preconceptual Care** – provided to women and men prior to pregnancy

**Prenatal Care** – provided to women while they are pregnant

**Intrapartum Care** – provided to women during labour and childbirth

**Postpartum Care** – provided to women and their babies after birth, including breastfeeding support and parenting.





however, the crisis 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; the centralization of birth in large teaching hospitals in cities; increasing medical and surgical interventions in labour and birth; and the lack of one-to-one support for women during labour. These are described in more detail in this section.

## Prenatal Care

Prenatal care can reduce illness, disability and death in pregnant women and their babies [21, 44]. In providing prenatal care, midwives, physicians and nurses monitor the health of the mother and fetus, identify and mitigate potential risks if they arise, provide prevention advice and treat (or refer for treatment) women with complex conditions or with medical conditions unrelated to their pregnancy. Inadequate (or lack of) prenatal care has been linked to preterm birth, low birthweight babies, and an increased risk of fetal and infant death [44]. Women who receive prenatal care early and regularly have better outcomes than those who do not. However, it is important to recognize that those women who have regular prenatal care tend to have higher incomes than those who do not, and that higher incomes are also linked to better outcomes for both mothers and babies [45].

Monitoring and reporting on the adequacy of prenatal care is therefore an important issue in the surveillance of maternal and infant health. Unfortunately, there is no routine reporting of the adequacy of prenatal care in Canada.

Research conducted in Manitoba found that only 62% of women received adequate prenatal care; 30% had intermediate care and 8% had inadequate care (using the Kessner Adequacy of Prenatal Care Index) [44, 46]. However, those women who identified themselves as Aboriginal were significantly more likely to have had inadequate prenatal care (16%) than were other (non-Aboriginal) Manitoba women (4%). Aboriginal women were also more likely to start prenatal care after the first trimester. Among both Aboriginal and non-Aboriginal women, those who did not receive adequate prenatal care, were more likely to live in poverty and to experience high levels of stress [44]. While prenatal care is ostensibly provided at no cost through the health system, the associated costs of transportation and childcare are a financial barrier for poor women. The Province of Manitoba's Healthy Baby Program<sup>13</sup> provides financial and community-based education and assistance to pregnant low-income women. The Program cannot address, however, the other barriers of distance and provider shortages.

## Intrapartum Care

### The Shortage of Maternity Care Providers

While many health professionals provide care to pregnant women and their babies, only physicians and midwives are allowed by law to attend women during childbirth.

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<sup>13</sup> At the time of writing, Healthy Baby provides up to \$81 per month for those with family incomes of \$32,000 or less, designed to improve women's nutrition during pregnancy. Healthy Baby also offers drop-in, community-based educational programs for pregnant women and new mothers across Manitoba. These programs also offer bus tickets (where public transit exists) and childcare, to make it easier for low-income women to attend.





Across Canada, fewer family physicians include intrapartum care in their practices and more women give birth attended by obstetricians. In 1988/89, family physicians attended 39% of women who gave birth in Manitoba. By 2002/03, this had decreased to 24%, and over 71% of women were attended by obstetricians when they gave birth [40]. This is comparable to the situation in the rest of Canada [47].

Data from the 2005 National Physician Survey show that 52% of Manitoba family physicians provided prenatal care and 46% provided postpartum care, but only 22% provided care to women during labour and childbirth. Older family physicians and male family physicians were more likely to provide intrapartum care, while younger family physicians and female family physicians were more likely than their male counterparts to provide both prenatal and postnatal care [47]. Within Manitoba, about 34% of family physicians outside of Winnipeg provided intrapartum care, compared to only about 14% in Winnipeg [40].

The loss of family physicians providing maternity care, especially intrapartum care, combined with the shortage of midwives in Manitoba, shifts the burden of providing this care to obstetricians.<sup>14</sup> In 2000, obstetricians attended almost two-thirds of all vaginal births and 95% of all Caesarean sections in Canada [48]. Is this the best way to provide maternity care? The best evidence available suggests that it is not [49, 50, 51]. There is considerable discussion across the country about how all providers can collaborate better.<sup>15</sup> While “collaborative care” among practitioners may help address the shortage of maternity care providers, and make maternity care more enjoyable and sustainable for physicians and midwives, it will not alone address the other issues in the maternity care crisis (e.g. medical interventions, hospital closures, see above).

## The Loss of Local Maternity Care and the Centralization of Birth in Large Hospitals

The centralization of birth at large teaching hospitals, with care routinely provided by obstetricians, both results from, and contributes to, the view of birth as a medical crisis to be managed, rather than as a normal life event. Most women can give birth safely in small hospitals, birth centres or at home [50]. While some women will need specialized medical care during pregnancy and birth, most will not. Good primary maternity care, provided by midwives and family physicians, with timely consultations and transfers to specialists as needed, reduces the need for women to travel to give birth, and recognizes birth as “a celebration, a normal healthy process.” [49].

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<sup>14</sup> Midwifery became a regulated profession in Manitoba in 2000. Not all RHAs employ midwives yet and there are vacant positions in other RHAs, due to a shortage of registered midwives in the province.

<sup>15</sup> The recently completed Multidisciplinary Collaborative Primary Maternity Care Project (MCP<sup>2</sup>), for instance, recommended the development of multidisciplinary collaborative primary maternity care teams across Canada, as a way to increase the availability and quality of maternity care services for all Canadian women. In collaborative practice, family physicians, midwives, obstetricians, nurses and nurse practitioners would work as a team. The expertise of each can then be best used, with obstetrical care focused on those women at highest risk of complications [51]. It would be essential to place women’s experiences and needs at the forefront of any practice arrangements.

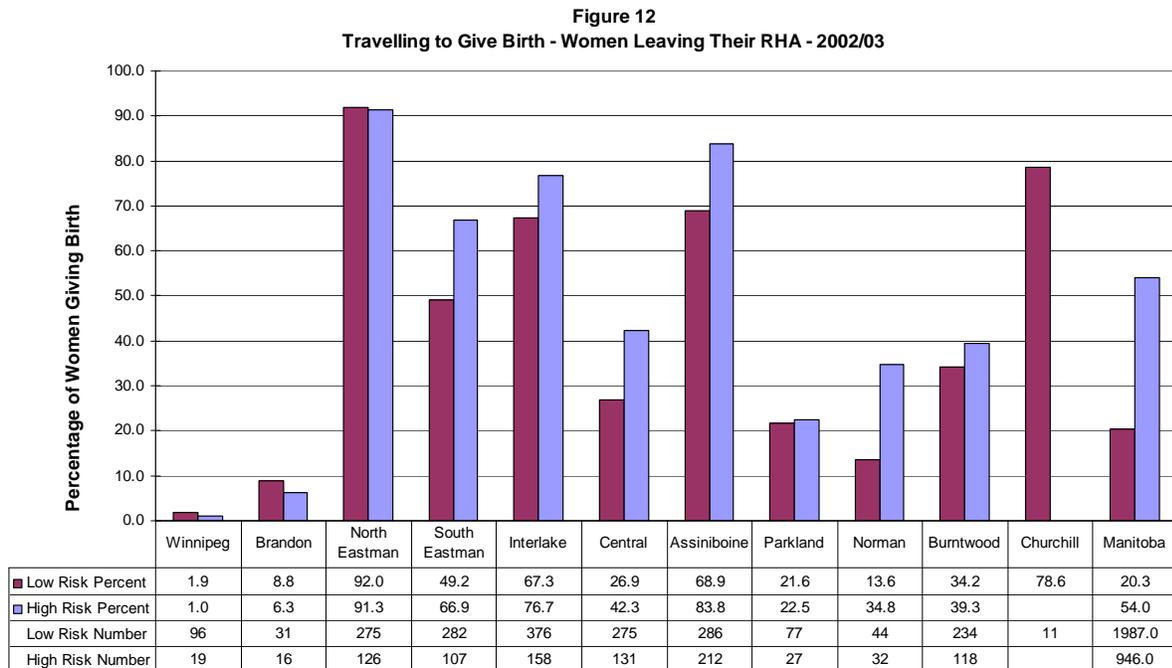




For rural and northern women, the departure of family physicians from maternity care is one factor that has led to the loss of their local maternity care services, since these hospitals currently rely on family physicians to provide most maternity care. Midwifery has been regulated and funded in Manitoba since 2000, however there are still not enough midwives to meet the demand for their services. In the fiscal year 1999/2000, 22 of Manitoba’s 65 hospitals provided planned services for birthing women. By 2004/05, this had decreased to 17 of 63 hospitals<sup>16</sup>. In 2003/04, about 85% of Manitoba babies were born in hospitals where more than 500 births per year took place.

As a result of these closures, thousands of Manitoba women must leave their home communities each year to give birth. In 2002/03, 2,775 women, or 48% of all women living outside of Winnipeg and Brandon left their home RHA to give birth. Although many more women stayed within their RHAs, they still had to travel to give birth. This is often thought of only as an issue for women in Northern Manitoba, particularly First Nations women who must leave their home communities and families behind for long periods. Increasingly, though, this is the case for other Manitoba women as well. In 2002/03 53% of women living in RHAs in the rural south of Manitoba<sup>17</sup> left their RHAs to give birth [40].

Figure 12 provides more detailed information about women travelling to give birth in Manitoba in 2002/03.



Source: Manitoba Health. Report of Manitoba Health’s Ministerial Working Group on Maternal/Newborn Services [40]  
 Note: Information about high risk women in Churchill has been suppressed due to small numbers.

<sup>16</sup> Less than 1% of births in Manitoba currently take place outside of hospitals. Manitoba midwives can attend women giving birth both in and out-of-hospital. The College of Physicians and Surgeons of Manitoba, however, prohibits physicians from attending planned out-of-hospital births.

<sup>17</sup> Included in this group are South Eastman, Interlake, Central, Assiniboine, Parkland and North Eastman RHAs.





A thorough examination of this issue concluded that rural hospitals, with limited services and, in many cases without local Caesarean section capability, offer safe maternity care, and that rural maternity care services should be maintained [50]. Research in British Columbia and the United States has found that removing maternity care from local communities leads to increased risks, and poorer outcomes, for both women and their babies [52, 53, 54].

Furthermore, the loss of rural maternity care has been shown to lead to a “cascade of unforeseen dangers”, ending with the realization that maternity and newborn care are “lynchpins for sustainable communities, medically, socially and economically” [55].

As the Joint Working Group of the Society of Rural Physicians of Canada (SRPC), The Maternity Care Committee of the College of Family Physicians of Canada (CFPC), and the Society of Obstetrics and Gynaecologists stated:

*Every woman in Canada who resides in a rural community should be able to obtain quality maternity care as close to home as possible. Whenever feasible she should give birth in her own community within the supportive circle of her family and friends. Respect for these women requires that public policy and clinical care guidelines support the provision of quality maternity care programs in rural Canada [50].*

There is an urgent need to develop alternatives to the current model of centralized maternity care. One important step is the Manitoba Kanaci Otinawawasowin Baccalaureate Program (KOBP) in Aboriginal Midwifery, which began in September 2006. Aboriginal midwives are being educated at two northern locations (Norway House and The Pas) through a degree program offered by the University College of the North. The first class will graduate in 2010. KOBP graduates can play an important role in helping northern women to have safe, healthy pregnancies and births close to home. However, additional investments in midwifery education and upgrading are needed to meet the demands for midwifery care.

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 [56, 57, 58]. There are birth centres in Québec, Alberta, Nunavut and the Northwest Territories, as well as in other countries including the USA and the UK. At the time of writing, the Women’s Health Clinic in Winnipeg and the WRHA are developing the criteria and plans for a birth centre in Winnipeg.





## Medical and Surgical Interventions in Birth

Interventions in labour and birth have become increasingly common in Canada and in other developed countries. In fact, they are now so common that in Canada in 2001/02, about **75% of all births** involved surgical intervention (use of instruments, induction, or epidural/general anaesthetic) [59]. Interventions can be life saving, both for mothers and their babies, however they are not risk free.

In this section we describe trends in the use of several of the most common interventions in labour and birth:

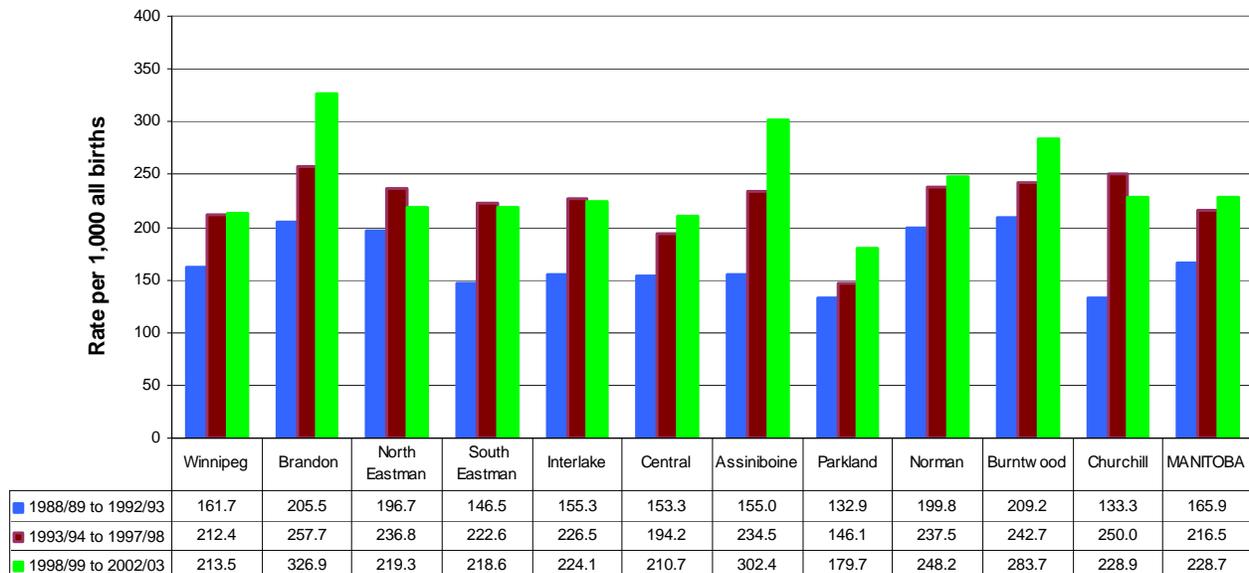
- inductions of labour
- analgesia and anaesthesia during labour
- assisted vaginal births (using forceps or vacuum extraction)
- Caesarean sections

The data that follow include only hospital births and include both live births and stillbirths.

### Induction of Labour

Induction of labour includes both medical induction (using medication) and surgical induction (the artificial rupture of membranes). In some situations, the risks of continuing the pregnancy and waiting for spontaneous labour and birth are greater than the risks associated with induction; however inducing labour is associated with increased risks of infections of the placental tissues and an increased rate of Caesarean delivery [21].

**Figure 13**  
**All Inductions of Labour**  
**Manitoba and RHAs - 1988/89 to 2002/03**



Source: Manitoba Health. Report of Manitoba Health's Ministerial Working Group on Maternal/Newborn Services [40]

Note: RHA refers to maternal place of residence, not location of the birth.





In Manitoba, the rate of labour induction has increased markedly, as illustrated by Figure 13. Unfortunately, this is consistent with practice in other Canadian provinces and in the US. From 1998/99 to 2002/03, 23% of Manitoba women had their labours induced (20% medical inductions and 3% surgical inductions) In 2000/01, 22% of Canadian women (excluding those in Nova Scotia, Manitoba and Québec) had their labours induced, up from 16.5% in 1991/92 [21, 40].

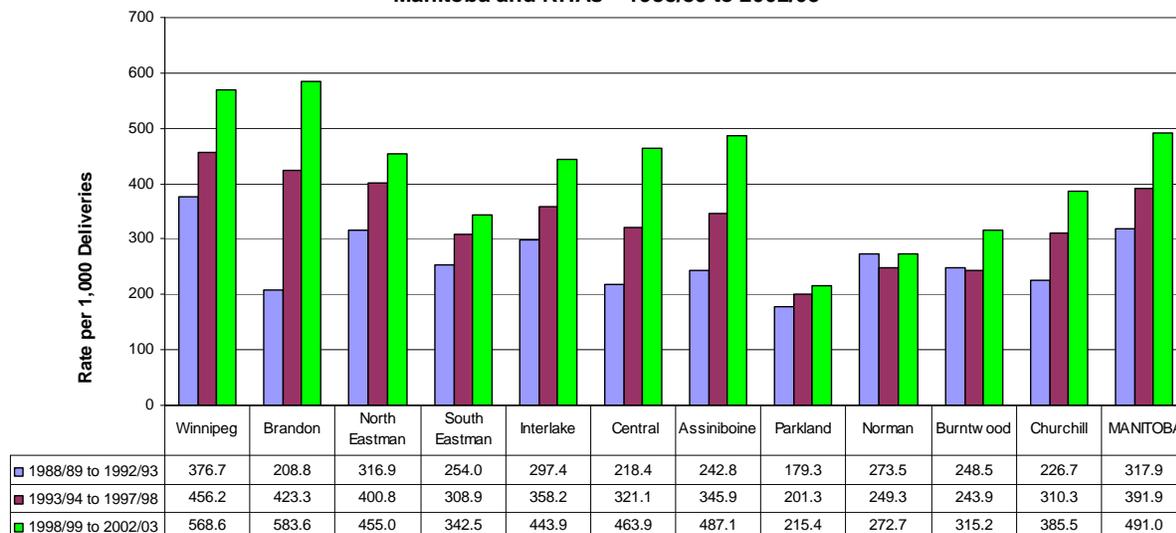
## Analgesia and Anaesthesia During Labour

There are many techniques available for pain relief during labour. Helping women manage the pain of labour and childbirth is an important part of maternity care. There are proven non-pharmacological methods of reducing the pain of labour (for example moving about freely, quiet time to adjust to each change, eating and drinking as needed) but increasingly women and physicians have come to rely on the use of epidural anaesthesia. In this procedure, a flexible tube is inserted into the lower spine, allowing analgesic medication to flow continuously. In Canada (excluding Manitoba), epidurals were used by 43% of all birthing women, and 45% of all women who had vaginal births. Epidural rates are influenced by many factors, including the availability of specialist physicians (usually anaesthesiologists), drugs and equipment for the resuscitation of mothers and babies. They are therefore more likely to be performed in large urban hospitals [59].

From 1998/99 to 2002/03, 49% of all Manitoba women giving birth had some analgesia or anaesthesia: 46% involved the use of epidurals and 2.5% involved general anaesthesia.

Figure 14 illustrates the patterns of analgesia and anaesthesia use among Manitoba women during the 15 year period from 1988/89 to 2002/03. Women from Brandon and Winnipeg were most likely to have had analgesia or anaesthesia during labour, and women from Parkland were the least likely [40].

**Figure 14**  
**Any Analgesia/Anaesthesia During Birth**  
**Manitoba and RHAs - 1988/89 to 2002/03**



Source: Manitoba Health. Report of Manitoba Health's Ministerial Working Group on Maternal/Newborn Services [40]

Note: RHA refers to maternal place of residence, not location of the birth.





While effective, epidurals are not without risk. Women who receive epidurals are more likely to have a longer second stage of labour, to receive medication to stimulate their labour contractions, to experience very low blood pressure, to be unable to move for a period of time after the birth, to have problems passing urine, and to develop fevers [60]. For all of these reasons, the World Health Organization recommends alternatives to medication, such as walking, changing positions, massage, relaxation, breathing and acupuncture [61].

Continuous one-to-one support during labour has been shown to reduce women's need for pain medication, to increase women's satisfaction with their birth experience and to increase the chances for spontaneous vaginal birth [62]. In many hospitals, however, continuous support is not routinely available. Nurses are expected to care for more women at a time than ever before, leaving many labouring women without continuous support. Trained doulas<sup>18</sup> can provide this important support; however, their services are not routinely available, and where they are, women must pay for them. Midwives provide continuous support during labour as a standard part of their practice, but currently only about 5% of Manitoba women are attended by midwives during their childbirth [59].

### Assisted Vaginal Birth

Assisted vaginal birth, or operative vaginal delivery, refers to the use of either forceps or vacuum extraction during birth. They can be used when normal labour fails to progress, when the fetus is compromised or because the mother's health makes pushing more risky [62]. Manitoba's rate of assisted vaginal birth is lower than the Canadian average. In 2001, the overall Canadian rate of assisted vaginal birth was 16.2% and the Manitoba rate was 9.1%. The national rate decreased slightly over the previous ten years, from 17.4% to 16.3% of vaginal births. During this time, the use of forceps decreased, while the use of vacuum extractions increased [21].

Figure 15 shows the patterns of assisted vaginal births among Manitoba women during the 15 year period from 1988/89 to 2002/03. In the most recent 5 year period, from 1998/99 to 2002/03, women from Brandon were the most likely to have had assisted vaginal births and women from the Central RHA were the least likely [40].

Non-operative interventions such as one-to-one support for women during labour, charting of the progress of labour (using a partogram), the use of medication to speed labour and delayed pushing in women who have had epidurals, have all been shown to decrease the rate of assisted vaginal births [63].

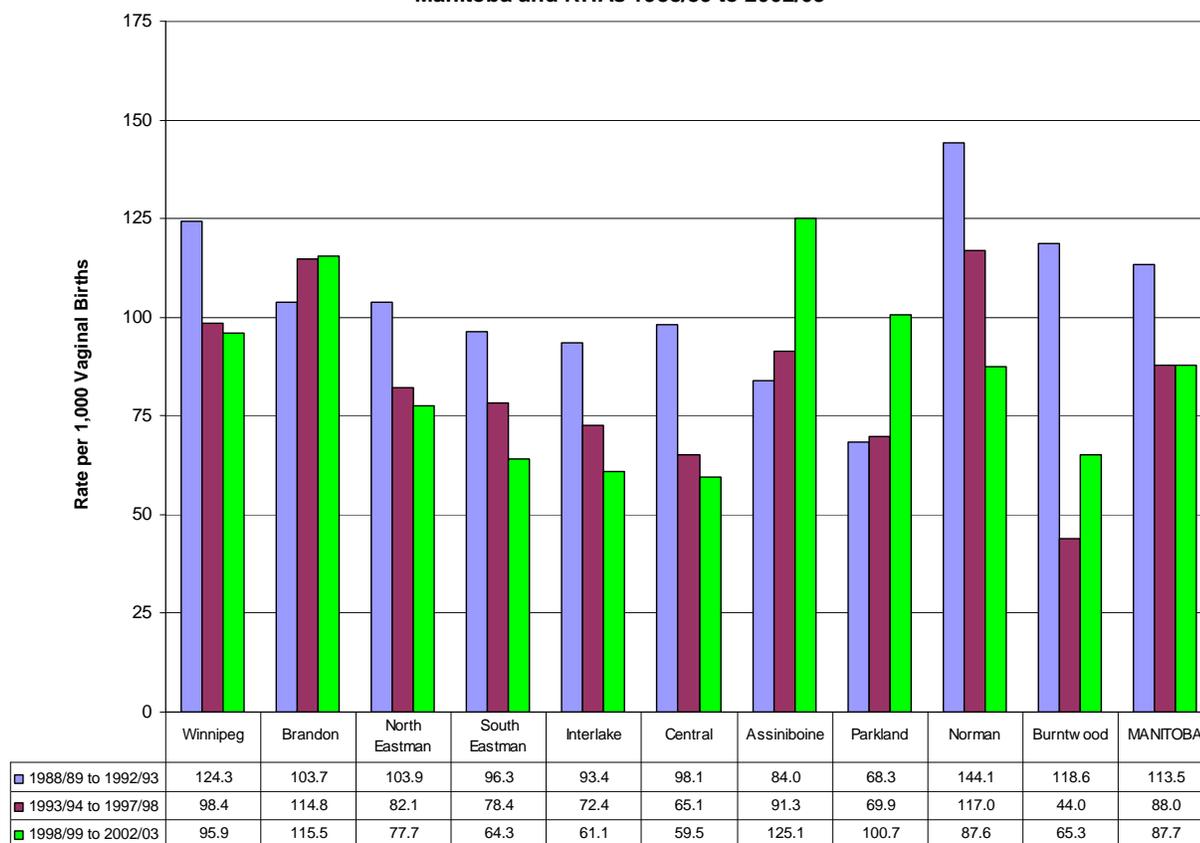
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<sup>18</sup> In labour support terminology, doula refers to a specially trained birth companion (not a friend or loved one) who provides labour support. It is a Greek word meaning "a woman who serves".





**Figure 15**  
**Assisted Vaginal Births**  
**Manitoba and RHAs 1988/89 to 2002/03**



Source: Manitoba Health. Report of Manitoba Health's Ministerial Working Group on Maternal/Newborn Services [40]

Note: RHA refers to maternal place of residence, not location of the birth.

## Birth by Caesarean Section

In some circumstances, birth by Caesarean section can be life-saving both for women and for babies. However, as with other major surgical procedures, there are risks associated with Caesarean sections. Women who have had Caesarean sections are more likely to experience complications (such as haemorrhage, pain and infection). They are also more likely to experience reproductive health problems later in life (including ectopic – tubal – pregnancies and problems related to the placenta) [21, 64]. The risk of serious consequences for birthing women appears to increase with each subsequent Caesarean section [65]. There are also risks for babies born by Caesarean section, including injury as the result of the surgery, respiratory problems following birth, difficulties initiating breastfeeding and an increased risk of hospital readmission within 6 weeks of birth [59, 66, 67].

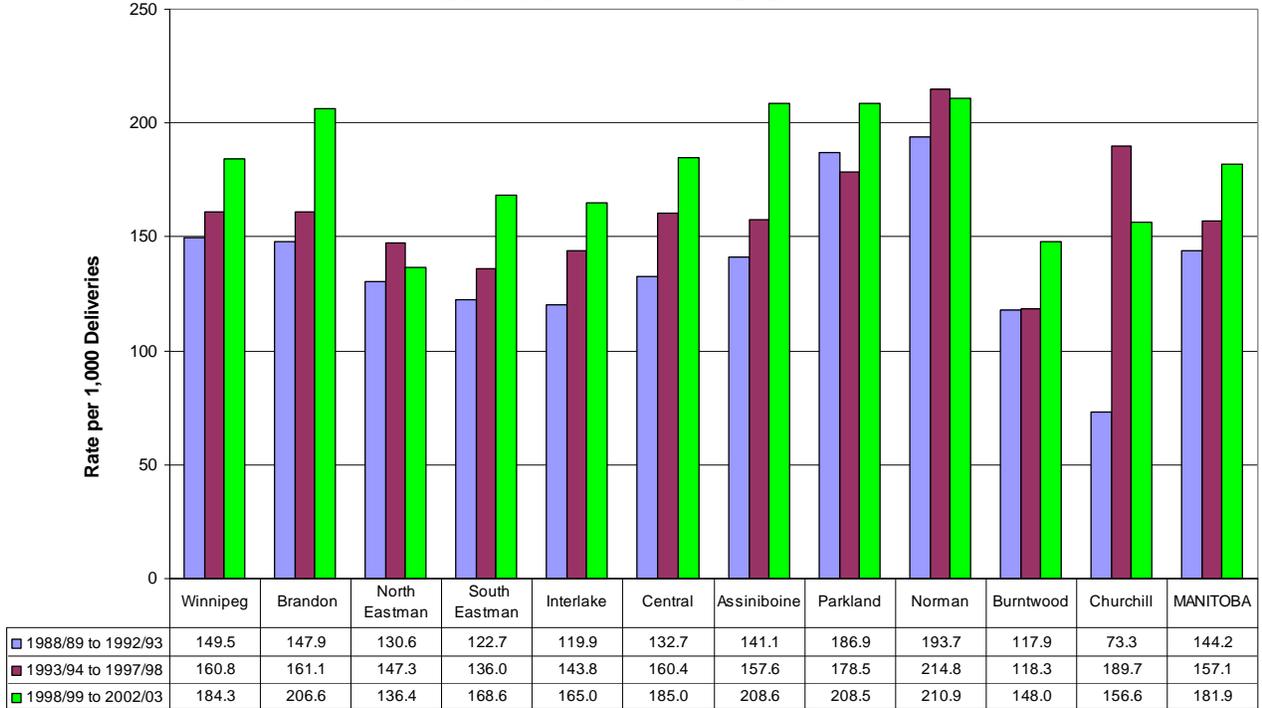
In Manitoba, as in the rest of Canada and in many other developed countries, the rate of birth by Caesarean section has increased markedly. In the late 1960s, the Canadian Caesarean section rate was about 5% of all births. By 2005, it had increased to 26.3%. Manitoba's rate was lower than the Canadian average at 21.3% of all births [68]. The World Health Organization recommends 5 to 15% as an appropriate range for births by Caesarean section [59].





Figure 16 shows the pattern of women giving birth by Caesarean section among RHAs during the 15 years from 1988/89 to 2002/03.

**Figure 16**  
**Caesarean Sections Rates**  
**Manitoba and RHA 1988/89 to 2002/03**



Source: Manitoba Health. Report of Manitoba Health's Ministerial Working Group on Maternal/Newborn Services [40]  
Note: RHA refers to maternal place of residence, not location of the birth.

During the five years from 1998/99 to 2002/03, women from the Nor-Man RHA were most likely to give birth by Caesarean section and women from the North Eastman RHA were the least likely. These data do not tell us about where women gave birth. For example, we do not know how many of the women from Nor-Man gave birth in that region. In the case of North Eastman women, there are currently no hospitals providing maternity care in the Region; therefore all of these women gave birth in other regions.

While it is generally assumed that Caesarean births are more frequently performed in large tertiary care hospitals, the Winnipeg RHA's Caesarean section rate is still below the national average. This is consistent with Ontario research that found that regardless of a hospital's size, location, level of care provided and population served, that it is possible to maintain a low Caesarean section rate. This is the case when the physicians and nurses working there embrace the belief that supportive labour care and the least intervention possible create the best opportunity for a good birth experience, and where they have set targets for Caesarean section rates, and where those rates are monitored and reviewed over time [69].

Once a woman has had one Caesarean section, she is unlikely to subsequently give birth vaginally. The Society of Obstetricians and Gynaecologists of Canada recommends that where there are no





contraindications, women with one previous Caesarean section (with a transverse, low-segment incision) should be offered a trial of labour, along with discussion of the risks and benefits [70]. However, vaginal birth after Caesarean section (VBAC) rates continue to decline. Between 1997/98 and 2001/02 the VBAC rate in Canada fell from 35% to 27%. In 2001/02 the VBAC rate in Manitoba was 32% [59].

There is ongoing debate about the causes of the increased rates of birth by Caesarean section, both in Canada and in other developed countries. There have been suggestions that this is fuelled, at least in part, by women's "demands". The only large survey on this issue found that less than 1% of American women who had a first Caesarean section reported actually requesting one. In contrast, almost 10% of those surveyed reported feeling pressured to have a Caesarean delivery [71]. Socio-economic reasons are also sometimes discussed as a driving force behind the increase in Caesarean section rates, in the belief that higher-income women, considering themselves "too posh to push", request Caesarean sections. The only study to date of this in Canada examined all women who gave birth from April 1, 2002 to March 31, 2003, and concluded that this was not the case. In fact, the opposite was true. Once age was accounted for, women living in Canada's highest-income neighbourhoods were less likely to give birth by Caesarean section than women living in the lowest-income areas. Older women in all income groups were more likely to have Caesarean sections [72].

Continuous support during labour has been shown to increase spontaneous vaginal births (decreasing the Caesarean section rate) and to increase women's satisfaction with their childbirth experiences [61].

*The issue of C-sections is not just a matter of choice, but a wake-up call to compromised care for pregnant women, and inattention to their needs. We must address this situation and do more, lots more, to improve the safety and circumstances of vaginal births. More importantly, we need to use the most appropriate responses -- social and societal supports, primarily -- to address women's birthing needs and leave surgical interventions for when they are truly medically necessary [73].*

Less frequently discussed is the important role of the attitudes of physicians towards Caesarean sections. Several studies have documented the extent to which obstetricians would choose to give birth by Caesarean section (in the case of women) or recommend it to their partners (in the case of men):

*Although we could discuss at length how it came about that society gave surgeons control over a physiological process called childbirth, nevertheless obstetricians truly have hegemony over this life process. If obstetricians in their practice and personal lives are now governed by fear of childbirth, we, as a society, have to help them get over their fears while at the same time we must address our fears of childbirth as well. [74, page 209]*





# Complications of Childbirth

## Maternal Mortality

Maternal mortality is a critical measure of both women's health and women's access to good quality health care. It is an indicator of a nation's health system standards, and of how women and children are valued [75].

Maternal deaths are, thankfully, rare in Canada. Canada's maternal mortality rate is among the lowest in the world [75, 76]. From 1997 to 2000, there were 64 maternal deaths in Canada (excluding the province of Québec), or 6.1 deaths per 100,000 live births. Of these 44 were direct maternal deaths and 20 were indirect maternal deaths. There were also 30 incidental deaths of pregnant women during this time [76].

Manitoba has a well-established system of investigation of all maternal deaths, led by the College of Physicians and Surgeons of Manitoba. In Manitoba, there were 5 maternal deaths from 1995 to 2002: 2 direct maternal deaths; 1 indirect maternal death and 1 death classified as "non-obstetric" [77]. This is equivalent to a maternal mortality ratio of 4.1/100,000 births.

Although the risk of Canadian women dying due to pregnancy and childbirth is low, overall numbers may mask important elevated risks for particular sub-groups of the Canadian population [76]. For example, in 2002, First Nations women were 2.2 times more likely to have a baby die in the perinatal period than were other Manitoba women [77]. This is indicative of a lower level of perinatal health among First Nations women.

## Maternal Morbidity

A 2004 study of severe maternal morbidity in Canada (excluding Québec, Nova Scotia and Manitoba) found that from 1991/92 to 2000/01, the rate of severe maternal morbidity<sup>19</sup> was 4.6 per 1,000 birthing women [76].

<sup>19</sup> Severe maternal morbidity was defined to include the following conditions in the hospital abstract: amniotic fluid embolism (AFE); obstetrical pulmonary embolism (not including AFE); eclampsia; shock (obstetrical, septic and other); pulmonary, cardiac and central nervous system (CNS) complications of anaesthesia; cerebrovascular

### What is a Maternal Death?

*Maternal Deaths* are deaths of women while pregnant or within 42 days of the termination of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from other causes.

**Direct maternal deaths** result from obstetric complications during pregnancy, labour and up to 42 days after the termination of the pregnancy; from interventions, omissions or incorrect treatment; or from a chain of events resulting from any of the above.

**Indirect maternal deaths** result from previous existing disease or disease that developed during the pregnancy, that was not due to direct obstetric causes, but that was aggravated by the pregnancy.

**Incidental deaths** result from conditions occurring during pregnancy, where the pregnancy is unlikely to have contributed significantly to the death, although it is possible to suggest a distant association [76].





While not a complete measure of maternal morbidity, hospital readmission after childbirth is one useful measure of maternal health, capturing severe postpartum maternal morbidity. It is limited, however, because:

- it does not capture severe maternal morbidity at the time of birth, if women are not first discharged and then later readmitted to hospital; and
- only the most serious maternal illnesses result in hospital readmission. Some of the other factors influencing maternal readmission rates include availability of hospital resources, distance to hospital, hospital admission policies and accessibility of outpatient services [21].

#### **What is Maternal Hospital Readmission?**

Maternal hospital readmission includes all hospital admissions within three months of the live birth or still birth of a baby.

Admissions for all causes (whether or not they are related to the birth) are included.

Research indicates that the risk of maternal readmission is increased by a short length of hospital stay following assisted vaginal birth (births using forceps or vacuum extraction) and birth by Caesarean section. From 1998/99 to 2000/01, 2.0% of Canadian women (living in all Provinces and Territories except Manitoba) who had vaginal births and 3.3% of women who had Caesarean births were readmitted to hospital within 3 months of discharge [21]. Manitoba women were more likely to be readmitted to hospital after birth. From 1998/99 to 2002/03, 3.9% of birthing women were readmitted (compared with the 2.0% of all Canadian women).

As birth by Caesarean section and other interventions in the birthing process (as described above) become increasingly common in Manitoba, maternal hospital readmissions, and their underlying causes, require ongoing analysis.

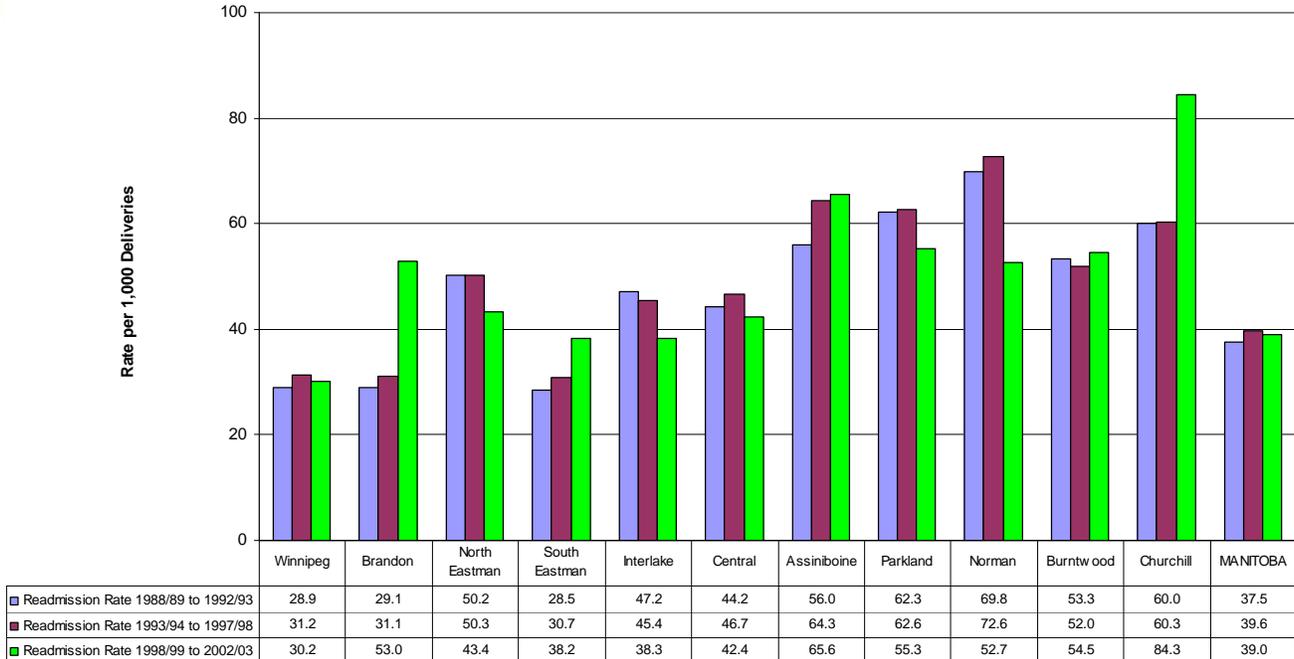
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disorders in the puerperium (including intra-cranial venous sinus thrombosis); uterine rupture; adult respiratory distress syndrome; pulmonary edema; myocardial infarction; acute renal failure following labour and delivery; cardiac arrest/failure or cerebral anoxia following obstetrical surgery; severe post-partum hemorrhage requiring hysterectomy or transfusion; and assisted ventilation.





**Figure 17**  
**Maternal Hospital Readmissions**  
**Manitoba and RHAs 1988/89 to 2002/03**



Source: Manitoba Health. Report of Manitoba Health's Ministerial Working Group on Maternal/Newborn Services [40]

Note: RHA refers to maternal place of residence, not location of the birth.

Figure 17 shows the pattern of maternal hospital readmission among RHAs during the 15 years from 1988/89 to 2002/03.

Women in Churchill were the most likely to be readmitted to hospital after birth (8.4% from 1998/99 to 2002/03). However, the total number of Churchill women readmitted was small – seven women during that five year period. Women from the Assiniboine RHA were the second most likely to be readmitted. Women from Winnipeg had the lowest readmission rate, perhaps in part because of their greater access to outpatient services.

## Postpartum Care

About 99% of Manitoba women currently give birth in hospitals [40]. Early hospital discharge policies mean that mothers and their newborn babies stay in hospital for shorter periods of time than past common practice. In Manitoba in 2000-01, the average length of hospital stay was 2.6 days for vaginal births and 4.6 days for Caesarean births. In comparison, in 1992-92, the average Canadian length of stay for women giving birth vaginally was 3.6 days; for women giving birth by Caesarean section it was 6.3 days [21]. While this trend is welcome, since most women do not need acute hospital care after normal childbirth, shorter hospital stays have shifted the responsibility for postpartum care to individuals, families, health professionals, and other organizations in the community. A well-organized system of community-based follow-up services is therefore essential. These include breastfeeding support, mental health services and community supports.





Currently in Manitoba, the extent and organization of postpartum care is determined by each RHA. In all RHAs, public health nurses contact all new mothers, usually by phone, to determine if a home visit is required. Northern regions make more extensive use of home visits. In First Nations communities, nurses either employed by the First Nation, or by the First Nations and Inuit Health Branch of Health Canada, provide this follow-up [40].

Adjusting to the birth of a new child, and to the addition of a new family member, takes some time. A “fourth trimester”, of at least three months’ duration, is now recognized as necessary for physical and psychosocial recovery [78].

“Postpartum blues” are common, and are experienced by 45 to 80% of women. These are transient feelings and usually disappear after 1 to 2 weeks. Often women feel that they are not “perfect mothers”. They may be disappointed in their physical appearance, their competencies as mothers, or their mood swings. Inadequate emotional support from partners and other family members can contribute to postpartum blues. Good community and family supports are essential to help these women [78].

Postpartum depression is more serious, beginning within 2 weeks to 6 months of the birth of a baby. About 10 to 20% of women experience postpartum depression. Women who have had previous depression, or who have had a difficult pregnancy, appear to be at higher risk of postpartum depression, as are women with poor family or marital relationships [78]. Immigrant women who gave birth in Ontario hospitals were significantly more likely than Canadian-born women to have possible postpartum depression, low social support, low incomes, poorer health and to have learning needs that were unmet in hospital. They were also less likely to be able to get financial aid, household help and support [79]. Infant sleep patterns and maternal fatigue are also strongly associated with postpartum depression. Interventions to reduce sleep deprivation in the early postpartum period may also therefore help prevent postpartum depression [80].

Because of the social stigma attached to postpartum depression, many women may not seek help, feeling that their depression makes them inadequate mothers [78]. It appears, however, that they are more likely to use the health care services system. Ontario research found that new mothers whose responses to a standard postnatal depression questionnaire (the Edinburgh Postnatal Depression Scale) indicated that they were depressed, had significantly more contacts with health professionals than other new mothers [81].

Healthy Child Manitoba, through the Families First program, funds many community-based programs to support new parents. In Winnipeg, the Women’s Health Clinic offers the Sherpa Mothers Mentoring Program, in which volunteer mentors are paired with new mothers, the Blues and Beyond support group, and Coping with Change training for professionals and community groups to normalize a women’s experiences in facing emotional changes after childbirth.

To date, Canadian perinatal surveillance reports have not included information about postnatal health, other than severe maternal and newborn morbidity and mortality. In 2007, the Canadian Perinatal





Surveillance System (a program of the Public Health Agency of Canada, carried out in collaboration with the Canadian Institute for Health Information, Statistics Canada, provincial governments, health care professionals, researchers, public health representatives and voluntary and consumer organizations) launched the Maternity Experiences Survey (MES), in collaboration with Statistics Canada. The primary objectives of the MES are:

- to document Canadian women's knowledge, experiences and practices during pregnancy, birth and the early postpartum months and their perceptions of perinatal care;
- to provide information for in-depth examination of groups deemed to be at higher risk for adverse perinatal health outcomes, such as recent immigrants and teenage mothers;
- to identify areas of strength and areas in potential need of strengthening within the Canadian reproductive and perinatal health care system [82].

This will provide policy makers and clinicians with important new information about women's health during pregnancy and the postpartum period.

## Women and Breastfeeding

Perfectly adapted for human consumption, breast milk provides all the nutrients infants need, and the World Health Organization recommends that babies be exclusively breastfed for the first 6 months [83]. There have been fads and fashions, societal and cultural trends and swings in breastfeeding but health care practitioners, and those involved in health care policy agree, as do women around the world, that breastfeeding is good for both mothers and babies.

There is a long list of additional benefits to breastfeeding and being nursed for babies besides nutrition [84]. But breastfeeding is also beneficial for mothers. Women who breastfeed their children have reduced incidence of breast and ovarian cancers later in life; resultant bone density offers protection against osteoporosis and hip fractures; and women have less postpartum bleeding, and more rapid uterine involution. Additionally women are more likely to return to prenatal body size and weight, more quickly, when they breastfeed and exclusive breastfeeding delays the return of fertility and menstruation [84].

Equally important to these physical and physiological benefits, breastfeeding allows for the emotional nurturing needed between mothers and babies. Women with satisfactory breastfeeding experience are less likely to experience postpartum depression than their formula feeding friends, although if breastfeeding is not going well, they can experience more depression. Negative birth experiences can cause psychological trauma and combined with attendant breastfeeding difficulties can result in post-traumatic stress disorder. Depressed mothers are more likely to quit breastfeeding [85]. We understand health to be more than the absence of disease or physical illness and so these emotional and mental health aspects of breastfeeding for women are important and should not be down-played.

Breastfeeding is a natural process, but does not always come naturally. In a society in which breastfeeding (and mothering) is often hidden and frequently discreet, women may find it difficult to learn good breastfeeding technique, to observe how other mothers nurse their babies, or to find the help they need





when breastfeeding does not proceed well. While new mothers and mothers of new babies do seek the company of other women, many women find it difficult to get the support and experienced advice they need for a smooth transition into and through breastfeeding. According to Manitoba Health's breastfeeding strategy, *Baby Friendly Initiative* (including the regional Baby-Friendly frameworks), "Mothers need current information regarding the normal management of breastfeeding, medications and their effect on the breastfeeding infant, and assessment and information on managing concerns like sore nipples, plugged ducts and mastitis." [86]

Mothers report getting conflicting information about breastfeeding from hospital staff, and in the first few days after a baby's birth. Regular professional upgrading in breastfeeding is not mandatory for all maternity nurses in Manitoba, and depends on each Regional Health Authority's breast feeding strategy. Most physicians lack basic training in the benefits of breastfeeding, the risks of not breastfeeding and how to help and encourage sustained breastfeeding [87, 88].

Although Manitoba public health nurses are well trained to assess the breastfeeding relationship as part of their neonatal and postpartum home visits, mothers in rural areas often have delays before seeing a public health nurse, due to the distances needed for travel, and the numerous duties nurses have (immunizations, other clinical tasks, and prenatal teaching). Since feeding a baby happens at all times of day and night, women must have the support they need, when they need it. Mothers want to be able to feed their babies and to have the confidence that they are doing it well, responding to babies' cries promptly and quickly. Manitoba Healthy Living's *Baby Friendly Initiative* sets a policy for Regional Health Authorities' responsibilities in ensuring employees receive the training they need to give women the information and support they need. The intent is to achieve this goal successfully and move beyond regional and provincial policy to a surrounding culture that supports and understands breastfeeding for the health it promotes in mothers and babies.

Currently, there is no mechanism to record and report breastfeeding rates in Manitoba, beyond initiation immediately following the birth. There are no data about exclusive breastfeeding rates at 2, 4 or 6 months of age. A forthcoming study from the Manitoba Centre on Health Policy will report on the implementation of the provincial and regional level breastfeeding strategies, including the information women receive about other resources and supports (L. Romphf, pers. comm.).<sup>20</sup>

Most critically, no hospital in Manitoba has received accreditation by the Breastfeeding Committee for Canada, the National Authority of the WHO/UNICEF Baby-Friendly™ Hospital Initiative (BFHI), as a Baby-Friendly Hospital (see box). Until there is a commitment by policy-makers and senior managers to adhere to and enforce the criteria for the Baby-Friendly Hospital Initiative and the International Code of Marketing Breast-Milk Substitutes, women will continue to get uneven and conflicting information for themselves and their babies. Adherence to the WHO standards will also require a change in how our society views breastfeeding, to one that values breastfeeding and all its benefits.

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<sup>20</sup> See the recent review and evaluation of provincial breastfeeding strategies in the 2008 MCHP report, *What Works?* [111].





### Ten Points for Baby Friendly Hospitals

- Have a written breastfeeding policy that is routinely communicated to all health care staff.
- Train all health care staff in skills necessary to implement this policy.
- Inform all pregnant women about the benefits and management of breastfeeding.
- Help mothers initiate breastfeeding within one half-hour of birth.
- Show mothers how to breastfeed and maintain lactation, even if they should be separated from their infants.
- Give newborn infants no food or drink other than breastmilk, unless medically indicated.
- Practice rooming in - that is, allow mothers and infants to remain together 24 hours a day.
- Encourage breastfeeding on demand.
- Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
- Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

### The Seven Point Plan for the Protection, Promotion and Support of Breastfeeding in Community Health Services

1. Have a written breastfeeding policy that is routinely communicated to all staff and volunteers.
2. Train all health care providers in the knowledge and skills necessary to implement the breastfeeding policy.
3. Inform pregnant women and their families about the benefits and management of breastfeeding.
4. Support mothers to establish and maintain exclusive breastfeeding to six months.
5. Encourage sustained breastfeeding beyond six months with appropriate introduction of complementary foods.
6. Provide a welcoming atmosphere for breastfeeding families.
7. Promote collaboration between health care providers, breastfeeding support groups and the local community,

Breastfeeding Committee for Canada  
The National Authority for the WHO/Unicef  
Baby Friendly™ Hospital Initiative (BFHI) in Canada





## Menopause

Menopause is the end of menstruation and is defined as beginning when a woman has not had a menstrual period in one year. It is preceded by perimenopause, the several years before menopause when women make the transition from regular menstrual periods to menopause. Menopause commonly occurs between the ages of 42 and 56. Menopause can be induced earlier due to the surgical removal of the ovaries, chemotherapy, radiation treatment or diseases of the ovaries [89].

Many women experience unwanted symptoms during perimenopause, such as weight gain, hot flashes, insomnia, night sweats, vaginal dryness, joint pain, fatigue, short term memory loss, mood swings, dry eyes, itchy skin, urinary tract infections and bowel difficulties. Most of these will lessen or resolve once the transition to menopause is complete [89]. Research in Canada and the US has shown that while most women will pass through menopause with little or no discomfort, menopause is generally perceived to be associated with unpleasant symptoms. There are many successful non-pharmaceutical strategies for providing symptomatic relief [90]. Little research has been done on the positive aspects of menopause [91].

Normal stages in women's lives, neither perimenopause nor menopause are medical conditions. They are part of the aging process. Menopause and aging are interrelated, complex processes. Because of this, it is often difficult to distinguish among changes related to menopause, changes related to other aging processes, and social and environmental factors.

Menopause is also socially defined. In other societies, women's experiences of menopause are quite different, suggesting that other factors, including genetics, diet, lifestyle and social and cultural attitudes toward older women may all play a role in determining women's experiences of perimenopause and menopause [89, 90]. Current research supports the idea that intercultural differences in the ways in which women describe their experiences of menopause result from the interaction of biological and cultural influences on women's menopausal experience [91].

For women, our society values youth and the attractiveness of youth. Consequently, many women may dread menopause and believe that their sexuality and attractiveness ends with the cessation of menstruation. Social standards for men are quite different, as men with grey hair and increased weight (becoming "portly") are seen as self-confident, experienced and masculine [90]. Women are challenging these double standards, and redefining what it means to be older, attractive and active – intellectually, physically and sexually.

While perimenopause and menopause are not medical conditions, they have been medicalized. In the 1960s, menopause was portrayed as a medical problem of estrogen loss, to be treated with hormone replacement therapy (HRT). In the 1980s, following evidence of increased endometrial cancer among women who had taken estrogen-only HRT, combined estrogen and progestin HRT was introduced. HRT was promoted as *preventive medicine*, presumed to protect women from the increased rates of cardiovascular





disease among post-menopausal women. Despite concerns raised by women's health scholars and activists, from the 1960s on, widespread prescription of HRT continued and increased for almost 40 years, until the early interruption of the US Women's Health Initiative (WHI) study, the largest randomised clinical trial of HRT, in 2002. The WHI showed that long term use of the standard estrogen plus progestin combined HRT was associated with increased risks of breast and ovarian cancer, as well as increased risk of cardiovascular disease [92]. HRT use has declined dramatically since then. See Chapter Six for a more detailed discussion of HRT use among Manitoba women.

## Sexually Transmitted Infections and HIV/AIDS

### Introduction

This section includes discussion of reportable sexually transmitted infections in Manitoba - Chlamydia (*Chlamydia trachomatis*), gonorrhoea (*Neisseria gonorrhoeae*) and syphilis (*Treponema pallidum*), as well as the human immunodeficiency virus (HIV), the virus which causes acquired immunodeficiency disease (AIDS). Human Papilloma Virus (HPV), linked to cervical cancer, is not a reportable disease in Canada. Reliable data are therefore not available about HPV.

Sexually transmitted infections (STIs) are a common cause of illness that may have serious and long-term health consequences for women. HIV and AIDS have reached devastating rates among women in some parts of the world. Manitoba and Canada must continue to monitor HIV/AIDS rates among women now and take immediate action to prevent a similar catastrophe in this country.

Women are both more physiologically susceptible and socially vulnerable to STIs than are men.

*Once infected, women face a disproportionate burden of sequelae from STIs. These include pelvic inflammatory disease (PID), chronic pelvic pain, ectopic pregnancy, infertility and cervical cancers. After one episode of PID, 20% of females will suffer chronic pelvic pain, 9% an ectopic pregnancy and 8% infertility; the risk of infertility doubles after each subsequent episode. PID is the cause of 15% of all infertility. [12]*

Since STIs can affect women's sexual and reproductive health so profoundly, it is important to understand infection in Manitoba women and consider how gender may influence infection, diagnosis and treatment.

### Chlamydia among Women in Manitoba

Chlamydia infections, while treatable, can be serious. Untreated chlamydia in women can result in pelvic inflammatory disease, infertility, chronic pelvic pain and ectopic pregnancy [93]. However, if treated early, complications can be prevented. Chlamydia is the most commonly reported sexually transmitted infection in Manitoba, among women.

Based on the most recently published data, the prevalence of Chlamydia among Manitobans was 315.6 per 100,000 people in 2003, a 21% increase from five years earlier [94]. Chlamydia has been on the rise in Manitoba since the mid-1990s, part of resurgence in bacterial STIs seen across Canada [95].





Preliminary analysis of unpublished data for 2006 estimated a rate of 360 per 100,000 people, continuing the trend [96, 97].

The provincial rate of Chlamydia disguises a large disparity between the sexes, as women account for a disproportionate number of cases. Of the 3,640 new cases of Chlamydia reported in 2003, 2,546 or 70% affected women. Thus, women’s rate of Chlamydia, at 435.2 per 100,000, is more than double the rate for men in the province and 38% higher than the provincial average (Figure 18) [94]. Women’s high rates of reported Chlamydia compared to men’s may also be due to their greater chances of being tested and diagnosed, both because they tend to have greater contact with the health care system, particularly during the reproductive years, and because they are more likely to show symptoms of the infection than are men.

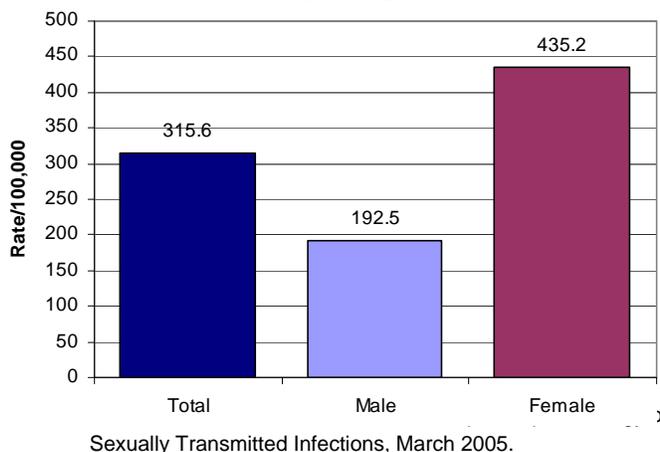
### Age-Sex Distribution of Chlamydia

Chlamydia is unevenly distributed among age groups, and the age specific pattern of rates differs for women and men. Young women aged 15 to 19 years are clearly at the greatest risk for Chlamydia compared to men their age and women of other ages (Figure 19). In 2003, the rate of newly reported infections in this group was six times the provincial average for women (2,717 vs. 435 per 100,000) and nearly four times the rate for men of the same age (699 per 100,000). Men’s peak rate (1,040) occurred in the 20 to 24 year age range, though this amounted to less than half the rate among women in this same age category (2,206) [94].

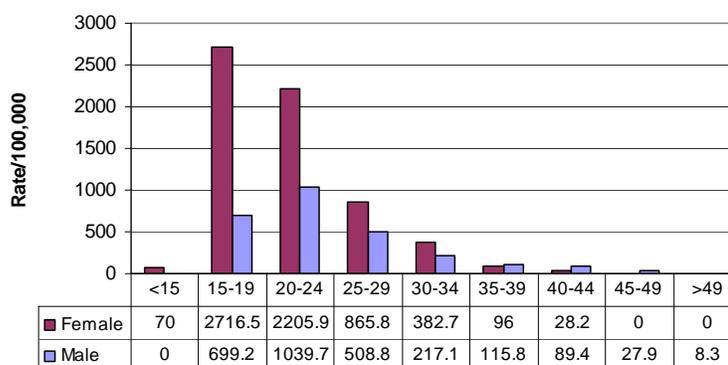
First Nations Manitobans<sup>21</sup>, especially young women, experience higher rates of Chlamydia infections than do other Manitobans. In 2003, the rate of Chlamydia reached 7,358 per 100,000 among First Nations

<sup>21</sup> Manitoba Health includes in its definition of First Nations people all those who, through self-declaration, have advised Manitoba Health that they are residents with Treaty Status. This system includes Manitobans living both on and off reserves. It is a voluntary system, which therefore does not include all First Nations people. Note: this a narrower definition than the one used for “Aboriginal” people in the HIV/AIDS discussion that follows.

**Figure 18**  
**Chlamydia Infection Rates**  
**Manitoba 2003**



**Figure 19**  
**Chlamydia Rates by Age and Sex**  
**Manitoba 2003**



**Source:** CDCU, MB Health. The Descriptive Epidemiology of Sexually Transmitted Infections. March 2005.





women aged 15 to 24. This is nearly four times the rate reported for non-First Nations women of the same age. This means that seven in every 100 First Nations women in this age group, were, on average, diagnosed with Chlamydia infection in that year [94].

## Regional Variation in Chlamydia

As sex-specific data are not available by RHA, women’s differing risks for Chlamydia by region must be inferred from data on the total population. Of the 3,640 new cases of Chlamydia reported to Manitoba Health in 2003, half were reported in Winnipeg (with 56% of the population) and another 20% in the Burntwood and Churchill regions combined (with 4% of the provincial population) [94, 97]. Burntwood/Churchill regions have more than five times the average provincial rate (1,618.9 vs. 315.6 per 100,000). Other regions where the rate of Chlamydia exceeds the provincial average by a

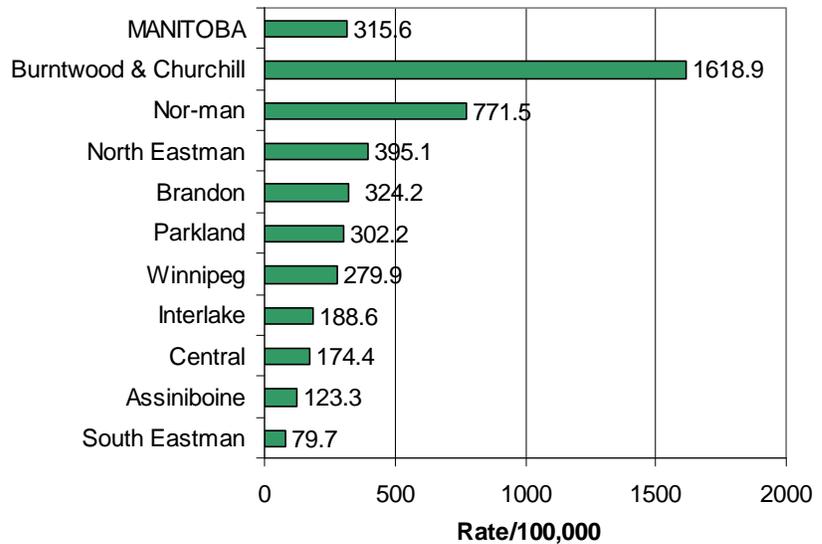
substantial margin are Norman and North Eastman. Thus, residents of northern and eastern regions have the highest rates of Chlamydia in the province [94]. Preliminary analysis of 2006 data show that generalizations based on published data for 2003 continue to hold true [96].

While high rates of Chlamydia are concerning in their own right, the underlying unsafe sexual practices and elevated risk of HIV infection associated with prior STI, also pose serious risks for the spread of HIV/AIDS.

## Gonorrhoea

Gonorrhoea is the second most commonly reported STI in the province. In 2003, the rate of newly diagnosed gonorrhoea among Manitoba women was 78 per 100,000 population (456 cases), only slightly higher than the rate for reported cases for males in the province (72.8 per 100,000). Among women, the number of newly diagnosed infections climbed by 45% (141 cases) from 2002 to 2003 [94]. As with Chlamydia, there has been a resurgence of gonorrhoea since 1997, which cannot wholly be attributed to improved surveillance and testing methods. This trend is confirmed by unpublished data on gonorrhoea for 2006 [95, 96]. Again, high rates of gonorrhoea reflect unsafe sexual practices, which, with increasing HIV infection rates in the province, pose risks for the spread of HIV/AIDS in the province.

**Figure 20**  
**New Chlamydia Infections by RHA**  
**2003**



**Source:** CDCU, MB Health. The Descriptive Epidemiology of Sexually Transmitted Infections, March 2005.





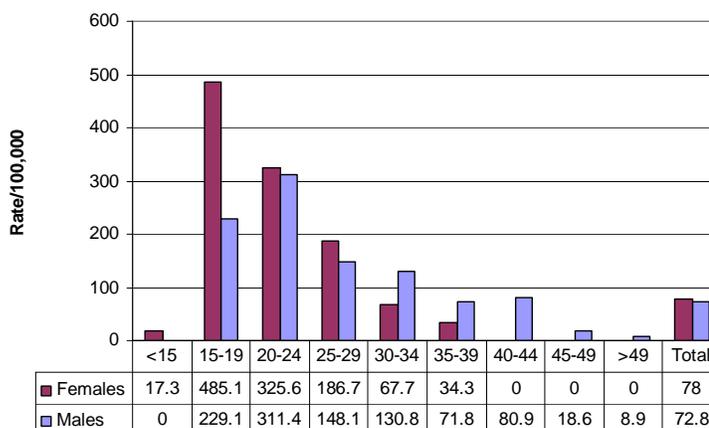
The age distribution of gonorrhoea follows a similar pattern to that for Chlamydia, with the highest rate of newly diagnosed infections found among women aged 15 to 19. A rate of 485.1 per 100,000 for this age group is six times higher than for Manitoba women of all ages and over twice the rate for men of the same age. Young women have also seen the greatest increases in rates of reported infections compared to other age and sex groups [94].

Among Manitoba women, First Nations women and women living in Winnipeg or northern regions show the highest rates of reported gonorrhoea. In 2003, women who self-identified as First Nations had a 6.6 fold greater rate of gonorrhoea than non-First Nations women, and the rate for young First Nations women (aged 15 to 24) reached 1,501.4 per 100,000. Over 50% of newly reported cases of gonorrhoea occurred among Winnipeg residents and Burntwood residents of northern Manitoba had almost five times the provincial rate [94].

## Syphilis

The incidence of infectious syphilis was very low and declining in Canada and in Manitoba during the 1990s (e.g. not exceeding 0.5 per 100,000 before 1999) [98]. Only six locally acquired cases of primary or secondary infectious syphilis were reported in Manitoba from 1999 to 2002. There was an outbreak of locally acquired syphilis in Manitoba in 2003, which saw 41 cases reported by the end of the year (rate of 3.6 per 100,000) [94]. The outbreak continued to intensify, with as many as 84 reported cases in 2005, and 60 in 2006. Thirteen of these 60 cases were reported for women [96]. Women tend to have lower rates of syphilis than men. Unlike Chlamydia and gonorrhoea, mature adults are more likely to be infected. In the 2003 outbreak, women aged 30-34 and men aged 40-44 comprised the majority of cases [94]. While all reported cases for 2003 affected residents of Winnipeg, in 2006, cases were identified in the Central, Brandon, Interlake and Parkland regions [94, 96]. First Nations Manitobans carry the infection at a rate disproportionate to their population, with at least 25% of cases in 2003 identified in this population [94].

**Figure 21**  
Gonorrhoea Rates by Age & Sex  
Manitoba 2003



**Source:** CDCU, MB Health. The Descriptive Epidemiology of Sexually Transmitted Infections, March 2005.





## HIV in Manitoba

In its early stages, North America’s HIV/AIDS epidemic primarily affected homosexual men<sup>22</sup>. However, recently, there are substantial and growing numbers of women among those diagnosed with HIV. By the end of 2006, 345 women had been identified as HIV positive by the province’s testing program, representing 25% of all HIV positive individuals in the province (1396) [99]. The number of Manitoba women testing positive for HIV is on the rise.

Annual data on new diagnoses, collected since 1985, show HIV among women steadily increased in the first decade and escalated after 1996 until 2005 (Figure 22).

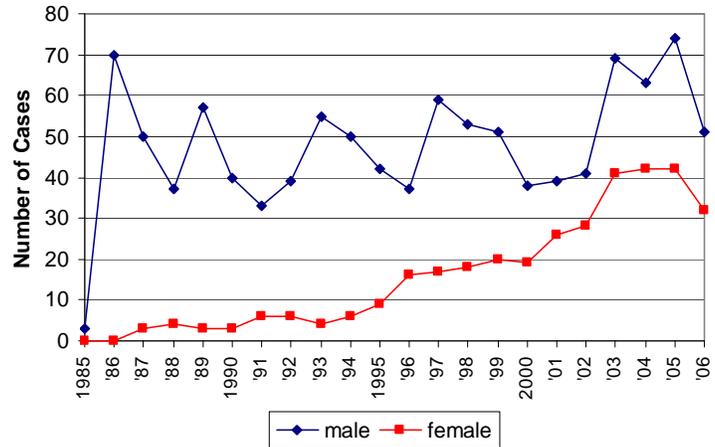
In 2006, 32 women were newly diagnosed with HIV, representing 39% of all new cases [99]. These numbers declined in 2006, but it is too early to know if this reflects a genuine decrease in cases.

Manitoba women account for a growing proportion of positive HIV diagnoses, a trend which is occurring faster than for Canadian women overall. Canadian women represented only 27% of new diagnoses in 2005 [100].

The age at which Manitobans are diagnosed with HIV differs greatly by sex. Based on diagnoses made between 1985 and 2006, women were most likely to be diagnosed between the ages of 20 and 29. Men most often received a diagnosis between the ages of 30 and 39 years (Figure 23) [99]. This finding raises the question of whether women are infected with HIV at a younger age, or whether the younger age at diagnosis for women compared to men is attributable to women’s greater contact with physicians for reproductive health care.

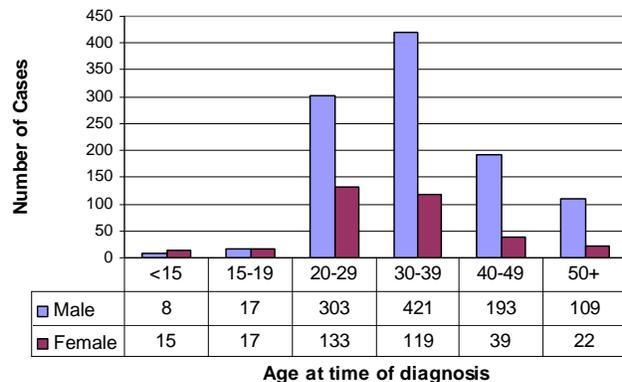
<sup>22</sup> Now more accurately referred to as men having sex with men – MSM.

**Figure 22**  
Newly Diagnosed HIV Cases  
Manitoba, 1985-2006



Source: CDCU, MB Health. Manitoba Health Statistical Update on HIV/AIDS, 1985 to 2006, March 2006.

**Figure 23**  
New HIV Diagnoses by Age and Sex  
Manitoba, 1985-2006



Source: CDCU, MB Health. Manitoba Health Statistical Update on HIV/AIDS, 1985 to 2006, March 2006.





## Ancestry & HIV

Information on self-reported ethnicity is collected by Manitoba physicians and public health nurses for persons who test positive for HIV. In 2006, more than a quarter of individuals tested (22 of 83) did not provide information on ethnicity. Conclusions drawn from these data must therefore be considered tentative. Aboriginal Manitobans bear a disproportionate burden of HIV infection. From 1999 to 2006, one-third of new HIV diagnoses occurred among Manitobans who self-identified as Aboriginal (220 of 676 cases) [99], although they represented only 13.7% of the 2001 provincial population [101]. Among women, the relative risks for Aboriginal women are great. In 2003, the latest year for which rates are available, the rate of new HIV infection among Aboriginal women was nearly ten times the rate of new infection for non-Aboriginal women (40.1 per 100,000 versus 4.6 per 100,000) [94].

Individuals who self-identify as African/African American account for a substantial proportion of Manitobans with HIV, representing 21% (139 of 676 cases) in 1999-2006 and 24% of newly diagnosed infections in 2006 [99].

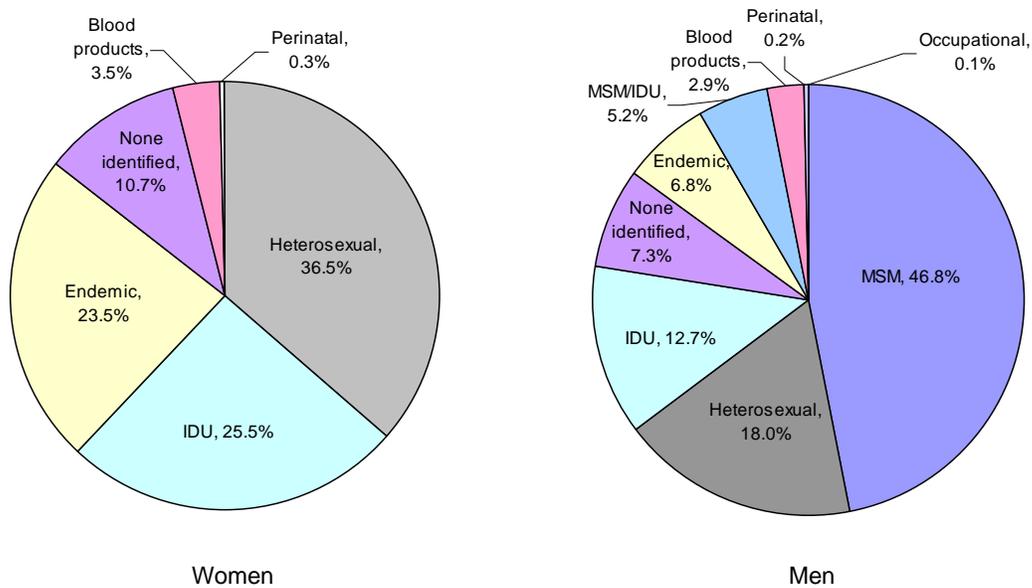
## Risk Factors

Manitoba women diagnosed with HIV during the 1985 to 2006 period were most likely to report heterosexual contact, injecting drug use (IDU), or living/traveling in an HIV endemic region as risk factors for the transmission of infection (Figure 24). These same categories have been identified by Manitoba Health as the fastest growing categories for all newly diagnosed individuals during this period. At the same time, the proportion of men reporting sex with men (MSM) as a risk factor has declined substantially over these decades [99]. Though annual data are subject to variability, there is some evidence in recent years that the 'endemic' risk category has increased substantially relative to other categories. In 2006, originating in an HIV endemic country accounted for 13 of 32 new HIV cases among women, up from 1 of 20 cases in 1999 [99, 102]





**Figure 24**  
**Newly Diagnosed HIV by Transmission Category,**  
**Manitoba Women and Men, 1985-2006**



**Note:** Individuals testing HIV antibody positive self-report exposure to one or more mode of transmission. These distributions reflect only a primary transmission category. Note that 10.7% of women and 7.3% of men did not identify exposure to any transmission mode.  
**Source:** CDCU, Manitoba Health. *Manitoba Health Statistical Update on HIV/AIDS. 1985 to 2006*, March 2006.

## AIDS in Manitoba

HIV positive women (and men) are likely to be diagnosed with AIDS within 10 years. According to Manitoba Health, 258 cases of AIDS have been diagnosed in the province since 1985. Among these individuals, 40 were women. In 2006 alone, 9 women were diagnosed with AIDS among 13 new cases in the province [99]. Although men have been more likely than women to receive an AIDS diagnosis, more than twenty years of data on AIDS in Manitoba shows that women constitute an increasing proportion of cases. In the past six years, women have represented approximately 40% of diagnosed cases, compared to 15.5% of all cases diagnosed since the beginning of data collection in 1985 [99, 103].

## Regional Distribution of HIV and AIDS Diagnoses

Regional comparisons show that among women diagnosed with HIV from 1985 to 2006, 83% (287 of 345) reported residing in Winnipeg and 14% in other regions of the province combined. Nearly 3% of women newly diagnosed with HIV were from out of province or did not report residence. Newly diagnosed cases of AIDS were similarly distributed, with 87.5% of cases identified in the Winnipeg region and 12.5% in other regions [99]. Compared to the regional population distribution, Winnipeg has a higher number of newly diagnosed HIV and AIDS cases than its population might predict, as only 57% of women in the province live in this region. The Burntwood/Churchill region (4% of female population) also appears to have a disproportionate number of diagnosed cases of AIDS [97].





**Table 1: Newly Diagnosed HIV Infection and AIDS  
Cases by Sex and Region, Manitoba 1985-2006**

RHA	Newly Diagnosed HIV				Newly Diagnosed AIDS			
	Female		Male		Female		Male	
	#	%	#	%	#	%	#	%
Brandon & Assiniboine	4	1.2	27	2.6	0	0.0	8	3.7
Burntwood/Churchill	9	2.6	14	1.3	3	7.5	1	0.5
Central	15	4.3	41	3.9	0	0.0	0	0.0
Interlake	7	2.0	32	3.0	0	0.0	4	1.8
Norman	1	0.3	5	0.5	0	0.0	2	0.9
North & South Eastman	9	2.6	23	2.2	1	2.5	1	0.5
Parkland	3	0.9	5	0.5	1	2.5	3	1.4
Winnipeg	287	83.2	881	83.8	35	87.5	196	89.9
Non-resident	8	2.3	23	2.2	0	0.0	3	1.4
Unknown	2	0.6	0	0.0	-		-	
<b>Total</b>	<b>345</b>	<b>100.0</b>	<b>1051</b>	<b>100.0</b>	<b>40</b>	<b>100.0</b>	<b>218</b>	<b>100.0</b>

Source: CDCU, Manitoba Health. *Manitoba Health Statistical Update on HIV/AIDS: 1985 to 2006*, March 2006.

## Reporting Behaviour & Gender Considerations

It is important to note that published rates of STIs cannot provide the true rate of infection in the population, but only reflect those cases where individuals have been tested. Women are more likely to be tested for STIs than men, as they more often present for care, especially for care during pregnancy and for other reproductive health care. One Manitoba study of STI screening and treatment found that only 25% of women and 4% of men aged 15 to 24 were tested for Chlamydia [93].

AIDS and HIV infection are notifiable diseases in Canada. Health professionals are therefore legally obligated to report all AIDS cases and positive HIV test reports to public health authorities. Positive HIV test results are promptly entered into the system, as all testing is done at the provincial Cadham Lab<sup>23</sup>. However, there may be delays in reporting cases of AIDS, so that the number of cases reported may not reflect the true number of AIDS cases diagnosed in the province for a given year. Therefore, it is difficult to accurately determine the incidence of AIDS [94, 99].

Since 2002, Manitoba has offered voluntary prenatal testing for HIV to all pregnant women. Partly for this reason, most HIV testing (70%) is done on women, although men are at higher risk of HIV [94].

<sup>23</sup> Recent changes by Manitoba Health have expedited the reporting of persons newly diagnosed with HIV. All positive HIV test results are now entered into the provincial HIV database as new cases before they are verified as new or existing cases by the health professional who requested the test. The practice may result in duplicate reports of new diagnoses, which are then removed when it is determined that a duplication exists [99].





Despite women's greater exposure to testing overall, certain groups of women, including Aboriginal women, refugee women, and young women living in high risk circumstances, may have less access to testing, which may mean their rates of infection are actually higher than reported.

## Social & Physiological Vulnerability

The social contexts and conditions of women may be more important than physiology alone in determining their risks for STIs. Women are infected by STIs in the context of their interpersonal relationships, which are shaped by socio-cultural norms, values, and expectations. In particular, socially constructed gender roles and power inequalities between men and women limit women's ability to insist on safe sex practices [104]. Women more often live with physical, sexual, emotional or psychological abuse, and may put themselves at risk of infection to protect their safety or avoid threats or anger from their partner. Women's greater unemployment, lower incomes, greater likelihood of living in poverty and greater marginalization increase the likelihood that women and girls resort to work in the sex trade, engage in high-risk activities such as injection drug use, and are victims of sexual violence, placing them at increased risk of STIs [105].

Young and Aboriginal women who are escaping violence, or are unable to negotiate safe sexual behaviours are more likely to have multiple partners, unprotected sex, high-risk partners, and to use alcohol or drugs, leading to unsafe sexual practices. For young women, power relations between genders add to the vulnerability already associated with their social position as youth.

## Refugee & Immigrant women

Women who have emigrated from HIV endemic countries are at increased risk for contracting the infection through heterosexual contact or exposure to contaminated blood and blood products in their country of origin, or through heterosexual contact with men from their country of origin, now living in Manitoba [104]. Accordingly, the HIV epidemic in Manitoba must be viewed in a global context. HIV/AIDS is a *women's* health issue in regions like Sub-Saharan Africa where 58% of HIV positive adults are women. Refugee women may be at increased risk of HIV/AIDS in their country of origin due to sexual violence and a greater likelihood of having to rely on sex trade work for survival [105]. In the Canadian context, refugee and immigrant women from developing nations often gain economic and social standing relative to their country of origin, but lack power and a voice in the new society. Their isolation makes them vulnerable to sexual and other abuse in their households and communities, which may increase their risk for contracting STIs.

## Policy Implications - STIs

*Although limited attention was paid to the role of gender in the HIV epidemic or the heightened vulnerability and suffering experienced by women and girls around the world, this gender blindness is beginning to recede. But in many low-incidence countries gender blindness continues to confound the management of HIV/AIDS. Canada is currently a low-incidence country but unless gender is recognized as a crucial factor in the spread of HIV, low-incidence countries such as Canada may soon be transformed into high-incidence countries [106].*





The 2005 UNAIDS report is the first to mention incidence and prevalence of HIV/AIDS in Canada. The HIV mortality and morbidity rates in Canada are much lower than those of other diseases (notably cardiovascular disease and cancers). However, as the data here show, infection rates among women of all ages in Canada are increasing; the biggest change of all is the rate of change among young women, aged 15 to 29. Not only are women experiencing greater vulnerability to HIV, but also they tend to “have a lower survival rate than men (as a result of) late diagnosis, and delay of treatment because of misdiagnosis or early symptoms, exclusion from drug trials,... higher rates of poverty and the tendency for women to make self-care a lower priority than the care of children and family” [107].

Aboriginal women are particularly vulnerable to HIV infection and the data demonstrate the alarming rise in incidence. This is in part because Aboriginal people are over-represented in the high risk groups of IDUs, sex trade workers and prison inmates. Poor housing and sanitation on Reserves, lack of appropriate public education and services, and limited economic opportunities are systemic problems, which are quickly compounding the HIV/AIDS rates among Aboriginal women [106].

Programs and plans to address STIs among women must account for the underlying social factors that place women at risk or create barriers to testing and treatment. They must also take into account the serious and long-term consequences of STIs for women and physiological differences between women and men that affect transmission.

The data and analysis presented here suggest the following:

- Women-centred strategies must consider gendered power relations between women and men.
- All women require access to testing, counselling and care.
- Sex-specific data at the regional health authority level are needed, to help target prevention and treatment.
- A STI strategy must include preventing sexual violence and abuse of women.
- Building self-esteem of girls and young women, and assertive communication skills, should be incorporated into strategies for youth.
- Prevention efforts should target high-risk groups, including young women, street involved youth, Aboriginal women, refugee and immigrant women from HIV endemic regions or developing nations.
- For Aboriginal women, prevention, support and care initiatives must be led by Aboriginal women and informed by their knowledge of culture and gender-based power issues in their communities.
- Strategies for refugee and immigrant women will benefit from leadership by local community members and accommodation of language barriers, social isolation, and specific cultural and religious beliefs.





## Summary

Sexual and reproductive health are central to women's health. For a long time women's health was interpreted *only* as reproductive health. We now understand the importance of gender as a much broader determinant of women's health in more holistic terms, and the influences of many other physiological, mental, emotional and spiritual factors. Nevertheless, it is imperative that we continue to pay attention to women's sexual and reproductive health, to women's access to needed reproductive health services, and to disparities among women in matters of reproductive health.

The availability of contraception has been a critical development in the lives and health of women. Despite this importance, comprehensive data about women's use of contraception are not available, and this is a health monitoring gap that should be redressed. The data available show that fewer women are using condoms, the only method of birth control that also prevents the spread of sexually transmitted infections. This is concerning, and the results can be seen in the increasing rates of sexually transmitted infections, especially Chlamydia as well as HIV/AIDS.

In general, the fertility rate among Manitoba women has been declining steadily. This appears to be linked to the number of women who delay having their first child and thus tend to have fewer children than in past generations. The trend is different, however, among First Nations women, who are having their first babies at an earlier stage in their lives than the population as a whole. Manitoba women had the highest pregnancy rate of women among the 10 provinces in 2003, with a pregnancy rate of 64.3/1,000.

Safe abortions are provincially funded and women do not pay for the procedure in Manitoba. However, there are disparities across the province, as women in rural and northern communities cannot obtain abortions easily, having to travel up to 1,000 kilometers. Ensuring equality of access to abortion is an important, outstanding, policy issue for Manitoba. Similarly, emergency contraception (Plan B®) is an important alternative to abortion for women who have had unprotected vaginal intercourse and who do not wish to become pregnant. Access to Plan B® varies across Manitoba, and its status as a "behind the counter" medication further limits accessibility.

Birth rates vary across Manitoba RHAs, being highest in northern Manitoba and lowest in Winnipeg. Manitoba's teen birth rate has been declining but is still above the Canadian average for women under 20 years old. Among rural women, birth rates peak in every income group among women aged 20 to 29. City-dwelling women under the age of 29 who have low incomes are more likely to have babies. However, after age 30 women with higher incomes are associated with higher birth rates.

Prenatal care is essential for the health of women and for their babies. With changes in practitioner standards and the declining numbers of physicians providing maternity care, only 62% of Manitoba women were found to receive adequate prenatal care, and Aboriginal women were significantly more likely to have had inadequate prenatal care.





The shortage of practitioners who provide maternity care is accentuated in the intrapartum and postpartum stages: through labour and delivery and in the early stages after birth. Manitoba women must travel greater distances than ever to deliver their babies, since only about 34% of family physicians practising outside Winnipeg provide intrapartum care, and midwives are not yet available in all parts of the province. Centralization and the closure of maternity wards are in part responsible for the high rates for intervention seen in the administrative data. Labour induction rates, use of analgesia and anesthesia, assisted vaginal births and births by caesarean section have all increased steadily in Manitoba. Maternal mortality rates still remain low, thankfully, but morbidity and readmission rates inform us that not all women are having healthy births.

Early discharge following a hospital birth has been a welcome development for those women who are healthy and have good supports in the home and community. A well-organized system of community-based follow-up services is essential however to maintaining breastfeeding and to care for women through the first weeks postpartum adequately. To date, Canadian Perinatal surveillance reports have not included information about postnatal health, other than severe maternal and newborn morbidity and mortality. The release of the forthcoming Maternity Experiences Survey could be a step towards providing important new information about women's health during pregnancy and in the postpartum period.

Although a normal stage in women's lives, menopause has historically been either dismissed and disregarded or, more recently, over-medicalized. Women require relief and support to deal with physical changes of menopause, but there is good evidence that women's experience is defined socially as much as physiologically, and these factors must be taken into account when providing good health care.

Lastly, we find that the incidence and prevalence of sexually transmitted infections among Manitoba women are increasing. Chlamydia is the most commonly reported STI in Manitoba women and rates of new cases are increasing alarmingly, particularly among young and First Nations women. Gonorrhoea is the second most commonly reported STI and as with Chlamydia, women are disproportionately infected. STIs rates are published based on test results and so are likely under-reported. The social contexts and conditions of women's lives may be more important than physiology alone. Women are more likely than men to live with physical, sexual, emotional or psychological abuse, and may not be able to insist on safe sex practices.

HIV/AIDS infection rates among women are rising – although there was decrease in 2006 in Manitoba. Women are more likely to report acquisition through heterosexual contact, injecting drug use or having lived or travelled in a country where HIV is endemic (where it was likely acquired through heterosexual contact). Attention to gender and gender identify considerations in the acquisition of HIV/AIDS and other STIs is essential to appropriate health system planning.





## Policy Implications

Total Fertility Rates (TFR) in Canada have been declining over the past one hundred years. Manitoba trends are part of the larger Canadian and global situation. While decisions about pregnancy and childbirth are intensely personal, they are also subject to social, economic and political forces. The decisions made by women and men about whether to have children, and about how many children to have, are sensitive to governmental policies that support working parents such as parental leave and high quality child care, as well as to economic conditions [42, 43]. Creative social, political and economic interventions are needed.

Firstly, changes are needed to enable women to choose to have children in their twenties and early thirties (when pregnancy and birth are easier physiologically) if they so desire, without detrimental financial consequences for themselves and their children. Secondly, action is required to support employed parents (and those who would like to have paid work) through programs such as universal, high quality childcare and paid parenting leaves. For example, the extension of maternity leave benefits under Employment Insurance from 6 months to 1 year (commencing in 2001), led to increased duration of breastfeeding for working mothers [108]. Particular attention is required to the situation of those who work part-time or who are self-employed, who do not benefit from most employment-based programs [109] (chapter Two).

Routine care for pregnant and birthing women should be an integral part of the primary health care system, available to women in the communities where they live, and with appropriate and speedy referrals to specialists as needed. This includes access to abortion, prenatal services, care during childbirth and postnatal care.

However physicians, especially family physicians, are leaving the practice of maternity care, or reducing their practice to exclude care for birthing women, resulting in the elimination of maternity care from many rural and northern communities. Evidence about the costs and consequences of removing birth from local communities must be considered, and necessary supports put in place to enable physicians and midwives in rural and Northern Manitoba to provide maternity care for local residents [50, 52, 53, 54, 55].

Birth is a normal physiological process. Yet three-quarters of Canadian births involve at least one surgical intervention [59]. Increased medical and surgical interventions in the birthing process are of concern, as they are not without risks for both women and their babies and action is needed to reverse this trend. Additionally, as un-medicated, spontaneous vaginal birth becomes rare, so to do physicians, nurses and their students, lose the skills necessary to support women during labour and childbirth without intervention. Midwifery care in Manitoba is a model for low-intervention care, but it is only available to a minority of women in Manitoba so far.

Some positive initiatives are taking place in Manitoba. The launch of the Kanaci Otinawawasowin Baccalaureate Program in Aboriginal Midwifery, at the University College of the North, will help to improve the health of pregnant women and their babies in Northern Manitoba. As well, the work in





progress to launch a birth centre in Winnipeg, designed as a centre of excellence in primary maternity care will offer another choice for women who wish to give birth out-of-hospital. The birth centre would also be a valuable model for rural and northern RHAs, and a training site for rural and northern professionals.

In September 2008, Manitoba Health confirmed that it will implement the 20 recommendations of the Maternal and Child Health Task Force, with 13 receiving priority attention, including training for “peer support workers to offer prenatal and postnatal social support as well as labour support for delivery in a culturally appropriate manner including services in First Nations, Inuit and Métis languages” [112], and more opportunities for educating maternity care providers. These steps should “strengthen both primary care and prevention services by addressing gaps in current services and supporting access to improved services closer to home” [112]. The work of planning local, regional and provincial maternity care services cannot be left to professionals alone. Women and their families need to be involved in the planning and evaluation of these services, locally, regionally and provincially.

Programs and plans to address STIs among women must account for the underlying social factors that place women at risk or create barriers to testing and treatment. They must also take into account the serious and long-term consequences of STIs for women and physiological differences between women and men that affect transmission. This includes prevention, intervention and treatment strategies that take into consideration gendered power relations between women and men, and that are built upon community consultations with the most at-risk and vulnerable populations.

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## CHAPTER FIVE

# Physical and Mental Health

This chapter provides gender-based analyses of Manitoba women's health status for physical and mental health indicators. The evidence demonstrates how women's living and working conditions (Chapter Two), as well as personal habits (Chapter Three) affect both their physical and mental health. Note that information about STIs and HIV/AIDS are included in Chapter Four.

This chapter includes information about:

1. Self-Rated Health
2. Cardiovascular Disease
3. Diabetes
4. Cancer
5. Arthritis
6. Self-rated Depression and Treatment for Depression
7. Injuries, Suicide and Self-inflicted Injuries





# Self-Rated Health

## Introduction

A substantial body of international research has found self-rated health to be significantly and independently associated with specific health problems, use of health services, changes in functional status, recovery from episodes of ill health and mortality [1]. Self-Rated health has been routinely measured in Canada in both the National Population Health Survey (1994/95 to 1998/99) and the Canadian Community Health Survey (2000-01 and 2003). It is also one of the core comparable health indicators agreed to by political leaders for annual reporting to Canadians [2].

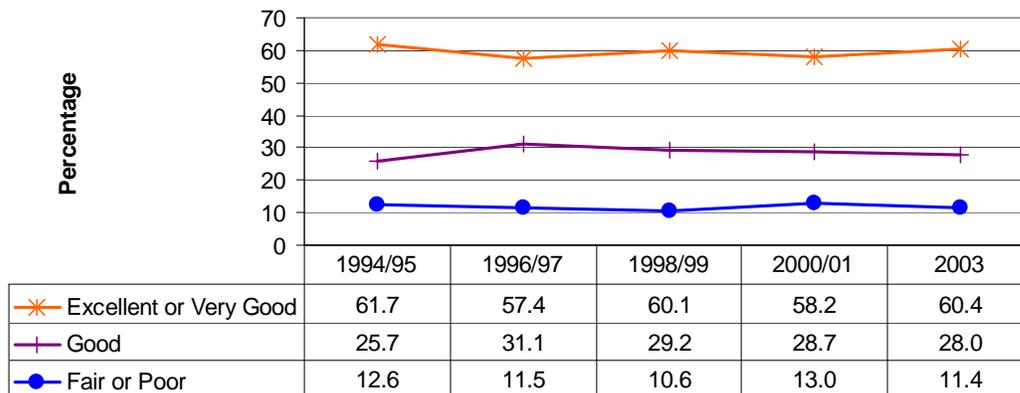
## Self-Rated Health in Manitoba Women

In 2003, 61.1% of Manitoba males and 60.4% of Manitoba females (aged 12 years and older) reported themselves to be in “excellent” or “very good” health, while 10.8% of males and 11.4% of females reported that their health was only “fair” or “poor” [3]. The percentage of the population reporting “excellent” or “very good” health has declined over time, both in Manitoba and in Canada as a whole (See Figures 1 and 2).

**Self Rated Health** (or self-perceived health) is how individuals describe their own health. In Canada, Self-Rated Health is measured using the following five point scale: excellent, very good, good, fair and poor.

Self-rated health can reflect aspects of health not captured in other measures, such as incipient disease, disease severity, aspects of positive health status, physiological and psychological reserves and social and mental function [3].

**Figure 1**  
Self-rated Health Manitoba Females 12 Years and Older  
1994/95 to 2003



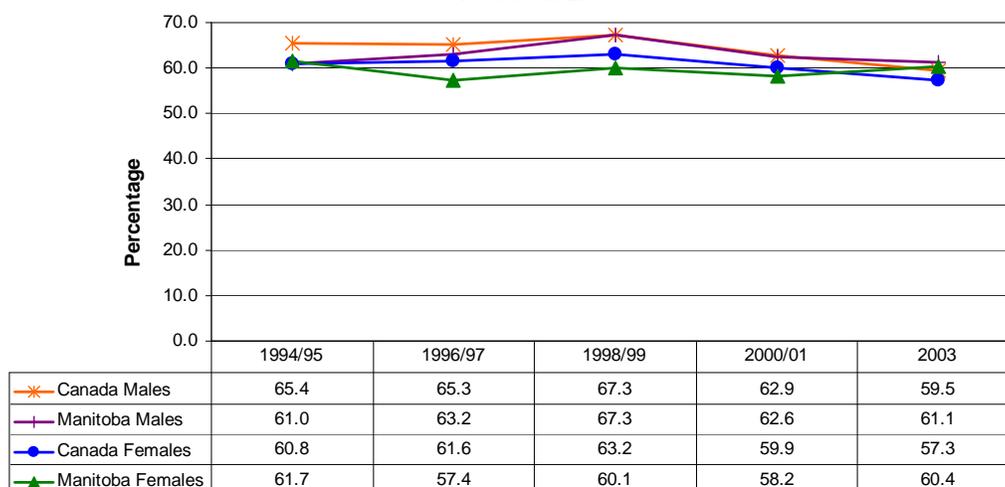
Source: Statistics Canada, CANSIM Table 105-0222





Age is an important factor in self-rated health; the proportion of women and men rating their health as “excellent” or “very good” decreases with age. As Chapter Seven demonstrates, women’s Health Adjusted Life Expectancy (HALE) declines with age, since women live longer, but have more chronic diseases and loss of mobility as they age. However, the proportion of Canadians reporting “excellent” or very good” health has declined since 1994 among both women and men in every age group. Statistics Canada has determined that this decrease is not entirely attributable to the aging of the Canadian population [4].

**Figure 2**  
**"Excellent" or "Very Good" Self-rated Health - Canada & Manitoba**  
**1994/95 to 2003**



Source: Statistics Canada, CANSIM Table 105-0222

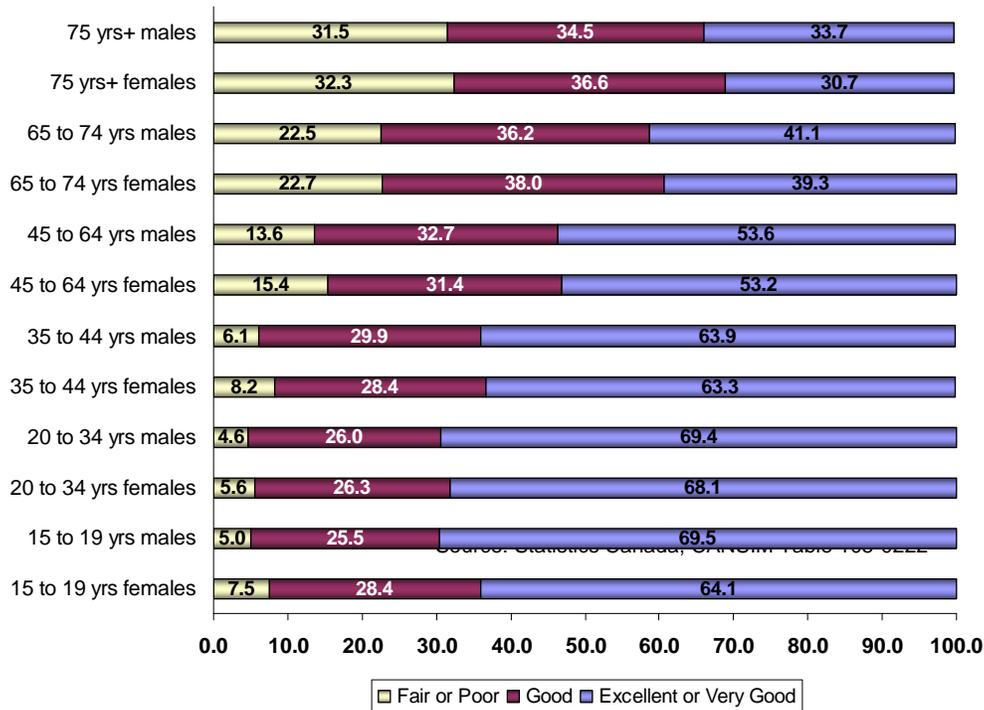
In every age group, women are more likely than men to report that their health is “fair” or “poor” and less likely to report that their health is “excellent” or “very good”. Age and sex specific rates are shown in Figures 3 below. Because of small sample sizes in Manitoba, data for all Canadians are presented in these figures.

Canadian men and women both report high levels of “excellent” or “very good” health. For all three categories (Excellent/Very Good, Good, and Fair/Poor), the largest gender gap appears among those 15 to 19 years of age. For both Excellent/Very Good health and Good health, these differences are smallest among young adults and the gap increases again with age. For those reporting Fair or Poor health, sex differences are smallest among those 64 years and older.





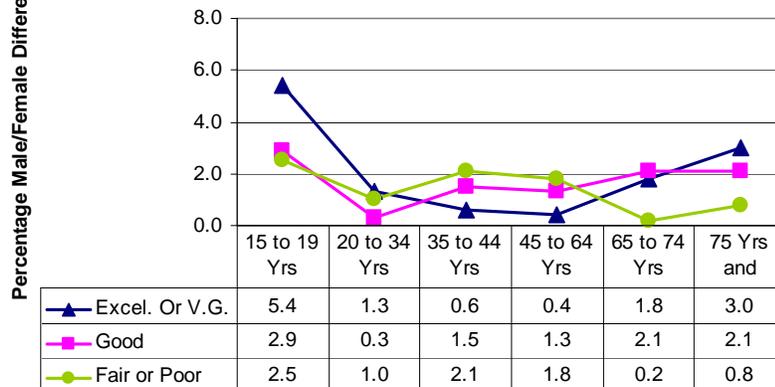
**Figure 3**  
**Self-Rated Health by Age & Sex Canada 2003**



Source: Statistics Canada, CANSIM Table 105-0222

During the ten year period from 1994 to 2003, fewer Canadians reported being in excellent health and more reported being in poor health. During this time, some factors thought to influence self-perceptions of health, such as obesity [4] and income inequality [5], have worsened, though others have improved. Notably, self-reported rates of tobacco smoking have decreased, while self-reported rates of physical activity have increased. All of these factors, taken together, suggest that Canadian women’s declining self-rated health reflects a decrease in actual health status, rather than a decrease in perceived health status [5].

**Figure 4**  
**Self-Rated Health - Gender Gap by Age**  
**Canada 2003**



Source: Statistics Canada, CANSIM Table 105-0222





As noted in the indicator on Time Stress (see Unpaid Work, Chapter Two) women are more likely to report being stressed for time with less time for personal pursuits and leisure. Prairie mothers juggling their roles as parents and employed persons, whether single or partnered, were most severely time stressed [6]. Good health requires sufficient sleep and adequate free time and personal care buffer stress. The long term trend toward the erosion of free time particularly affects working mothers [7]. Furthermore, inequity in unpaid work is a better predictor of depression for women than is the absolute time women spend on unpaid work.

## Summary and Implications

Self-rated health provides policy makers, and those wishing to influence public policy with a reliable, sex and age specific measure of the general health of a population. It is particularly useful in measuring changes over time, and inequities between and among sub-populations.

Most Manitoba women report being in good to excellent health, which is good news. As we have seen, however, there are compelling reasons to continue to look at self-rated health in the context of time stress, unpaid work, income, HALE and living with disease.

Collection of data on Manitoba women's self-rated health should continue and should be analyzed in the context of other information about the circumstances of women's lives.

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# Cardiovascular Diseases

*“Higher rates of heart diseases among young and middle-aged men have created the false conception among women and health care practitioners that heart disease is primarily a middle-aged male disease.” [1]*

## Introduction

Cardiovascular disease (CVD) is the leading cause of death for Canadian men and women. CVD is also the leading cause of hospital admissions among men, and among women is second only to hospitalizations for pregnancy and childbirth [2]. Similarly, CVD has contributed to more deaths among Manitobans than any other cause and is responsible for a slightly greater proportion of deaths among women (37.5%) than among men (35.5%) [3].

According to the Heart and Stroke Foundation, for the first time in 30 years, the total number of deaths from cardiovascular disease, for all ages, is virtually the same for Canadian women and men [4]. Yet the serious impact of CVD on women’s health often goes unrecognized. More often, it is seen as a disease of middle-aged men. CVD tends to develop approximately 10 years later in women than in men [2]. This is consistent with published research comparing rates of CVD treatment among Manitobans by sex [3]. The delayed onset of CVD in women may be due to protective effects conferred by normal levels of estrogen, prior to the onset of menopause [1, 5]. Although CVD is more common among men at young ages, after child-bearing age the difference between the sexes lessens. The greater likelihood of CVD in old age for women combined with women’s

### What are cardiovascular diseases?

Cardiovascular diseases (CVD) include several diseases that affect the heart or blood vessels. The most common types of CVDs include ischemic heart disease, acute myocardial infarction (AMI) or heart attack, cerebrovascular diseases, which include stroke, and congestive heart failure.

**Ischemic heart disease (IHD)** is any condition in which heart muscle is damaged or works inefficiently because of an absence or relative deficiency of its blood supply. IHD is most often caused by atherosclerosis, a build up of cholesterol plaque on artery walls. IHD is the underlying disorder for sudden episodes such as heart attack and sudden death as well as the chronic condition of angina pectoris. IHD is also called coronary heart disease (CHD).

**Acute myocardial infarction (AMI)** is a severe and sudden manifestation of ischemic heart disease. A blockage in an artery obstructs blood flow to a section of heart muscle resulting in ‘death’ of heart tissue.

**Cerebrovascular disease** includes disrupted blood flow and all diseases of blood vessels of the brain.

**Stroke** is a condition that results in a disruption of blood flow to a region of the brain causing irreversible “death” of brain tissue.

**Congestive heart failure** is an inability of the heart to deliver blood at a rate required by metabolizing tissues at rest or during light exercise.

**Hypertension, or high blood pressure**, is generally defined as diastolic (when the heart is dilating) blood pressure equal to or greater than 90 millimeters of mercury (mm Hg) or systolic (when the heart is contracting) blood pressure equal to or greater than 140 mm Hg. Hypertension is the number one risk factor for stroke and a major risk factor for heart disease [6].





longer life expectancy results in a relatively high number of women affected by CVD. Thus, CVD poses a serious threat to the health of women, and one that is not often recognized.

CVD is likely to remain a serious health concern for women in the years to come. As the population continues to age, women's tendency to live longer than men and the greater likelihood of developing CVD in older age is expected to result in more women affected by CVD than men within the next two decades [7]. Also, although rates of mortality, especially for ischemic heart disease, have been steadily declining for men over the last decades, these rates have been more stable for women [8]. Though the reasons for this are not yet well understood, systemic and social factors are increasingly recognized as important contributors to women's distinct CVD profile [1]. While many gaps in knowledge persist concerning women's experience of CVD, as well as appropriate treatments for women, what we do know about key areas of risk for women provides a basis for action in policy and program development.

## CVD Prevalence and Incidence in Manitoba

It is estimated that 42% of Canadians with hypertension [5] and approximately 50% of women with ischemic heart disease [9] are undiagnosed. The following data about the prevalence and incidence of major cardiovascular diseases in Manitoba, drawn from the provincial health administrative data, are therefore conservative, including only those who have received health services<sup>1</sup> for these conditions. The rates do not indicate the true prevalence of disease, that is, the proportion of the population that has a disease, nor the incidence of disease, defined as the number of new cases of a disease in the population identified within a given time period. However, the data have the advantages of representing confirmed cases and avoiding reliance on self-reported diagnoses, upon which population health surveys commonly rely. As well, treatment prevalence rates are based upon the entire population of residents in the province of Manitoba, rather than smaller samples that could introduce sampling error [3].

## Hypertension

Hypertension, or high blood pressure, is very common among Manitobans. Provincial data for 2001-2004 showed that one in four adults aged 25 and older had been treated for hypertension. The prevalence (age standardized rate) of hypertension was 25.9% for Manitoba women, slightly but significantly higher than among men (25.9% versus 24.0%,  $p < 0.001$ ) (Figure 1). This is equivalent to an annual average of 35,985 women affected by hypertension—which is considerably higher than the 28,142 men affected.

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<sup>1</sup> Treatment prevalence values for residents of remote northern areas served by nursing stations may be under-estimates of actual values, where physician claims were not associated with all health care contacts.



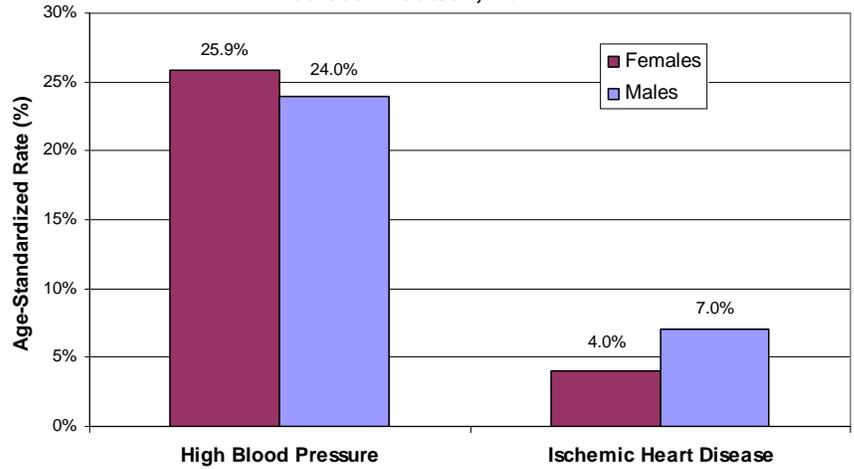


The prevalence of hypertension was low among young adults (e.g. less than 5% among women under age 30) but rose rapidly with increasing age. By age 50, more than one in four women had received treatment for hypertension and by age 80, the majority of women (70%) had received treatment. The difference in rates of hypertension between women and men also increased with age (Figure 2). By age 85, the rate of hypertension was 15% higher among women than men.

Since hypertension is often asymptomatic, many individuals are unaware of their hypertension and will therefore not be represented in these statistics. Thus there is an important connection between physician visit rates and the diagnosis of hypertension. Hypertension is more likely to be undiagnosed in those who use physician care less often than those who see physicians more often, and women's greater use of physician care may be a factor in their higher rates of diagnosed hypertension. Among all Manitobans, females were more likely to have seen a physician, outside of hospital, at least once per year (86% of females and 79% of males) and this difference was statistically significant. Women also saw physicians more often than males in every age group except those aged 75 to 85 years [3].

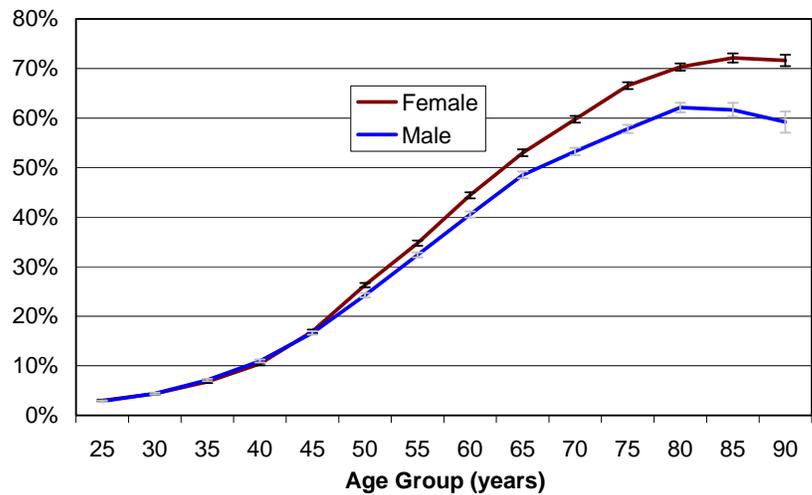
Regional comparisons of hypertension treatment rates indicated that women in northern and rural settings have relatively high risks for cardiovascular disease. Significantly higher (age standardized) rates of hypertension were found among women than among men in most regions. Rates were higher for

**Figure 1**  
Age Standardized Treatment Prevalence for High Blood Pressure, 2001/02 - 2003/04 & Ischemic Heart Disease, 2002/03 - 2003/04, Manitoba



Source: Fransoo et al., 2005. Manitoba Centre for Health Policy, 2005 [3]

**Figure 2: Hypertension Treatment Prevalence by Age and Sex, Manitoba, 2001/02 – 2003/04**  
Crude percent of residents treated for high blood pressure age 25+



Source: Fransoo et al., Manitoba Centre for Health Policy, 2005 [3].



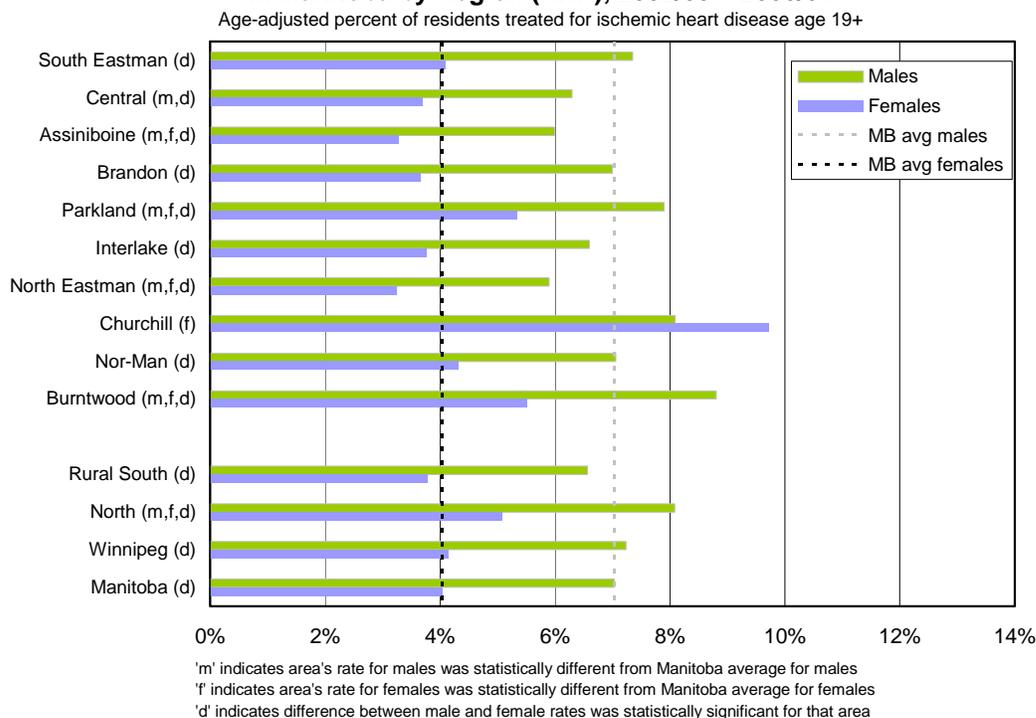


women living within the boundaries of the North and Rural South Regional Health Authorities (RHA), but not in the Winnipeg RHA. Over 30% of women living in the North regions were treated for hypertension, a significantly higher rate of treatment than for Manitoba women overall. Among individual RHAs, women in the Interlake and Burntwood RHAs had significantly higher rates of hypertension (28% and 34% respectively) than average for all women in the province. Only women living in the Central region had significantly lower rates of treatment for hypertension (24%) compared to Manitoba women overall.

## Ischemic Heart Disease

Ischemic heart disease (IHD) is much more common among men than women in Manitoba (Figure 1). The (age adjusted) prevalence of IHD<sup>2</sup> for 2002-2004 was 7% for men compared to 4% for women aged 19 and older, which represents 26,094 men and 19,939 women living with IHD in the province. The prevalence rose steadily with increasing age; one in ten women aged 65 years and one in four women aged 80 years were treated for ischemic heart disease (versus 1/6 and 1/3 for men, respectively). Women (and men) residing in Northern Manitoba were more likely to have received treatment for IHD than the Manitoba

**Figure 3: Ischemic Heart Disease Treatment Prevalence in Manitoba by Region (RHA), 2002/03 – 2003/04**



Source: Fransoo et al., 2005. Manitoba Centre for Health Policy, 2005 [3]

<sup>2</sup> This is the treatment prevalence of IHD in residents age 19+ defined by a combination of data on physician visits, hospitalizations, and prescription drugs, from 2002/03 to 2003/04 fiscal years (one or more hospitalizations with any diagnosis code from 410 through 414 in any diagnosis field, OR, two or more physician claims with one of these diagnoses, OR, one physician claim with one such diagnosis AND two or more prescriptions for IHD drugs) [3].





general population. Treatment rates by region (Figure 3) varied considerably and indicated high rates of IHD among women in the Churchill, Burntwood and Parkland regions, and low rates among women in the North Eastman and Assiniboine regions compared to Manitoba women overall. Women living in the Churchill region were 2.5 times more likely to have received treatment for IHD than Manitoba women (9.7% versus 4%).

## Acute Myocardial Infarction (AMI)

Manitoba men (age 40+) are much more likely than women to suffer an AMI<sup>3</sup>, leading to either hospitalization or death. The annual (age adjusted) incidence of hospitalization or death for men was over double the rate for women (7.1 versus 3.1 per 1,000) and represented 1,517 and 943 AMIs per year among men and women respectively (Figure 4). Men's greater risks were observed in all age categories. Regional comparisons among women again found greater risks in the North. Women living in the North regions had significantly higher rates of AMI than Manitoba women overall.

Among individual RHAs, women in the Burntwood, Brandon and Interlake regions were more likely to suffer an AMI compared to all women in the province. Significantly lower rates were recorded for women in South Eastman and Central regions [3].

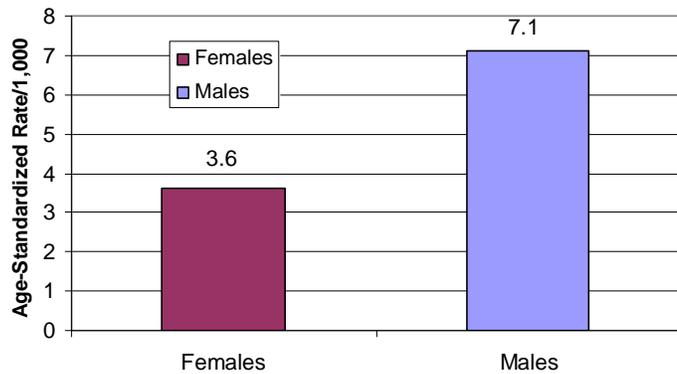
## Prevalence of CVD among First Nations Women

Based on the results of health surveys<sup>4</sup>, hypertension appears to be more prevalent among First Nations women than other Canadian women (23.2% versus 17.4%) (Figure 5). Comparisons by age indicate that First Nations women have a younger age of onset for hypertension. While similar rates of hypertension were found among women over age 60, in younger age categories, First Nations women had a higher prevalence of hypertension. Heart disease has also been found to be more prevalent among First Nations women than other women in Canada (8% compared with 5.1%) [10].

<sup>3</sup> Defined as the annual rate of hospitalization or death due to acute myocardial infarction in residents age 40 and older, over the five-year period 1999/2000 to 2003/04. Vital Statistics files provided information on deaths; hospitalized patients were counted if they stayed three or more days, as those hospitalized for less than three days have been found to be less likely to represent true cases of heart attack. Rates were age adjusted to remove the influence that differences in age structure between populations would have on rates of heart attack [3].

<sup>4</sup> The prevalence rates reported by the First Nations Regional Longitudinal Health Survey and the Canadian Community Health Survey are based on self-reported diagnoses of heart disease and hypertension. These rates are not comparable to the treatment prevalence rates reported earlier, which were reported by the Manitoba Centre for Health Policy based on Manitoba Health's administrative data.

**Figure 4: Age Standardized Incidence of Hospitalization or Death from Heart Attack, Manitoba 1999/2000 to 2003/04**



Source: Fransoo et al., Manitoba Centre for Health Policy, 2005



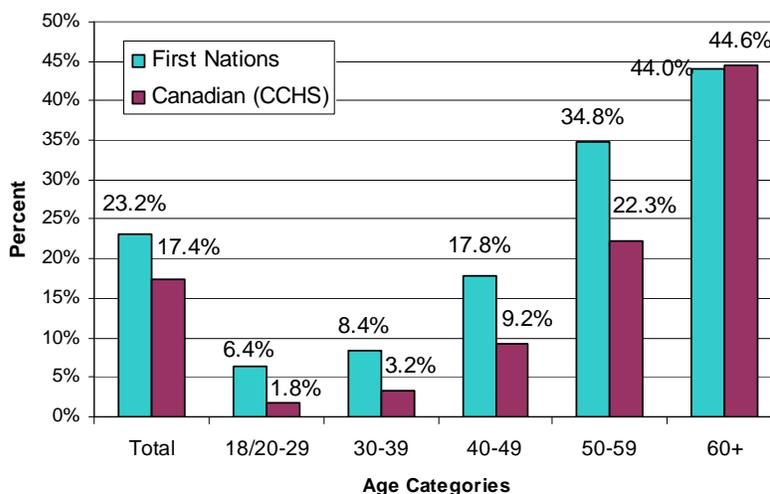


A report on the health of Manitoba First Nations people found interesting disparities in the prevalence of hypertension by residence, though this research did not provide an analysis of sex-specific data. Comparing First Nations and other Manitobans, the study found similar rates of hypertension overall (22.1% versus 20.2%) and in southern RHAs, including Winnipeg, but significantly higher rates for First Nations in northern regions. Further, among First Nations, the on reserve population had a significantly higher rate of hypertension compared to the off reserve population (23.5% versus 19.9%) [11].

First Nations peoples' higher risk for CVD has been attributed in part to their higher exposure to such major risk factors as diabetes, obesity and smoking [12], as well as less fruit and vegetable consumption [7], a challenge tied to food security issues which disproportionately affect First Nations populations. The higher burden of diabetes among First Nations women compared to both men and non-First Nations women [13] (see Diabetes) contributes to a higher prevalence of hypertension in this sub-population. National First Nations survey results found that diabetes sharply increased the risk of CVD; survey respondents with a diabetes diagnosis had 4 to 5 times the rates hypertension and heart disease compared to those not affected by diabetes (42% versus 10% and 14.9% versus 3.3% respectively) [10].

Women belonging to certain ethnic groups also have higher risks for CVD, whether through the influence of a genetic predisposition or through cultural influences on lifestyle risk factors. Research has shown that individuals with South Asian and Eastern European ethnicity are particularly vulnerable to heart disease, and that those with Chinese ethnicity have a higher risk of stroke [7]. Among Canadian women, South Asian immigrant women have the highest rates of IHD. Studies from the United States have also demonstrated that Black women have high rates of CVD relative to other women. Canadian research has shown Black women's rates of self-reported CVD (7.3%) to exceed rates for all Canadian women (3.5%), as well as rates for Black men (2.8%) [2].

**Figure 5: Prevalence of Hypertension by Age First Nations & Canadian Women, 2003**



**Source:** First Nations Regional Longitudinal Health Survey (RHS), 2005. The RHS derived data on Canadian women from the CCHS 2003. [10]

**Notes:** The CCHS did not survey people in the northern territories, on military bases, in institutional collective dwellings or living on First Nations reserves. The RHS defined its youngest age category as 18-29, whereas the CCHS defined its youngest age category as 20-29.





## Key Risk Factors Contributing to CVD for Women

Some of the major risk factors which predispose individuals to heart disease are shaped by both sex and gender [14]. Biological and epidemiological research have shown differences in the impact, prevalence, and expression of risk factors for women and men. For women, the individual biological or behavioural risk factors which have the greatest impact on CVD are advancing age, cigarette smoking and diabetes. Other major risk factors, including hypertension, overweight, and physical inactivity, hold a similar degree of risk for both sexes [17]. While behavioural factors receive considerable attention in research and policy, the importance of socioeconomic factors for women's CVD is increasingly recognized, in Canada and among international experts in the field. While several of these risk factors relate to other indicators covered elsewhere in the *Profile*, some important points with respect to CVD risks and Manitoba contexts are offered below.

**Smoking** is commonly recognized as the most important modifiable risk factor for CVD. Women who smoke have two to six times the risk for AMI and two to three times the risk for stroke, compared to women who do not smoke. As well, women who smoke and use oral contraceptives have an increased risk for stroke [1]. Smoking has also been found to be a stronger risk for AMI in middle-aged women than in men [2]. Overall, women are less likely to smoke, and when they do smoke, they consume fewer cigarettes than men (see Chapter Three), though the large differences in smoking behaviour that were seen a generation ago, no longer exist. In Canada, as in other developed nations, smoking has become as common among young women as it is among young men [18]. In Manitoba, the 2005 CCHS found little difference in the rates of smoking among females and males aged 15 to 19 (Chapter Three). As lifestyle habits that begin in youth often continue through life, early onset of smoking has lasting influences on risks for CVD.

Though the prevalence of smoking has declined in recent years, often attributed to public health campaigns and policies which restrict smoking in public spaces, less dramatic gains have been observed for women than for men. The influence of gender on smoking behaviour may be partially responsible, as women appear to have distinct motivations for smoking. Women often smoke to cope with psycho-social issues, often associated with poverty; women may also receive less social support for quitting [14]. Among female adolescents, initiation and sustained smoking are more often related to targeted advertising by tobacco companies, self esteem and issues of body image than for male youth [18]. As well, women are more physiologically susceptible to nicotine addiction and may find it more difficult to quit smoking [19]. It is important to recognize that because individuals may smoke for 2 or 3 decades before health consequences are seen, for a growing cohort of older women, many of whom quit only in the late 1970s (15 years later than men, on average) the consequences of their risk exposure may not yet be fully reflected in the incidence of CVD.

**Physical inactivity**, though not the most important risk factor for CVD, has been described as the most prevalent modifiable risk factor [17]. Regular physical activity can reduce body weight, improve serum lipids and cholesterol, blood pressure, and diabetes, and thereby reduce overall cardiovascular risk. National guidelines recommend a minimum of 60 minutes of light physical activity or 30 minutes of moderate physical activity daily [20]. Research has shown a five-fold greater risk of CVD mortality among





women who are the least active relative to the most active groups of women [15]. Many studies suggest that women are more likely to be sedentary than men. Canadian surveys of activity levels have classified 36% of women aged 18 to 74 as physically inactive, and found higher levels of inactivity among older individuals and those with lower socioeconomic status [2]. Nearly two-fifths of teenaged girls in Canada are physically inactive [7], and a wide gap between young women and men (12 to 19) persists, despite encouraging trends [18]. While surveys of activity levels have often been restricted to measures of leisure time, sport and exercise, the Manitoba *In Motion* survey, which incorporated a broader range of daily activities (e.g. house/yard work) still found that young women (aged 18 to 34) were less active than men of the same age. Even girls aged 13 to 17 have been found to be less active than their male peers (Chapter Three). Young women's lower levels of physical activity have been attributed to women's attitudes toward exercise and their bodies and to the limited availability of gender sensitive activities for girls and women. Despite the prevalence of sedentary lifestyles, and considerable attention devoted to the issue, physical activity is not well recognized by women as a means of reducing their risk for CVD [17]. However, studies have found that women tend to have positive attitudes toward physical activity, but may be unable or unwilling to take action. The most commonly reported barrier to women's participation in physical activity is family responsibilities [15].

**Overweight, particularly obesity** increases risks of morbidity and mortality associated with hypertension, heart diseases, cerebrovascular diseases, and diabetes mellitus. Excess weight has adverse effects on blood glucose levels, blood pressure and lipid profiles [15]. Obesity and overweight<sup>5</sup> are highly prevalent among Canadians [2]. In Manitoba, 55% of women were either overweight (29%) or obese (26%) in 2004 [21]. While obesity is more common among men than women overall, women are particularly susceptible to weight gain in adolescence, pregnancy and menopause. Weight increase in menopause has been shown to be associated with a significant increase in blood pressure [15]. Among children (age 2-17) in Manitoba, the prevalence of unhealthy body weight was similar for girls and boys aged 2 to 17 (30-31%) [22]. The prevalence of obesity and overweight increase with age; approximately one third of Canadian women are obese by age 45 [23]. Women living in poverty may have somewhat higher risks for being overweight, which is associated with less access to high quality food. However, according to the 2004 CCHS, Canadian women in middle and upper-middle income households are more likely to be obese compared to women in the highest and lower income households. In contrast, men in the highest income households are most likely to be obese [24]. Sex differences in overweight and obesity are also influenced by ethnic background. The prevalence of overweight is lower among Black Canadians overall, but higher among Black women (20%) than among Caucasian women (15%). The Aboriginal population has the highest reported rate of obesity in Canada (25-30% for women and men) [15]. Social and environmental factors are important influences on activity levels and body weight. Canadian women living in urban cores report less overweight and obesity than those living in suburban or rural areas,

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<sup>5</sup> According to the 2003 Canadian Guidelines for Body Weight Classification in Adults, the following Body Mass Index (BMI) values distinguish four categories of body weight on the basis of associated health risks that have been demonstrated through research: Obese  $\Rightarrow$  30.0 kg/m<sup>2</sup>; Overweight = 25.0 - 29.9 kg/m<sup>2</sup>; Normal Weight = 18.5 - 24.9 kg/m<sup>2</sup>; and Underweight  $<$  18.5 kg/m<sup>2</sup>. However, the BMI is not an appropriate measure of healthy body weight for pregnant women and persons less than 3 feet tall (0.914 metres) or greater than 6 feet 11 inches tall (2.108 metres). See Chapter 3 for a gender-based analysis of BMI.





which is understood to partly reflect the greater convenience and opportunity afforded for biking and walking in urban neighbourhoods. Health promotion initiatives that remove social and environmental barriers, while creating opportunities for safe, active living, are recognized as effective means to promote weight loss for women and men [24]. Women's greater likelihood of suffering depression with obesity [24] is one aspect which calls for gender sensitive approaches to weight loss strategies for women.

**Diabetes mellitus**<sup>6</sup> is an established risk factor for the development of CVD [15] and a particularly important risk factor for women. 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 [2]; a two-fold greater risk of coronary heart disease and stroke for women compared to men has been described in the literature [1]. Also, women of childbearing age who develop gestational diabetes, marked by high blood sugar levels in the late stages of pregnancy, have increased risk of developing overt diabetes in later life and, in turn, are at greater risk of heart disease [1]. Gestational diabetes occurs in about 2% to 4% of pregnant women [5]. Diabetes also affects the severity of CVD outcomes. Individuals with diabetes and heart disease are more likely to die than are non-diabetics with heart disease. A large Norwegian study, which followed participants with and without diabetes for 18 years, found that diabetes was a stronger predictor for death from ischemic heart disease (IHD) in women than in men, eliminating the usual gender gap in IHD mortality [25]. The link between CVD and diabetes is especially concerning in Manitoba where the highest reported diabetes prevalence among Canadian women has been found—20% higher than the average rate for Canadian women (i.e. age standardized prevalence of 5.3% versus 4.4%). The high prevalence of diabetes in Manitoba is understood to partially reflect the higher burden of diabetes borne by the Aboriginal population, who comprise a large proportion of the provincial population than the Canadian population (13.6% versus 3.3%<sup>7</sup>). Among First Nations women in Manitoba, as of 2006, the prevalence of diabetes was higher than for men and more than four times higher than among non-First Nations women. The growing incidence of diabetes in the province [13] and several risk factors being common to both conditions (e.g. hypertension, elevated blood cholesterol levels, overweight or obesity, and physical inactivity) indicate the importance of prevention and early intervention initiatives that address the early stages of both CVD and diabetes among women and men.

## Women's Social Conditions and CVD Risk

*There is a growing body of evidence that the determinants of health go beyond individual genetic endowment, lifestyle behaviour, and the health care system to the more pervasive forces in the physical, social and economic environment... Health policy makers and analysts have emphasized that these underlying determinants need to be addressed in order to prevent heart disease and stroke. They urge us to direct attention towards modifying not only risk factors and risk behaviours but also such 'risk conditions' as poverty, powerlessness and lack of social support [16].*

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<sup>6</sup> See also Diabetes, this Chapter.

<sup>7</sup> The Aboriginal identity population for Manitoba and Canada, according to the 2001 Census of Canada.





This statement challenges health promotion initiatives to address not only individual behaviours—the more immediately modifiable risk factors for CVD—but also the systemic level of risk, with the potential to benefit large sub-populations for whom improvements in CVD mortality and morbidity have proven resistant to medical and lifestyle approaches.

Research has demonstrated a relationship between socio-economic variables—income, education and occupation—and cardiovascular disease. Income level has been found to have both an independent effect on CVD and an interactive effect in relation to other risk factors. Several studies in the UK and US have documented a much higher risk of death from CVD for women and men in low income groups compared to high income groups. Generally, the relative risk of death has been two or more times as high for low income individuals [16]. While studies have not always disaggregated data by sex, some have found sex differences in the relative risk of death from heart or vascular disease by income. A study conducted in England and Wales found that women in the two lowest income groups had a 200% greater risk of death from CHD compared with women in the two highest income groups, whereas low income men had a 66% greater risk. Similarly, for CVD, individuals with low income were more likely to die than their higher income counterparts, and these risks were greater for women than men (i.e., 68% greater risk of death for women in low income than high income groups; 55% greater risk for low income men). A Canadian study of urban residents found smaller differences in CVD mortality by neighbourhood income among women than among men. However, the study also found that the relative risk of death comparing women from the lowest and highest neighbourhood income groups had increased (1.12 in 1991 to 1.20 in 1996) while for men it had declined (1.35 to 1.32)<sup>8</sup> [16]. An analysis of the 2000/01 Canadian Community Health Survey found that women with heart disease were more likely to be poor than men with heart disease, and that poor women with heart disease were much more likely to report fair or poor health and higher levels of co-morbidity. Socio-economic factors (income, education, language), health behaviour (physical activity), access to care, and psychosocial factors (depression, stress, and sense of community belonging) were all found to be independently associated with poor health for women [26]. While low income may also be a consequence of living with CVD, longitudinal studies have found evidence that low income precedes the onset of cardiovascular disease and death, and still contributes to these outcomes when the influence of medical and lifestyle factors are removed [16].

An analysis by the Manitoba Centre for Health Policy of provincial data on hypertension, ischemic heart disease and AMI established the importance of socioeconomic factors for the occurrence of CVD among women and men in Manitoba. The study found that socioeconomic status (defined as area-level income) strongly influenced rates of cardiovascular disease. For women, age-adjusted rates of treatment for ischemic heart disease and hypertension and of death or hospitalization for AMI were higher among residents of low-income areas in both urban and rural settings, with statistical tests indicating a highly significant relationship between CVD and income ( $p < .001$ ). A similar relationship was found for men,

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<sup>8</sup> These values represent ratios of death rates. Note that Canadian studies of differences in death rates by income have produced more conservative results for these ratios than studies from the UK or US. This has been attributed to the use of neighbourhood income as an estimate of individual income in Canada, where income and socioeconomic data for individuals are not routinely collected at death.





although the trend was not statistically significant for hypertension and a somewhat lower level of significance was achieved in income comparisons for AMI among rural men ( $p < .01$ ) [3]. Closer examination of the data on ischemic heart disease also revealed a larger disparity by income for women than men. That is, women living in the lowest income areas, in both urban and rural settings, had 1.5 times the rate of treatment for the disease than women who lived in the highest income areas. For men, the difference in treatment by income was not as pronounced (ratios of 1.1 and 1.2 in urban and rural areas respectively) [3].

Raphael explored the influence of income inequality and social exclusion, recognized as distinct from income level alone, and found these two factors to be very important influences on cardiovascular disease rates. The extent of relative inequality in a society independently contributed to CVD among those with lower socioeconomic status, primarily resulting from the physiological effects of chronic stress on the heart [16]. Similarly, research with African-American women found that chronic exposure to discrimination contributes to early stages of coronary artery disease [27]. Although the mechanisms by which socioeconomic factors contribute to CVD are not well understood, the effects are believed to be mediated through social isolation, coping styles, behaviour, job strain or stress, and anger and hostility. The characteristics of low income neighbourhoods may also influence CVD outcomes [1]. For example, residents of low income neighbourhoods are exposed to more air pollution, which has been linked to increased rates of cardiovascular disease. The Ontario Medical Association has estimated that in 2005, there were over 16,000 hospital admissions in that province associated with air pollution exposure, of which approximately 11,000 were associated with cardiovascular illnesses [28, 29]. A report by the Royal Commission on Environmental Pollution presented a wide range of physical, environmental and social factors that can interact in residential environments to change cardiovascular risk (see Figure 6). Notably, sex and gender were not included among the pathways, though most of the effects listed are gendered, while certain effects differ by sex. Again taking the example of air pollution, research has shown that women are more physiologically susceptible to the effects of fine particles in air pollution on coronary heart disease [30].

The importance of socioeconomic factors and social status to women's cardiovascular health was recognized at the first international conference devoted to women's experience of heart disease and stroke. Leading experts in the field asserted that "the promotion of cardiovascular health and the prevention of heart diseases and stroke and its sequelae among women can only be accomplished with attention to the realities of women's various roles within the family, the workplace and the community, and their power base in the family and country" [1]. A lack of control in community, family, and work settings is believed to be detrimental to women's cardiovascular health. Research has found that high demand and low control jobs adversely affect heart health and that women tend to have a restricted choice of jobs and less control than men over the process and content of their work. As well, many women with a double workload, consisting of paid employment and unpaid work in the home, may experience high levels of stress. It is also important to note that there are considerable differences among women's status and opportunities for self-determination, which often follow divisions marked by levels of educational attainment and rural or urban residence [1, 14]. In the home environment, women usually carry the role of the primary caregiver in the family, and due to their longer life expectancy, are often less likely than older

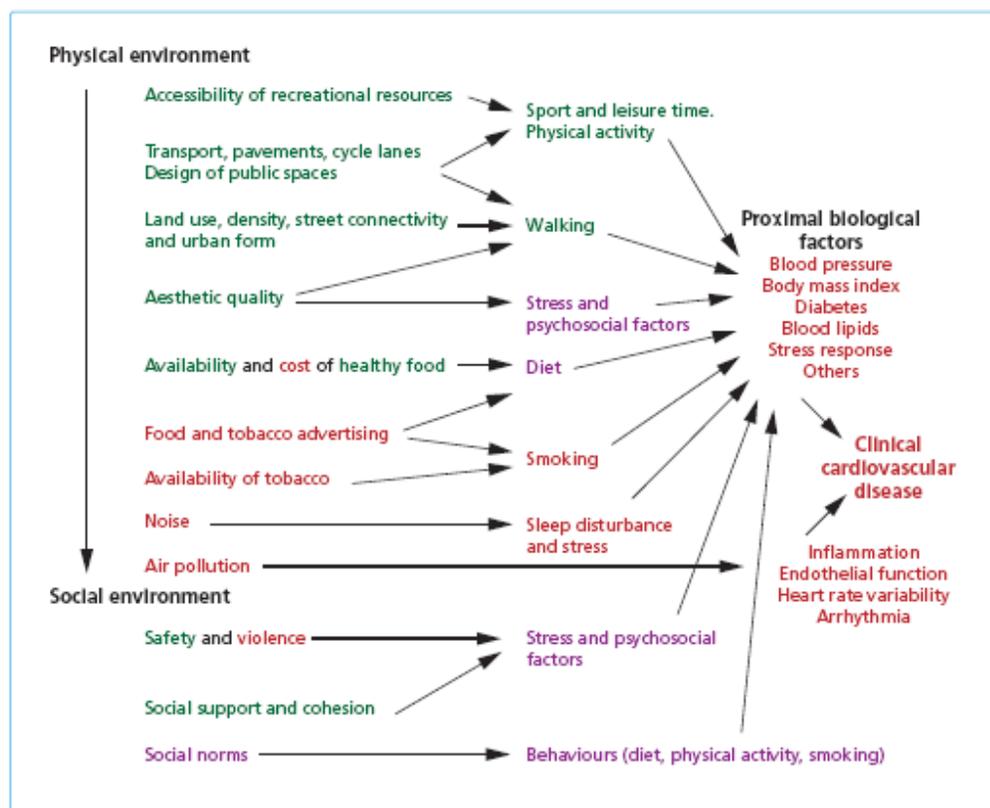




men to have a partner to provide care to them. Thus, women's more limited access to social support may affect both the risk for disease as well as their likelihood of success in recovering from an AMI or stroke [1].

### The pathways that can link residential environments to cardiovascular risk<sup>111</sup>

Green = positive effects Red = negative effects Purple = mixed/intermediate effects



Source: Royal Commission On Environmental Pollution, 2007 [28].

Figure 6

## Women's CVD Outcomes

### The Influence of Knowledge Gaps & Gender Bias

Research from Canada and other nations comparing sex differences for CVD have consistently found that men are more likely to be diagnosed with CVD and have higher age standardized death rates [8]. Despite this, women appear to have worse outcomes for CVD events. Women who suffer an AMI are less than half as likely to recover as men [31]. Studies have shown that, at all ages, women have higher in-hospital mortality rates following AMI than men. An analysis of health care outcomes for Canadians found that, compared to men, women's risk of dying within the first 30 days following a cardiovascular event was 16% higher for AMI and 11% higher for stroke, even when the study controlled for the older age of women with CVD and the greater likelihood of their having other illnesses that could complicate CVD outcomes [4]. However, Manitoba research, that examined a cohort of Manitobans diagnosed with an AMI from 1999 to





2002<sup>9</sup>, followed-up for outcomes at the time of hospitalization, 30 days after AMI and one year after AMI, found no statistically significant differences between women and men in age-adjusted rates of mortality [3].

Other research has found evidence of worse health status for women among survivors of CVD events. Women typically have longer stays in hospital and suffer greater disability related to CVD. The National Population Health Survey showed that among individuals diagnosed with heart disease, women consistently reported higher levels of pain, discomfort, activity restriction and disability secondary to their heart disease than men [8]. There is some indication that women with cardiovascular disease also receive less support than men, don't cope as well, and report more symptoms of anxiety and depression [14]

The ability to understand and improve upon CVD outcomes for women has been hampered by a lack of research and analysis of women at risk of, or living with CVD. Until recently, most clinical trials and epidemiological studies concerning CVD have been based on samples that are completely or predominantly made up of men. In 2003, a systematic review of research on coronary heart disease performed by the U.S. Agency for Healthcare Research and Quality still found a serious lack of sex-specific evidence in a number of important areas of diagnosis, treatment and risk prevention. In many cases, even when data were collected on women and minorities, the authors did not perform analysis or publish results for these subgroups [32, 14]. Furthermore, studies that have included women have often focused on young and middle-aged populations, age ranges in which CVD is much less common for women than for men [15]. Consequently, not enough is known about women's disease origins, risk factors, disease characteristics, effective practices for women in the areas of prevention or preclinical and clinical interventions, or the quality and responsiveness of health services for women with CVD [1, 2].

The lack of information on women's experience of CVD has raised concerns that this may lead to women delaying seeking help, thus contributing to their poorer outcomes. An example which is often mentioned in the literature is that research has more often explored the symptoms and signs of AMI experienced by men than those of women. Men typically experience severe chest pain, sweating and an inability to breathe as early symptoms of AMI. Women are less likely to report chest pain, and are more likely to experience unusual fatigue, sleeplessness, sudden dizziness, or nausea [14]. Consequently, the widespread public perception is that chest pain is the definitive sign of an AMI. Thus, women tend not to recognize 'atypical' warning signs and seek treatment. Though based on a small sample of research subjects, one study found that relatively few women recognized early signs of an AMI even when many women had experienced severe chest pain and were aware of their families' history of heart disease. The results contributed to evidence that delays in seeking medical care contributes to higher rates of disability and death for young women (under age 55) who suffer an AMI [33]. Similar studies have arrived at four main themes to account for delays in women seeking medical care, including: uncertainty about symptoms, competing social demands, problems with doctor patient interaction, and structural barriers to access to

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<sup>9</sup> Excluded patients who were hospitalized for AMI in the two years preceding the current AMI, in an attempt to exclude patients experiencing multiple AMIs in a short period [3].





health care [14]. However, a national survey of Canadians aged 35 and over found that women were generally very aware of heart health issues facing women, while many men were unaware of the risks to their female partners, mothers, siblings, or loved ones. Over half (53%) of men polled erroneously thought the number of heart and stroke deaths was somewhat or a lot less in women compared to men (an error made by only 27% of the women polled). Only 24% of men thought their partner or spouse would develop heart disease or stroke within their lifetime, while 45% of women acknowledged these risks to their own cardiovascular health [4]

Another study has pointed to evidence that coronary events are underdetected in women and attributed the failure in early detection, not to individual women's lack of awareness, but to the systems and health professionals whose policies, practice and behaviour determine diagnoses [34]. Gender bias in the delivery of health care has been recognized as a key contributor to women's CVD outcomes. Research involving primary care doctors in the UK and US found that the gender of patients significantly influenced doctors' diagnostic and management activities, while race, social class and age did not. Female CVD patients were asked fewer questions, received fewer examinations and had fewer diagnostic tests ordered for CHD, suggesting that doctors' actions may contribute to gender inequalities in health [35]. Research has also indicated that women receive fewer preventive services for CVD than are recommended, less advice regarding modifiable risk factors, and fewer referrals to specialists. One study found that physicians tended to assign lower risk for CVD to women than to men, despite identical risk profiles [36]. Furthermore, women receive fewer referrals for cardiac rehabilitation and are less likely to attend when they are referred [37]. A study of women receiving cardiac rehabilitation found that women aged 60 and over were well served by the program, but younger women appeared to have more unaddressed psychosocial issues associated with their cardiac disease [38]. Gender bias has also been found to affect women's access to intensive care. A recent Canadian study, which looked at almost 500,000 Ontario patients, found that older women (over age 50) with heart failure were 32% less likely to be admitted to intensive care units, received less life support, and were 20% more likely to die in intensive care units than men [39].

While women with CVD have been found less likely to receive intensive treatment, these results have not been consistently demonstrated. For example, women are less likely to undergo revascularization (e.g. angioplasty and coronary artery bypass surgery) and are more likely to be treated with medical therapy than men [37]. However, women's lower rates of revascularization may reflect an older age of onset of CVD which may affect their candidacy for surgery [37]. Research has also shown that lower revascularization rates have not adversely affected mortality rates for women [40]. Other studies have found no sex differences in revascularization [37]. In Manitoba, an analysis of provincial data on cardiac care found no evidence of gender bias in diagnosis or treatment rates for women and men with CVD. Researchers reviewed preceding diagnoses and treatment received by Manitoba males and females who experienced an AMI (1999 to 2002) which resulted in either death or hospitalization. Catheterization<sup>10</sup> procedures were highlighted in the analysis. The study found similar diagnoses were attributed to men

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<sup>10</sup> A procedure to identify extent and location of blockages in coronary arteries.





and women in the year preceding an AMI. Sex differences in treatment rates were found, as males overall had a significantly higher rate of cardiac catheterization than female AMI survivors (35.7% versus 28.7%). However, the difference was accounted for by age differences in the male and female patient populations. Comparisons of catheterization rates between men and women within the same age groups found very similar rates of treatment for men and women. Younger patients were more commonly catheterized than older patients. Thus, apparent sex differences reflected more aggressive treatment of a relatively younger male patient population (7 to 10 years younger on average). Geographic differences were also indicated by the results, as patients residing in Winnipeg were more likely to have received aggressive treatment following an AMI than those who did not live in the city [3].

### Use of Medications for Cardiovascular Diseases<sup>11</sup>

Manitoba's Pharmacare system allows prescription drug use by provincial residents to be tracked. Pharmacare data include information about all prescriptions filled for Manitobans in Manitoba pharmacies, and out-of-province claims submitted by residents. The program pays the costs of prescription drugs, within an approved formulary, after residents reach an annual deductible amount. The deductible paid per resident is based on personal income. In 1998/99 cardiovascular drugs accounted for 32.7% of total drug expenditure in Manitoba [41].

**Angiotensin-converting Enzyme (ACE) Inhibitors** relax blood vessels to lower blood pressure and make it easier for the heart to pump blood. They are primarily used to lower blood pressure and are also prescribed for persons with congestive heart failure. ACE inhibitors were the most commonly prescribed drugs used to treat hypertension in Canada in 2004; 31% of prescriptions to treat hypertension were for ACE inhibitors [42]. They are recommended in Canada as the first line treatment for monotherapy of uncomplicated hypertension. (Other drugs are also used to treat hypertension, including older drugs such as diuretics and beta-blockers and newer, more expensive drugs such as angiotensin II receptor antagonists (A2RAs) [41].)

Rates of ACE inhibitor use have increased in Manitoba, as the number of patients for which these drugs are recommended has also increased [3]. During the 2003/04 fiscal year, 10% of Manitoba males and 8.7% of females (age adjusted, population 20 years of age and older) have had at least one prescription filled for ACE inhibitors. This difference was statistically significant ( $p < .001$ ) [3]. Therefore, while women were more likely to be diagnosed with hypertension, men were more likely to receive treatment with ACE inhibitors.

ACE inhibitor use was strongly linked to age. Men aged 80 to 85 (31%) and women aged 85 to 90 (31%) were most likely to have had at least one prescription filled for an ACE inhibitor [3]. There was also a strong relationship between ACE inhibitor use and neighbourhood income. In both rural and urban Manitoba, men and women living in poorer areas were more likely to have used ACE inhibitors [3]. While

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<sup>11</sup> Material in this chapter section was previously produced for the World Health Organization in *Manitoba Field Testing of Gender-Sensitive Core Set of Leading Health Indicators*, by Donner, Haworth-Brockman and Isfeld (2006). The authors are grateful to the World Health Organization for technical assistance.





this illustrates the greater burden of CVD borne by low income Manitobans, it also demonstrates the success of the Pharmacare Program, which provides public funding for prescriptions, with an income-related deductible amount.

**Statins** are cholesterol-lowering drugs. They are used to treat ischemic heart disease, as lower cholesterol or lipid levels may decrease one's risk of coronary heart disease (CHD), and, as a consequence one's chance of having an AMI [41]. Statins accounted for 9.6% of total pharmaceutical expenditures in 1998/99 and 12.6% of the growth in overall prescription drug costs in the three years from 1995/96 to 1998/99 [2]. Lipitor®, a statin, was the single most commonly prescribed drug in Canada in 2006, with over 12.7 million prescriptions dispensed by retail pharmacies in that year [43].

During the 2003/04 fiscal year, 7.4% of Manitoba females (age adjusted, population 20 years of age and older) filled at least one prescription for statins, with those aged 70 to 80 years of age most likely to have been prescribed a statin. About 26% of elderly women in this age group received at least one prescription for a statin [3].

Patterns of statin use varied by income among both women and men. For both urban and rural women, those living in lower income neighbourhoods were more likely to use statins. Among urban men, the opposite was true; those with the highest incomes were the most likely to have used statins. All of these differences were statistically significant. No relationship was found between income and statin use among rural men [3].

**Beta-Blockers after Acute Myocardial Infarction:** Beta-blockers, when used after an acute myocardial infarction (AMI), have been shown to reduce the risk of a second AMI. Other drugs, including ACE inhibitors and angiotensin II receptor antagonists can also be used for secondary prevention of recurrent AMI. Research by Metge et al found that approximately 17% of Manitobans received no secondary prevention drug treatment following an AMI [41].

During the five year period from April 1, 1999 to March 31, 2004, 79.8% of males and 72.7% of females who had an AMI filled a prescription for a beta-blocker within four months. This difference was statistically significant. Among rural AMI patients, those from higher income areas appear to have been more likely to have been prescribed a beta-blocker. This was true for both males and females, and the differences were statistically significant. For urban residents, there was a marginal difference for males and no difference for females [3].

### **The Appropriateness of CVD Medical Therapies for Women**

The lack of clinical research involving women may place women at greater risk of receiving ineffective or harmful medical therapies. Many drug therapy protocols and medical interventions commonly administered to women are based on research solely on men. As a result, appropriate diagnostic criteria, drug dosages and interventions that are effective for women are often unknown [1]. Concerns have been raised regarding the effectiveness and safety of statins for women. Women have been underrepresented in trials of statins, yet they account for approximately half of the 3 million Canadians who take statins daily.





By age 75, one-third of Canadian women are on statins [44]. In Manitoba, administrative data for 2003/04 show that 7.4% of women and men aged 70 to 80 received at least one prescription for statins [3]. The rate of statin prescription for Manitoba women appears slightly less than for women of similar age in six Canadian provinces<sup>12</sup> (2006), among whom 8.8% of women age 15 and older and 28.7% of women aged 70 to 74 received statins [44].

While results from the Framingham Heart Study established that high cholesterol increased the risk of heart disease in young and middle-aged men, these findings were not demonstrated for women or individuals beyond age 60 [44]. In 2004, an in-depth review of women and trials of statins found that only 21 of 1,500 trials included women, and only 9 published results by sex. The study concluded that for women without known cardiovascular disease, the use of lipid lowering medications (hypothesized as a form of primary prevention) did not reduce mortality, and evidence was insufficient to show that it reduced stroke or AMI [44]. Yet 75% of female users of statins are prescribed the drug as part of a primary prevention strategy. Furthermore, there is evidence that statins may pose health hazards, particularly for women. The 1996-1999 CARE trial (14% of participants, or 576, were women) found a 12 fold, statistically significant increase in the incidence of breast cancer in statins users [44]. Another study found that statins were associated with muscular weakness, particularly for elderly women, as well as mood and memory problems [44]. Health Canada issues a caution about the use of statins for pregnant women and women of childbearing ages [44]. Despite the weak evidence that statins improve women's health, and the existing evidence linking statins with serious harms, statins continue to be prescribed to women in the belief that they will reduce morbidity and mortality due to heart disease.

The practice of prescribing Hormone Therapy (HT) to menopausal women for the prevention of cardiovascular disease has also been proven to carry significant risks for women's health [44]. Early studies had theorized that hormonal differences between the sexes were responsible for younger women's lower rates of CVD and, on this basis, suggested that HT might prevent heart disease in post-menopausal women. For many years, hormonal therapy (estrogen alone or combined with progestin) was commonly prescribed to prevent cardiovascular disease, as well as to alleviate symptoms of menopause, slow the development of osteoporosis, and to prevent cancer of the uterus. However the 2002 Women's Health Initiative found that women who took a combined estrogen and progestin therapy had a significantly higher risk of stroke. This and other research also found a greater risk for breast cancer in women on HT [45].

## Policy Implications

The challenge of improving women's cardiovascular disease outcomes and addressing existing gaps and inequities concerning cardiovascular health requires a broad, collaborative and cross-sectoral approach to policy, as was voiced by the Victoria Declaration. International experts drew attention to the distinct cardiovascular health issues of women and called upon governments, NGOs, researchers, institutions, industry and other stakeholders to participate in the development of several different levels and types of

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<sup>12</sup> Provinces included Alberta, Saskatchewan, Ontario, Quebec, New Brunswick and Nova Scotia.





policy. It was especially clear that significant improvements in CVD may only be achieved through addressing the ‘upstream’ determinants of risk factors—that is, the systemic and social issues believed to have a major impact on the cardiovascular health of women and other social and economic minorities [1, 26]. What we already know about socio-economic and environmental determinants of women’s cardiovascular health warrants greater action in programming and policy development, including stricter controls on air pollution.

Other key policy areas include improving the economic security and food security of women, including:

- access to nutritious food;
- addressing social support and care giving needs of women;
- addressing the quality of life for women in the workplace, particularly to increase women’s degree of control in work situations; and
- incorporating a gender and diversity perspective in all major policy areas.

Continued and greater attention to primary prevention is needed, particularly with greater consideration for the gendered nature of risk factors and the socioeconomic barriers that prohibit many women from pursuing healthy lifestyle choices. In Manitoba, considerable support has been directed to Healthy Living programs which focus on public education regarding modifiable risk factors for CVD and diabetes, among other chronic illnesses. Nationally, this work is supported through an integrated public health initiative, the Strategy on Healthy Living and Chronic Disease, which builds collaboration between provinces to reduce the burden of chronic disease, including CVD. As well, the Healthy Baby program and the Child Tax Benefit have enhanced the food security of Manitoba women and their children, and provided education on the health benefits of nutritious foods. Manitoba’s provincial ban on smoking in public places is an important component of policies protective of heart health. However, there is also a particular need for gender sensitive smoking cessation programs. Given that inactivity is a major modifiable risk factor for CVD, and influences other risk factors, it is important to support gender sensitive physical activity programming for women over the life course.

Greater awareness must be built among women, men and health care practitioners of women’s risks for and symptoms of CVD. In clinical practice, primary prevention may benefit from improved and equitable access to services; programs tailored to women’s needs (e.g. rehabilitation); continued evaluation of health services and community program; reevaluation of the prescription of statins to women; and improved surveillance of women’s CVD outcomes.





## The Victoria Declaration

**Recognizing** that heart diseases and stroke are the leading cause of death among women in the developed world and are fast approaching the same status in the developing world, that gender inequity, poverty, illiteracy, unemployment, and lack of access to health services influence women's health, that taking appropriate action to address these and other underlying determinants of health, and that promoting a healthy lifestyle would help prevent heart diseases and stroke,

**the Advisory Board of the First International Conference on Women, Heart Disease and Stroke calls upon**

women and men; health, media, education and social science professionals, and their associations; the scientific research community; government agencies concerned with health, education, trade, finance, culture and recreation, commerce and agriculture; the private sector; international organizations and agencies concerned with health and economic development; community health coalitions; voluntary health organizations; employers and their organizations;

to marshal their efforts and invest resources in the prevention and management of heart diseases and stroke among women in both developed and developing countries, and to adopt the following five values as the foundation for the development, implementation and evaluation of all policies, programs and services:

- **health as a fundamental human right**
- **equity**
- **solidarity in action**
- **participation**
- **accountability**

Advisory Board, First International Conference on Women, Heart Disease and Stroke  
Victoria, Canada, May 10, 2000 [1].

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# Diabetes

## Introduction

Diabetes is serious and growing health concern in Manitoba. In 2006, about 38,050 Manitoba girls and women and about 38,600 Manitoba boys and men were living with diagnoses of diabetes, a 55% increase over the previous decade.<sup>1</sup> Currently, about 3,000 Manitoba girls and women are diagnosed with diabetes each year. The annual number of new cases among girls and women increased by 57% from 1989 to 2006 [2].

Manitobans were more likely than were other Canadians to be diagnosed with diabetes. In 2004/05, 4.7% of Manitoba females (aged 1 year and older) had been diagnosed with diabetes, compared with 4.2% of their Canadian counterparts [3].

Diabetes can lead to reduced life expectancy. In every age group, diabetic women and men are more likely to die than are other Manitoba women and men [2, 4]. The life expectancy of people with Type 1 diabetes at the ages of 20 to 24 years may be shortened by as much as 15 years, and by 5 to 10 years for those with Type 2 diabetes [5].

Diabetes also reduces disability-free life expectancy. Canadian research found diabetes reduced disability-free life expectancy by 14.1 years among Canadian women. Its impact was greater than for any of the other factors studied: arthritis, cancer, physical inactivity, smoking, low income, low education, and abnormal body mass index [7].

### What is Diabetes?

**Diabetes Mellitus** is a serious, chronic, systemic disease, characterized by the body's inability to produce sufficient insulin and/or to use the insulin that it does produce. Insulin is a hormone produced by the pancreas that assists with the conversion of glucose (sugar) into energy. Insufficient insulin, or the inability to use insulin effectively, results in elevated blood sugar (glucose) levels, interfering with the proper nourishment of body cells. Over a long period of time, this can have serious consequences, including blindness, heart disease, reduced blood supply to the limbs (which may result in the need for amputation), nerve damage, stroke, and, in men, erectile dysfunction.

There is no cure for diabetes. Treatment is based on controlling blood glucose levels through diet, exercise, and medications if necessary.

There are three main types of diabetes:

**Type 1**, where the body makes little or no insulin. This used to be called Juvenile Diabetes.

**Type 2**, where the body makes insulin but cannot use it properly. This is the most common type of diabetes in Manitoba.

**Gestational diabetes** occurs among some pregnant women, where the body does not properly use insulin during pregnancy [1, 6].

Note: This chapter does not discuss gestational diabetes.

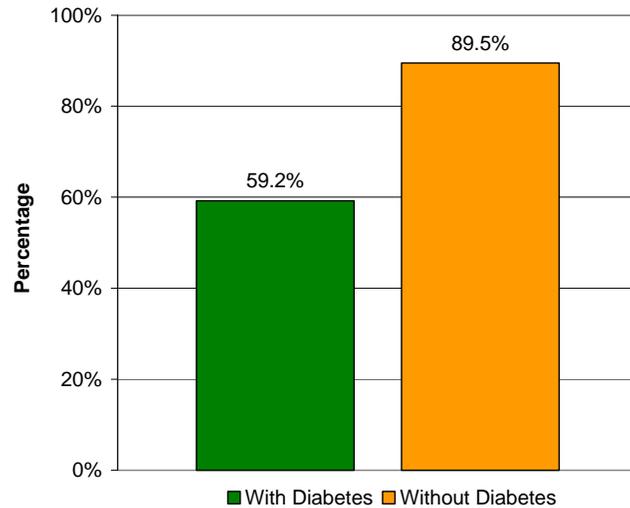
<sup>1</sup> Includes all those one year of age and older. Gestational diabetes is not included. Data are drawn from the Manitoba Health's databases of hospital discharges and medical services provided by physicians and include all those registered for health insurance (Medicare) in the Province. It therefore excludes diagnoses where no physician claim was filed (e.g. non fee-for-service physicians where no shadow billing was submitted). The case definition for diabetes includes those who have been hospitalized for diabetes; or who have had two physician claims for diabetes within a 2 year period; or who have had one physician claim followed by a hospitalization for diabetes within 2 years [2].





Diabetes affects the quality of life of those who live with it. Self-management of diabetes is important in the prevention of both immediate life-threatening events and long-term health problems. This requires ongoing monitoring of food intake, insulin levels, physical activities, and for many, regular medication (whether taken orally or by injection) [5]. It is therefore not surprising that only 59% of Manitoba women with diabetes perceived their own health to be “excellent”, “very good” or “good”, compared with 90% of women without diabetes<sup>2</sup> (See Figure 1) [8].

**Figure 1**  
**Good, Very Good or Excellent Self-Perceived Health**  
**Manitoba Females 12 Years & Older With and Without Diabetes 2003**



Source: CCHS 3.1 Public Use Microdata File [6]

The long term consequences of diabetes include heart disease, blindness, kidney failure, and lower limb amputations [9]. These occur at great personal and financial cost to those with diabetes, to their families, and to Manitoba as a whole. It is estimated that Canadians with diabetes incur medical costs that are two to three times higher than those without diabetes [10]. About three-quarters of those with diabetes use either insulin or oral anti-hyperglycemic medications. As the number of Canadians with diabetes increases, so do the costs to the health care system. Health Canada has estimated the direct treatment costs (including only hospital care and prescription drug costs, and excluding the costs of physician services), to be \$400 million annually in Canada [5].

In addition to the costs of physician and hospital care, diabetics can face personal financial costs for medication and supplies ranging from \$1,000 to \$15,000 a year [10]. Manitoba’s Pharmacare system reduces the financial burden on individuals and families in the province by paying the costs of diabetes medications and some supplies, after an income-related annual deductible has been reached.

Early diagnosis of diabetes is important, since early treatment and management can prevent complications and prolong life. Treatments are designed to control blood sugar (through diet, exercise, anti-hyperglycemic drugs, and injections of insulin), control blood pressure and blood lipid levels, to manage symptoms, reduce the risk of complications and to enhance the quality of life [5].

<sup>2</sup> This analysis is based on Statistics Canada’s Canadian Community Health Survey, Cycle 3.1., Public Use Microdata file, which contains anonymized data collected in the year 2005. All computations on these microdata were prepared by Prairie Women’s Health Centre of Excellence and the responsibility for the use and interpretation of these data is entirely that of the authors.





Women and men with diabetes are more likely than those without the disease to be hospitalized for a range of conditions including hypertension, cardiovascular disease, cerebrovascular disease, peripheral vascular disease, lower respiratory tract infection, renal disease and skin disease [5]. They are more likely to be diagnosed with depression [9]. They are also more likely to use home care services [6].

American research has found that approximately 30% of diabetes may be undiagnosed, and this is felt to be the case in Canada as well [9]. Delayed diagnosis of diabetes increases the risks of serious complications and premature mortality. However, screening based on current diabetes care guidelines will reduce the proportion of undiagnosed diabetes in the population.

Programs that focus on the early diagnosis of diabetes, diabetes education, and prevention are all important initiatives. If successful, they can reduce the incidence of diabetes, and delay or prevent the onset of complications in those already diagnosed with the disease. These programs are usually aimed at those with acknowledged risk factors for Type 2 diabetes including middle years and older adults, those with a family history of diabetes, those with hypertension or elevated blood cholesterol levels. Being overweight or obese, either alone or combined with physical inactivity places people at increased risk of diabetes. Aboriginal people and those of South Asian origin are also at increased risk of developing diabetes. Women face additional risk factors for developing diabetes. These are gestational diabetes, giving birth to a baby that weighed more than 4 kg (9 lb), or having polycystic ovarian syndrome. Income inadequacy is also acknowledged as an important risk factor for diabetes, but it has received much less attention in diabetes prevention programs [1, 5, 9, 11, 12].

## Diabetes Incidence

The annual number of new cases of diabetes in Manitoba was relatively constant from 1989 to 1997. However, since 1998, the number of new cases of diabetes has increased by 63% from a 5-year average of 3,920/year between 1989 and 1993 to 6,390/year between 2002 and 2006 [2]. This was probably due to the enhanced detection of undiagnosed cases after introducing new Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada, 1997.

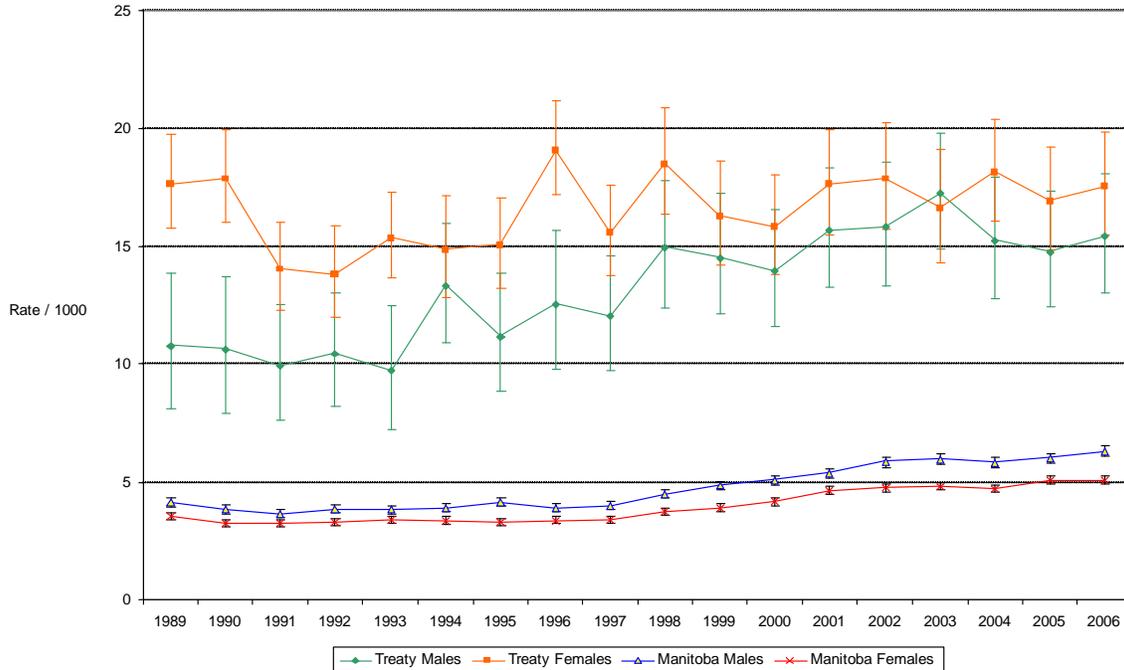
**Diabetes Incidence** is the number of new cases of diabetes detected in the population (as defined in footnote 1) during a fiscal year (April 1 to March 31) [2].

In 2005/06, 3,220 girls and women were newly diagnosed with diabetes. These represented about 48% of new cases, down from about 50% of cases in 1989, as the incidence of diabetes has increased more quickly among males than among females [2].





**Figure 2**  
**Age Standardized Diabetes Incidence Rates 1988/89 to 2005/2006**



Source: Manitoba Health [2]

Note that "Treaty" = First Nations people who have identified themselves to Manitoba Health. See footnote 3 below.

Figure 2 shows the annual changes in the age standardized incidence of diabetes among First Nations<sup>3</sup> and non-First Nations males and females from 1989 to 2006.

Overall, the age standardized incidence of diabetes increased by 50% from 4/1,000 in 1989 to 6/1,000 in 2006<sup>4</sup>. The highest incidence of diabetes occurred among First Nations women, at 18/1,000 in 2006, about four times the incidence rate of 5/1,000 among non-First Nations women. The female First Nations diabetes incidence rate is consistently though not significantly higher than the male First Nations incidence rate in most years [2]. This is consistent with national findings [14]. It is important to note that while the proportional burden of diabetes is highest among First Nations women, their actual number is

<sup>3</sup> Manitoba Health includes in its definition of First Nations people all those who, through self-declaration, have advised Manitoba Health that they are residents with Treaty Status. It does not, therefore, include all Registered First Nations people living in Manitoba. It includes First Nations Manitobans living both on and off Reserves. In 2004, there were 77,371 people identified as First Nations in the Manitoba Health Insurance Registry, while Indian and Northern Affairs Canada included 123,378 in their records. In using this method, we assume that the distribution of diabetes rates and other health events among First Nations people included in the Manitoba Health Registry are representative of all First Nations people in Manitoba [2]. Manitoba Health's system does not include any separate identification of other Aboriginal peoples (e.g. Métis, Non Status and Inuit). They are included in the non-First Nations group.

<sup>4</sup> In 2007, both the National Diabetes Surveillance System and Manitoba Health adopted a diabetes case definition that includes all persons one year of age and older. Earlier reports from MB Health and NDSS included only those aged 20 years and older. Rates included here **should therefore not be compared** with those in earlier reports from these sources, nor with those in reports from the Manitoba Centre for Health Policy, which has used the population aged 20 to 79 years of age in reporting about diabetes. The inclusion of those aged 1 to 19 years decreases the reporting prevalence by about 2% among the total Manitoba population [2].

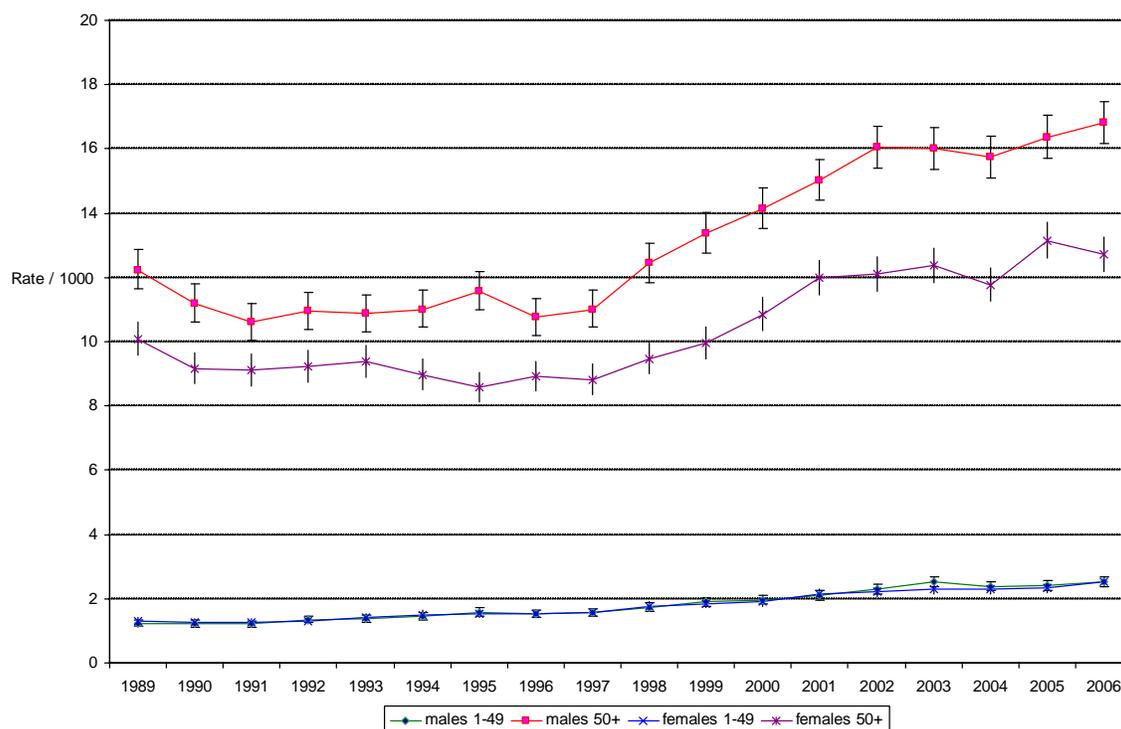




relatively small. Of the 3,224 new cases of diabetes diagnosed among Manitoba girls and women in 2006, 287 (9%) occurred among First Nations women [2].

While among the population as a whole males were more likely to be diagnosed with diabetes than females, important differences emerge when age-specific incidence rates are considered. Young women (aged 20 to 34) were significantly more likely than were their male counterparts to have been diagnosed with diabetes [2]. This is consistent with findings from the rest of Canada. The extent to which this reflects a higher burden of disease is not completely understood. It may be the result of young women's more frequent contacts with physicians (often for reproductive health care needs). As well, since women who develop gestational diabetes during pregnancy are more likely to develop Type 2 diabetes, this may also contribute to the higher rate of diabetes among young women [9].

**Figure 3**  
**Manitoba Age and Sex Specific Diabetes Incidence 1988/89 to 2005/06**



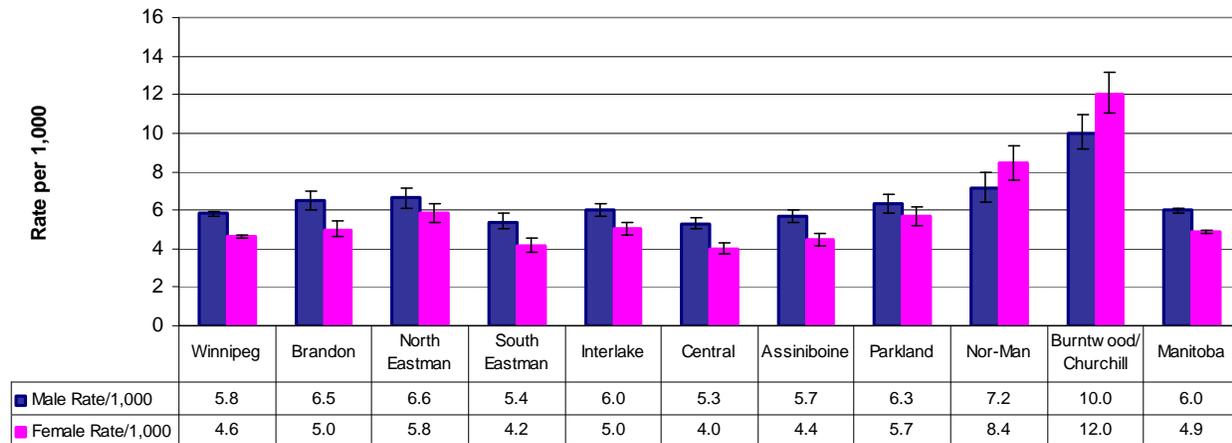
Source: Manitoba Health [2]

The incidence of diabetes also varied among women by RHA. From 2001/02 to 2005/06, the average annual age-adjusted incidence varied from 4.0/1,000 in Central RHA to 12.0/1,000 in Burntwood/Churchill RHAs.





**Figure 4**  
**Age Standardized Diabetes Incidence**  
**Manitoba Females & Males by RHA 2001/02 to 2005/06**



Source: Manitoba Health [2]

## Diabetes Prevalence

Diabetes prevalence is a measure of the burden of this disease in regions and among communities. The growing numbers of people living with diabetes make it a serious public health concern in Canada [6]. This is particularly the case in Manitoba. Manitoba women have the highest reported diabetes prevalence rate in Canada<sup>5</sup>. In 2004/05, the age standardized prevalence rate among Manitoba females aged one year and older was 4.7%, higher than the national average of 4.2% [3].

**Diabetes Prevalence** is the total number of persons known to have had diabetes (as defined in footnote 1) at any time from April 1, 1988 to March 31, 2006. Data are presented here about both the numbers of people, and the percentage of the population with diabetes [2].

In 2006, there were approximately 38,050 Manitoba girls and women living with diagnosed diabetes, an increase of 55% from 1997. As in other parts of Canada, First Nations women bear a much higher burden of diabetes than do other Manitobans, both First Nations men and non-First Nations women and men [14]. While the rate of diabetes among non-First Nations women was 4.6/1,000 in 2006, it was more than four times higher at 19.9/1,000 among First Nations women. Figure 5 illustrates the increasing rates of diabetes among all Manitoba males and females, First Nations and non-First Nations [2].

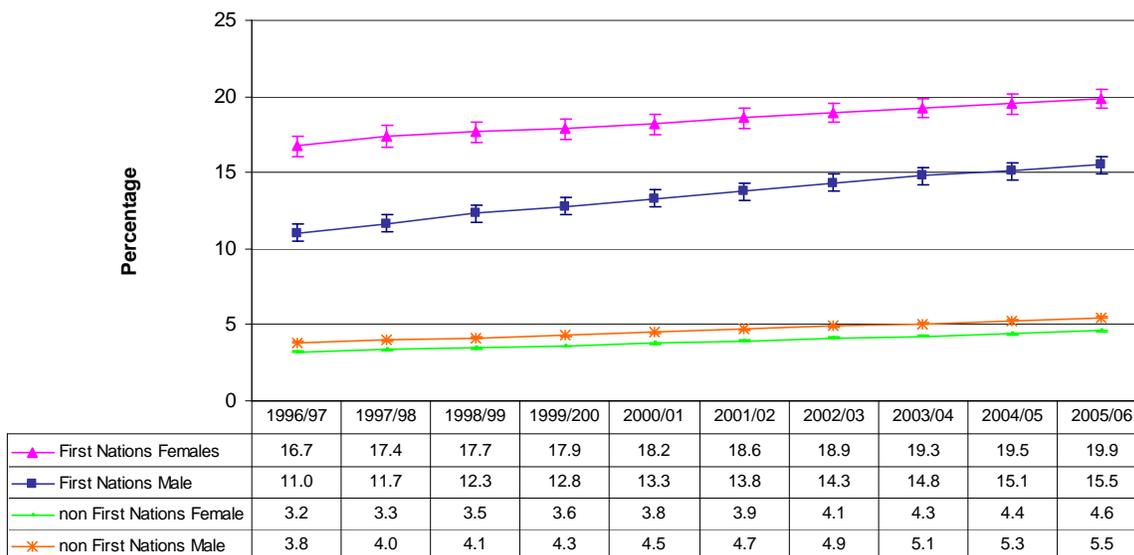
The prevalence of diabetes increases with age. In 2006, the prevalence of diabetes among Manitoba women aged 20 to 44 years of age was 2.5%, compared with a rate of 9.4% among women aged 45 to 64 and 18.7% among senior women older than 65 years of age. Among those 45 years and older, women were less likely than men to have been diagnosed with diabetes. As discussed above, among those 20 to 44, women were more likely to have been diagnosed with diabetes [2].

<sup>5</sup> This includes only the ten provinces and territories participating in the National Diabetes Surveillance System (excluding New Brunswick, Newfoundland and Labrador, and Nunavut).



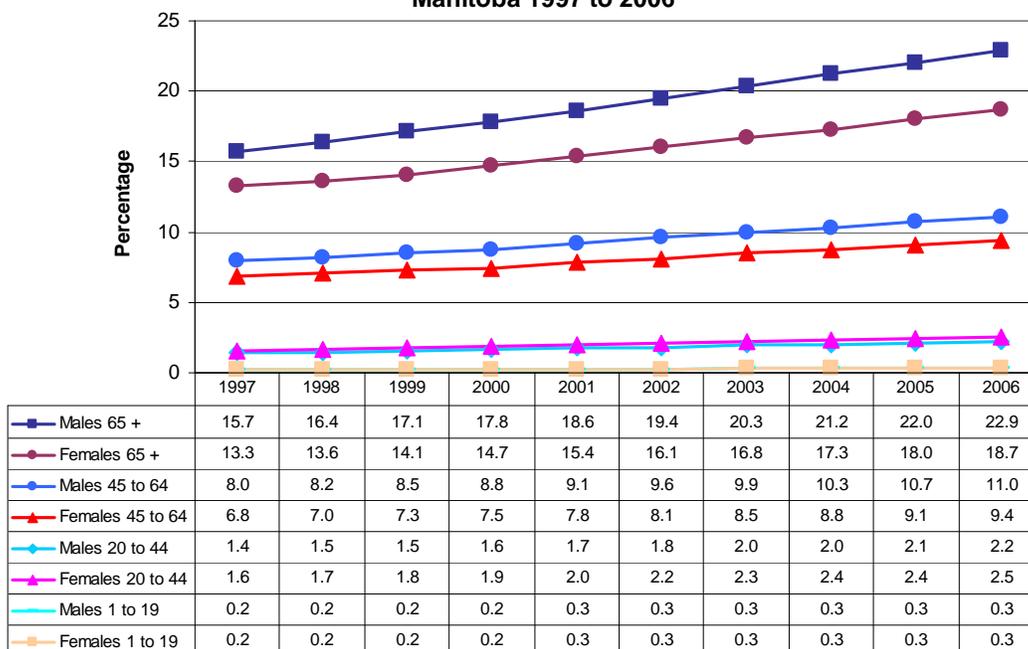


**Figure 5**  
**Age Standardized Diabetes Prevalence Manitoba**  
**1988/89 to 2005/06**



Source: Manitoba Health [2]

**Figure 6**  
**Age & Sex Specific Diabetes Prevalence**  
**Manitoba 1997 to 2006**

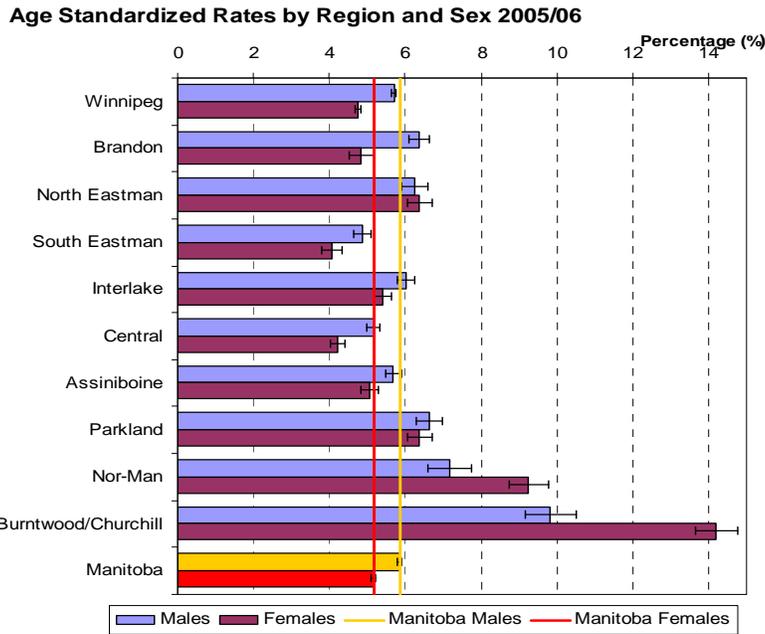


Source: Manitoba Health [2]





**Figure 7**



Diabetes prevalence also varied by region, as illustrated in Figure 5. While overall, males in the province had higher rates of diabetes than did females, females were more likely to have been diagnosed with diabetes in the Burntwood/Churchill and Nor-Man RHAs. These regions also had the highest overall diabetes rates in the Province. Women in the South Eastman and Central RHAs had the lowest rates of diabetes.

### Aboriginal Women with Diabetes

In 2006, 4,671 First Nations women<sup>6</sup> in Manitoba, and 33,376 non-First Nations women, were living with a diagnosis of diabetes. In every region of the Province, First Nations women were significantly more likely to have been diagnosed with diabetes than their non-First Nations counterparts. In Manitoba, First Nations females were over 4 times as likely to be diagnosed with diabetes as non-First Nations females. In Canada as a whole, First Nations women reported living with diabetes 5 times more than other Canadian women [15]. While diabetes rates have increased significantly among all Manitoba women from 1997 to 2006, the prevalence of diabetes increased by 54% among non-First Nations women and by 68% among First Nations women [2].

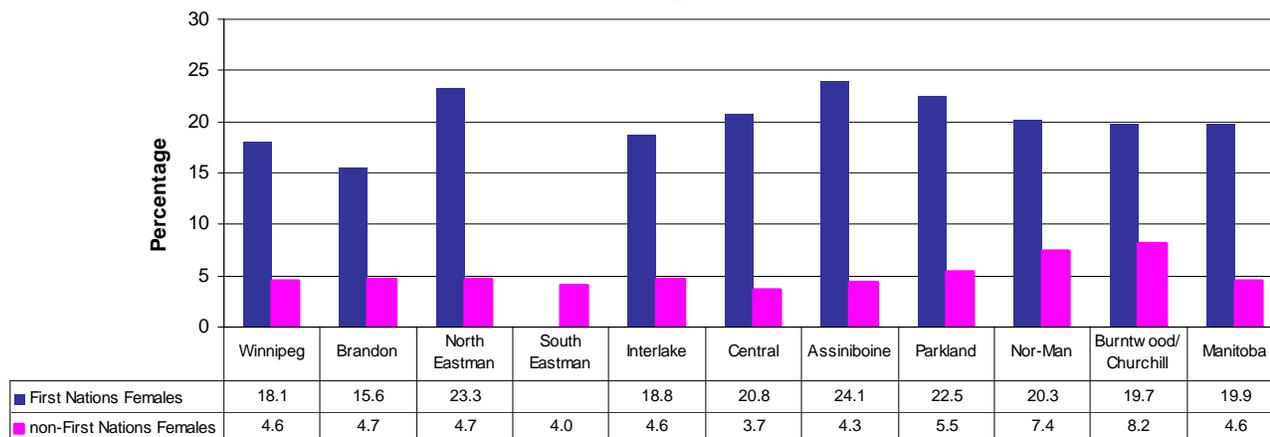
Health Canada has reported that, compared to other Canadian women, First Nations women are younger at the time of onset of type 2 diabetes, have more severe disease at the time of diagnosis, and experience

<sup>6</sup> See footnote 3. This number includes only those First Nations women who had indicated to Manitoba Health that they had Treaty Status.





**Figure 8**  
**Age Standardized Diabetes Prevalence**  
**First Nations and Non-First Nations Females**  
**2005/06**



Source: Manitoba Health [2]

Note: Data suppressed where numbers too small to be published.

higher complication rates. Almost one-third of First Nations women with diabetes reported being first diagnosed during pregnancy [15].

Data about diabetes among non Status and Métis people are more difficult to obtain, because their Aboriginal identity is not recorded in provincial health services data systems. Manitoba Health has worked collaboratively with the Manitoba Métis Federation (MMF) to examine the extent of diabetes among Métis people in Manitoba. Their study, *The Health of Manitoba's Métis Population and their Utilization of Medical Services: A Pilot Study*, was released in 2002. The authors were able to link provincial health data with MMF membership (primarily among people residing in the Interlake region), and compared members of the MMF to other Manitobans. They found that the age-standardized prevalence of diabetes among Métis girls and women aged 15 years of age and older as of December 31, 1997, was 11.3% for Métis females, compared to 5.7% for all Manitoba females<sup>7</sup>. In every age group, Métis women were more likely to have been diagnosed with diabetes than the total Manitoba population. Among Métis women aged 65 to 74 years, diabetes was found in epidemic proportions, with a prevalence of 40.0% [16].

The reasons for the high rates of diabetes among Aboriginal people are multi-factorial and not completely understood. Aboriginal ancestry itself appears to be a risk factor for diabetes. First Nations communities are not homogeneous. Across Canada, rates of diabetes are higher in some First Nations language groups, and there is a north-south gradient, with people in the south having higher diabetes rates than those in isolated northern communities. Survey data from Inuit communities show a lower rate of diabetes than in First Nations communities [6].

<sup>7</sup> Note that in the Manitoba Health/MMF report, only the population aged 20 years of age and older was included, consistent with the national case definition of diabetes in use at the time. This explains why the prevalence rates appear higher in 1997 than in 2006. The inclusion of those aged 1 to 19 years decreases the reporting prevalence by about 2% among the total Manitoba population [2].





Recent research about diabetes among on-reserve First Nations Manitobans found that diabetes prevalence was significantly associated with both income and geography. Northern First Nations communities had lower rates of diabetes than southern First Nations communities. As well, the higher the income of the tribal council area, the lower the diabetes prevalence. Interestingly, access to specialists was not associated with diabetes prevalence [29].

As well as increasing the risks of chronic diseases such as cardiovascular disease, there may be a connection between diabetes and the increasing rates of tuberculosis (TB) in some First Nations communities. Research done in India has shown that diabetes makes a substantial contribution to the incidence of TB in India, where it is predicted that the current diabetes epidemic may lead to a resurgence of tuberculosis in endemic regions. There is evidence that people with TB and diabetes have worse TB outcomes than those without diabetes [17].

While much has been written about the increasing prevalence of diabetes among Aboriginal women in Canada, little has been written by them about their experiences living with diabetes. Health Canada has noted that information is urgently needed to help tailor prevention, diagnosis and treatment to the circumstances of Aboriginal populations in Canada [6].

One notable example of a diabetes prevention approach based on the experiences and knowledge of Aboriginal women is *Empowering Words of First Nations Women*, a diabetes resource tool published by the First Nations of Québec and Labrador Health and Social Services. It is based on consultations with over 50 First Nations women, living in nine Québec communities. All were 40 years of age or older were interested in participating in a project and in getting more control over their diabetes. These consultations showed the ways in which gender-based standards and surveillance had prevented these women from expressing themselves independently and taking independent action. For example, while health promotion materials for diabetics often stress the importance of regular walking for health, in many communities, women felt that they could not go out for a walk without raising suspicions of adultery, and risking violence from their husbands [18].

The authors concluded that:

- *when input from women is sought out for the creation of health promotion tools that affect them,*
- *when women are consulted in their capacity as specialists on what controlling diabetes among First Nations women means and requires*
- *when there is an incentive for women to open up and relate their experience, their suggestions and their concerns in order to construct a working tool which can be used to improve the health of other women in their midst and which can be made available to First Nations decision makers,*

*...we are engaging in a strategy aimed at making First Nations women struggling with diabetes partners with whom we can pursue the search for a solution to this illness, which is now reaching epidemic proportions [18, p.10].*





The authors of the manual based these conclusions on research showing that mainstream methods of behaviour modification are less likely to be successful among Aboriginal women. They recommend new and original initiatives, incorporating existing networks of women and engaging Aboriginal women with diabetes as full partners in the design and adoption of health promotion tools. They stress the need to focus on actions that work for diabetic Aboriginal women in their everyday lives, rather than on strategies that increase guilt without decreasing blood glucose levels. They recommend the creation of women's self-help networks to address both diabetes prevention and action to promote the health of women living with diabetes [18].

## Complications of Diabetes

The many complications of diabetes include cardiovascular disease, kidney disease, and visual problems. Diabetes is the leading cause of acquired blindness among adults in North America [9]. These complications are not sex and gender neutral.

As described below, certain complications of diabetes, such as renal failure [20] and lower limb amputations (described below), are more common among men than among women. However, diabetic women are at greater risk of morbidity due to cardiovascular disease than their male counterparts. Diabetic women are significantly more likely to have coronary events than are men and non-diabetic women [21, 22, 23].

Diabetes has also been linked to two conditions more common among women: depression and eating disorders. In Ontario, the reported prevalence of depression among women with diabetes (8.3%) was much higher than among either non-diabetic women (5.4%) or diabetic men (3.6%) [9]. The Canadian Diabetes Association has recognized the importance of addressing eating disorders among young women and adolescent girls. Those with type 1 diabetes are at increased risk of eating disorders. In addition to the risks associated with eating disorders in the general population, diabetic women and girls with diabetes have poorer glycemic control and are at increased risk of long-term complications [24].

Data on the complications of diabetes in Canada are limited. It is anticipated that the next report of the National Diabetes Surveillance System will include estimates of diabetes-related cardiovascular disease, cerebrovascular disease, peripheral vascular disease, retinopathy and renal disease [6].

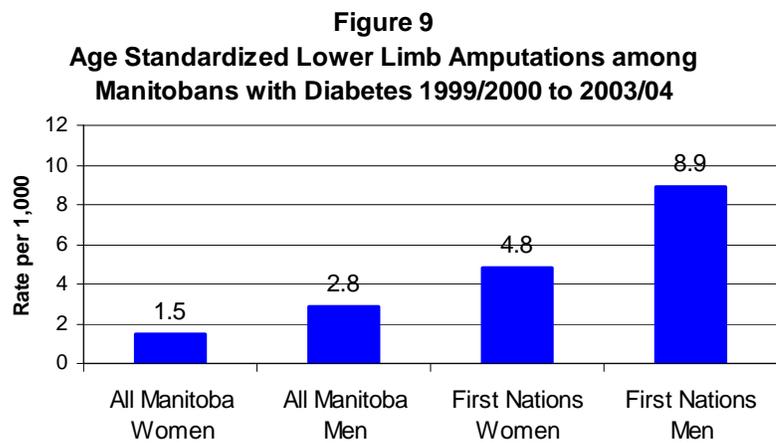




## Lower Limb Amputations

Manitoba Health has provided information about one of the major complications of diabetes – lower limb amputations. Diabetes can lead to both nerve damage (diabetic peripheral neuropathy) and circulatory problems (atherosclerotic peripheral arterial disease). Both of these cause problems in the extremities, especially in the legs and feet. Usually, minor injuries to the foot will heal; however, in diabetics, they can lead to skin ulceration and infection. These can be difficult to treat, and, if gangrene develops, may result in amputation of the lower limbs. For this reason, diabetics have much higher rates of lower limb amputations than do other Manitobans. Foot problems account for about 20% of all diabetes-related admissions to hospital [2, 19]. Indeed, diabetics account for about 77% of all lower limb amputations (excluding those resulting from cancer and injuries) in Manitoba. From 1999/2000 to 2003/04, 1186 Manitobans with diabetes had lower limb amputations, including 427 women.

Women with diabetes are less likely than their male counterparts to have a lower limb amputation. The age adjusted rate of lower limb amputations among Manitoba women with diabetes was 1.5/1,000 compared with 2.8/1,000 among men (Figure 9). First Nations<sup>8</sup> women and men were at higher risk of lower limb amputation. The rate of amputation among First Nations diabetic women was 4.0/1,000, over three times that of their non-First Nations counterparts [2].



Source: Manitoba Health [2]

Manitoba research found that among on-reserve First Nations people, lower limb amputation rates among those diagnosed with diabetes did not vary significantly between northern and southern communities, nor by income, in this population. However, the authors did find that among First Nations Manitobans, regions with the lowest consult rates (measured as access to specialist care) had the highest rates of amputations [29].

## Mortality

Canadian adults with diabetes are twice as likely to die prematurely, compared with their non-diabetic counterparts [6, 9]. In 1999/2000 (the most recent year for which national data are available), the diabetes mortality rate ratio was 2.1 among Canadian women, compared with 1.9 among Canadian men [6]. Women with diabetes are significantly more likely to die as the result of cardiovascular disease than are men with diabetes [21, 23].

<sup>8</sup> See Footnote 3.





From 2001/02 to 2005/06, the average annual diabetes mortality rate ratio among Manitoba women was 2.43, compared to 2.01 for men. That is, women with diabetes were almost 2.5 times as likely to die as were women without diabetes. More concretely, about 4,800 Manitoba women died each year, of whom about 1,225 (25%) had diabetes [4].

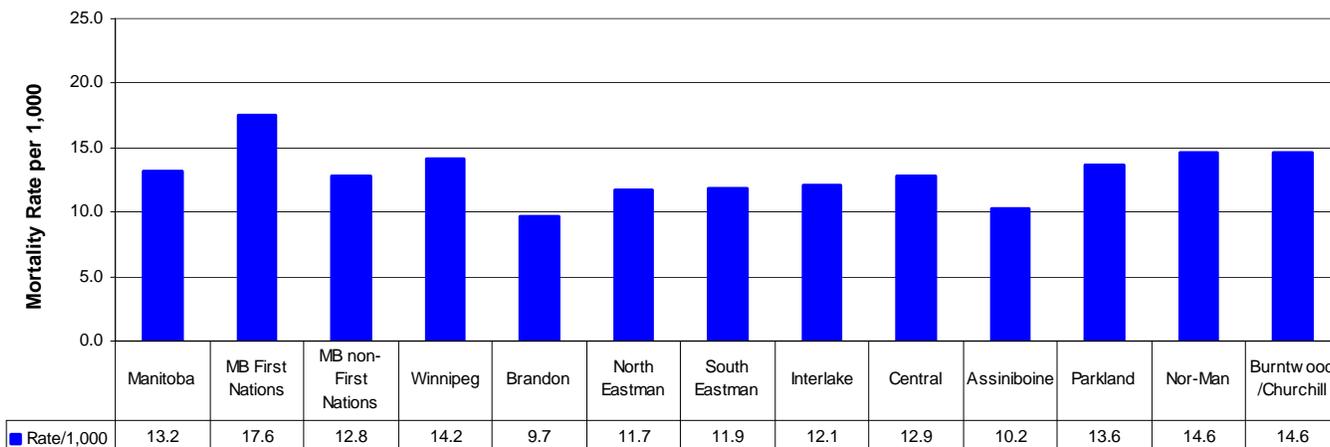
The costs of these deaths are huge – for the families of the women who have died, for their communities and for Manitoba as a whole. Health Canada estimated that the 1998 value of lost production due to premature mortality (defined as deaths among those under 75 years of age) among Canadian women was over \$300 million per year [5]. This is an understatement of the true economic value, since it includes only women’s work in the paid labour force.

**Mortality Rate** is the proportion of the population, aged 20 years and older, who died, for any reason, during one fiscal year. Consistent with the definitions used by the National Diabetes Surveillance System, Manitoba Health includes deaths among diabetics, for whatever reason, when calculating the diabetes mortality rate. This all-cause method is used since diabetes, although an underlying cause of death for many diabetics, is often not coded on death certificates.

**Diabetes Mortality Rate Ratio** is the comparison between the rate of deaths among people aged 20 years and older with diabetes, and the rate of death among those without diabetes, for any cause, in any given year [2, 6]

Figure 10 illustrates the mortality rate among Manitoba women with diabetes by RHA and among First Nations and non-First Nations women. Diabetic women in the northern regions of Nor-Man, Burntwood and Churchill were the most likely to have died and those in Brandon were the least likely to have died. First Nations women with diabetes were about 1.4 times as likely to have died as were their non-First Nations counterparts [4].

**Figure 10**  
**Age Standardized Mortality Rates**  
**Manitoba Women with Diabetes 2001/02 to 2005/06**



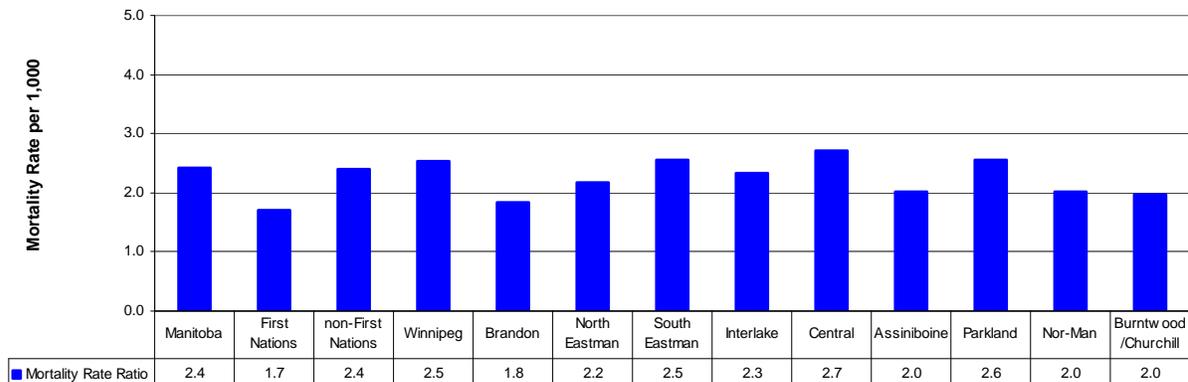
Source: Manitoba Health [4]





Mortality rate ratios by RHA allow us to gain insight into the differential impact of premature deaths due to diabetes. As illustrated in Figure 11, the diabetes mortality rate ratio was highest for women living in the Winnipeg and South Eastman RHAs, and lowest for those in the Brandon, Burntwood and Churchill RHAs. In part, these results reflect the way in which the diabetes mortality rate ratio is calculated. It will be lower in communities with higher mortality among the non-diabetic population. In Manitoba, RHAs with the lowest female age-adjusted premature mortality are located in the rural south of the province (South Eastman, Central, Assiniboine and Brandon). Those with the highest are located in the north (Nor-Man, Burntwood and Churchill) [25]. The higher overall premature mortality rate of First Nations women also explains why they have a lower diabetes mortality rate ratio than do non-First Nations women.

**Figure 11**  
**Age Standardized Diabetes Mortality Rate Ratios**  
**Manitoba Women 2001/02 to 2005/06**



Source: Manitoba Health [4]

## Summary and Policy Implications

Diabetes is a growing and acknowledged health concern in Manitoba, and in Canada as a whole, as the number of Manitobans living with diabetes continues to increase. The Province of Manitoba has recognized this in the 1998 publication *Diabetes: A Manitoba Strategy* [26] and in the establishment by Manitoba Health and Healthy Living of Priority Initiatives for diabetes systems integration, prevention, education, care, research and support [27].

Manitoba has demonstrated its serious commitment to the National Diabetes Surveillance System, and the publication of *Diabetes in Manitoba 2007* [2] will place Manitoba in the forefront of diabetes surveillance in Canada. Because these data will be presented disaggregated by sex and First Nations status, our ability to understand the differential burden of diabetes among Manitobans will be greatly enhanced.

The important connections among obesity, physical activity, and the increased risk of diabetes are now well known. Less attention has been paid to the socio-economic determinants of diabetes [11, 12]. Manitoba research has shown that 14% of low income rural women aged 20 to 79 years of age were treated for diabetes, compared with 4% of rural women in the highest income group. Among urban





women, 9% of those in the lowest income group, compared with 3% of those in the highest income group had been treated for diabetes [13]. This trend is also found among men; however, income disparities are greater among rural and urban women than they are among rural and urban men [13]. This is consistent with other Canadian research that has found income-related disparities in diabetes to be greater among women than among men [9].

An important next step will be to ensure that those data are used to design and deliver programs that recognize the importance of gender, Aboriginal ancestry, and socioeconomic status in the development and progression of diabetes. The importance of these factors has been recognized by the Canadian Diabetes Association, which recommends that “diabetes programs and services should be culturally appropriate, community based and respectful of age, gender and socioeconomic conditions” [28]. Within Manitoba’s regionalized health care system, responsibility for the delivery of diabetes prevention programs, for the diagnosis, education and treatment of those with diabetes rests with the Regional Health Authorities.

Ground-breaking work with First Nations women in Québec has identified the importance of understanding women’s struggles with diabetes in the broader context of their daily lives. Involving women with diabetes in the design of health promotion programs, and using women’s self-help networks will lead to more successful programs. These important lessons may also serve to increase the efficacy of diabetes programming directed at non-Aboriginal women as well.

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# Cancer

## Introduction

In 2007, approximately 2,900 Manitoba women and girls were diagnosed with cancer, and approximately 1,300 died as the result of cancer. About 39% of Canadian women will develop cancer during their lifetimes and about 24% of women will die from cancer, making it the second leading cause of death after heart disease [1].

## What is Cancer?

Cancer is a group of diseases in which abnormal cells in some organ or tissue begin to grow in an uncontrolled manner. Normally, the cells in the body grow and reproduce themselves, generally at the same rate at which old cells die. Cancer is a renegade system of cell growth occurring when cells grow out of control and form a mass, called a tumour.

There are two types of tumours: benign and malignant. Benign tumours grow and enlarge only at the site where they began. Malignant or cancerous tumours can also invade and destroy the normal tissue around them and spread to other parts of the body. Distant spread of a cancer occurs when malignant cells detach themselves from the original or primary tumour and are carried to other parts of the body, causing more tissue damage. When this happens, the cancer is said to have metastasized. When tumours affect organs such as the lungs, liver or brain, the damage and loss of organ function eventually causes death [2].

The development of cancer is a complex, multi-factorial, multi-step process. Cancer is believed to begin when the DNA of cells (the genetic material) is damaged by a genotoxic agent (an *initiator*) that causes a mutation in the DNA. Initiators include genetic factors, environmental and occupational exposures to carcinogens (cancer causing substances such as tobacco, asbestos, etc.), radiation, infectious agents (such as the Human Papilloma Virus - linked to cervical cancer, Hepatitis B virus - linked to liver cancer, and the bacteria *Helicobacter pylori* - linked to stomach cancer), and lifestyle factors (such as diets high in certain fats and physical inactivity). Other processes occurring spontaneously inside cells can also cause DNA damage. Exposure to *tumor promoters* (substances that enhance tumor formation after exposure to a genotoxin),

### Measuring the Burden of Cancer

The data included here refer only to **invasive cancers**. Invasive cancer occurs when a cancer spreads beyond the layer of tissue in which it developed and grows into surrounding tissues. Invasive cancers reported here include in situ bladder cancer and exclude non-melanoma skin cancers.

**Cancer Incidence** refers to new cases of cancer, calculated as the rate per 100,000 people. Therefore, a rate of 1,000/100,000 is 1%.

These rates have been age standardized to allow the meaningful comparison of data over time, since cancer rates increase with age, and the Canadian population is aging. Canadian incidence data are drawn from Canadian Cancer Statistics 2007 [1] and have been standardized to the 1991 Canadian population. Manitoba incidence data were provided by Cancer Care Manitoba and have been standardized to the 1996 Manitoba population [4].

**Cancer Prevalence** refers to the number of people living with cancer at a certain point in time. Prevalence rates are influenced by two factors: the incidence of the disease and the average period of survival [1].

**Cancer Mortality** refers to deaths from cancer, using the rate per 100,000 population. The sources and age standardization are as described above for cancer incidence.





which may be other agents or the compound effect of exposures to a number of agents over time, cause the damaged cells to mutate, setting off the uncontrollable growth of cells that characterizes cancer [2,3,4].

For many cancers, the disease takes years to develop; the time between exposure to carcinogens and the diagnosis of cancer (latency period) may be decades apart. For example, many lung cancers diagnosed today are the result of smoking years ago. Exposures to carcinogens and other risk factors today will cause cancers many years in the future. Often our knowledge of these risks is limited, making it difficult to make the connection at the individual level between exposures and disease. Epidemiological studies of particular populations (such as groups of workers in a particular workplace or occupation) are therefore important to help identify risk factors and to prevent future cases of cancer.

The first environment for all human beings is the prenatal one, in the uterus. Prenatal exposures to certain substances can increase the risk of cancer among children and adults. For example, from 1941 to 1971, the drug diethylstilbestrol (DES) was prescribed to Canadian women to prevent miscarriage. The women themselves are at increased risk of breast cancer [5], and the daughters of women who took DES are at increased risk of vaginal and cervical cancer and fertility problems.

## Cancer Incidence

In 2007, the estimated incidence of cancer among Manitoba women was 376/100,000, about 25% lower than the rate for Manitoba men (470/100,000) and 5% higher than the rate for all Canadian women (358/100,000). Cancer is more common among males than females in those younger than 20 years and those over 60 years old, and more common among women than men among those aged 20 to 59.

Canada is fortunate to have a well developed system of provincial cancer registries, using consistent national standards, allowing reporting based on actual cases, rather than on survey results or estimates. These reporting procedures have been stable since 1981 [1]. The following table shows the increases in selected cancers among Canadian women and men from 1981 to 2002. During this time, the incidence of cancer increased more quickly among women than among men, although men continue to be more likely to be diagnosed with cancer than women. The increases in lung and breast cancer are stark reminders of what many of us have experienced and witnessed in our personal lives. Some of the increase in breast cancer may be attributable to increased use of screening mammography, which may have resulted in the identification of some cases of breast cancer earlier than would have been the case without screening [1]. The national decreases in the incidences of colorectal and cervical cancers among women are encouraging.





**Table 1**  
**Age Standardized Incidence of Selected Cancers in Canada**  
**1981 to 2003**

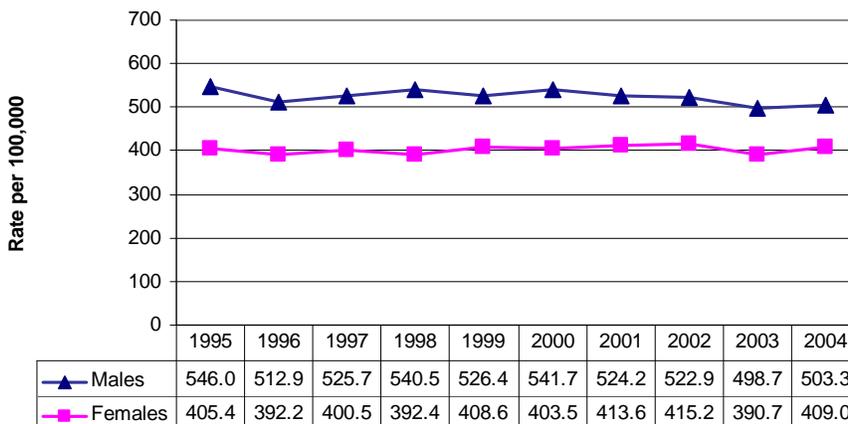
	All Cancers		Lung		Colorectal		Female Breast	Female Cervix
	Female	Male	Female	Male	Female	Male		
1981 Rate/100,000	328.3	442.9	24.3	91.2	48.6	62.6	86.5	13.9
2003 Rate/100,000	346.6	455.6	44.9	70.9	42.2	60.9	95.9	7.7
Percent Increase/ Decrease	5.6%	2.9%	84.8%	-22.3%	-13.2%	-2.7%	10.9%	-44.6%

Data Source: Canadian Cancer Statistics 2007 [1]

Figure 1 below shows the incidence of cancer among Manitoba females and males from 1981 to 2003, expressed as a rate per 100,000 people. The data have been age standardized. Since the Manitoba population is aging, and since the risk of developing cancer increases with age, age standardization is necessary to enable meaningful comparisons among different years. After increasing for many years, cancer rates among women may now be stabilizing [1].

Figure 2 below shows regional differences in rates of cancer diagnoses. Although the differences are small, female residents of Winnipeg were the most likely, and residents of Rural South Manitoba<sup>1</sup> were the least likely to have been diagnosed with cancer [6].

**Figure 1**  
**All Invasive Cancers - Age Standardized Incidence**  
**Manitoba 1995 to 2004**



Source: Cancer Care Manitoba [6]

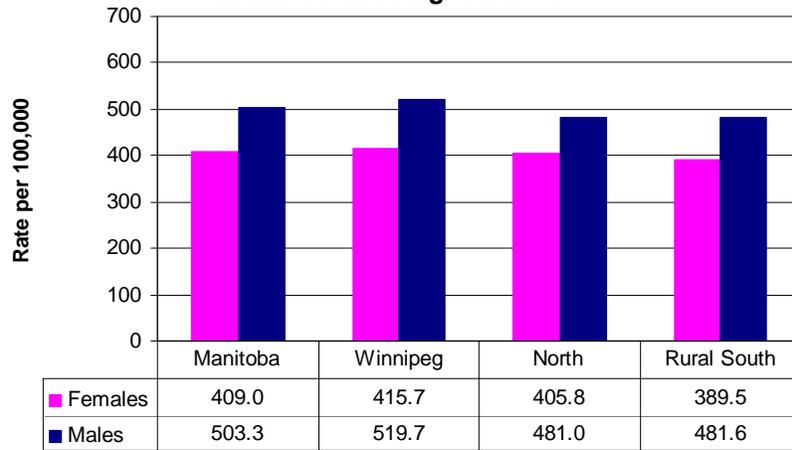
<sup>1</sup> RHAs have been grouped as follows: Northern RHAs include Nor-Man, Burntwood and Churchill; Rural South RHAs include Assiniboine, Brandon, Central, Interlake, South Eastman, North Eastman and Parkland.





Examining the rates of new cases of cancer enables us to understand trends. However, age standardized rates do not reveal the true burden of cancer on individuals, families, communities and the health care system. The actual number of new cases of cancer continues to rise steadily as the population ages [1]. From 1995 to 2004 (the most recent year for which data are available), the number of Manitoba girls and women diagnosed with cancer increased by about 10%, from 2,531 in 1995 to 2,794 in 2004 [6].

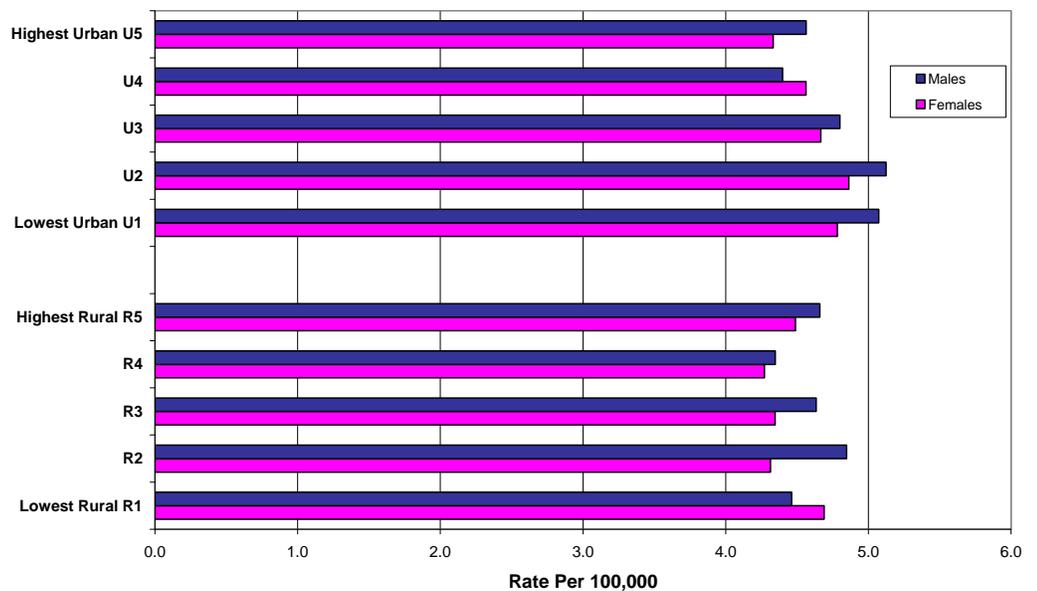
**Figure 2**  
All Invasive Cancers - Age Standardized Incidence  
Manitoba and Regions 2004



Source: Cancer Care Manitoba [6]

Cancer risk is also related to socio-economic status, although the straightforward relationship found in many other diseases (where low socio-economic status is associated with a higher risk of disease and high socio-economic status is associated with a lower risk of disease) has not been found in cancer. An international review found that lower socioeconomic status was consistently associated with increased risk of cancers of the cervix, stomach, esophagus and less consistently, with cancers of the liver. They found that high socioeconomic status among women was associated with increased risk of cancers of the breast, colon, ovary, and melanomas of the skin, but did not suggest why this was [1, 7].

**Figure 3**  
All Invasive Cancers by Income Quintile  
Age Adjusted Incidence, Manitoba, 1995-2004



Source: Cancer Care Manitoba [6]

Figure 3 shows the incidence of all invasive cancers

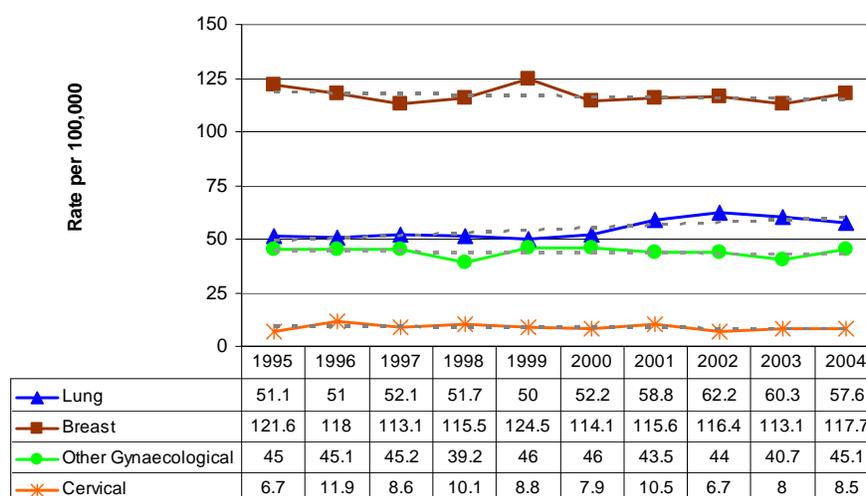




among Manitoba males and females from 1995 to 2004 by neighbourhood income quintile. While higher income women were at lower risk of being diagnosed with cancer, the results were not statistically significant.

Figure 4 provides more detailed information about four types of cancers diagnosed among Manitoba women from 1995 to 2004: the two most common cancer sites (breast and lung) and the two female-specific types (cervix and other gynaecological cancers<sup>2</sup>). Breast cancer remains the most common type of cancer among women, accounting for 28% of all new cancers diagnosed among Manitoba women in 2004 [6].

**Figure 4**  
**Selected Cancers - Age Standardized Incidence**  
**Manitoba Females 1995 to 2004**



Source: Cancer Care Manitoba [6]  
 Trend lines are indicated by ----.

The increasing rate of lung cancer among women is particularly evident during this ten year period [6]. Lung cancer incidence continued to increase among Canadian women during this time, by about 1.4% per year, while decreasing among men. This is related to differences in tobacco consumption. While tobacco consumption among men began to decrease in the mid-1960s, women’s tobacco smoking did not decrease until the mid-1980s [1].

Figure 5 shows regional cancer rates among women for cancers of the lung, breast, cervix and other gynaecological cancers in 2004. As noted above, for all invasive cancers, residents of Winnipeg were the most likely, and residents of Rural South Manitoba were the least likely, to have been diagnosed with cancer. However, differences emerge when individual cancer sites are examined. While differences among

<sup>2</sup> Other gynaecological cancers exclude cervical cancer and include cancers of the ovaries and of the body of the uterus.

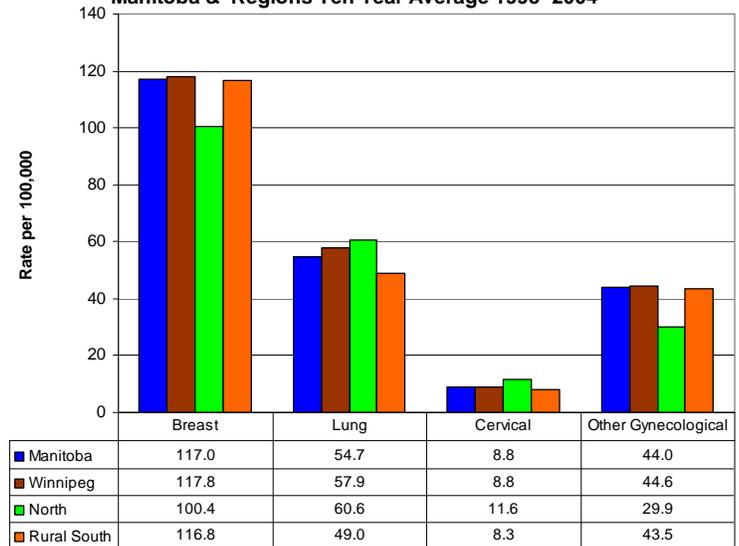




the regions are small, northern women were at highest risk of both lung cancer and cervical cancer. They were also at lower risk of gynaecological cancers other than cervical cancer, and breast cancer. Northern women are more likely to smoke tobacco, contributing to their increased risk of developing lung cancer. This is described in more detail in Chapter 3.

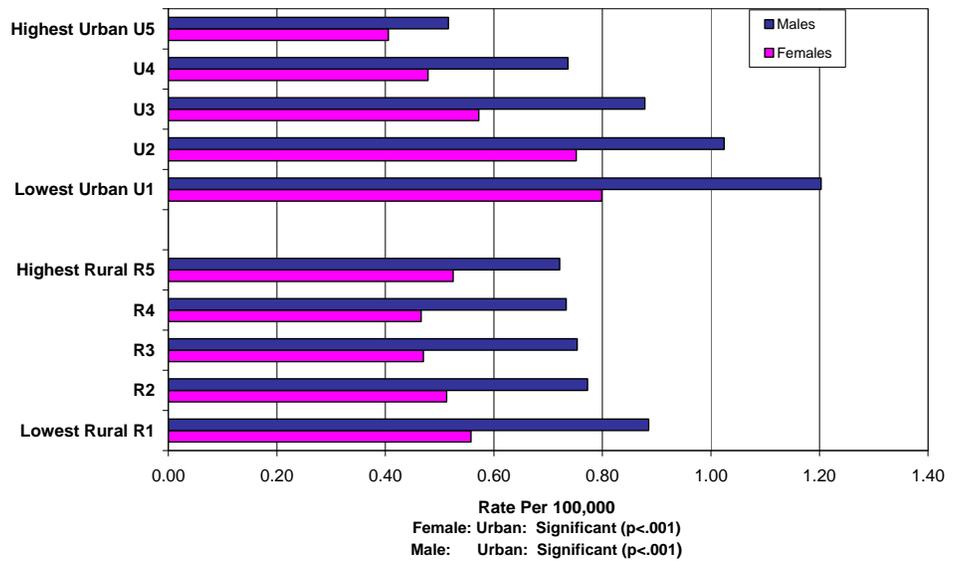
Figures 6 through 9 show income related differences in cancer incidence among Manitoba males and females for these same four selected cancers. Consistent with the international results described above, low income women in Manitoba were significantly more likely to have been diagnosed with cancers both of the lung and of the cervix [7]. The connection between income and smoking, a leading cause of lung cancer, has been well documented [8] (see Chapter Three). Low income earners also have greater exposures to occupational lung carcinogens and are more likely to live in neighbourhoods with higher levels of environmental air pollution, linked to lung cancer [9, 10]. The relationship between low income and cervical cancer diagnosis requires more investigation.

**Figure 5**  
Selected Cancers - Age Standardized Incidence Among Females  
Manitoba & Regions Ten Year Average 1995- 2004



Source: Cancer Care Manitoba [6]

**Figure 6**  
Lung Cancers by Income Quintile  
Age Adjusted Incidence, Manitoba 1995-2004



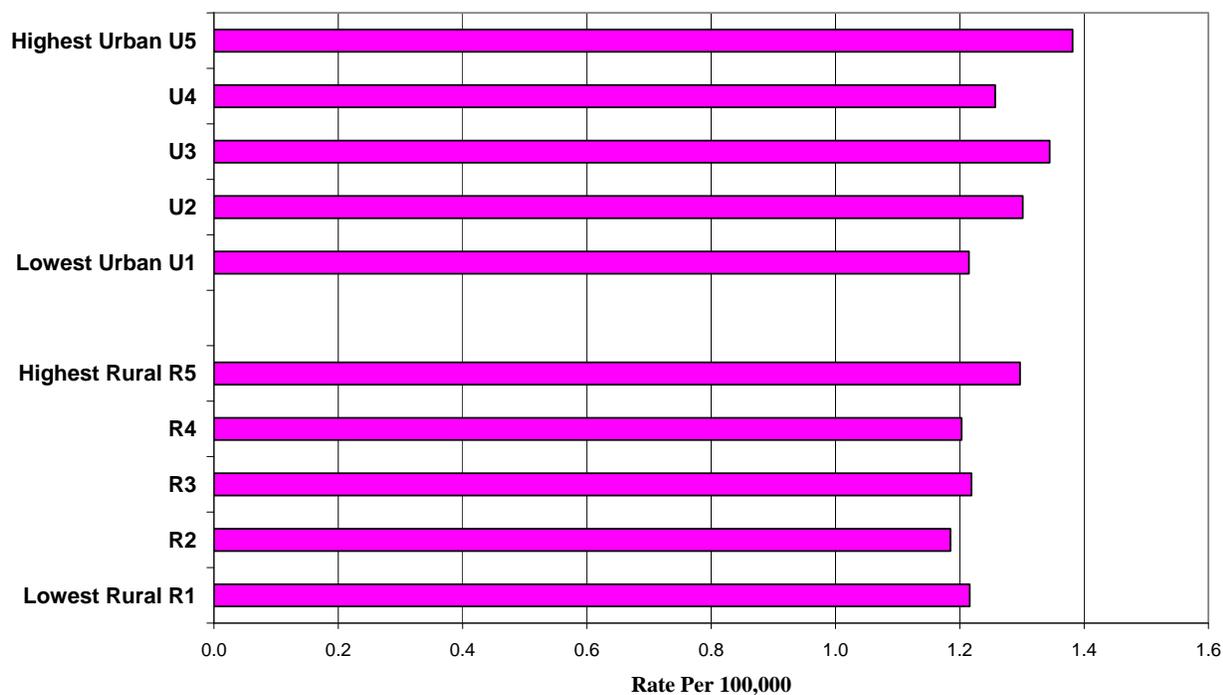
Source:  
Cancer Care Manitoba [6]

It is noteworthy that there were no significant income differences found for cancers of the breast and other gynaecological cancers.



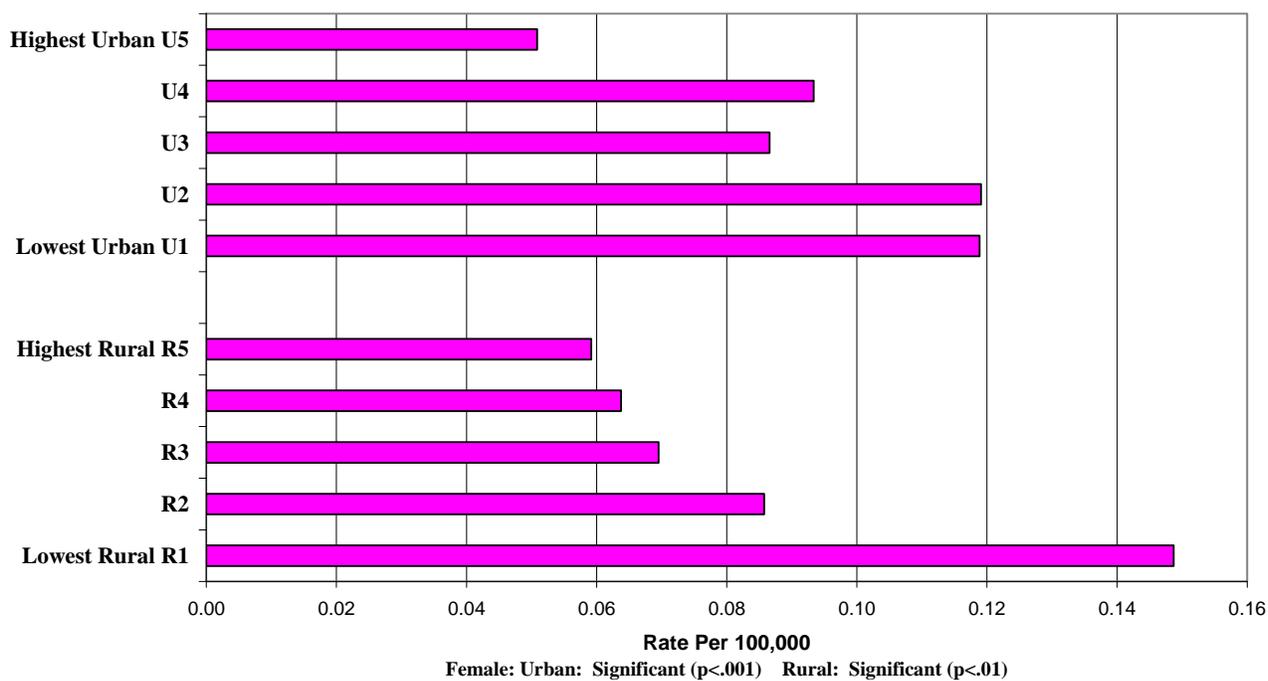


**Figure 7**  
**Female Breast Cancers by Income Quintile**  
**Age Adjusted Incidence, Manitoba 1995-2004**



Source: Cancer Care Manitoba [6]

**Figure 8**  
**Cervical Cancers by Income Quintile**  
**Age Adjusted Female Incidence, Manitoba 1995-2004**

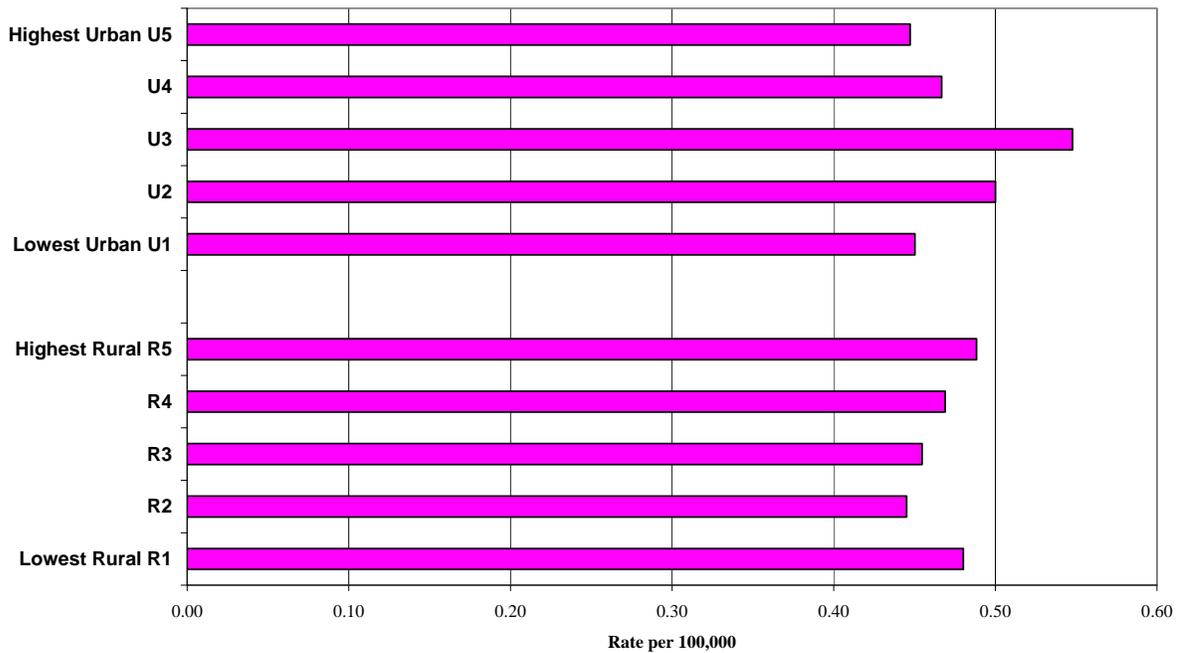


Source: Cancer Care Manitoba [6]





**Figure 9**  
**"Other Gynaecological" Cancers by Income Quintile**  
**Age Adjusted Female Incidence, Manitoba 1995-2004**



Source: Cancer Care Manitoba [6]

## Cancer Prevalence

Cancer prevalence is an important measure of the costs of cancer for individuals, families and of the health care system as a whole. Those lucky enough to survive cancer are often left with physical, emotional, social and economic needs. Many cancer survivors require repeated testing, and active treatment, rehabilitation, mental health and social support services over many years [1].

In 2007, the National Cancer Institute of Canada and the Canadian Cancer Society estimated that the proportion of Canadians living with cancer, based on survival data from Saskatchewan, was 2.5% among men and 2.8% among women [1]. This means that about 1 in 40 Canadian men and 1 in 36 Canadian women had cancer diagnosed at some time during the previous 15 years, and were still alive. The mortality rate from breast cancer, for example, the most common cancer among women, and the second most common cause of cancer death among women, is declining, while an increasing number of women have had a diagnosis of breast cancer at some time in the past 15 years. It is estimated that 162,600 Canadian women, or 1% of Canadian females, have had a diagnosis of breast cancer at some time in the last 15 years [1].

In 2000, the crude prevalence (not age adjusted) of invasive cancer in Manitoba was 2.7% among men and 3.4% among women [11]. Prevalence was highest among females in South Westman RHA (which amalgamated with Marquette RHA to form Assiniboine RHA in 2003) at 4.7% and lowest among females in Burntwood RHA (0.7%). These differences are in part due to the different age structures of the RHAs, since cancer is more common among older people, and northern Manitoba RHAs have much younger





population than do those in the rural southwest of the Province. Projections by Cancer Care Manitoba suggest that by 2025 about 5% of Manitobans will be living with cancer, or approximately 58,000 to 61,000 people [11].

## Cancer Mortality

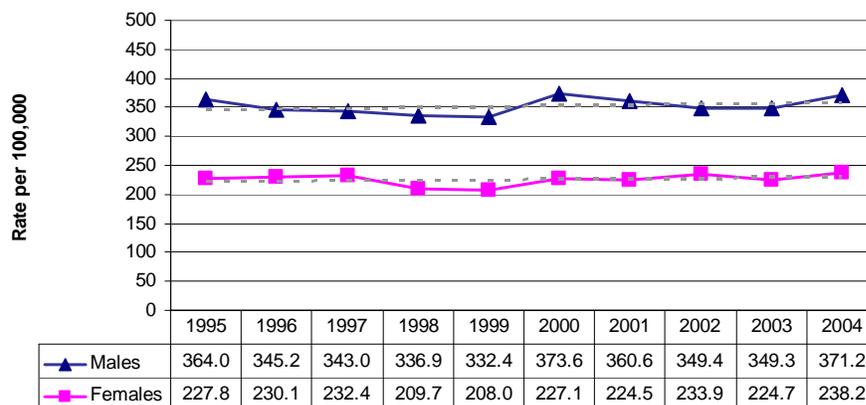
From 1995 to 2004 (the most recent year for which data are available), the rate of mortality due to cancer remained stable. Because of the aging population, the actual number of girls and women who died annually of cancer increased from 1,468 in 1995 to 1,730 in 2004 [6]. Figure 10 shows the rate of deaths from cancer among Manitoba women and men during that time, expressed as an annual age standardized rate per 100,000 females. During this time, women were much less likely to die from cancer than were men. For every 100 male deaths, there were approximately 64 deaths among females. This ratio did not change during this decade.

Figure 11 shows regional differences in rates of cancer deaths from 1995 to 2004.

Among Manitoba women, residents of northern RHAs had a slightly higher rate of death from cancer than residents of Winnipeg and rural southern RHAs [6].

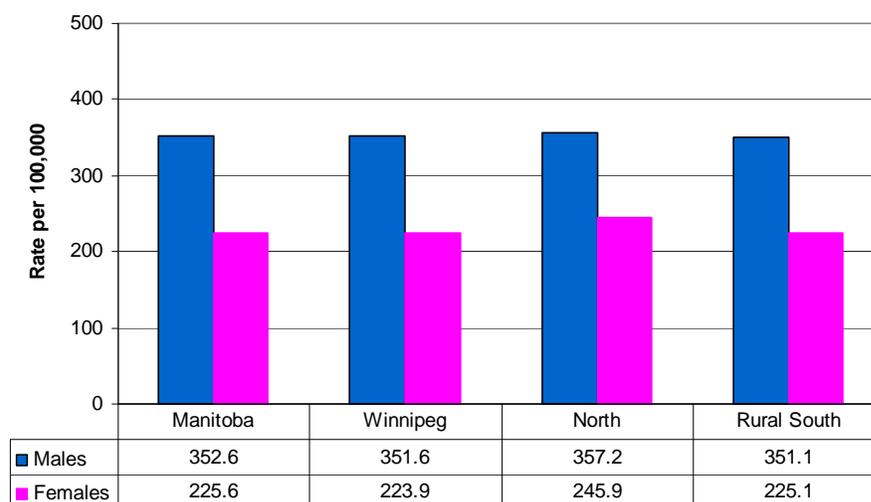
Figure 12 provides more detailed information about deaths among women from four types of cancer - breast, lung, cervix and other gynaecological, during the ten year period from 1995 to 2004. These four types accounted for about 50% of cancer deaths among females during this time [6].

**Figure 10**  
**All Invasive Cancers - Age Standardized Mortality**  
**Manitoba 1995 to 2004**



Source: Cancer Care Manitoba [6]  
Trend lines are indicated by ----.

**Figure 11**  
**All Invasive Cancers - Age Standardized Mortality**  
**Manitoba & Regions Ten Year Average 1995- 2004**



Source: Cancer Care Manitoba [6]





As indicated by the trend lines in Figure 12, the death rate for lung cancer increased over the decade, while the rate of deaths due to breast cancer decreased slightly. The death rates due to cervical cancer and other gynaecological cancers remained stable.

Figure 13 shows average regional cancer death rates among women for cancers of the lung, breast, cervix and other gynaecological cancers during the ten year period from 1995 to 2004. Northern women experienced an increased rate of death compared to all Manitoba women for both lung and cervical cancers, and a decreased death rate due to other gynaecological cancers. Women from the Rural South experienced an increased rate of death compared to all Manitoba women for other gynaecological cancers [6].

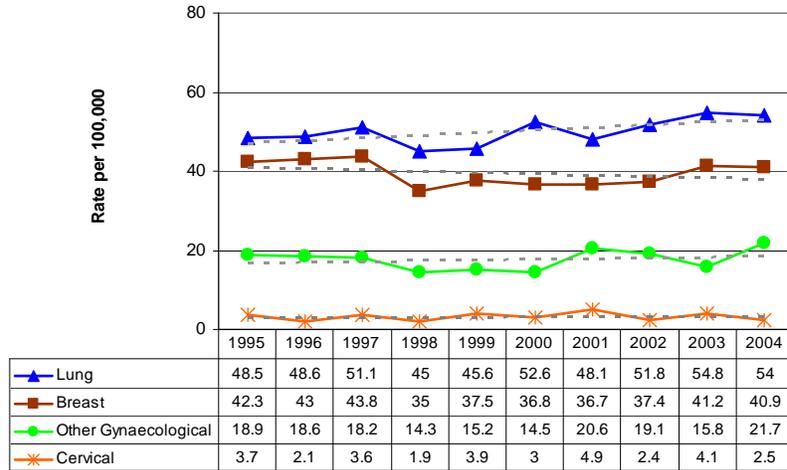
### Cervical Cancer Screening

In 2004, approximately 50 women were diagnosed with cervical cancer, and 18 women died due to cervical cancer.

Screening for cervical cancer is essential to preventing cervical cancer and to early treatment when it is diagnosed. Screening is done using the Papanicolaou (Pap) Smear, a microscopic examination of cells scraped from the cervix used to detect pre-cancerous or cancerous changes in cervical cells, and cancer [12]. Organized screening programs have the potential to reduce both incidence and deaths from cervical cancer [13].

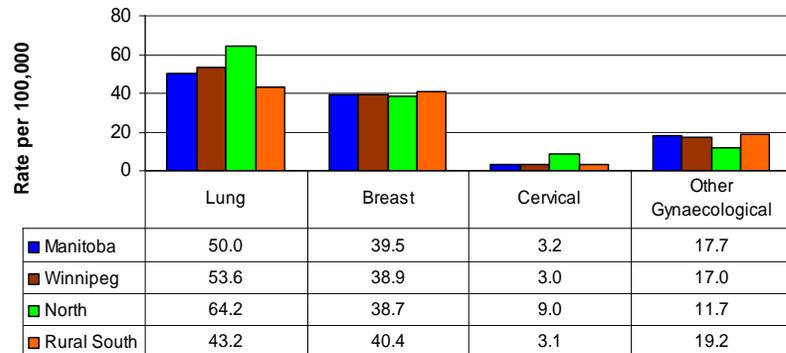
In Manitoba, it is recommended that all women who are sexually active have an annual Pap smear. After three consecutive normal results, the frequency can be reduced to once every two years, until aged 70 years. After aged 70, it is recommended that women discuss the need for ongoing Pap smears with their

**Figure 12**  
Selected Cancers - Females - Age Standardized Mortality  
Manitoba 1995 to 2004



Source: Cancer Care Manitoba [6]

**Figure 13**  
Selected Cancers - Age Standardized Mortality  
Females Manitoba & Regions Ten Year Average 1995 to 2004



Source: Cancer Care Manitoba [6]





physicians [14]. Among Manitoba women aged 18 to 69 years of age, just 67% were screened for cervical cancer in the two year period from 2001/02 to 2003/04 [15], although Manitoba offers publicly funded screening programs for cervical cancer.

Lower socio-economic status has been associated with higher risk of cervical cancer [1]. This is consistent with Manitoba research showing that rates of cervical cancer screening are related to socio-economic status. Higher income is associated with higher screening rates among both urban and rural women. Among urban dwellers, 75% of women aged 18 to 69 had had a Pap smear in the three year period from April 1, 2001 to March 31, 2004, compared with 61% of those in the lowest income group. Among rural women, 69% of those in the highest income group compared with 48% of those in the lowest income group had Pap smears during that period. This also reflects the added difficulties faced by rural women in getting Pap smears. Women living in the Brandon RHA were most likely to have had Pap smears (74%), compared with about 70% of Winnipeg women, 63% of women living in the Rural South and a disturbingly low 44% of Northern women [15]. Manitoba's Cervical Cancer Screening Program, introduced in 2001 and delivered by CancerCare Manitoba, is intended to reduce both the incidence of, and mortality from, cervical cancer in the Province.

Infection with the human papillomavirus (HPV) has been implicated in virtually all cases of cervical cancer. The federal government recently announced short term financial support for those provinces that implement mass immunization programs of girls for certain strains of HPV (types 16 and 18, using the vaccine Gardasil<sup>®</sup>), despite concerns raised about the efficacy and safety of this approach [16]. In May 2008, the Manitoba government announced a province-wide voluntary immunization program to be offered to girls in grade 6, plus additional funds to improve women's access to cervical screening [39].

## Breast Cancer Screening

As described above, breast cancer is the most commonly diagnosed cancer among Manitoba women and the second most common cause of cancer-related deaths among women. In 2004, 795 Manitoba women were diagnosed with breast cancer, and 296 died as the result of the disease.

The publicly funded Manitoba Breast Screening Program is operated by Cancer Care Manitoba. Women are eligible to attend the program if they are asymptomatic, have never been diagnosed with breast cancer, and do not have breast implants. Women are recruited to the program through personal letters of invitation sent at the time of their 50<sup>th</sup> birthday. Screening mammography is also available for younger and older women, upon physician referral [17].

The program operates four fixed sites in Winnipeg, Brandon, Thompson and Morden/Winkler. Two mobile screening vans, operated in co-operation with RHAs, visit over 87 rural and northern communities each year [17].

Breast cancer screening is done with a mammogram, a specialized x-ray of the breasts. Unlike screening for cervical cancer, mammograms cannot prevent cancer; they can detect cancer, and lead to earlier treatment.





Despite this universal program, the use of mammograms varied widely among eligible Manitoba women. In the two year period from April 1, 2003 to March 31, 2004, just 60% of women aged 50 to 69 years had a screening mammogram. Women in the rural south were most likely (63%), and women in the north were least likely (53%), to have had a mammogram. In fact, all RHAs in the rural south had higher participation rates in the breast screening program than did Winnipeg (59%) [15].

Use of breast cancer screening is also income related. Among rural women, during the two year period from April 1, 2002 to March 31, 2004, 65% of those in the highest income group compared with 52% of those in the lowest income group had mammograms during the same period. Among urban women, 67% of those in the highest income group had mammograms, compared with 47% in the lowest income group<sup>15</sup>. Living in rural and remote communities, low levels of education, being born in Asia, and not having a regular family physician are among the factors that have been identified as linked to reduced participation in breast cancer screening programs [7].

## Cancer and First Nations Women

Manitoba Health's administrative data enable us to look at cancer among some First Nations Manitoba women<sup>3</sup>. Historically, cancer rates have been much lower among First Nations Manitobans than among the population as a whole [11]. This is consistent with other provinces. For example, work done in Ontario, examining the health records of all First Nations people in the province, found that the age-adjusted incidence of cancer among First Nations women was significantly lower than that of other Ontario women [18]. Cancer incidence among First Nations Manitoba women has been increasing however, and is now close to that of other Manitoba women, as illustrated in Figure 14. During the ten years from 1995 to 2004, the incidence of cancer among First Nations women doubled, from 178/100,000 to 391/100,000. During the same time, the incidence of cancer among non First Nations women increased by just 1.5% [6]. While some of this increase may be due to improved diagnosis and treatment, the general trend is still a troubling one.

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<sup>3</sup> Manitoba Health includes in its definition of First Nations people all those who, through self-declaration, have advised Manitoba Health that they are residents with Treaty Status. It does not, therefore, include all Registered First Nations people living in Manitoba. It includes First Nations Manitobans living both on and off Reserves. In 2004, there were 77,371 people identified as First Nations in the Manitoba Health Insurance Registry, while Indian and Northern Affairs Canada included 123,378 in their records. In using this method, we assume that the distribution of cancer and other health events among First Nations people included in the Manitoba Health Registry are representative of all First Nations people in Manitoba. Manitoba Health's system does not include any separate identification of other Aboriginal peoples (e.g. Métis, Non Status and Inuit). They are included in the non-First Nations group.



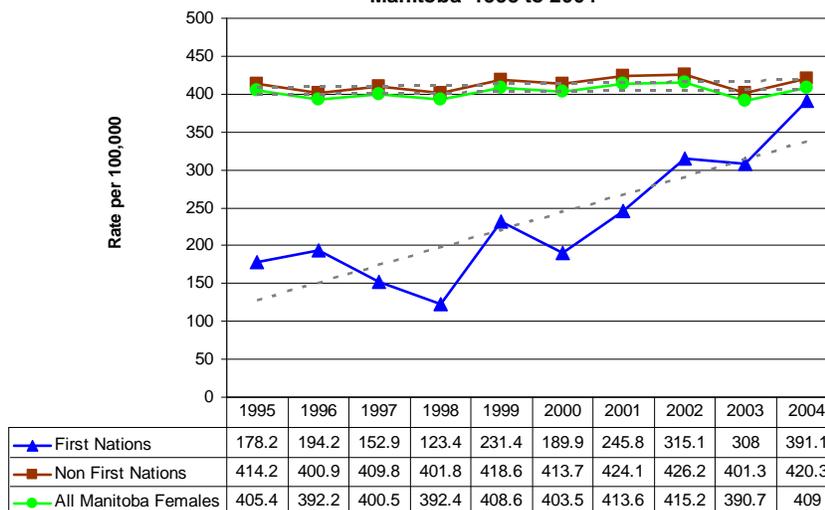


Figure 15 shows the average age standardized incidence of selected cancers among First Nations and non First Nations women in Manitoba from 1995 to 2004. For both First Nations and non First Nations women, breast cancer was the most commonly diagnosed cancer, and the rate of breast cancer was higher among non First Nations women. First Nations women were at lower risk of lung cancer and other gynaecological cancers than were non-First Nations women. However, First Nations women were at higher risk of cervical cancer. In 2004, the rate of cervical cancer among First Nations women was 2.9 times that of non First Nations women [6].

As described above, cervical cancer is preventable with screening. The high numbers of cases of cervical cancer among First Nations women reflects barriers to access to this essential preventive service. This points to the urgent need for improved outreach programs, reaching First Nations women in their home communities.

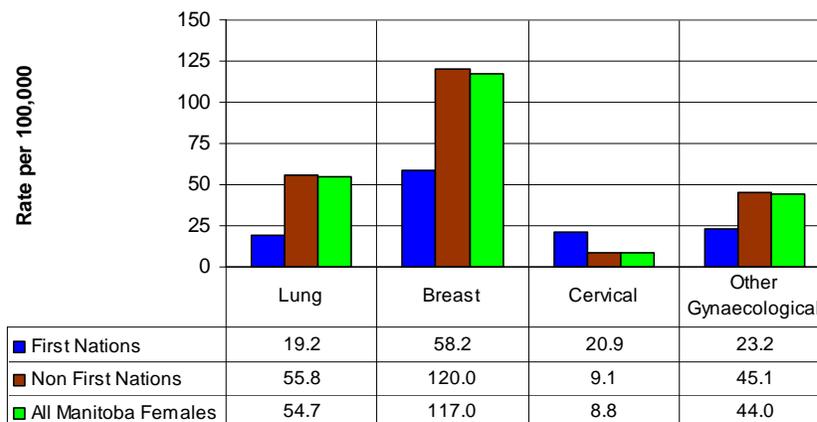
Figure 16 illustrates the incidence of breast cancer among First Nations and non First Nations women from 1995 to 2004 and points to a troubling trend. Due to small numbers, similar data cannot be presented for lung cancer, cervical cancer and other gynaecological cancers<sup>4</sup>.

**Figure 14**  
**All Invasive Cancers - Age Standardized Incidence**  
**First Nations and Non First Nations Females**  
**Manitoba 1995 to 2004**



Source: Cancer Care Manitoba [6]  
 Trend lines are indicated by ----.

**Figure 15**  
**Selected Cancers - First Nations & Non First Nations Females**  
**Average Age Standardized Incidence - Manitoba 1995 to 2004**



Source: Cancer Care Manitoba [6]

<sup>4</sup> It is the policy of Manitoba Health and Cancer Care Manitoba to suppress data where the number of cases is 5 or fewer.



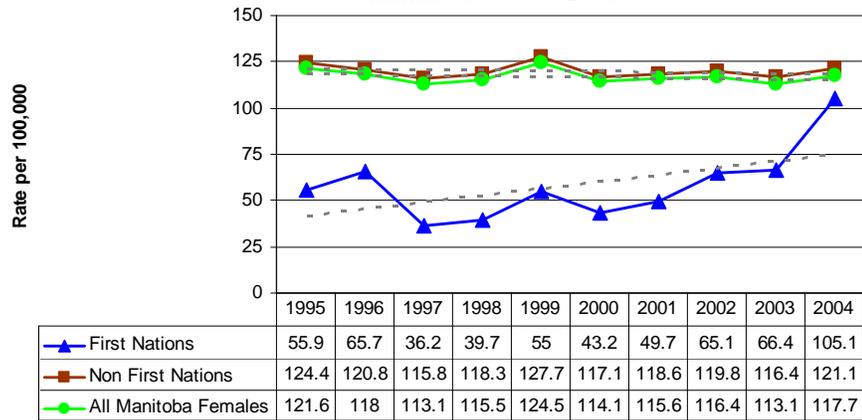


We do not have data available about cancer deaths among First Nations and non First Nations Manitobans. However, Ontario research has shown that Aboriginal people diagnosed with cancer in that province have a much lower 5-year survival rate than do other Ontarians [19].

Cancer Care Ontario has developed an Aboriginal Cancer Strategy, guided by a committee with representatives from First Nations and Aboriginal organizations, including the Ontario Native Women's Association and Cancer Care Ontario. The Strategy has four Guiding Principles: a holistic approach, encompassing the traditional Aboriginal approach to health which includes physical, mental, emotional and spiritual health; community-based programs that make a difference at the community level and are inclusive of Aboriginal peoples' voices; cultural competence - working in conjunction with natural, informal support and helping networks within culturally diverse communities,

understanding the Aboriginal world view and recognizing community knowledge and assets; and process oriented - respectful of people first [19]. Such an approach may be useful in improving prevention, screening, diagnosis and treatment efforts among Aboriginal women in Manitoba.

**Figure 16**  
**Breast Cancer - Age Standardized Incidence**  
**First Nations and Non First Nations Females**  
**Manitoba 1995 to 2004**



Source: Cancer Care Manitoba [6]. Trend lines are indicated by ----.

## Access and Barriers to Cancer Services

Manitoba's universal, freely accessible cancer screening, diagnosis and treatment programs are essential to our ability to provide screening, diagnosis, treatment and palliative care. One need only consider the situation of those in other countries, including many in the US, for whom cancer treatments often lead to financial hardship.

However, there are still barriers to cancer treatment. Those living with cancer may face cultural and linguistic barriers during cancer diagnosis and treatment. Some barriers are geographical. For example, while there are Community Cancer Programs providing some treatment in 15 locations throughout the province (Morden/Winkler, Brandon, Dauphin, Flin Flon, Gimli, Hamiota, Neepawa, Pinawa, Portage la Prairie, Russell, Selkirk, Steinbach, Swan River, The Pas, and Thompson), all of Manitoba's oncologists practice in Winnipeg [20]. While travel costs for northern patients are covered through the Northern Patient Transportation Program, residents in southern Manitoba must pay for their own travel and accommodation costs in Winnipeg.





Manitoba's public Pharmacare program will cover costs for those requiring prescription medication while outside of hospital, either for cancer treatments or to manage or ameliorate the effects of treatments, *after* an income-related deductible amount has been paid. Those with private (usually employment-related) extended health benefits may have this deductible reduced or eliminated, but as noted in Chapter 2 many women do not have jobs with employee benefits. Pharmacare does provide prescription drugs at no charge and with no deductible to cancer patients (and others) receiving palliative care in their homes, through the Palliative Care Drug Access Program. In this way, palliative patients at home do not pay for drugs that are provided at no cost in hospital or in long term care facilities. It is important to learn more about patients who must pay for cancer-related drugs, how much they pay, and whether and which women pay more.

Non-prescription items such as wigs can be expensive. Some are available to borrow through Cancer Care Manitoba.

Many cancer patients will require home care services, and these are available through Manitoba's public Home Care Program, for those who require health services or assistance with activities of daily living in order to remain safely in their homes. However, the Home Care Program is meant to supplement, not to replace informal care provided by family members and other community resources (See Chapter Six). The Home Care Program also provides, at no cost, some specialized equipment needed by some cancer patients.

## Cancer Prevention

The best way to stop cancer is to prevent it. Based on current knowledge, it is estimated that at least one-half of all cancers in Canada can be prevented [21].

Cancer Prevention involves three different types of activities.

1. **Primary Prevention** is what is commonly understood as prevention. Primary prevention reduces the incidence of cancer, by preventing new cases from occurring. Removing or eliminating the causes of cancer such as tobacco smoking, and exposures to other carcinogens, eating a diet high in fruits and vegetables and being physically active, are all examples of primary prevention. Public policies such as anti-smoking legislation, health promotion activities, pollution prevention, and mandatory labelling of carcinogens are other important forms of primary prevention.
2. **Secondary prevention** involves measures to reduce prevalence. It involves the early treatment of cancer, at a stage when treatment may be easier and more effective. Screening programs for breast, cervical and colorectal cancers are examples of secondary prevention [12].
3. **Tertiary prevention** involves treatment to alleviate established disease, in order to prevent further disability and restore a higher level of functioning [20, 22].

This discussion focuses on primary prevention which has, historically, received much less research attention than other forms of prevention and treatment, though in Canada this has begun to change. In





2006, the federal government announced support for the Canadian Partnership against Cancer (CPAC), charged with the leadership of Canada's cancer control strategy, the objectives of which are to:

- reduce the expected number of new cases of cancer among Canadians;
- enhance the quality of life of those living with cancer;
- lessen the likelihood of Canadians dying from cancer [23].

Most Canadians are familiar with primary prevention messages aimed at promoting healthy behavioural change to prevent cancer and other chronic diseases. These include messages to stop smoking, be physically active, eat adequate amounts of fruits and vegetables, maintain healthy body weights, and avoid sun exposure. While important, these do not address exposures to carcinogens which are the result of societal or governmental actions or inactions, and which are difficult or impossible to modify through personal changes in behaviour. For example, in 2005, Manitoba businesses reported to the federal government, through the National Pollution Release Inventory, that they had released 746,052 kilograms of known carcinogens into the Manitoba environment. (This includes only those companies with 10 or more employees, which also used at least 10 tonnes or more of an NPRI listed substance, with certain exceptions) [24,25].

Determining which cancers are caused by occupational and environmental exposures is difficult.

*With rare exceptions, cancers with different causes look the same. In other words, there is no test that can be performed to identify the cause of a cancer. In addition, it is now recognized that the great majority of cancers have multiple causes, such as a combination of genetic, lifestyle and environmental factors. The implications of this for prevention are that if any one cause is removed, the risk of cancer may be significantly reduced [26].*

Thus in order to make change, we must be vigilant wherever possible.

Because of these difficulties, the Precautionary Principle was first adopted by the European Council in 2000. It states:

*Whenever reliable scientific evidence is available that a substance may have an adverse impact on human health and the environment, but there is still scientific uncertainty about the precise nature or magnitude of the potential effect, decision-making must be based on precaution in order to prevent damage to human health and the environment [27].*

The Precautionary Principle was adopted by the Canadian Strategy for Cancer Control, the predecessor of the CPAC, and more recently by the Canadian Cancer Society, which has stated that it:

*...Believes that Canadians should not be exposed to known or probable cancer-causing substances at home, at work, or in their environment.*

*Wherever possible, exposure to substances that are known, or believed, to cause cancer should be identified and eliminated by substituting safer alternatives. When elimination is not possible, exposure should be reduced to the lowest possible levels.*





The Society strongly supports a community's right to know what they are being exposed to so they can make an informed decision about their health.

Some of the most important information needed to make this happen includes:

- an understanding of what substances increase cancer risks
- providing information to the public about ingredients in consumer products
- advocating for the use of safer alternatives where they exist

Current scientific evidence is the cornerstone of our information and positions about cancer. However, we believe it is important in some circumstances not to wait for perfect scientific clarity to take action to protect Canadians [28].

The Precautionary Principle directs decision-makers to act to protect health in the face of uncertainty. This is important because long latency periods (the time between exposure to a carcinogen and the development of cancer), limited research attention to primary prevention, and a socio-legal environment in which chemicals are presumed harmless until demonstrated to be hazardous, mean it is not always possible to know with absolute certainty that something is or is not carcinogenic. In some cases, those with interests in the continued production of suspected or known carcinogens will invest heavily in public relations and lobbying campaigns to discredit the evidence against their products. The campaign by cigarette manufacturers to prevent legislation limiting tobacco use is the best known example of this. Such campaigns are not limited to tobacco. The current campaign by Canadian manufacturers and exporters of asbestos is another such example [29,30].

The International Agency for Research on Cancer (IARC), part of the World Health Organization, conducts thorough scientific reviews of epidemiologic and experimental research, including studies about the carcinogenicity of individual chemicals, groups of chemicals, processes, occupations, and physical and biological agents known or suspected to cause cancer [31].

Much of the research used by the IARC to determine carcinogenicity is based on occupational health research – studies of workers exposed to carcinogens in the workplace. Women's occupational health has received much less attention than that of men, and traditional "women's work" has been assumed to be safer than that of men. This has resulted in a knowledge gap about the occupational health risks, including the risks of occupational cancer, faced by women [32] (see Chapter Two). Some recent work has begun to address this. For example, hairdressing, an occupation dominated by women, has been classified by the IARC as Class 2A

**The IARC classifies agents into one of five types:**

**Group 1:** The agent is *carcinogenic to humans*.

**Group 2A:** The agent is *probably carcinogenic to humans*.

**Group 2B:** The agent is *possibly carcinogenic to humans*.

**Group 3:** The agent is *not classifiable as to its carcinogenicity to humans*.

**Group 4:** The agent is *probably not carcinogenic to humans* [25, 30].

The IARC publishes monographs and a searchable database, which are publicly available at <http://monographs.iarc.fr>





(probably carcinogenic to humans) because of chemical exposures faced by hairdressers, specifically exposures to certain hair dyes [33]. A study of women in the Windsor, Ontario area found that women with breast cancer were nearly three times more likely to have worked in agriculture when compared to a control group of women not diagnosed with breast cancer [34].

The cancer surveillance data presented earlier in this chapter are an important record of the burden of cancer in Manitoba. However, because of long latency periods in the development of many cancers, cancer surveillance includes and reflects exposures that may have happened many years in the past. Cancer surveillance, therefore, is of limited value in primary cancer prevention.

Surveillance of exposure to carcinogens, on the other hand, allows for intervention to prevent further exposures and to prevent the development of cancer. In Canada, the best example of such a surveillance program is the National Dose Registry which monitors occupational exposures to ionizing radiation. There are no similar programs for measuring exposures to other occupational or environmental carcinogens in Canada [25]. Research done in British Columbia used CAREX, the International Information System on Occupational Exposure to Carcinogens, originally developed by the Finnish Institute for Occupational Health as part of a European Union effort, to estimate the extent of exposures to occupational carcinogens. Examining only the ten most common occupational carcinogens, they found that over 325,000 BC workers were exposed to chemical carcinogens, 164,875 were exposed to solar radiation, 17,312 were exposed to environmental tobacco smoke and 9,958 were exposed to ionizing radiation [35].

Carcinogen surveillance would monitor exposures to known carcinogens. Better still would be the elimination of these exposures. In Canada, many community groups, environmental organizations, labour unions, and organizations of cancer survivors have advocated for the removal of carcinogens from products, and substitution with safer alternatives. Breast cancer survivor groups have been especially active in lobbying the federal government to remove carcinogens from cosmetics and household cleaners. Partly as the result of these efforts, the federal government introduced regulations to require mandatory ingredient labelling for all cosmetics sold in Canada beginning in November 2006. However, there is no requirement that cosmetics sold in Canada have labels that identify which ingredients are carcinogens. Consumers are only able to avoid using these if they know which of the chemicals listed are carcinogenic [25].

The Primary Prevention Action Group (PPAG) of the Canadian Strategy for Cancer Control undertook a review of best practices in the prevention of occupational and environmental cancers in Canada. They identified the following as best practices:

- identification and surveillance of hazards and exposed populations;
- transmission of information through labelling and disclosure legislation;
- public education;
- reduction of exposure to carcinogens using substitution or process changes;
- using legislation and regulation to contribute to cancer prevention [25].





The PPAG concluded that improved primary cancer prevention requires action in the following six key areas:

1. to raise the profile of the primary prevention of the environmental and occupational exposures as a priority issue within provincial cancer control agencies/programs;
2. to disclose the presence, use and release of classified carcinogens, as a necessary prerequisite to primary prevention in workplaces, the environment and the home;
3. to develop further legislation, regulation and policy, as required for primary prevention.
4. to focus efforts nationally and provincially more specifically on primary prevention of exposures to occupational and environmental carcinogens;
5. to establish the elimination, when possible, and minimization of exposure at all times, for Group 1 and 2A carcinogens as an objective for primary stakeholders and governments;
6. to exploit opportunities for inter-sectoral collaboration in order to maximize our effectiveness and focus activity on primary prevention strategies [25].

The European Union has taken leadership in the elimination of exposures to carcinogens, through its REACH Program (Registration, Evaluation and Authorization of Chemicals). REACH became law among the member nations of the EU in 2007, with implementation to be phased in over the next 11 years. It requires manufacturers and importers to gather information on the properties of their chemical substances, which will allow their safe handling, and to register the information in a central database. REACH also requires the progressive substitution of the most dangerous chemicals when suitable alternatives have been identified. The EU Environment Commission has stated that in addition to cancer prevention, REACH will contribute to the reduced pollution of air, water and soil as well as to reduced pressure on biodiversity, and to reduce the effects of endocrine disrupting chemicals [36]. The European Union has concluded that the costs of implementation of REACH in Europe (one of the largest producers of chemicals in the world) will be very limited, in terms of the reduction in the EU's Gross Domestic Product [25, 35].

The introduction of a similar system in Canada would have similar health and environmental benefits. This would require legislation by the federal government. However, provinces and municipal governments can act to reduce exposures to carcinogens in their own areas of jurisdiction. For example, through occupational health and safety legislation and regulation, environmental legislation, regulation and development approvals, the Province of Manitoba can act to reduce or eliminate exposures to carcinogens. Municipalities can also act to promote primary prevention. Several Canadian municipalities have taken action to eliminate the ornamental use of pesticides, a position supported by the Canadian Cancer Society [37]. The City of Toronto has used its Sewer Use By-law to require those using the sewage system to plan for the reduced use of toxic substances. As a result of this, the dumping of waste water containing cadmium (classified by the IARC as a confirmed human carcinogen) into the Toronto sewage system has been reduced [24].





## Summary

Cancer is a serious disease that causes pain and suffering for patients, their family and friends; it is a disease that still evokes fear. More than a third of women (approximately one of every 2.6) will be diagnosed with cancer during their lifetimes.

While Manitoba women as a whole have a 25% lower incidence of cancer than men, women aged 20 to 59 are more likely than men of the same age to be diagnosed with cancer. In particular the incidence of both breast and lung cancers among women has increased sharply since 1981. The greater availability of screening tests and better diagnoses, have contributed in part to this increase, through earlier and better detection. However, the rise in the incidence of cancer remains a serious public health concern, pointing to the need to emphasize cancer prevention.

After rising for many years, cancer rates now appear to be stabilizing among Manitoba women. Women living in Winnipeg were the most likely to be diagnosed with cancer in 2004 and women from Rural South Manitoba were the least likely. Breast cancer remains the most common type of cancer to be diagnosed; however rising rates in lung cancer incidence are also alarming and are linked to women's use or exposure to tobacco over the past 40 years. The increasing rates of these two types of cancer are particularly evident for women who live in the northern parts of the province. Northern women were at highest risk for both lung cancer and cervical cancer. Cancer incidence among First Nations women in the province has risen dramatically, particularly since the late 1990's.

As cancer treatments improve, more women are living with cancer. In 2000, about 3.4% of Manitoba women were living with a diagnosis of cancer. CancerCare Manitoba estimates that by 2025, about 5% of Manitobans will be living with cancer, or approximately 58,000 to 61,000 people [1].

Cancer remains the second leading cause of death for women after heart disease; approximately one in 4.2 Canadian women will die of cancer. Cancer is the leading cause of *premature* death among Canadian females (as it is for males), expressed as potential years of life lost. In 2003, deaths due to cancer were responsible for 520,700 potential years of life lost to Canadian girls and women. Approximately 20% of the potential years of life lost due to cancer were attributable to smoking. The leading causes of cancer deaths among Canadian women are those of the lung, breast and colorectum [1].

Mortality rates from breast cancer, the most common cancer among women, the second most common cause of cancer death among women, and the leading cause of cancer death among women under the age of 50, have declined.

Among Manitoba women, those living in Northern RHAs Manitoba women had the highest rate of cancer deaths and residents of Winnipeg and Rural Southern RHAs had the lowest rates of death due to cancer. The death rate for lung cancer increased over the decade from 1995 to 2004, while the rate of deaths due to breast cancer decreased slightly. Death rates due to cervical cancer and other gynaecological cancers remained stable.





Manitoba's cervical screening program is increasingly reaching many women in the province, but coverage is still incomplete, with only about 2/3 of women aged 18 to 69 years screened in a two year period. Women living in lower income areas are persistently less likely to be screened. Northern women were also far less likely to be screened for cervical cancer. Manitoba's breast cancer screening program, reached just 60% of women aged 50 to 69 years during the two-year period from April 1, 2003 to March 31, 2004. Northern women and women in lower income areas are consistently less likely to receive screening mammography, while women living in Rural Southern RHAs were the most likely to be screened. As First Nations women appear to be particularly vulnerable to cervical cancer, developing culturally respectful and appropriate screening and outreach will be fundamental to reaching First Nations and other Aboriginal women in the province.

Along with screening, diagnosis, treatment and palliative care, we need systematic cancer prevention programs, as the best way to stop cancer is to prevent it. Based on current knowledge, it is estimated that at least one-half of all cancers in Canada can be prevented [20].

Most cancers are caused by multiple factors. Diet, lifestyle, viral agents, genetics, and exposures to environmental and occupational carcinogens can all contribute to the initiation and progression of a tumour. In the past, there has been much debate about what percentage of cancer is attributable to each of these factors. Rather than focus on attributable percentages, we support the call for a new cancer prevention paradigm, one based on limiting exposures to all avoidable environmental and occupational carcinogens and to important risk factors including diet, exercise and other lifestyle factors [4].

All levels of government – federal, provincial and municipal, can act to prevent cancer, by joining the Canadian Cancer Society in supporting the Precautionary Principle, which directs decision-makers to act to protect health in the face of uncertainty.

Promoting cancer prevention, like other forms of primary prevention, can be difficult. Prevention doesn't offer any "magic bullets". Dr. Harvey Fineberg, the President of the US Institute of Medicine has provided seven reasons why prevention is a "hard sell". These are:

1. there is no drama in prevention;
2. non-events are not counted;
3. statistical lives don't have immediacy;
4. prevention is not profitable;
5. prevention often runs against commercial interests;
6. prevention may conflict with personal preferences or religious beliefs;
7. there is declining trust in leaders and institutions, challenging people's willingness to follow guidelines [38].

However, these difficulties are not insurmountable barriers. Other countries, notably the European Union, have acted to eliminate exposures to carcinogens, through its REACH Program (Registration, Evaluation and Authorization of Chemicals), which became law among EU member nations in 2007.





### Primary Prevention Resources for Consumers

**The CancerSmart Consumer Guide** is available from Labour Environmental Alliance Society 1203–207 West Hastings St. Vancouver, B.C. V6B 1H7 or from <http://leas.ca/CancerSmart-3-The-Consumer-Guide.htm>

**The Canadian Cancer Society's web site** has information on cancer prevention and what the CCS is doing to promote primary prevention at:  
[http://www.cancer.ca/ccs/internet/standard/0,,3172\\_10139\\_langId-en,00.html](http://www.cancer.ca/ccs/internet/standard/0,,3172_10139_langId-en,00.html)

Through its Health and Environment Awareness Project, **Breast Cancer Action Montreal** has published *The Beast of Beauty: Toxic Ingredients in Cosmetics*, [http://www.bcam.qc.ca/heap/heapdfenglish/Beauty\\_products\\_f5.pdf](http://www.bcam.qc.ca/heap/heapdfenglish/Beauty_products_f5.pdf) and *The Dirt on Cleaners: Toxic Ingredients in Cleaning Products* [http://www.bcam.qc.ca/heap/heapdfenglish/Cleaning\\_products\\_f5.pdf](http://www.bcam.qc.ca/heap/heapdfenglish/Cleaning_products_f5.pdf)

**The U.S. Environmental Working Group** has developed an online searchable database of cosmetics and personal care products, including many of those sold in Canada. The database contains information about carcinogens and other hazardous chemicals in these products.  
<http://www.cosmeticdatabase.com>

**The U.S. National Institutes of Health and National Library of Medicine** maintain an online searchable Household Products Database of information about the contents of household products, using information provided by manufacturers for products sold in the U.S. Many of these are also available in Canada. Products that contain chemicals that have been identified as carcinogens by the U.S. Occupational Health and Safety Administration and other U.S. regulators are indicated.  
<http://hpd.nlm.nih.gov/products.htm>

Manufacturers and sellers of products to be used in Canadian workplaces are required to provide purchasers with Material Safety Data Sheets (MSDS) for each of their products. These are not normally made available to consumers. However, using an internet search engine to search for the term “MSDS” followed by the product name, will often lead you to the relevant MSDS, which must, by law, contain information about the carcinogenicity of any ingredients.





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# Arthritis

## Introduction

Arthritis is one of the most prevalent chronic conditions in Canada, and a leading cause of long-term disability, pain, and increased health care utilization [1]. Osteoarthritis is the most prevalent type of arthritis, affecting approximately 1 in 10 Canadians, compared to 1 in 100 affected by rheumatoid arthritis [2]. However, these conditions are both far more common among women than among men. Osteoarthritis is generally twice as common among women as men, whereas rheumatoid arthritis is two to three times as common among women [3]. National health surveys have ranked arthritis/rheumatism second only to non-food allergies as the most commonly reported health problems among women [4]. Similarly, in Manitoba, arthritis represents the second-most common disease for which Manitobans report having received treatment, and treatment prevalence rates are significantly higher among women than men [5].

The effects of arthritis vary considerably between the sexes. Women are known to exhibit more aggressive rheumatoid disease and to have poorer long-term outcomes than men [6]. Chronic pain and reduced mobility and function are the most common outcomes of long-term arthritis. Overall, musculoskeletal disorders account for higher disability costs than any other category of illness in Canada. Specifically, arthritis and osteoporosis account for more productivity losses due to long-term disability than any other diagnostic category. According to one study, arthritis and heart disease are each responsible for about 15% of total disability in the US [7].

While biological factors play an important role in women's greater risks for arthritis and some disease outcomes, gender considerations often mediate women's capacity to utilize and fully benefit from effective treatments and informal supports that can improve functioning. Women's roles and social and economic circumstances often constrain the resources necessary to cope with a chronic degenerative condition. Providing more gender-sensitive care, addressing biases in practice, and removing barriers to access hold promise for improving the health of the large numbers of women affected by arthritis.

### What is Arthritis?

Arthritis is a group of disorders that affect joints and are often characterized by inflammation and joint or musculoskeletal pain. Arthritis consists of more than 100 distinct conditions, which range widely in severity from mild and localized forms (e.g. tendonitis) to more severe and systemic forms (e.g. systemic lupus erythematosus). The most common forms of arthritis are osteoarthritis and rheumatoid arthritis.

### Osteoarthritis

Osteoarthritis (OA) is caused by the breakdown of cartilage at a joint, often resulting from overuse or an injury. OA can involve any joint, but usually affects hands and weight-bearing joints such as hips, knees, feet and spine. Over time, the breakdown of cartilage may result in damage to bone, inflammation and pain. Loss of functional ability results from reduction in joint mobility and weakening of surrounding muscles through lack of use.

### Rheumatoid Arthritis

Rheumatoid arthritis (RA) is an autoimmune disease that causes chronic inflammation in the lining of joints. It can also affect other tissues and internal organs. Autoimmune diseases are illnesses that occur when the body's immune system mistakenly attacks its own tissues. RA may develop gradually or begin with a sudden attack of flu-like symptoms. Symptoms and the rate of disease progression (or remission) vary considerably between individuals. RA can lead to permanent damage to joints. Individuals with RA may suffer severe pain and experience difficulty carrying out activities of daily life [8].





## Prevalence of Arthritis<sup>1</sup> in Manitoba Women

It has been estimated that only 40-60% of those with symptoms of arthritis will consult with a health professional [1]. A common misconception that arthritis symptoms are a normal part of aging may contribute to the large numbers of people who do not seek a diagnosis for these conditions. Thus, the Canadian Community Health Survey (CCHS), which is based upon self-reporting of medical diagnoses, provides a conservative estimate of the prevalence of arthritis in the population.

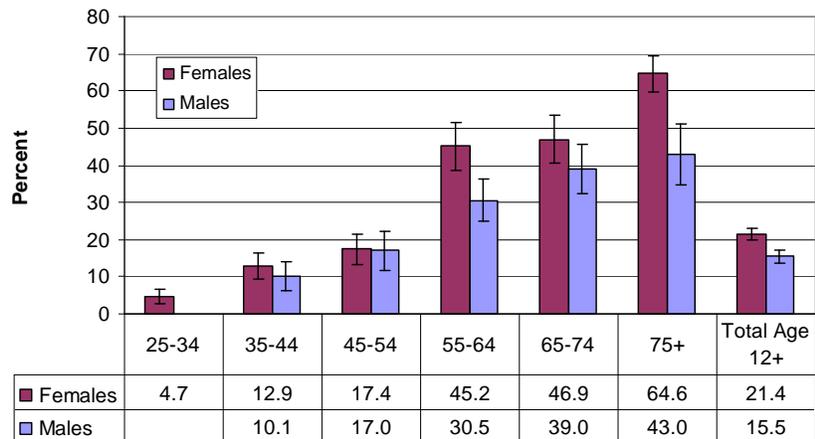
According to the 2005 CCHS, 21.4% of women (age 12 and older) in Manitoba, the equivalent of 101,739 individuals, reported having received a diagnosis of arthritis or rheumatism from a physician. The prevalence of arthritis among women was significantly higher than

among males in the province, 15.5% of whom had received a diagnosis for the condition (Figure 1). The prevalence of arthritis among women increased with advancing age and at a steeper rate after middle age. In fact, rates more than doubled from 17.4% in the 45 to 54 age category to 45.2% in the 55 to 64 age range. Arthritis was more prevalent for women than men in all age categories, although differences achieved statistical significance only in the 55 to 64 and over age 75 age ranges. The majority of elderly women were affected by arthritis: nearly two-thirds of women over age 75 had received a diagnosis for arthritis or rheumatism, which was 50% higher than the prevalence among men of the same age [10].<sup>2,3</sup>

### CCHS Definition

The Canadian Community Health Survey (CCHS) asked participants (aged 12+) about their chronic health conditions, defined as long-term conditions that had lasted or were expected to last 6 months or more, and that had been diagnosed by a health professional. Included in the list of conditions was “arthritis or rheumatism”, which were differentiated from back problems and fibromyalgia [9].

**Figure 1: Prevalence of Arthritis or Rheumatism By Age and Sex, Manitoba 2005**



**Source:** CCHS 2005 [10].

**Notes:** Rates for women aged 25-34 and men aged 35-44 were associated with high sampling error and should be interpreted with caution. Results for men and women aged 12-24 and for men aged 25-34 were too unreliable to publish. Confidence intervals (95%) illustrate potential variability in estimated rates due to sampling error.

<sup>1</sup> Includes both osteoarthritis and rheumatoid arthritis.



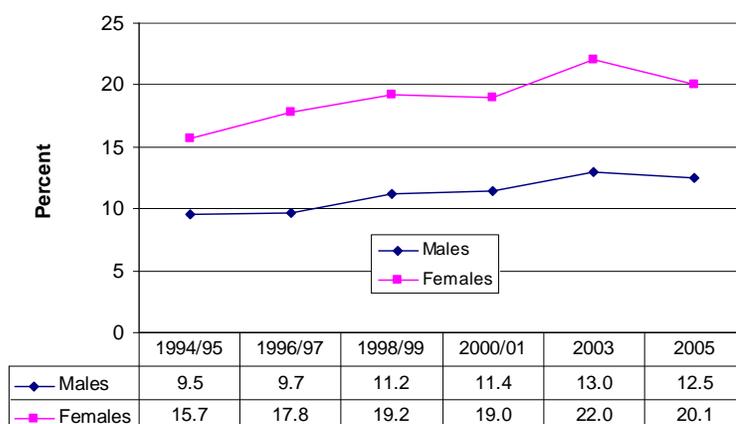


A misconception that arthritis affects only the elderly persists, yet the largest number of people with arthritis are in the 45-64 age range [1]. Among women, rheumatoid arthritis most commonly appears between the ages of 25 and 50 [2]. In comparison with other chronic degenerative diseases, arthritis affects a relatively large proportion of women under age 65.

The rates based on the CCHS are generally consistent with the results from an analysis of health administration data for Manitoba, which found that approximately one in five women in the province had been treated for arthritis<sup>4</sup> and that women had significantly higher rates of treatment than men (22.3% of females versus 19.2% of males aged 19 and older). Consistently higher rates of treatment for women were found across nearly all age categories, the highest rates relative to men having been found in the 50 to 60 age range [5].

The prevalence of arthritis among Manitoba women is also comparable to that of Canadian women overall (20.1%), though Manitoba men have higher rates than the male national average (12.5%) [10](Figure 2). The trend in national data shows a steady increase in the prevalence<sup>5</sup> of arthritis among women and men over the past decade with, again, women having consistently higher rates than men [7]. However, long-term trends have

**Figure 2: Trends in Arthritis/Rheumatism Prevalence, Canada 1994-2005**



**Sources:** National Population Health Surveys (NPHS) 1994/95, 1996/97, & 1998/99; CCHS 2000/01 & 2003 [7], CCHS 2005 [10]. Note: CCHS and NPHS definitions of arthritis differ. The NPHS definition did not explicitly exclude fibromyalgia, as did the CCHS. Therefore, more people may have reported arthritis in the NPHS than in the CCHS [9].

<sup>2</sup> The CCHS includes people aged 12 years or older who were living in private dwellings in the 10 provinces and three territories. People living on Indian Reserves or Crown lands, those living in institutions, full-time members of the Canadian Armed Forces and residents of certain remote regions were excluded.

<sup>3</sup> This analysis is based on Statistics Canada’s Canadian Community Health Survey, Cycle 3.1., Public Use Microdata file, which contains anonymized data collected in the year 2005. All computations on these microdata were prepared by Prairie Women’s Health Centre of Excellence and the responsibility for the use and interpretation of these data is entirely that of the authors.

<sup>4</sup> The Manitoba Centre for Health Policy also combines osteoarthritis and rheumatoid arthritis in this measure of arthritis treatment prevalence. The prevalence is defined as the percentage of residents aged 19 years or older diagnosed with arthritis using a combination of data on physician visits, hospitalizations and prescription drugs (see original for specific, validated criteria) from 2002/03 to 2003/04 fiscal years. These rates are adjusted to control for differences in age structure between male and female populations [5].

<sup>5</sup> Crude rates, unadjusted for any differences in age structure over time.





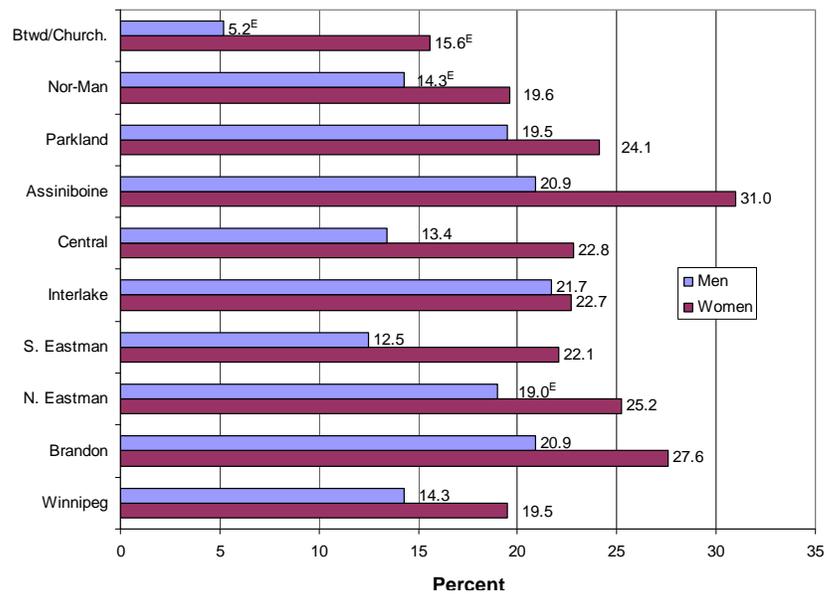
shown that, for Canadian women<sup>6</sup>, the odds of having arthritis were higher in the late 1970s than in the mid-1990s, even when the effects of age, education and income were taken into account. Arthritis was significantly less prevalent among women aged 32 to 49 and 50 to 67 in the mid-1990s than for women in the same age ranges in the late 1970s, particularly for younger women. Although the Canadian population is aging and the *number* of individuals with arthritis and other chronic diseases is expected to increase, women (and men) may stay healthier longer than previous generations. Delayed onset of chronic disease among women in the middle-age range and lower rates of activity limitation among senior women has generally been attributed to healthier lifestyles and improved health care and health promotion efforts [11].

### Arthritis Prevalence by Region

According to the 2005 CCHS, the prevalence of arthritis varied widely among women in different regions of the province. For example, a two-fold difference could be seen in a comparison of rates among women in the combined Burntwood-Churchill region in Northern Manitoba (15.6%<sup>E</sup>) and the Assiniboine region (31%) in the South. Although rates of arthritis were consistently higher for women than men in all regions, the disparity was particularly large in Burntwood/Churchill, South Eastman and Central regions [10](Figure 3).

It is important to note that these regional prevalence rates represent crude rather than age-adjusted rates. Crude rates are useful in providing a realistic assessment of the disease burden for the population in a given region, which may inform health care planning. However, caution must be taken when comparing the prevalence of arthritis between and among regions, because differences in rates may reflect differences in age structure between regional populations as well as differences in exposure to risk factors for arthritis. In the comparison above, an older population in the rural, southern Assiniboine region may account for higher rates of arthritis than in the rural north, where the average age of residents is younger.

**Figure 3: Crude Prevalence of Arthritis or Rheumatism By Region and Sex, Manitoba 2005**



**Source:** CCHS 2005 [10].

**Note:** 'E' signifies a high degree of error in estimated rates. Interpret with caution.

<sup>6</sup> Data sources included the 1978/79 Canada Health Survey (CHS) and the 1996/97 National Population Health Surveys. The CHS covered the non-institutionalized population, excluding residents of the territories, First Nations reserves and remote areas. The NPHS covered household and institutional residents in all provinces and territories, except persons living on First Nations reserves, on Canadian Force bases, and in some remote areas.





Using age-standardized rates of treatment of arthritis, an analysis of health administration data for Manitoba (2002/03-2003/04) demonstrated that in all regions, women were more likely to have been treated for arthritis than their male counterparts, though the sex difference did not achieve statistical significance in the Churchill region. Comparing women across the regions showed significantly higher age standardized rates than women's average treatment prevalence (22.33%) in the Nor-Man (28.74%), Parkland (26.26%), Burntwood (25.86%), and Brandon (23.38%) regions. Women in the Interlake (21.3%) and Central (21.57%) regions had significantly lower-than-average rates of arthritis treatment [5]. As this analysis controlled for differences in age-structure, the variation in these rates may reflect regional differences in underlying risks for arthritis, and/or differences in the delivery of health care and community resources.

### Prevalence of Arthritis Among First Nations & Aboriginal Women<sup>7</sup>

Arthritis or rheumatism is the most common chronic condition diagnosed among Aboriginal women. A national survey of First Nations' health found the prevalence of arthritis/rheumatism<sup>8</sup> among First Nations women to be 1.7 times higher than among Canadian women overall (age adjusted prevalence of 30.1% versus 17.4%), with the most notable differences found among women younger than 60 years [12].

The CCHS also found elevated rates of arthritis/rheumatism for those who identify as Aboriginal, living off reserve (Figure 4). Nineteen percent of Aboriginal Canadians had arthritis, which would be equivalent to 27% if this population had the same age structure as the overall Canadian population. In all age groups, Aboriginal women had a significantly higher prevalence of arthritis than non-Aboriginal Canadian women. Among men, the difference between Aboriginal and non-Aboriginal rates achieved significance only in the 35 to 44 age group. The CCHS also found that Aboriginal people under age 65 were more likely than non-Aboriginals to report activity limitations with arthritis [13].

An analysis of 1999 survey findings concluded that First Nations women were more likely to report several chronic health conditions, including arthritis, as compared to their male counterparts and other Canadian women. Women also tend to develop arthritis, as well as respiratory and cardiovascular problems, at a younger age than men [14]. Although the Manitoba First Nations survey reported a growing prevalence of arthritis among the provincial First Nations population, sex disaggregated data were not published [15]. The growing problem of obesity among First Nations is expected to affect rates of osteoarthritis in this population [16].

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<sup>7</sup> The CCHS gathered data on Canada's Aboriginal population, defined as those individuals who self-identified as North American Indian, Métis, or Inuit. The CCHS did not survey people in the northern territories, on military bases, in institutional collective dwellings or living on First Nations reserves. The First Nations Regional Health Survey (RHS) identified as First Nations, those individuals living in First Nations communities (on-reserve) in all provinces and territories except Nunavut.

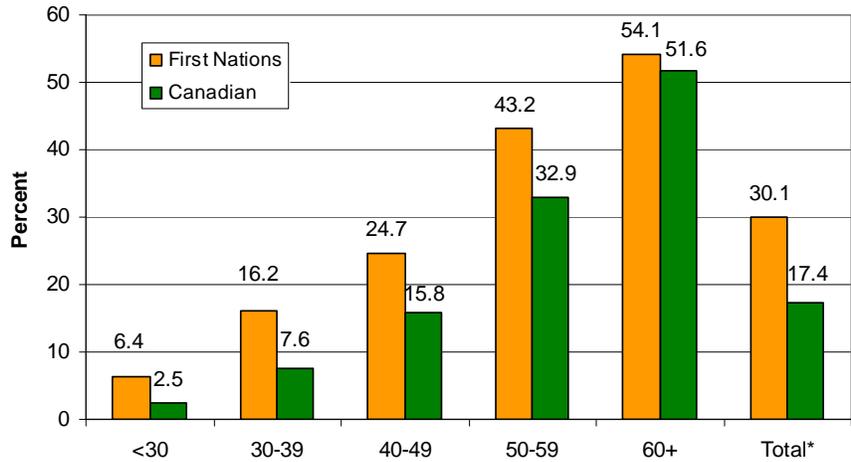
<sup>8</sup> Similar to the question posed by the CCHS, the RHS asked respondents about long-term health-related conditions that have lasted, or that are expected to last, six months or more and that have been formally diagnosed by a professional.





Although data concerning First Nations and Aboriginal people are most accessible in Canada, relative to other ancestral populations, US studies have demonstrated a higher prevalence of rheumatoid arthritis and osteoarthritis in African Americans [1]. A US study found higher rates of knee osteoarthritis among women of colour in comparison with Caucasian women [17]. Other ethnic or cultural sub-populations of significance among Manitoba women may also be at greater risk for arthritis. However, until prevalence data on other populations becomes available, the extent of these differences will remain unknown.

**Figure 4: Prevalence of Arthritis/Rheumatism by Age, First Nations & Canadian Women, 2002/03**



**Source:** 2002/03 First Nations Regional Longitudinal Health Survey (RHS). The RHS derived data on Canadian women from the CCHS 2003. [12]

**Notes:** \*Age-adjusted prevalence.

Comparing rates from different surveys, such as the RHS and the CCHS, may be problematic due to differences in the design and contexts of surveys that affect response rates.

### Risk of Arthritis – Sex & Gender Differences

Several factors are understood to contribute to the development of arthritis, although the specific causal mechanisms remain unknown. Hereditary susceptibility, hormonal and biomechanical influences, such as injury or overuse [9], and excess weight [8], are commonly named among key contributing factors. Female sex and sex hormones have been recognized as independent risk factors for arthritis. Immunological differences between the sexes also play a role in women’s greater risks for arthritis. Women have enhanced immune systems compared to men, which offer women greater protection from many types of infection, but also makes them more vulnerable (2.7 times more likely) to acquire an autoimmune disease, of which RA is one. Men have higher levels of natural killer cell activity than women, which is associated with lower levels of autoimmune disease [18].

Women’s greater susceptibility to arthritis has been attributed to female hormones, though their influence is not well understood. The observation that women disproportionately experience osteoarthritis around or after menopause suggested a relationship between hormones and arthritis. Clinical research has found elevated levels of estrogen in arthritic cartilage of women with osteoarthritis, implicating estrogen in the development of arthritis in women [19]. Elevated risk for arthritis has been demonstrated for women who have had their ovaries surgically removed, and women who have never been pregnant or who have recently given birth [20]. Conversely, women with existing rheumatoid arthritis often experience an improvement in symptoms during pregnancy, and the contraceptive pill may





also be protective [6]. Pre-dating evidence of harms associated with hormone therapy (HT), clinical trials which hypothesized a protective effect of HT on arthritis were contradictory and failed to confirm the association. However, a Canadian longitudinal study found evidence of a two-fold greater two-year incidence of arthritis among middle-aged and older women who were on HT, when age and the frequency of visits to a physician were controlled for [20]. Clearly more research on the role of female hormones in the development of arthritis is needed.

Excess body weight is recognized as an important modifiable risk factor for arthritis. Excess weight places greater strain on joints and increases risks for arthritis [8]. Obesity may confer similar risks for women and men, as some research has indicated [9]. Other research has found greater risk of arthritis for obese women than men [9]. An analysis of Canadian survey data found the elevated risk for developing arthritis to be similar for obese women and men (60% higher incidence than those with weight in normal range), which was independent of other known influences. However, for individuals who were overweight, but not obese, only women had a higher risk of developing arthritis (30% higher than those with weight in normal range) [9]. The effect of excess weight on arthritis may be mediated by other physiological differences between the sexes. For example, men are known to have significantly larger knee cartilage volumes than women, even when individuals of similar body and bone size are compared. Thus, men may have more natural protection from the exacerbating effects of weight on arthritis of the knee than women [19].

Other modifiable and biomechanical risk factors for arthritis, including intensive physical activity and previous knee injury may be less detrimental for women than men. Physical activity generally reduces the risk of hip/knee osteoarthritis, especially among women [17]. However, high intensity and high impact activity, more often engaged in by young men, is associated with a small increase in risk. Men's greater involvement in sport increases their risks for injury as well as long-term strains on joints. These gender differences in the level and type of physical activity have been used to explain higher levels of osteoarthritis among men than women in young adult age groups. As well, research on occupational health has established that kneeling and squatting for extended periods of time represent risk factors for osteoarthritis of the hip and knee. However, this research has primarily focused on men in 'masculine' occupations, and little is known about women's occupational risk exposures [17]. For women, biomechanical risk factors may also interact with social role expectations to create unique risks, as has been demonstrated by the effect of women's footwear on arthritis. Several US studies have shown that wearing high-heels over two inches increases the risk of osteoarthritis for women, with longer term wear likely increasing those risks. High heels increase forces (torques) in the region where women typically get osteoarthritis. These forces lead to joint degeneration [19].

Several socioeconomic factors have been associated with higher rates of arthritis, though again causal mechanisms are poorly understood. Nevertheless, social factors appear to have a stronger relationship with the development of arthritis for women than for men. An analysis of the 1998/1999 National Population Health Survey (NPHS) found differences in income, education, relationship status and labour force participation among Canadian women and men with arthritis, though women demonstrated greater disparities than men for these social indices. For example, twice the proportion of low-income women





reported having a diagnosis of arthritis or rheumatism compared to women in the highest income category (30% versus 15%), whereas lower prevalence rates and a more moderate income disparity was apparent among men (17% versus 11%). A very similar set of rates were found in the comparison of arthritis prevalence among women and men with different levels of education [1].

Further evidence has come from a newly released gender and equity analysis of 2000/01 CCHS data. Using five categories of income, the study clearly demonstrated income gradients in the prevalence of arthritis for Canadian women (age 25+) and men, as well as higher rates of arthritis for women than men in all income groups. Again, nearly one third of women in the lowest income group reported a diagnosis of arthritis compared to 21% of women in the highest income group and 21% of men in the low income group [21]. An analysis of hospital administration data by the Manitoba Centre for Health Policy also established the importance of socioeconomic factors for the occurrence of arthritis among women and men in Manitoba. Age-adjusted rates of arthritis were higher among residents of low-income areas in both urban and rural settings, with statistical tests indicating a highly significant relationship between arthritis and income ( $p < .001$ ) [5].

## Effects & Outcomes of Arthritis for Women

Arthritis has serious and far-reaching effects on women's health and well-being. Arthritis is associated with a broad range of physical, social and psychological impacts with consequences for the quality of life, the ability to work, and numerous direct and indirect costs. While this breadth of effects is difficult to adequately quantify, research has focused on several measures that demonstrate key areas of impact for women; these primarily include mortality, ill health, including pain and psychological health, and long term disability.

**Physical and Mental Effects** - A comprehensive report on the effects of arthritis on Canadians found that women are at greater risk of death attributable to arthritis than are men. In 1998, 497 women and 257 men in Canada died from arthritis and related conditions identified as the underlying cause. Indeed, in every age category, women's risk of death was higher than that of men, with approximately four female deaths for every three male deaths [13].

Among individuals with arthritis, women report more severe symptoms of pain, greater functional limitation and disability than men [17, 22]. Forty-five percent of women with arthritis report pain that prevents some activity; 21% report pain that prevents all or most activity [1]. Considerable research suggests that women and men differ in their experience of pain [23]. Experimentation in laboratory settings has shown that when women and men are exposed to similar stimuli, women exhibit greater pain sensitivity. Several mechanisms have been proposed to account for differences in pain perception between the sexes, including psychosocial factors such as sex role beliefs, pain coping strategies, mood, and pain-related expectancies [23]. As well, sex hormones are known to have different effects on pain perception in the male and female brain [24].

A study that compared arthritis symptoms in women and men showed that women's experience of greater pain was fully accounted for by greater severity of disease in women, contrary to the stereotype





that women over-report symptoms or over-rate their severity. Depression also accounted for some part of women's greater pain severity [25]. Women still report more pain and disability when x-ray results show comparable severity of disease for women and men. This observation has raised concerns that clinical measures used to determine the need for hip and knee replacement surgery are not sensitive to differences in women's and men's bodies and experience of arthritis [17]. Similarly, a study that followed women and men with rheumatoid arthritis over one year found that women suffered greater disability over time, though objective ratings of disability by a physician's assistant were not associated with a client's self-perceived pain and disability. However, depression again had a significant influence on women's greater loss of function over time [26].

Arthritis is a particularly important cause of long-term disability for women. Women are more likely to suffer long-term disability attributable to arthritis, whereas long-term disability in men is more likely to result from back problems [1]. Compared to women with other chronic conditions, women with arthritis are more likely to suffer long-term disability, report poorer health, more pain that restricts activity, and consult with a general physician, specialist and physiotherapist [1]. Arthritis commonly interferes with women's daily activities; 43% of women with arthritis required assistance with daily tasks (personal care, household chores, shopping) compared to 30% of men with arthritis and 13% of women with other chronic conditions [1]. Further, arthritic women with functional limitations have been found to be more likely than men to require personal assistance with daily activities, but are less likely to report having access to unpaid support. This difference may be accounted for by the larger number of elderly women who live alone [17].

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 life. Furthermore, research has shown that women with arthritis report greater depression than men [27]. A study of sex differences in psychological impacts of rheumatoid arthritis, which controlled for other known variables, including the quality of emotional support, passive pain coping, and physical functional impairment, found that these factors only partially explained differences in negative indicators of psychological wellbeing. Thus, other mechanisms in the relationship between gender and depression in arthritis patients remain unexplained [27]. A study of RA patients found that emotional distress increased with decreasing functional ability, increasing pain, and exposure to such work characteristics as low autonomy, low income, and high demands. No sex differences in measures of distress remained after controlling for disease and work variables and the study concluded that men and women with high levels of functional disability and exposure to stressful work characteristics are at equal risk of emotional distress [28]. Nevertheless, arthritic women may be more likely to suffer poor emotional outcomes because women tend to have lower incomes and less workplace autonomy, as well as greater declines in functional ability and more severe pain.

**Socioeconomic Effects** - Differences in social and economic capacities between and among women and men factor into the impact of arthritis. Because women are more likely to lack economic resources, income loss due to long-term disability compounds deprivation for many women living on low-income, lacking sufficient insurance or other resources. Research has found that compared to women living with other





chronic conditions, women living with arthritis have been found to be in many ways more vulnerable in social and economic respects. Women with arthritis tend to be older, have lower incomes, have fewer years of education, are more likely to be widowed, and are less likely to participate in the labour force than women with other chronic conditions. Thus, it appears that women with arthritis are particularly lacking in resources to deal with the effects of the condition on their daily lives [3].

Income has been found to mediate several health outcomes for women and men with arthritis. A recently released analysis of CCHS data demonstrated significant socioeconomic disparities across several key measures of health for arthritic women. Women with arthritis in the lowest income categories were significantly more likely than women in the highest income categories to report fair or poor health, worse health than in the previous year, poorer functional capacity<sup>9</sup>, pain that limits activities, probable depression<sup>10</sup>, and four or more coexisting chronic conditions. As well, comparisons between women and men found greater disparities by income for functional limitations and multiple chronic conditions among women than men. Half of women in the lowest income group with arthritis reported having four or more chronic conditions [21].

Some research that focused on the importance of social support in mediating the effects of stress on arthritis and other chronic conditions has seen women as benefiting from more supportive social environments. However, more in-depth research has noted other important gender distinctions. Based on data from the National Population Health Survey, a comparison of women and men matched for age and chronic illness found that men had significantly higher odds than women of being in poor health or having died after four years of follow-up. While women's resilience was attributed to their greater access to social support, interestingly, the sexes also differed in the nature of support received. Women were more likely to report having people to talk to, to provide advice in a crisis and to understand their problems, whereas men were more likely to report having someone to help if they were confined to bed, to prepare meals and to help with activities [29]. Women's more limited access to concrete social support may pose challenges for women with arthritis who require assistance in coping with activity limitations and recovery following surgery.

A study which explored specific ways in which social networks are utilized in the self-management of arthritis and other chronic diseases found evidence of gender and race differences that may account for gender differences in disease outcomes. Women tended to speak more of how others influenced their coping (positive or negative), whereas men spoke only of receiving support for doctor's appointments. Men tended to receive more support from a spouse, whereas women were more likely to have children or

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<sup>9</sup> Functional capacity was measured by the HUI, Health Utility Index, a single index based on assessment of functional capacity from eight attributes of health (vision, hearing, speech, mobility, dexterity, emotion, cognition and pain). Scores on the HUI range from 0 to 1, where 0 indicates death and 1 indicates perfect health. The Health Utility Index is an indicator of overall health. A score equal to or less than 0.8 is considered poor health [21].

<sup>10</sup> Proportion of population who score equal to or greater than 0.90 Depression Scale Predicated Probability Score using the Composite International Diagnostic Interview (CIDI). Note: Questions about the validity of this measure have been raised and it is no longer included in the CCHS [21]. See Depression, this chapter.





friends who influenced their self-management. The extent to which the influences from children were not beneficial was unanticipated by the researchers. Not unlike the social circumstances of older men and women in the overall population, most men in the study population were married, whereas most women were single, divorced, or widowed, although more African American than Caucasian women lived with family members [30].

## Women's Access to Treatment

While there is presently no cure for arthritis, available treatments, including medication, surgery, rehabilitation and self-management, aim to prevent disability, maintain function and reduce pain [1]. Research has shown that prognoses are improved by aggressive treatment early in the progression of arthritis [2], and that cost savings—to individuals and health systems—are gained through timely surgical treatment [17] and treatment with medications proven to be effective in preventing joint damage [13]. In light of the higher prevalence of arthritis among women and certain sex disparities in disease outcomes, sex differences in treatment are warranted. Yet there is evidence indicating that differences in treatment and timeliness of treatment do not adequately respond to the needs of women [13, 17].

**Medication** - A variety of arthritis medications are available in Canada, including non-steroidal anti-inflammatory drugs (NSAID)—both conventional varieties and the newer COX-2 inhibitors, low-dose corticosteroids, disease modifying anti-rheumatic drugs (DMARD), and the newly available, more effective biologic response modifiers (biologics). NSAIDs and corticosteroids target inflammation and pain, whereas DMARDs and biologics limit disease progression [13].

According to national survey data<sup>11</sup>, women and men with arthritis are equally likely to be prescribed any medication, but women are more likely to be prescribed pain medications and antidepressants than men and than women with other chronic conditions [1]. These treatment differences may appropriately reflect women's experience of arthritis, as described earlier—that is, arthritic women's more common experience of pain and depression. Nevertheless, there is also evidence that higher rates of prescription of pain medication (e.g. NSAIDs) to women may have adverse consequences that are unaddressed by medical practice. Long term use of NSAIDs has been linked to gastrointestinal, liver or renal injury, heart failure and adverse reproductive outcomes [13]. Research has shown that women, particularly aged 65 and older, are more likely to experience ill health from use of nonspecific non-steroidal anti-inflammatory drugs (NS-NSAIDs). Female sex and older age (65 and older) are associated with nausea, abdominal pain, and dyspepsia [31]. However, research has also shown that men are more likely to die from gastrointestinal bleeding as the underlying cause, most often the result from NSAID use [13]. A study of sex differences in NSAID use by older adults found that physicians were significantly more likely to prescribe NSAIDs to women than to men (37% versus 30%), and that usage did not diminish with greater risk of adverse effects or self-reported symptoms [32].

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<sup>11</sup> National Population Health Survey data.





While newer arthritis medications, such as COX-2 inhibitors and the biologics family of drugs, are more effective and may lessen adverse effects, their costs are a problem for equitable access through provincial health systems and for individuals. In the case of DMARDs, the primary therapy recommended for rheumatoid arthritis, prescription rates have increased consistently over time. Nevertheless, in all provinces, the rate of provision of these drugs still falls well short of the estimated prevalence of rheumatoid arthritis. In Ontario, the cost of arthritis-related prescription medications nearly doubled between 1999 and 2000, and is expected to continue to rise as the use of biologics increases. Annual per patient costs for biologics may exceed \$18,000 (USD) [13]. In Manitoba, biologics may be covered under the Exceptional Drug Status program<sup>12</sup>. Thus Pharmacare reduces the financial barrier to biologics considerably, though this and other care costs may still represent a formidable expense for some women. Thus, the lack of affordability of some arthritis medications is likely to have a greater effect on women, particularly in light of arthritic women's fewer resources, as was previously described.

**Surgery** - National data indicate that Canadian women have a slightly higher rate of total knee and hip replacement surgery than men. For 2004/05, age-standardized surgical rates for women exceeded those for men by 7% and 22% for hip and knee replacement surgery respectively [33]. In light of the two-fold greater prevalence of arthritis among women compared to men, these small differences in surgical rates indicate that treatment is insufficient to the level of need among women [1, 13]. Similarly, in Manitoba, comparisons of age-adjusted rates of hip replacement found no significant difference between men and women (1.62 versus 1.72 surgical events per 1,000 residents aged 40+) and significant, though small sex differences in rates of knee replacement surgery (2.7 versus 2.1 per 1,000 residents aged 40+)<sup>13</sup> [5]. As well, women have longer hospital stays than men for both knee and hip replacement [13, 33]. In 2004/05, Manitoba women undergoing hip replacement averaged 17 days in hospital compared to 10 days for men, though both sexes had a nine day average stay for knee replacement [33].

Arthritic men are actually more likely to receive certain surgical procedures than women. Men were significantly more likely to undergo minimally invasive surgery (MIS), a new surgical technique used for hip and knee replacement procedures, which is associated with improved outcomes and quicker rehabilitation. Men's higher rates of MIS remained significant even when the age and body mass index of patients was controlled for [33]. As well, rates of joint replacements for other than knee and hip joints and arthroscopic knee procedures are higher among men with arthritis and related conditions than for women. Higher rates of arthroscopy may reflect the greater exposure of young males to injury from physically demanding jobs or sports [13]. Despite apparent inequities in access to surgery, trends seen in national data indicate that surgical rates are rising most rapidly among some groups of women. Between 1994/05 and 2004/05, rates of knee arthroplasty more than tripled for women aged 45 to 54, while rates more than doubled among men in this age category [33], indicating notable improvements for women.

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<sup>12</sup> A patient's specialist must demonstrate the individual's circumstances meet specific criteria set by the Manitoba Drugs Standards and Therapeutics Committee. If a claim is successful, a patient living on low income may expect to pay an annual deductible of approximately \$500-\$775.

<sup>13</sup> Taken from hospital data for 1999/2000 to 2003/04; all surgical events are counted, which may include more than one procedure performed on a resident.





Knee and hip replacements are underused by both women and men, though there is evidence for greater concern for women. A study in southern Ontario found that although women had a higher prevalence of arthritis of the hip or knee, had worse symptoms and greater disability associated with arthritis, they were less likely to discuss the possibility of surgery with their physician, and less likely to have undergone joint replacement than men. Based on a sample of residents (over 48,000), excluding those who had undergone arthroplasty, more than twice as many women as men (45 per 1,000 women compared to 21 per 1,000 men) were identified through a standardized screening process as having a potential need for surgery. After adjusting for willingness to undergo surgery, the need among women was three times that for men (5.6 per 1,000 women and 1.6 per 1,000 men). Thus, the degree of underuse of knee and hip surgery is greater among women than men, despite their being equally appropriate and willing candidates for surgery. Possible reasons given by the authors for the difference included lower rates of referral of women, women being less likely to initiate discussion of treatment options or to demand surgery when it is discussed, or attitudes among primary care givers that make them consider women less suitable candidates for surgery than men [34]. A gender-based review of the available literature on wait times for knee and hip surgery confirmed that, compared to men, women are less likely to be referred, or are referred after a longer interval, to orthopedic surgeons. Moreover, waiting lists do not adequately represent the delays in surgical intervention for women, as standard definitions of 'waiting' account only for time spent waiting after a patient has indicated they are ready to receive service and the physician has booked it [17].

Studies of patients on surgical waiting lists have found some evidence of poorer surgical outcomes for women, partly reflecting the tendency of women to be listed at a more advanced stage of disease. Although a prospective study found no differences in the severity and frequency of pain experienced by women and men waiting for surgery, women had worse pre-operative functioning on physical performance measures, including the ability to walk quickly, climb stairs, and get in and out of a chair. Within three months following surgery, women also showed a slower rate of recovery for all physical performance measures. Research comparing rates of recovery between women and men must be able to remove the influence of women having lower initial scores on function, which may require longer prospective studies [35].

A recent study attributed underuse of surgery by women to practitioner bias. The study examined the effect patients' sex had on surgical recommendations made by 71 physicians in blinded assessments of standard patients, who differed in sex but shared identical clinical presentations of knee osteoarthritis. The study found that family doctors and particularly orthopedic surgeons were more likely (2 and 22 times as likely, respectively) to recommend knee replacement to a male patient than to a female patient, indicating that a gender bias contributes to sex-differences in surgical rates. Physicians have been shown to take women's symptoms less seriously and attribute their symptoms to emotional rather than physical causes, which may stem from conscious or unconscious biases. The authors suggest that physicians may unintentionally succumb to gender biases by acting on information that women do not gain the same degree of benefit from surgery, although this is an inappropriate preconception that results from women typically receiving surgery at a more advanced stage of disease than men [36].





Other factors contributing to delays in and underuse of surgery by women are seen to relate to the larger social contexts in which women access health services and physician-patient interactions. For example, the tendency for arthritic women to lack social and economic resources, described earlier, may influence women's willingness to undergo surgery, or surgeons' willingness to recommend surgery [17]. Research has found that patients' concerns about a lack of social support for post-operative recovery and rehabilitation affects their willingness to undergo surgical procedures. This issue may disproportionately affect older women who are more likely than men to live alone [37, 17]. As well, because women represent the majority of caregivers, the time they have to take for recovery from surgery and rehabilitation may be seen by women as conflicting with this role [17]. As disability and employment studies have largely focused on paid work, relatively little is known about the effect of arthritis on unpaid work and women's roles, which may influence access to care [3].

Research conducted in the UK sought to explain why women and men with similar arthritis symptoms differed in their decisions to undergo surgery. Psychosocial factors were seen to influence individuals' perceptions of need for surgery and health care professionals' decisions. Women were less likely to discuss treatment options with their doctor, more likely to have heard negative examples of surgical outcomes from family or friends, more likely to discuss pain and mobility issues than activities requiring higher function, and more likely to discuss the effect of arthritis on their mood. These factors may delay women's access to surgery until later in the disease course. In contrast, men were more likely to discuss treatment options and to question or disagree with their doctor, which was thought to explain why men tend to be listed for surgery earlier in the course of their disease. The authors concluded that in the absence of consensus on criteria to establish the need for surgery (in the UK as well as in Canada), psychosocial factors are likely to affect whether individuals are listed for surgery, which may contribute to a bias toward fewer invasive procedures for women [38].

## Policy Implications

Recognizing that women with arthritis often have few social and financial resources to cope with the impacts of the disease, social policy and program initiatives that help ensure women's adequate income, access to disability insurance, and enhance social support may be particularly beneficial. Assuring food security and a healthy diet also needs to be a component of arthritis prevention and management. As for other chronic conditions, socioeconomic factors (e.g. income, education) appear to be especially influential for women's outcomes of arthritis. Thus, it is important to address arthritis with other chronic diseases through a broad socioeconomic strategy and tie surveillance of disease prevalence with measurement of indicators of social equity [21].

As age, income, care giving, other familial responsibilities, and the availability of social support influence women's decisions to undergo surgical treatment, gender-sensitive care that addresses the needs of women, particularly older women, as providers and recipients of care is important. The provision of respite, formal home care or supports to informal care-giving needs to be coordinated with treatment and rehabilitation plans. As well, it is important to address gaps in knowledge concerning indirect costs of treatment and waiting for treatment experienced by women as this relates to women's responsibilities for





unpaid work. A new pilot project with federal and provincial support, announced in March 2008, aims to ensure timely and appropriate referral to specialists in several areas of practice, including orthopaedics [39]. Women's lower rates of referral and greater delays in referral, as well as distinct barriers in pathways to surgical wait lists, demonstrate the importance of incorporating a gender-sensitive approach to the revision of Manitoba's referral system.

A gender-sensitive approach to arthritis should also better take into account women's distinct physical and emotional experiences of arthritis, including women's greater likelihood of suffering depression and more severe pain with arthritis. Women and men with arthritis are more likely to report having had a mental health visit than Canadians overall, which underscores the need for coordinating mental and physical health care services. High levels of co-morbidity among women with chronic disease have led experts in this field to call for more widespread adoption of patient-centred models of care [21]. There is a need to better address gender-specific pain in arthritis. The arthritis research community is exploring gender-specific pain relief and surgery, yet many gaps in knowledge remain with regard to sex differences.

In part, the approach to women's experience of pain includes ensuring that women have access to effective medications. In Manitoba, the Pharmacare program subsidizes prescription drugs on an approved formulary. Manitoba residents pay an annual deductible based on personal income, beyond which costs of several drugs used in the treatment of arthritis are covered. While DMARDS are included on Manitoba's formulary, the newer biologics are not. As this family of drugs is very expensive, women relying on limited incomes, disability insurance or pensions may be particularly challenged in affording these medications. Subsidizing access to biologics and DMARDS has been deemed cost effective, in light of the great direct and indirect costs of arthritis [13].

Public education and prevention efforts aimed at arthritis must dispel misconceptions that symptoms of arthritis are a normal part of aging. As well, women need to be sensitized to the benefits of early surgical interventions. Furthermore, evidence of a gender bias in arthritis treatment demonstrated a need for gender sensitivity training in medical curricula and training to better inform physicians on when and for whom to consider surgery as well as the potential benefits of early treatment. Policies that increase diversity among health care providers were also recommended by this study [36].

A heavy burden of arthritis among women residing in some southern rural regions, which may reflect a higher average age in these populations, indicates another area of need. As well, First Nations and Aboriginal women's high rates of arthritis, which may account for high age-adjusted rates of arthritis in Northern regions of Manitoba, suggests a need for culturally appropriate responses to arthritis prevention and treatment. Accessible housing and home care for women with functional limitations living in rural and northern communities is one critical issue requiring attention. Other local needs must be defined in consultation with women and planners in these communities.

Overall, the response to arthritis in terms of research or policy and programming initiatives has been disproportionate and inadequate to the impact of this disease on women's health. The new wait-time





reduction project [39] gives provincial and regional health planners an opportunity to build in gender-sensitive approaches to delivering care that is timely for women's needs.

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# Self-Rated Depression and Treatment for Depression

## Introduction

Historically, women's mental health has either been ignored in the context of health assessments and health surveys, or has been exclusively medicalized and pathologized to male gender norms [1]. Raeburn and Rootman comment, however, that Canada was one of the first countries to develop health promotion in the area of mental health (though Canada may no longer be a leader in the field) [2]. Whereas mental health had routinely been characterized in terms of mental illness, a new concept of mental well-being was conceived at a Toronto workshop in 1996:

*Mental health is the capacity of each all of us to feel, think and act in ways that enhance our ability to enjoy life and deal with the challenges we face. It is a positive sense of emotional and spiritual well-being that respects the importance of equity, social justice, interconnections and personal dignity [Joubert & Raeburn, in 2].*

In recognition of the new understanding of the importance of mental well-being to overall health, the WHO Expert Working Group included women's self-rated depression as a critical indicator (among 36 other core indicators), particularly as there has been greater appreciation of the extent to which women world-wide experience depression [3]. It is noteworthy that other recent documents issued by the WHO also recognize mental diseases and mental well being as critical to overall health status.

## Data Collection

Until recently, data on depression were collected by Statistics Canada using the Composite International Diagnostic Interview (CIDI) Short Form for Major Depression. Data were collected as part of two national surveys - the National Population Health Survey (1994, 1996 and 1998) and the Canadian Community Health Survey (2000-01 and 2003). In keeping with international standards Statistics Canada used their data to report on self-reported probable risk of depression. In July, 2006, however, Statistics Canada announced that they would no longer support the use of "probable risk of depression" as an indicator of population health using the data available.<sup>1</sup>

Statistics Canada recommends, instead, two indicators using the concept of Major Depressive Episode, available only in the 2002 CCHS Cycle 1.2 Mental Health and Well-being (I. Ledrou, pers. comm. July 4, 2006; unreferenced).

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<sup>1</sup> "The depression module used in CCHS Cycle 3.1 (as well as in Cycles 1.1 and 2.1 and in the NPHS) is based on a long form of the Composite International Diagnostic Interview (CIDI) scale, which was developed in the late 1980s/early 1990s. This scale was never fully validated by the CIDI research team and its psychometric properties are therefore not well understood... At this time, Statistics Canada recommends that analysis of data from this module be restricted to examination of depression as a correlate of other health behaviours and characteristics. For now, use of the data as an indicator for the probability of depression or to calculate simple population prevalence is discouraged." [4].





**Major Depressive Episodes** are periods of 2 weeks or more with persistent depressed mood and loss of interest or pleasure in normal activities, accompanied by symptoms such as decreased energy, changes in sleep and appetite, impaired concentration, and feelings of guilt, hopelessness, or suicidal thoughts.

The proportion of Canadians who have experienced a **Major Depressive Episode** was derived from responses to questions asked as part of the *Canadian Community Health Survey Cycle 1.2 Mental Health and Well-being* (2002). Respondents were questioned about symptoms of depression during both the previous 12 months and during their lifetime. They were considered to have experienced a Major Depressive Episode if they reported:

1. a period of two weeks or more with depressed mood or loss of interest or pleasure plus at least five additional symptoms; **and**
2. the symptoms were not better accounted for by bereavement; **and**
3. clinically significant distress or impairment in social, occupational or other important areas of functioning.

The questions on **Major Depressive Episode** are based on a World Mental Health version of the Composite International Diagnostic Interview (WMH-CIDI) modified for the needs of CCHS 1.2. The WMH-CIDI instrument, as part of the WMH2000 Project (World Mental Health 2000) is a World Health Organization worldwide initiative to assess the prevalence rates of various mental disorders in multiple countries [5].

## Women's Depression

Because small sample sizes created unacceptably high coefficients of variation, making the data unreliable, we are unable to report on sex and age disaggregated data for Manitoba. All data presented in this section are therefore for Canada as a whole.

In the 2002 CCHS about 6% of Canadian females and 4% of Canadian males aged 15 and older, reported having a Major Depressive Episode (MDE) in the previous twelve months.<sup>2</sup> For both males and females, rates were highest among those aged 35 to 44 years of age and second highest among young women and young men aged 15 to 24<sup>3</sup> [6] (Figure 1). In every age group, women were more likely to have experienced depression than were men. Among all Canadians, women were about 1.6 times as likely as were men to have experienced a MDE in the previous 12 months. For both men and women, the risk of MDE decreases with age [6]. The gender gap was the greatest among those aged 45 to 54, where women were about twice as likely as men to have experienced a MDE in the previous 12 months [6].

<sup>2</sup> The CCHS includes people aged 12 years or older who were living in private dwellings in the 10 provinces and three territories. People living on Indian Reserves or Crown lands, those living in institutions, full-time members of the Canadian Armed Forces and residents of certain remote regions were.

<sup>3</sup> This analysis is based on Statistics Canada's Canadian Community Health Survey, Cycle 1.2., Public Use Microdata file, which contains anonymized data collected in the year 2002. All computations on these microdata were prepared by Prairie Women's Health Centre of Excellence and the responsibility for the use and interpretation of these data is entirely that of the authors.

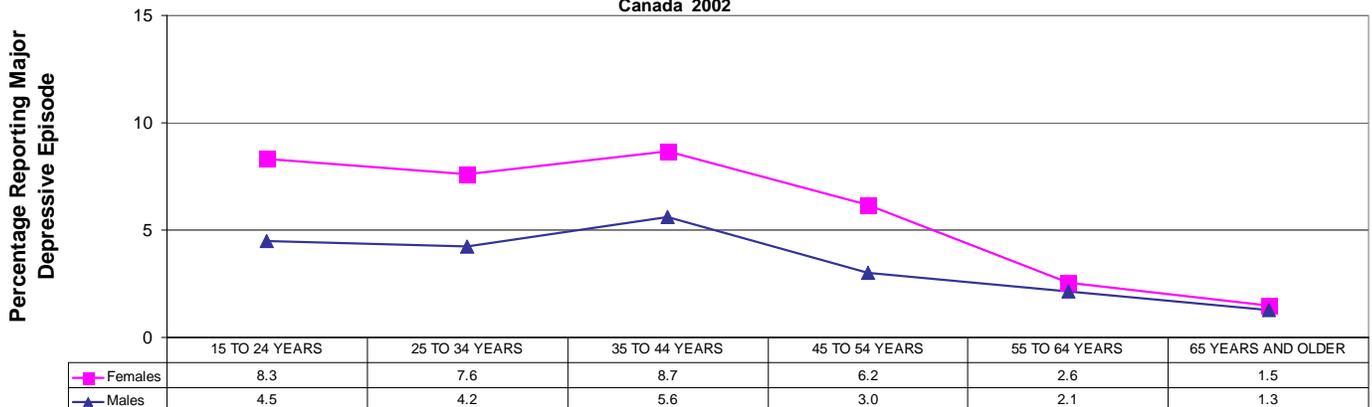




MDE – Previous 12 Months shows that women aged 35 to 44 are at highest risk, which is different from earlier data investigations showing highest rates among young women for probable risk of depression. While the Short Form CIDI (now unusable) may not have reliably identified major depression, it did serve as an early alert to troubling trends in mental health, particularly among young women. The CCHS (2002) also included a straightforward question, in which respondents were asked to rate their own mental health as excellent, very good, good, fair or poor. Unlike the MDE, this question showed that the rate of excellent and very good self-rated mental health decreased with age [7].

As with depression in the previous 12 months, in every age group women were more likely to have experienced a MDE over the course of their lifetimes than were men. About 15% of Canadian females aged 15 and older reported having a MDE at some point during their lifetime. The gender gap was the greatest among those aged 15 to 24, among whom girls and young women were 2.1 times more likely to have had a MDE than were boys and young men. Women also tended to be younger when they first experienced a MDE. About 37% of women and about 31% of men reported that they were less than 20 years of age when this first occurred [6]. The risk of ever having had a MDE was highest among women aged 45 to 54. About 20% of women in this age group reported ever having experienced a MDE, compared to about 11% of men [6].

**Figure 1**  
Major Depressive Episode Previous Twelve Months  
Canada 2002

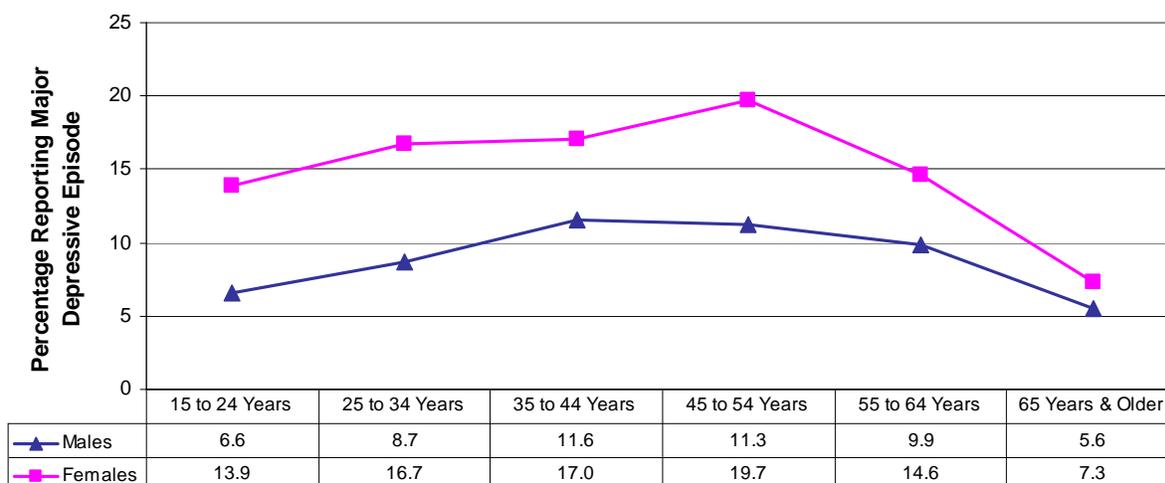


Source: CCHS Cycle 1.2 Custom Tabulation





**Figure 2**  
**Major Depressive Episode - Lifetime, by Age, Sex**  
**Canada 2002**



Source: CCHS Cycle 1.2 Custom Tabulation

While it would seem that the lifetime risk of having experienced MDE would increase with age, women and men 55 years and older reported a lower rate of lifetime MDE than their younger counterparts. This may reflect changing social attitudes about the expression and interpretation of symptoms which are today understood to be indicative of depression. Additionally, since clinical depression may be associated with a higher risk of cardiac arrest and with overall all-cause mortality [8, 9], those who do survive to old age may be less likely to have ever experienced major depression. Note however, that the data available on suicide in Manitoba (see later, this chapter), demonstrates troubling suicide rates among elderly men.

## Treatment for Depression

More can be learned when treatment for depression is also examined. In Canada, depression is now the third leading reason for physician office visits, after hypertension and diabetes [10, 11]. Psychotherapeutic drugs are the second largest category of oral solid prescription drug spending in Canada and antidepressants account for 59% of this spending [12].

The Manitoba Centre for Health Policy (MCHP) found that from 1997/98 to 2001/02, 23.6% of females aged 10 years of age and older received treatment for depression.<sup>4</sup> It is concerning to realize that almost one in four girls and women, 10 years of age and older, were treated for depression during this five year period. Others, who received help only from professionals outside of the health system, including private

<sup>4</sup> MCHP defined the treatment prevalence of depression as an age-adjusted percentage of the population aged 10 or greater that satisfied the following criteria in the five-year period from 1997/98 to 2001/02:

*From the hospital or Mental Health Management Information System files:* Any of ICD-9-CM codes 296.2-296.8 (affective psychoses), 300.4 (neurotic depression), 309 (adjustment reaction), or 311 (depressive disorder), ICD-9-CM code 300 (neurotic disorders) plus a prescription for an antidepressant or mood stabilizer (excluding the anti-anxiety drugs paroxetine, citalopram and venflaxamine). *From the physician files:* Any of ICD-9-CM codes 296, 309, or 311, ICD-9-CM code 300 plus a prescription for an antidepressant or mood stabilizer (excluding the anti-anxiety drugs paroxetine, citalopram and venflaxamine).





practice psychologists, school psychologists, school counsellors, and social workers in agencies not part of the health care system, are not included in these data [13]. Those most likely to receive treatment for depression were women aged 40 to 50, of whom 28% received treatment [13]. Women in their middle years were also the most likely to have experienced a MDE in the previous 12 months [6].

MCHP also found a significant income-related gradient in treatment prevalence of depression by neighbourhood income quintile for urban Manitobans. Among Winnipeg females, 27% in the lowest income group were treated for depression compared with 22% in the highest income group. This association was not found among rural residents [13].

Finally, MCHP was able to link the files of Manitobans who reported as being at probable risk of depression in Statistics Canada's 1996/97 National Population Health Survey, with the Manitoba Health administrative data. Of the 409 Manitobans who were found through the survey to be at probable risk of depression, only 150 (37%) were actually treated for depression; the remainder received no treatment. Of the 581 who were treated for depression, 431 (74%) were classified as not at "probable risk of depression" using the criteria of the NPHS, which are the same as those used in the CCHS [13]. These findings support the reservations expressed by Statistics Canada about the usefulness of this measure as an indicator of the prevalence of depression in the population.

## Depression and Women

Why are women and girls at increased risk of depression? The psycho-social-economic position of women in a society is an important contributor to women's increased risk. For example, women have less access to education and well paying jobs, and are at higher risk of low income, combined with more unpaid and unrecognized work as unpaid caregivers [14]. Women are also more likely than men to describe their problems in psychological or social terms [10]. In Canada, women's higher rate of depression has been largely uncritically attributed to characteristics either of sex-specific hormones, or of women's "nature". Women's health scholars and activists have identified other factors that are also involved:

- Women are more likely to seek medical care than are men, both because of reproductive health needs, and because they suffer from more chronic diseases than do men. This may result in women being more likely to be diagnosed with depression or anxiety [10].
- Women are more likely than men to describe their problems in psychological or social terms, and are therefore more likely to receive a diagnosis of depression [10].
- Women are more likely than men to have lower education and income, combined with more unpaid caregiving work, in their roles as caregivers to the young and the elderly [14].
- Societal stereotypes about women are also held by some physicians. This may lead them to look for psychological, rather than physiological, explanations for women's complaints [15].
- Women are more often the victims of intimate and family violence, including childhood sexual abuse, which may result in depression in later life [10].
- Men are more likely to handle feelings of depression without seeking help from professionals, through, for example, alcohol consumption [10].





- Pharmaceutical companies have actively marketed antidepressants as the solution to women's emotional distress in response to normal, or traumatic, life events [10].

## Policy Implications

Both the self-rated measure of depression and the treatment prevalence measure of depression show that depression is a major health issue for women in Manitoba, since it is clear that girls and women are more likely than boys and men to report and be treated for depression. It is important to consider gender issues, including the different social and economic pressures faced by women, in order to reduce depression in girls and women.

Acknowledging there is currently no adequate health indicator to monitor or track mental health of women and men in Canada, Tannenbaum tested the validity of using self-reported rates of psychotropic drug use, physician billings for mental health visits and self-reported symptoms. She concludes that while each indicator contributes valuable information on mental health, they are each also deficient measures. Tannenbaum suggests that a combination of indicators would give a more robust picture of women's mental health [16].

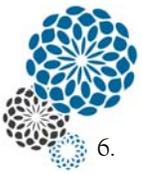
In a review of four provinces Morrow found that while there was broad agreement on the importance of mental health and to improving mental health services, mental health policy continues to be guided by frameworks that are "gender-neutral and do not take into account relations or race, class, and other forms of social differences" [1, page 370]. Morrow notes that there is, however, an understanding in some jurisdictions that people seeking mental health care are not a homogeneous group, and that a wide range of services are needed. Similarly, the 2006 Senate Committee report, *Out of the Shadows*, sets an agenda and calls for leadership to change understanding of mental illnesses and improve access to mental health services, with some attention to specific Canadian populations. It does not include a gender-based analysis nor make mention of women's specific mental health needs [17].

Measures to address women's increased risk of depression should include public policy changes to address the systemic discrimination faced by women, their lower incomes, unpaid caregiving expectations, greater risk of intimate partner and family violence, and to increase social supports available [16].

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# Injuries, Self-Inflicted Injuries, and Suicide

## Introduction

Injuries are an important, although often overlooked, contributor to ill health and death among Manitoba women. Falls are the leading cause of injury hospitalization among both Manitoba males and females, and the leading cause of injury death among females. Suicide is an important, although often overlooked cause of death, particularly among young men in Manitoba. In fact, suicide is the leading cause of injury-related death among men. Self-inflicted injuries, however, are much more common among women than among men. *Injuries in Manitoba: A 10-Year Review* [1] provides a comprehensive look at injuries for women and for men in the province. In this section we examine a summary of the findings.

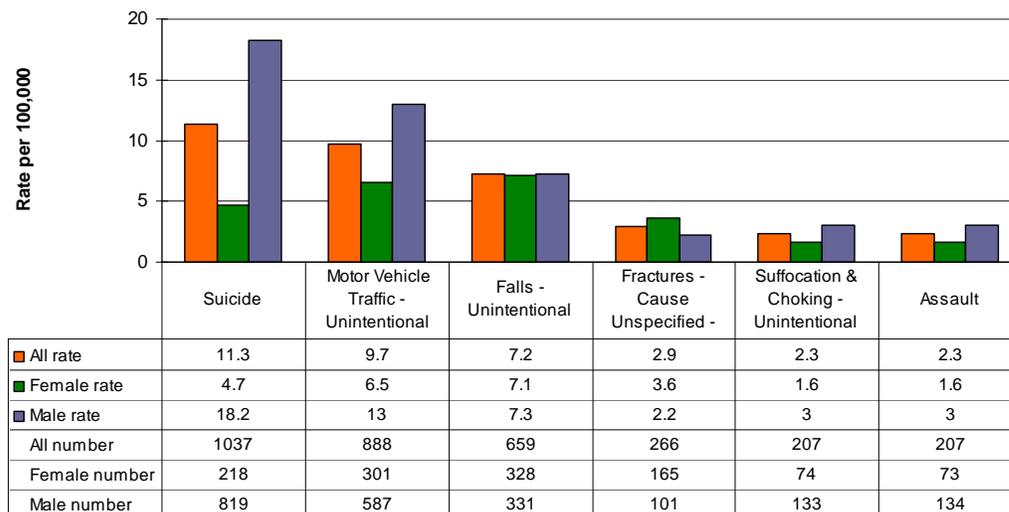
The data below are from two sources: Manitoba Health’s 2004 injury surveillance report [1] and Health Canada’s national injury surveillance reporting system [2]. Both these sources describe only the most serious injuries, those that resulted in either death or an in-patient hospital stay. Injuries that were treated only in hospital emergency departments or by physicians outside of hospital are not included.<sup>1</sup>

## Injury Deaths

In Manitoba, from 1992 to 1999, 1,337 women aged 15 and over died as the result of injuries, amounting to about 14 women every month. In 2000, Manitoba women were more likely to die as a result of injuries than were women in any other Canadian province [2]. While injuries were responsible for about 7% of all deaths in the province, they were the leading cause of death among girls and women aged one to 24 years [1].

Figure 1.

Leading Causes of Injury Deaths in Manitoba  
1992 to 1999



Source: *Injuries in Manitoba: A Ten Year Review* [1].

<sup>1</sup> Both of these sources use data that were collected using the WHO’s International Classification of Diseases Ninth Revision (ICD-9). Those included are hospitalizations and deaths where a Supplementary Classification of External Causes of Injury and Poisoning (E Codes 800 – 999, excluding adverse events) were included in the record.





From 1992 to 1999, injury deaths among females increased by 48%. For men, the increase was 7%. Some of this increase is due to the aging of the Manitoba population, since older people are more likely to die of injuries than are younger people, and on average women live longer than do men. However, the increased rate of injury deaths among women is concerning and points to the need for additional research [1].

Patterns of injury deaths were different for women and men. Men and boys were over twice as likely to die as the result of injuries than were women and girls, and women and men tended to die as the result of different types of injuries. Women who died as the result of injuries were most likely to die due to falls (328 of 1,095 deaths) while men were most likely to die as the result of suicide (819 of 2,964) deaths.

First Nations girls and women<sup>2</sup> were about 1.5 times as likely to die as the result of injuries as were their non-First Nations counterparts. Whereas falls were the leading cause of injury deaths for all Manitoba women (7.1/100,000), the leading cause among First Nations women was motor vehicle traffic collisions (11.6/100,000), followed by suicide (7.8/100,000).

Women living in Northern Manitoba<sup>3</sup> were 2.5 times as likely to die as the result of injuries as were all Manitoba women. Northern men were also at greater risk of death due to injury than were all Manitoba men (1.8 times as likely to die), however, the increased risk was greater for northern women than northern men.

## Injury Hospitalizations

From 1992 to 2001, there were 52,293 hospitalizations for injuries among women aged 15 and over. That's about 435 hospitalizations per month, or more than 14 every day. Over half of these (28,142) occurred among women aged 65 years and older. Manitoba women had the fourth highest rate of injury hospitalization among all the Canadian provinces [2].

The total rate of injury hospitalization was about the same for females and males. Falls were the leading cause of injury hospitalization for both sexes. However, there were other notable differences in injury hospitalizations among women and men. Self-inflicted injuries were the second most common cause of injury hospitalizations among women, while among men, motor vehicle injuries and assault were more common causes of injury hospitalization [1].

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<sup>2</sup> Data on deaths were provided by Manitoba Vital Statistics. They identify First Nations people as those living on Reserve. Non-First Nations Manitobans are defined as all those living in municipalities other than a Reserve on June 1 of the year of their deaths, including First Nations Manitobans living off-Reserve. This under-represents First Nations Manitobans, since it excludes those living off Reserve. It also excludes all other Aboriginal Manitobans, including Non Status and Métis people.

<sup>3</sup> Northern Manitoba includes three Regional Health Authorities – Nor-Man, Burntwood and Churchill.





First Nations girls and women<sup>4</sup> were over three times as likely to be hospitalized as the result of injuries as were their non-First Nations counterparts. While the leading cause of injury hospitalization among non-First Nations women was unintentional falls (597/100,000), the leading cause among First Nations women was self-inflicted injuries (622/100,000). First Nations were less likely to be hospitalized as a result of falls (540/100,000) than were other Manitoba women. This may be due to the younger average age of First Nations females in Manitoba, compared to non-First Nations females.

There were also regional differences in injury hospitalizations among women. Women living in Rural South Manitoba<sup>5</sup> were most likely to be hospitalized as the result of injuries (1.2 times more likely than were all Manitoba women). It is important to note that these data are not age adjusted, and the older age of the rural population is likely a factor, as older people are more likely to be hospitalized due to injuries.

## Unintentional Falls

Unintentional falls<sup>6</sup> are the leading cause of both injury death and injury hospitalization among Manitoba women [1]. From 1992 to 1999, 328 Manitoba women died as the result of falling: 302 of these women (92%) were 65 years of age and older and 198 (65%) were women aged 85 years and older. From 1992 to 2001, there were 29,712 hospitalizations due to falls among women aged 15 and older. That's over 8 women each day. In 2001, women hospitalized for falls remained in hospital for about 23 days each, or an equivalent of over 67,000 hospital bed days per year [1].

Notably, while 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.

First Nations women were less likely to die due to falls than were other Manitoba women. This may be related to First Nations women's shorter life expectancy, since deaths due to falls are more common among older women.

Fall prevention is therefore an important way to improve the health of Manitoban women.

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<sup>4</sup> Manitoba Health includes in its definition of First Nations people all those who, through self-declaration, have advised Manitoba Health that they are residents with Treaty Status. This system includes Manitobans living both on and off Reserves. It is a voluntary system, which therefore does not include all First Nations people. From 1992 to 2001, the average annual number of First Nations people in this data set was 66,306. The Manitoba Centre for Health Policy reported that in 1998, there were approximately 85,959 First Nations people in Manitoba [3]. Therefore, the Manitoba Health First Nations data set represents about 86 per cent of the total First Nations population. For hospitalization data, all Manitobans who have not declared to Manitoba Health that they are First Nations people are considered to be non-First Nations people.

<sup>5</sup> This includes seven Regional Health Authorities – Assiniboine, Central, Interlake, South Eastman, North Eastman, Brandon and Parklands.

<sup>6</sup> Unintentional falls are those that were neither intentionally self-inflicted, nor the result of assault.



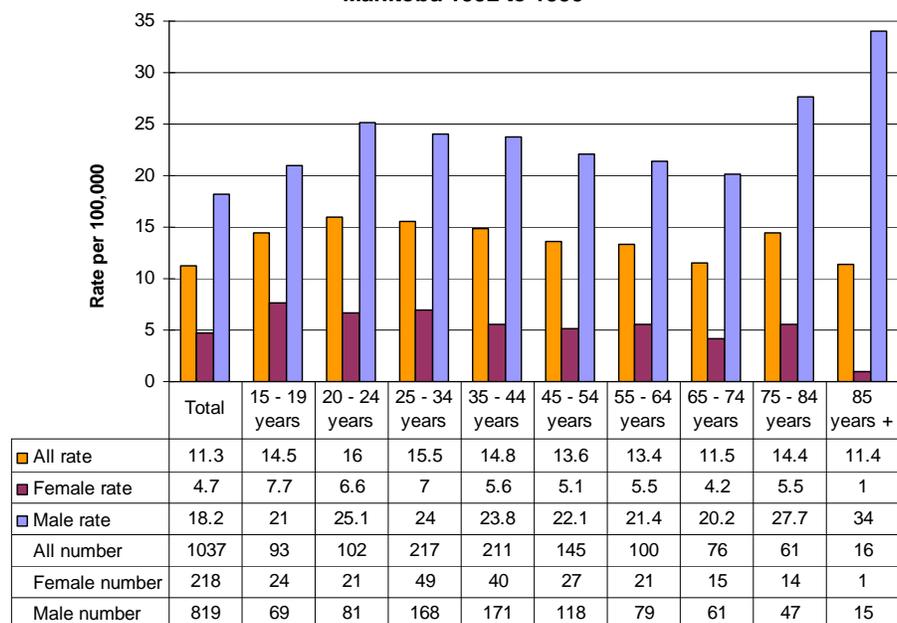
## Suicide and Self-Inflicted Injuries

Self-inflicted injuries are intentionally committed by a person on her- or himself. They do not include unintentional self harm. The data presented below include only those self-inflicted injuries that resulted in hospital admission (usually at least one night’s stay in hospital) or death (suicide). These topics can be uncomfortable and difficult to discuss. However, without open discussion, including increasing our understanding of the important role played by gender in suicide and self-inflicted injuries, we will not be able to prevent intentional self-harm and death.

### Suicide

From 1992 to 1999, suicide was the third leading cause of injury death for Manitoba women, after falls (328 deaths, 7.1/100,000) and unintentional motor vehicle traffic (301 deaths, 6.5/100,000). During that time 819 men (18.2/100,000) and 218 women (4.7/100,000) died by suicide. Among women, young women were at greatest risk of committing suicide. However, among men, men aged 75 and older were at greater risk than younger men, but the greatest number of suicides occurred among young men [1].

**Figure 2**  
**Deaths Due to Suicide**  
**Manitoba 1992 to 1999**



Source: Injuries in Manitoba: A Ten Year Review [1]

### Self-Inflicted Injuries

From 1992 to 2001, self-inflicted injuries were the second leading cause of injury hospitalization after falls for Manitoba women and girls. During this ten year period, Manitoba girls and women were hospitalized 5,868 times due to self-inflicted injuries. Women were about 1.7 times more likely to be hospitalized for self-inflicted injuries than were men [1].

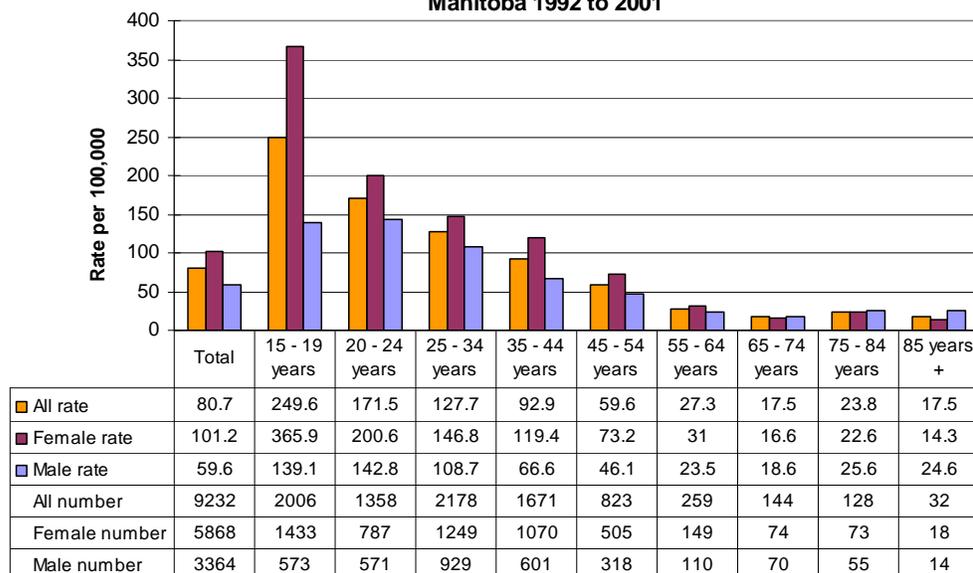




Self-inflicted injuries were the fifth leading cause of injury hospitalization among men<sup>1</sup> [1].

Some women were at much higher risk of hospitalization for self-inflicted injuries: they were the leading cause of injury hospitalization among girls and women in the age groups 10 to 14 years through 25 to 34 years; First Nations women were about 9 times as likely to be hospitalized for self-inflicted injuries as were non-First Nations women. First Nations women accounted for 35% of the hospitalizations for self-inflicted injuries [1].

**Figure 3**  
**Hospitalizations for Self Inflicted Injuries**  
**Manitoba 1992 to 2001**



Source: Injuries in Manitoba: A Ten Year Review [1].

While most women who currently harm themselves are adults, many began as adolescents. One study of incarcerated Manitoba women who had a history of self-inflicted injuries found that these women had become disenfranchised through poverty, sexism, a history of colonization and violence, racism and discrimination. The authors concluded that it was within this context that some women turned to self-harm [6].

## Policy Implications

These data illustrate important differences between the injury experiences of women and men, boys and girls. Within the health system, injuries are often over-looked as an important cause of ill health. Yet they were the leading cause of death among all Manitobans aged one to 25 years, and the leading cause of death among girls and women aged one to 24 years. Successful injury prevention therefore requires attention to gender issues, and the development of gender-specific injury prevention strategies.

However, examining suicide alone underestimates the importance of self-inflicted injuries among women. For each Manitoba man who committed suicide from 1992 to 1999, there were about 3 hospitalizations among men for self-inflicted injuries. For each Manitoba woman who committed suicide during this period, there were about 21 hospitalizations for self-inflicted injuries.

<sup>1</sup> After falls, motor vehicle injuries, assault and being struck by an object.





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## CHAPTER SIX

# Use of Health Services

With some understanding of what promotes or inhibits good health in Manitoba women now established in this Profile, Chapter Six is an examination of women's use of health services, and how well health services are able to meet women's needs.

Manitoba women use provincially funded physician and hospital services, and many women also seek care from providers and make use of other treatments that are currently outside of the mainstream. Using the data available, we look at what services women use and why. We follow with an examination of women's use of Manitoba's long established and comprehensive Home Care system, and the prescription drugs they use, concluding with a brief investigation of women's use of emergency and cataract services.

This chapter includes information about:

1. Use of Physician and Hospital Services
2. Use of Alternative Health Services
3. Home Care
4. Women's Use of Prescription Drugs
5. Emergency Medical Services
6. Cataract Procedures





# Use of Physician and Hospital Services

## Introduction

Balancing the needs of a diverse population for appropriate access to publicly-funded health services within the challenges of escalating costs for care, reflects a strongly held social value of Canadians and a fiscally responsible goal of provincial health authorities.

Access to health care services is a key determinant of health, for which effects on health status have been demonstrated. In Canada, despite guaranteed universal access to health care provided by the *Canada Health Act*, real access to health services is a growing problem [1]. The 2002 Romanow Commission acknowledged that timely access to health care in Canada is a serious problem in every province and territory, while also recognizing the distinct challenges for women, rural residents and Aboriginal people [2].

A gender-based analysis of women's use of health services is important because women have distinct health needs, stemming from biological and social differences from men. Women's barriers to service access are also distinct, reflecting the status of women in Canadian society, women's roles and values, and gender relations within the family, community and health care contexts. Thus, the following analysis does more than consider health service usage alone, but relates women's care to issues of gender bias, appropriateness of care for women, women's unmet needs and satisfaction with services, and women's participation in the health service system.

## Manitoba Women's Use of Health Service<sup>1</sup>

### Visits to Physicians<sup>2</sup>

Females in Manitoba are more likely than males to consult with a medical doctor, and they do so more frequently. During the 2003/04 fiscal year, over 85% of females and 79% of males had at least one ambulatory physician visit for any reason (including prenatal visits). Females averaged 5.4 physician visits, while Manitoba males averaged 4.4 visits during the year. Although prenatal exams are excluded from the ambulatory visit rate, a portion of the male/female difference is attributable to sex-specific conditions of the genitourinary system and breast, which accounted for 7.1% of all visits by females and 3.9% of all visits by males. Even when visits for sex-specific causes are excluded, visit rates for females remain higher than for males due to higher rates for several other causes, including mental illness, respiratory, musculoskeletal, and nervous system conditions.

Rates of ambulatory physician visits vary over the life course. Among males, the rates are high for young children (over five visits per year), drop dramatically among youth (slightly over 2 visits per year), remain

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<sup>1</sup> Unless otherwise noted, data presented in this section was derived from Fransoo et al., Manitoba Centre for Health Policy, *Sex Differences in Health Status, Health Care Use, and Quality of Care*, 2005 [3].

<sup>2</sup> Visits to physicians were attributed to the RHA of residence of the patient, not to the area where the visit took place.





low for young adults, and increase sharply with age to reach over 10 visits per male resident by the age of 80. Among females, the rates are similarly high for young children, drop only briefly in childhood (ages 5-14 years), but escalate sharply in the teen years, and steadily throughout adulthood. Young and middle-aged women average two visits more per year than men of the same age, though rates converge by age 70.

Residents of Winnipeg, both males and females, visit physicians more often than residents of rural and northern Manitoba (see Figure 1). Although physician visit rates appear very low in the Churchill district, this likely reflects an undercount of services, as many residents in the region receive services from nurse practitioners, events which are not recorded in medical claims data, or from salaried physicians, who are not required to submit claims information [3].

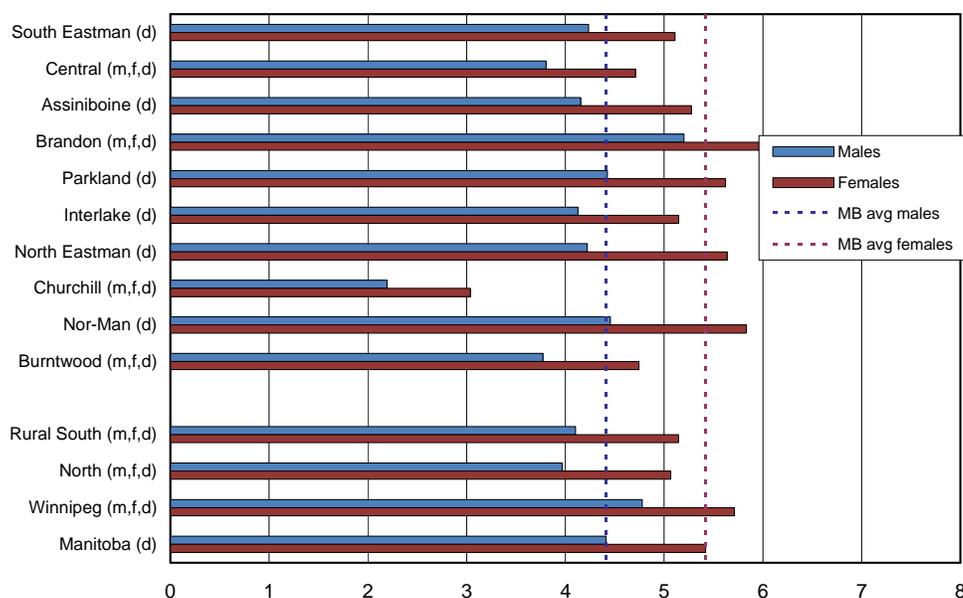
**Some measures of physician service use:**

**Use of physicians** is the percentage of residents who had at least one ambulatory (excluding in-hospital) visit to any physician (e.g. general physician, family physician, and specialist) during the fiscal year, for any reason, including prenatal care.

The **ambulatory visit rate** is the average number of visits to all physicians for all Manitoba residents during one fiscal year, excluding hospital in-patients and prenatal care for women. It includes almost all contacts with physicians: office visits, walk-in clinics, home visits, personal care home (nursing home) visits, visits to outpatient departments, and some emergency room visits (where data are recorded).

The **ambulatory consultation rate** includes only consultations by physicians, a subset of all ambulatory visits which occur when a patient is referred to another physician (usually a specialist or surgeon) because of the complexity, obscurity or seriousness of the condition, or when the patient requests a second opinion. The consultation rate is used as an indicator of access to specialists [3].

**Figure 1: Ambulatory Visit Rates by Sex & RHA, 2003/04**  
Age-adjusted annual rate of ambulatory visits to all physicians, per resident



Source: Fransoo R, Manitoba Centre for Health Policy, 2005.





Since health and income are related, in the absence of barriers to service one would expect to find that those with lower socioeconomic status had more physician visits than those with higher socioeconomic status. This is true for urban, but not for rural males and females in Manitoba [3]. Thus, the provision of physicians' services is not well matched to need in rural and northern settings.

### Access to Specialists for Consultations

Overall, Manitoba females are more likely to see specialists than are men. The average ambulatory consultation rate over the 2003/04 fiscal year for females was 0.33 visits per year, compared to 0.29 for men, a statistically significant difference ( $p < .001$ ) (see Figure 2). However, there is considerable variation among women and men according to age, area of residence and income.

Among children, the rate of consultation for females and males was similar, whereas among teens and young adults women's rates were higher, particularly during the childbearing ages. Older women (age 75+) were less likely than men of the same age to receive a consultation (see Figure 3).

Regional comparisons found that residents of rural areas, both women and men, had lower than average consultation rates. In northern regions, men were less likely to consult with a specialist than the average male in Manitoba, whereas women's rates of consultation were not significantly lower than the provincial average for women (see Figure 2).

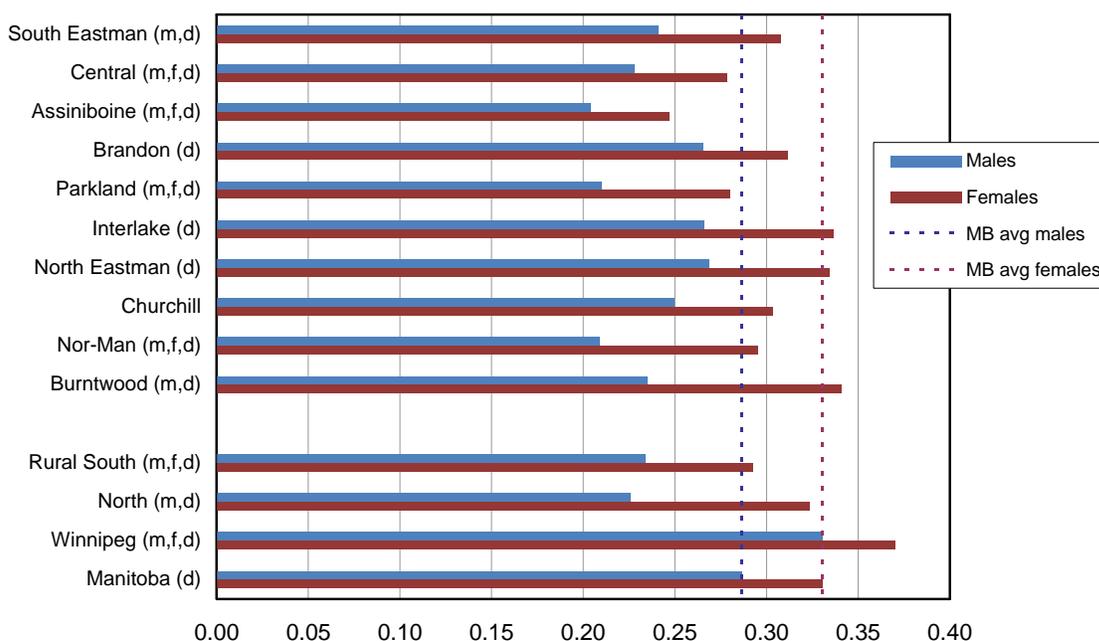
Not surprisingly, urban residents show a clear advantage over rural women and men in their access to specialists, reflecting the concentration of specialists in urban areas. In rural areas, a strong relationship was evident between consultation rates and area-level income for both women and men, which was not found in urban areas (see Figure 4). This suggests that limited income has a greater effect on access to specialists for women and men in rural areas than for residents of urban centres, which likely reflects the greater costs for rural residents to travel to appointments with specialists. The income disparity in consultation rates raises concern since, as we have seen in this *Profile*, residents of low income areas tend to have poorer health than those in higher income groups. Where low income and rural residence coincide, specialists' services are then more poorly matched to the needs of women (and men).





**Figure 2: Ambulatory Consultation Rates by Sex & RHA, 2003/04**

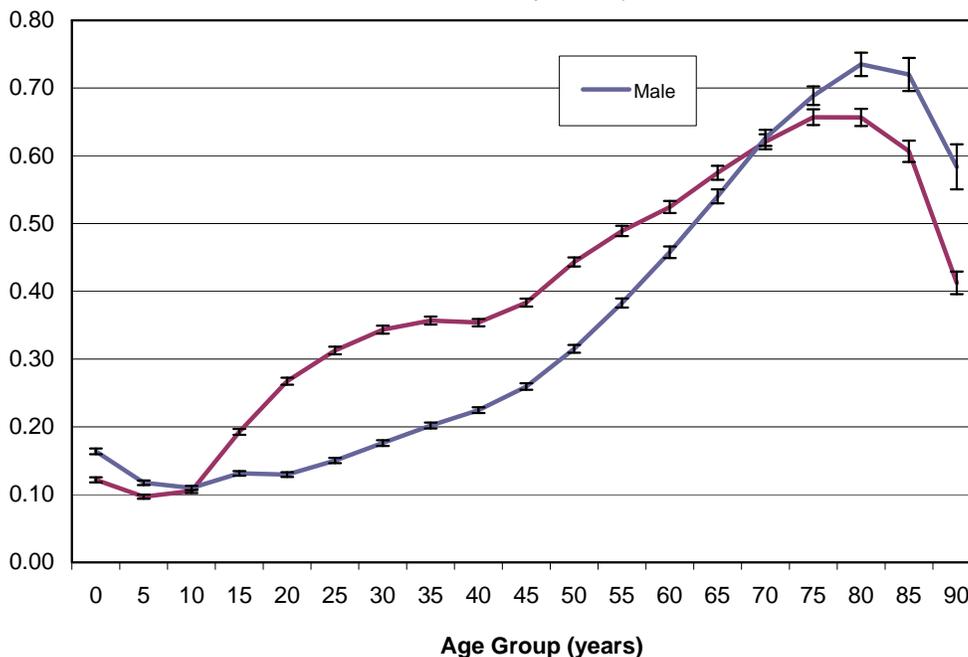
Age-adjusted annual rate of ambulatory consults per resident



'm' indicates area's rate for males was statistically different from Manitoba average for males  
 'f' indicates area's rate for females was statistically different from Manitoba average for females  
 'd' indicates difference between male and female rates was statistically significant for that area  
 Source: Fransoo R, Manitoba Centre for Health Policy, 2005.

**Figure 3: Ambulatory Consultation Rates by Age and Sex, 2003/04**

Crude annual rate of ambulatory consults per resident



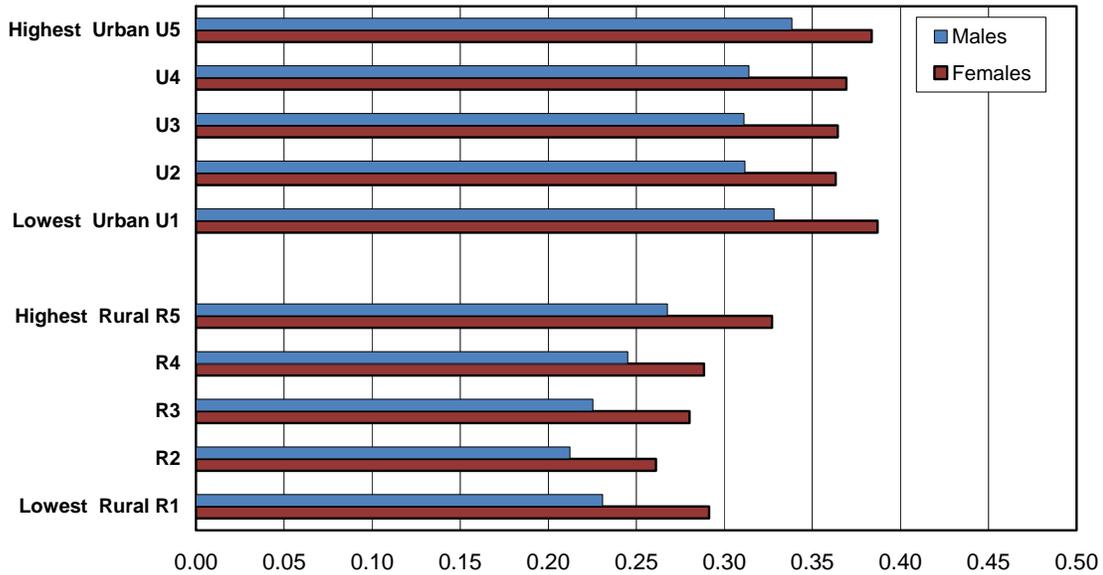
Source: Fransoo R, Manitoba Centre for Health Policy, 2005.





**Figure 4: Ambulatory Consultation Rates by Sex and Income Quintile, 2003/04**

Age-adjusted annual rate of ambulatory consults per resident



Linear Trend Test Results

Female: Urban: Not Significant Rural: Significant ( $p < .001$ )

Male: Urban: Not Significant Rural: Significant ( $p < .001$ )

Source: Fransoo R, Manitoba Centre for Health Policy, 2005 [3].

### Hospitalization<sup>3</sup>

According to the MCHP, for most indicators of hospital use, Manitoba females have higher rates of service use than males. In the 2003/04 fiscal year, Manitoba females were hospitalized at a significantly higher rate than were males (162.0 versus 126.6 per 1,000;  $p < .001$ ), and higher rates for females were found in all regions (see Figure 5). Though females also appeared to have longer stays in hospital than males, the difference did not reach statistical significance for provincial level comparisons. However, in the Rural South and North, females did have significantly longer hospital stays than males. Consistent with other findings, and with health reform trends, the MCHP analysis demonstrated a continued trend toward fewer days spent in hospital by both females and males in Manitoba [3, 4].

#### Measures of hospital service use:

Total hospital separation rates are the number of hospitalizations, that is, discharges from hospital, per 1,000 area residents. Inpatient cases and day surgery cases are counted, as well as hospital stays related to childbirth or reproductive health issues for women. (Note that this is different than for the measure of ambulatory visits). Multiple admissions of the same person are counted as separate events. Emergency room treatments not resulting in hospital admission are excluded.

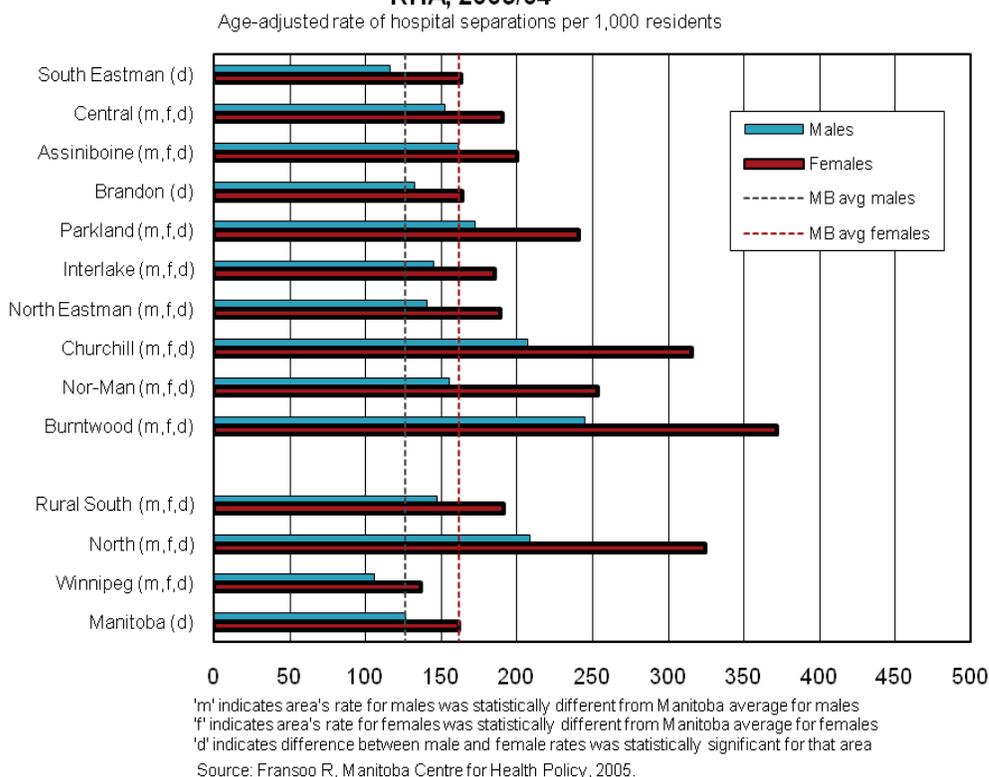
Total hospital days sums all days spent in hospital by residents, expressed as a rate per 1,000 population [3].

<sup>3</sup> All hospitalizations were attributed to the RHA of residence for patients, regardless of where the hospitalization took place. Hospital separations and days of stay in hospital reflect use of acute care hospitals. MCHP excluded chronic care or long-term care facilities from the analysis.





**Figure 5: Total Hospital Separation Rates by Sex and RHA, 2003/04**



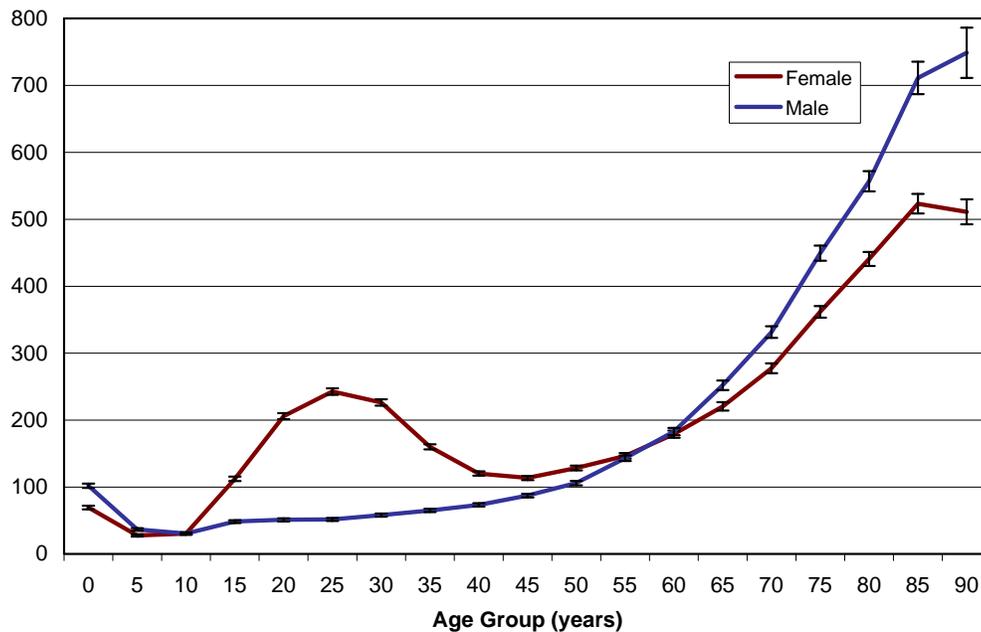
Residents of the Rural South and especially North regions had high rates of hospitalization relative to provincial averages for females and males. Northern females had twice the rate of hospitalization as Manitoba females overall (324.5 versus 162.0 per 1,000). As well, northern residents spend considerably more days in hospital than their southern rural and urban counterparts [3].

Predictably, rates of hospitalization vary by stage of life (see Figure 6). Among seniors (65+) hospitalization rates escalate with advancing age. Younger women's (age 15-40) rates of hospitalization far exceed those of men, while the reverse is true among the elderly. After age 60, men's rates exceed those of women by an increasing margin. The higher rate of hospitalization for females overall may be attributed to their higher rates during peak years of childbearing, which represents a larger proportion of the population than the senior age range, and thus carries greater influence on the overall rate.





**Figure 6: Total Hospital Separation Rates by Age and Sex, 2003/04**  
Crude rate of hospital separations per 1,000 residents



Source: Fransoo R, Manitoba Centre for Health Policy, 2005.

Analysis of hospital separations by length of stay and cause provide further indications of the reasons for the age-sex pattern. Though the rate of short term hospitalization is significantly higher for females than males, rates of long-term hospital stays are similar for the sexes. In fact, for short-term stays in hospital, female rates were lower than for males when hospitalizations for sex-specific causes, including pregnancy and birth, and genitourinary and breast disorders were removed (100.6 per 1,000 females versus 109.6 for males)<sup>4</sup>. Pregnancy and birth events accounted for approximately one in four (24.8%) short-term hospital stays for females and genitourinary and breast disorders were the second leading cause of short-term stays (10.2%) for females.

Again, there was a strong relationship between area-level income and the rate of hospitalization. In both urban and rural areas, higher rates of hospitalization were found among female and male residents of low income than high income areas, consistent with generally poorer health in low income areas, reflecting the benefit of the universal medicare system. As well, the results by regions were also consistent with health needs, as regions with a higher burden of illness reported higher hospital use.

### Other Indicators of Health Service Usage by Sex

In addition to the indicators reviewed in the data analysis above, the literature provides further evidence of sex differences in health service utilization. Because research has shown that the continuity of care influences health outcomes [1], population health surveys have gathered information on regular access to a

<sup>4</sup> This difference may be statistically significant, but was not tested (R. Fransoo, pers comm. Sept 11, 2008).





physician. According to the 2007 CCHS, Manitoba females (age 12 and older) are significantly more likely to have a regular physician than are males (89.6% versus 79.3%) [5]. As well, the 2005 CCHS gathered information on the use of the telephone to consult with health service providers and found that Manitoba women were much more likely than men to use this service (12.0% versus 4.9%) [6].

Research comparing emergency health service usage by sex has produced conflicting results. For example, the 1996/1997 NPHS found higher emergency department usage by Canadian females than males (24% versus 19%) [7], whereas the 2003 CCHS found that men were more likely than women to have used ER services (14% versus 12%), and for Manitoba, no sex difference in rates of emergency department usage was found [8]. However, use of hospital emergency services is known to vary by both sex and age, reflecting differences in the lives of women and men, including involvement in sports, risk taking, gender-based violence, and alcohol and drug use. Under age 15, more males than females are admitted to emergency departments, from age 15 to the mid-40s women generally have more visits than men, after which men again outnumber women [9].

### **Accounting for Women’s Greater Use of Health Services**

Research has consistently shown greater use of health services by women than men [10, 11, 12, 13, 14, 15]. Several explanations have been offered, though no single explanation adequately accounts for the sex differences. A model advanced by Anderson proposed that three types of factors affect an individual’s use of health care: first, the state of their health, whether perceived or diagnosed; secondly, their predisposition toward using services, which is influenced by such characteristics as age, gender, race or cultural identity; and thirdly, factors enabling them to access services, including education, income and access to service providers [11]. Consideration of all these variables has resulted in a complex literature and unclear evidence that health services are equitable and meeting women’s needs.

### **The Influence of Sex-specific Conditions and Chronic Disease on Women’s Service Use**

Sex differences in health service use are, in part, attributed to women’s reproductive biology and sex-specific conditions, reflected in higher rates of service use for women within the reproductive age range. Pregnancy, childbirth, and uniquely female diseases and preventive and diagnostic needs are recognized as major factors behind women’s greater use of mainstream health services. Papanicolaou (Pap) test, mammogram, and birth control pill use have been identified as some of the most important factors in women’s greater use of services. Research has shown that, although being pregnant and giving birth does not affect the rate of consultation with general practitioners, the use of specialists and the odds of being hospitalized is influenced by women’s reproductive biology [13]. Certainly, the large degree to which women’s reproductive health has come under medical management—for reasons related to menstruation, childbirth, and menopause—has added another dimension to women’s greater use of physicians’ services.

Women’s high service needs have also been accounted for by their higher levels of morbidity, particularly their generally higher rates of care-intensive chronic diseases relative to men. Clinical and epidemiological evidence has shown women’s higher consultation rates for chronic disease to be due to more than simply sex differences in help-seeking [14]. Research has shown that women with similar chronic conditions as men are more likely to visit a physician, although they are also less likely than men to be hospitalized for





the same conditions [9]. A multivariate analysis of 1994/95 health survey data<sup>5</sup> found that certain conditions, including asthma, stroke and high blood pressure, were highly associated with women's risk for hospital admission, independent of other contributing factors, whereas for men, heart disease and high blood pressure were most likely to result in a hospital admission [7].

Research has attempted to distinguish between the extent to which women's use of health services is a function of need, reflecting poorer health status, sex-specific needs, and other factors, including a gender-influenced predisposition to seek care or interest in health. One such study found that when differences in health status (chronic conditions, general health, pain and distress) were accounted for, the odds that women consulted a general practitioner or a specialist in the previous year, or were hospitalized, were still more than double the odds for men. However, when female-specific health needs (pregnancy/childbirth, mammograms, Pap smear tests and the use of birth control pills) were also taken into account, the odds of women aged 20 to 49 consulting a physician or being hospitalized were no greater than the odds for men in the same age range [13].

Another study based on an analysis of 2005 CCHS data also found that when the effect of chronic conditions and self-perceived health were controlled for, women aged 18 to 64 still reported greater service use (single and multiple GP consultation and a specialist consultation) than men of the same age. The odds were considerably reduced when women who were pregnant or had given birth within the past year were excluded from the analysis. In contrast, among seniors, when chronic conditions, self-perceived health and other factors were taken into account, senior women no longer had significantly higher rates of service use than senior men. In fact, the odds that elderly women had consulted a specialist in the previous year were significantly lower than for men. Furthermore, the results showed that physician consultations were independently associated with age, sex, household income, race, language, urban/rural residence and having a regular family doctor [11].

These findings are somewhat consistent with the results of the above data analysis, which demonstrated that sex differences in rates of hospital separation were eliminated when hospital use for reproductive issues were removed. However, the findings for physician visits by cause showed that only about half of the difference between males and females could be accounted for by sex-specific events (pregnancy, birth, genitourinary and breast disorders) [3]. Thus, although health status is certainly a major determining factor for health service use, other variables, which may relate to socialized behaviour and health system factors, are also likely to have distinct effects on service use.

### **Other Health Status Factors Influencing Women's Service Use**

Other common health conditions have also been implicated in women's greater use of health services. For example, women have a greater susceptibility to colds and flus and are more likely than men to seek treatment by a physician (as well as to self-manage treatment) for these conditions [13]. Depression is the third leading reason for visits to a physician, after hypertension and diabetes and more women than men

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<sup>5</sup> 1994/95 National Population Health Survey data linked with Hospital Morbidity files for 1994/95 to 1997/98, prepared for seven provinces, which did not include Manitoba.





receive treatment for depression (see Chapter Five, Depression). In Manitoba, nearly one in four girls and women aged 10 and older had been treated for depression within the five year period ending 2001/02, which was approximately twice the treatment rate for males (12.6% males versus 23.6% of females). Moreover, among Canadians, females report higher consultation rates for mental health issues than males in every age category and at all household income levels [13]. Research has also shown that women with depression are more likely to be hospitalized than those without depression (age-adjusted 18.7% versus 11.5%,  $p < 0.01$ ), but that the same relationship is not found for men [7].

Gender-based violence is another major contributor to women's health care usage. Approximately one in five women in Manitoba has been recently (past 5 years) victimized by a partner (see Chapter Two, Domestic and Sexual Violence). Abused women are more likely than other women to experience poor health, chronic pain problems, depression, suicide attempts, addiction, and pregnancy problems. Accordingly, they require and use a disproportionate amount of health care services including emergency rooms visits, primary care, and community mental health center visits [16].

The results of an analysis of 1998/1999 NPHS data revealed an important trend toward greater hospital use by women that could be tied to their smoking behaviours. Not surprisingly, current smokers are more likely to be hospitalized than former smokers or those who never smoked. Females have enjoyed smaller relative risks for hospitalization from causes linked to smoking than males, which has been attributed to their lower average exposure due to later age at smoking initiation and fewer packs smoked per day than for males. However, these findings showed that just as the sex differences in smoking behaviours have diminished over time, as women's smoking increased, the likelihood of hospitalization has become similar for female smokers and male smokers [7].

### **Gender Predisposition to Seeking Health Services**

Women's rates of health service may also, in part, be explained by socialization and gender roles that encourage women to respond to symptoms and to be more active in seeking medical care, as well as alternative care. Women's greater use of a variety of health care services may reflect greater awareness, knowledge and concern about health matters, that enhance a more proactive and preventive approach to health by women [13]. This may help to explain why greater sex differences are generally seen in the use of physician services as compared to the use of hospital resources, more often used for treatment in advanced stages of disease. As well, women may be more likely to seek help for health concerns because social norms for communicating vulnerabilities and identifying illness are more permissive for females than for males. Gender differences in help-seeking manifest early in childhood and are reinforced over the life course [14].

Another argument has posed that female gender roles better accommodate women to seek care including, for example, greater flexibility to schedule doctor's appointments and less loss of income when time is taken to seek medical attention [14]. However, as increasing numbers of women participate in the paid work force, typically with less self-determination and flexibility in their work roles, while continuing to provide care within the community and family, often as single parents, the costs and role flexibility advantages for women are likely to diminish.





Interestingly, a recent analysis of CCHS data<sup>6</sup> has shown gender diversity to be an important factor in health service utilization. The study confirmed that the use of health care services differs depending on self-identified sexual preference. Gay men were generally more likely to consult with a family doctor than heterosexual men, whereas lesbian women were less likely to see a doctor than were their heterosexual counterparts. Also, lesbian and bisexual women were less likely than heterosexual women to have a regular doctor. However, they were significantly more likely than heterosexual women to consult with professionals for treatment of mental health issues. Sexual orientation remained a significant, independent factor, even when differences in income, education, culture, diagnosed chronic disease, mood or anxiety disorder, self-rated health, and other factors that influence health care usage were controlled for. Other research has demonstrated similar differences, attributing them to such factors as some lesbians delaying or avoiding seeking care because of a fear of disclosing their sexual orientation to their doctor or past negative experiences with medical professionals. Lesbian and bisexual women's higher usage rates for psychological services may be due to more positive norms for using mental health services in these communities, as well as greater stress among women who belong to a stigmatized social category, which could trigger seeking care [17].

## Gender Bias in Service Provision

Though there is little question that, overall, women's use of health services is high relative to men, the question of whether the level of service is adequate to women's needs is less clear. A lack of prospective studies that link health outcomes to service use limits insight into whether higher service use by women improves women's health. At the same time, evidence of gender inequities in service access has been put forward, particularly for some diagnostic and specialists' services, which raises additional questions of whether treatment biases exist and, if so, whether they have consequences for women's health. It is also important to recognize that if the goal is equality in health outcomes, identical treatments and service provision to women and men may be inappropriate [9].

Physician referral practice patterns may partially account for sex differences in the rates of specialty care and diagnostic testing. Research has found that men are referred to specialty care more often than women, and hospitalized men are more likely to be referred for invasive cardiac procedures than women [12]. Studies have found that women receive fewer kidney transplants and cardiac bypass surgeries than men, even when living with the same level of disease [9]. A review of literature found that the most common results indicating gender biases in health services demonstrated that men were more likely than women to receive treatment for cardiac arrhythmias and cerebrovascular disease, and to receive vascular surgery, heart transplants, kidney transplants, hip replacements, and antiretroviral (AZT) therapy for HIV/AIDS. In contrast, women appeared more likely to receive liver transplants and cataract surgery. However, the review authors cautioned that because the studies did not provide sufficient information on disease severity, prognosis, or patient preferences for treatment, the determination of bias could not be made [18].

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<sup>6</sup> The study was based on combined 2003 and 2005 data from the Canadian Community Health Survey for adults aged 18 to 59.





However, a study which employed an experimental design found evidence of gender bias in physicians' surgical recommendations, that saw fewer women than men recommended for knee replacement, despite identical clinical presentations of knee osteoarthritis and scripting of patients' treatment discussions [19] (see Chapter Five, Arthritis for details).

Other evidence of gender bias comes from studies of wait times for health services. An analysis of national health survey data<sup>7</sup> found that Canadian women had significantly longer wait times for diagnostic services than men (53.1 days versus 31.4 days). In particular, women were much more likely than men to wait for magnetic resonance imaging (MRI) (70.3 days versus 29.1 days)<sup>8</sup>. As well, women had longer waits for certain specialists, such as specialists for asthma and other breathing conditions, for which women waited nearly eight times as many days, on average, as men (78.8 days versus 10.8 days). In contrast, women had significantly shorter wait times than men for the services of mental health specialists (20.9 days versus 55.4 days) [10].

## The Unmet Needs of Women

Though it is difficult to determine what amount of health care is optimal for any group, measures of unmet health needs and satisfaction have provided data on the accessibility and quality of services, which are commonly based on self-reports and recall for the preceding 12 month period. Manitoba (2002 HSAS) survey respondents reported a relatively high rate (10.4%) of unmet needs, ranking third nationally after Newfoundland and Prince Edward Island [1]. Moreover, the percentage of Canadians who reported unmet health care needs has increased (4% in 1994/95 to 6% in 1998/99), and the perception of unmet need is higher among females than males (7% versus 5% in 1998/1999) [7]. As well, women in Manitoba are almost twice as likely as men to report use of some form of alternative health care (see next section of this chapter) which may also indicate that women's needs are not adequately met by services or care available to them.

The 2000/01 CCHS asked Canadians how satisfied they were with health care services (including hospital, physician and community-based services). The lowest levels of satisfaction in Canada were reported by residents of Nunavut, while among the provinces, Manitobans reported the lowest levels of satisfaction with health care services overall. Manitoba women were somewhat more likely than men (81.2% versus 79.2%) to rate the quality of services as excellent or very good (compared to Canadian women and men: 84.7% and 84.0% respectively). However, results of the Women's College Hospital Health Survey showed that 43% of Canadian women have changed doctors within the year because they were dissatisfied with the way they were being treated [1]. These results indicate both considerable dissatisfaction among women, and consequences for the continuity of care.

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<sup>7</sup> These included the 1998/99 National Population Health Survey, the 2000/01 Canadian Community Health Survey, and the 2001 Health Service Access Survey.

<sup>8</sup> The MCHP *Sex Differences Report* reported sex-specific MRI scan rates, which did not differ for Manitoba males and females. However, the report did not address wait times for this service [3].





## Women's Access to Health Services

Because women have higher rates of health care utilization, they are also disproportionately affected by difficulties accessing these services. Unfortunately, the 2002 Health Services Access Survey (HSAS) did not report on access indicators by sex, but found that the vast majority of Manitobans (84.8%) had a regular physician in 2001. More than 50% of those who did not, gave the reason as having not contacted a physician, that is, a lack of doctors was not apparently the primary cause of a lack of continuity in care [1]. Manitoba has among the highest number of health care providers per capita in Canada. However, a recent study also shows that the province ranks among the three provinces with the largest net losses of health care providers through interprovincial migration. Another concerning trend is that health care professionals are aging faster than the Canadian workforce overall and that more doctors move to urban than to rural communities [20]. Results of a Manitoba study indicate that the use and supply of family physicians' services has actually declined only slightly since the early 1990s, a period when a physician surplus was widely perceived. In explanation for current shortages of physicians, the study points to a major generational shift and an increase in workloads among family physicians in the province. Older physicians have heavier workloads than in the past, while more young doctors limit their workloads. Thus, difficulties in finding a physician may be due, not only to somewhat fewer physicians, but to greater competition for physicians' time and possibly to fewer physicians taking on new patients [21].

A number of other access issues were highlighted by the HSAS, which generally showed greater challenges for Manitobans than for other Canadians: 17.1% of Manitobans had difficulty accessing routine care (11.1% Canada), 19.4% had trouble getting health information or advice (13.1% Canada), and 26.2% had difficulty getting immediate care for a minor health problem (18.8% Canada). Problems of access to health services are particularly great in rural areas. The 2002 Romanow Commission acknowledged that rural challenges to access result from serious shortages in health care providers in rural areas. As well, rural residents face additional barriers to access, including the need to travel for care, added costs for travel, and separation from social support [1, 2].

Although comprehensive studies of sex differences and gender influences on health service access are lacking, a study which conducted a gender analysis of wait times for hip and knee replacement provides an interesting illustration of how gender issues may influence access. The study showed distinct access barriers for women that are commonly unaccounted for in studies of wait times for surgery. Women were seen to delay a decision to undergo surgery because of their unpaid care giving responsibilities or the lack of support for their own care during rehabilitation following surgery. Because such delays typically preceded their being placed on waiting lists, women's barriers to surgical services are often underestimated [22]. Although these access barriers resided in the daily life context of women, rather than in the health service *per se*, it signals a lack of relevance of services for women and of measures designed to monitor access.





## Socioeconomic Status & Women's Health Service Usage and Access

Low income and education are known to have negative consequences for health and are associated with service use rates. Several Canadian studies have reported that low income is nearly as important a determinant of health service use as is illness [23]. National population health surveys and Manitoba health administration data have shown that women and men with low incomes are more likely than those with higher incomes to be heavy users of physician services, emergency departments, to be admitted to hospital, to take multiple medications, to require home care services, and to die sooner [7, 3]. Not only are the poorest Canadians affected, as the relationship between service use and income often follows a gradient. For example, Canadians in the lowest income group are more likely to be hospitalized than those in the middle and highest income groups (12%, 7%, 5%). As well, access to dental care is characterized by a steep income gradient, with the lowest rates of use found among those with the lowest incomes. This reflects the fact that dental care is considered a non-essential service and, therefore, is not covered by public health insurance and those living on low incomes are less likely to have private insurance or coverage through an employment benefits plan than those with mid to high range incomes. A similar relationship has been demonstrated for education levels and rates of hospitalization. Men and especially women with less than secondary education are more likely to be hospitalized than those with college or university education [7].

The MCHP data provided above showed that low income residents of Manitoba's urban communities made more frequent visits to general physicians yet, in both urban and rural areas, had fewer consultations with specialists than residents of high income neighbourhoods [3]. Particularly concerning for women is that residents of low income areas are less likely to use preventive screening services that protect women from serious life threatening conditions. In both urban and rural centres, women in the highest income neighbourhoods are most likely to use a Pap smear to screen for cervical cancer and a mammogram to screen for breast cancer. Furthermore, low screening rates among women with income challenges are consistent with research that has found higher risks of cervical cancer in this population (for more information, see Chapter Five, Cancer).

A review of literature on factors contributing to long hospital stays found considerable evidence that women were at increased risk for long stays in hospital. The authors attributed this to women's greater likelihood of suffering from adverse social circumstances, such as isolation, poverty, inadequate housing and poor access to transportation, as well as to women living longer than men [24]. These findings are somewhat consistent with the results of the data analysis presented above, which showed both a strong relationship between area-level income and length of hospital stays, and that females used more hospital days than males, though the difference achieved statistical significance only in Manitoba's rural south and north regions [3].

Gender inequalities may also limit Manitoba women's access to services, as is the case for many millions of women in other nations who continue to be deprived of basic health care as a result of poverty and discrimination [25]. To a large extent, Canada's universal medical care system has removed financial barriers to medical and hospital services. Though provincial systems vary somewhat in the extent of coverage, in Manitoba the Medicare system covers all residents for physician, midwifery, public health





and hospital services, as well as some chiropractic and home care services. Despite these benefits, indirect and incidental costs associated with service access still present barriers for individuals living on low-incomes. For example, women report that the expenses of travel and accommodation, lost income, and childcare influence their decision to seek health care. Women's lower levels of labour force participation and lower average earnings compared to men, as well as their limited access to other household income, or influence over how it is spent contribute to financial barriers women face in getting health services (see Chapter Two, Women, Income and Health).

## Aboriginal Women and Accessible, Appropriate Care

Although sex-specific data for health services use by First Nations or Aboriginal<sup>9</sup> people is unavailable, information for the total population (female and male) gives a broad indication of usage rates, which are enhanced by the results of qualitative studies with women. An analysis of provincial administrative data found large disparities in service use between First Nations and Manitobans overall. Hospitalization rates for Registered First Nations (RFN) people in Manitoba were double the rates for all Manitobans (348 versus 156 per thousand, per year). In most RHAs, RFN residents had the highest rates of both hospitalization and total days of care. RFN persons also average more frequent contact with physicians than do other Manitobans (5.8 versus 4.7 visits per year). However, the rate at which First Nations people were referred to specialists, taking into account the first consultation or referral visit only, was almost the same as for other Manitobans (0.29 versus 0.27 visits per person, per year), despite much poorer average health status of First Nations. It is interesting to note that the proximity to specialists did not influence rates of specialist consultations for RFN. For example, in Winnipeg and Brandon (where 90% of the specialists are located), RFN people had fewer contacts per person with specialists (first visit and follow-up treatment by a specialist) than did other residents (Winnipeg: 1.60 versus 1.71; Brandon: 0.82 versus 0.98), again, despite their overall poorer health [26]. Other research has shown that Aboriginal people in Canada, as well as visible minorities, have lower odds of reporting specialist consultations than Canadians with Caucasian ancestry [11].

Aboriginal women face formidable barriers in obtaining appropriate health services, including discrimination, distance and cultural barriers [12]. Research that explored Aboriginal women's experience with mainstream health care services in Winnipeg indicated a considerable level of unmet needs. Among the top four health needs reported by participants were the need for improved access to services (23% of 125 respondents) and the need for treatment and services for depression (22%), which followed reports of need for balance in their life (26%), and having their nutritional needs met (23%) [27]. In a study of older Métis women in Saskatchewan, Krieg and colleagues identified multiple, interconnected barriers to accessing health care in northern and Aboriginal communities, including service availability, transportation, financial needs, language and isolation. The authors noted that access barriers have led to increased dependence on informal care giving to fill the gaps of necessary services [28], responsibilities that primarily fall on women in the community. Aboriginal women are also vulnerable to other health

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<sup>9</sup>First Nations Manitobans are those individuals who hold Treaty Indian status or are a Registered Indian as defined by the *Indian Act of Canada*, and/or who are members of an Indian Band or First Nation. Aboriginal people are those who self-identify as belonging to a culturally defined population.





system challenges commonly experienced by northern and rural residents, such as a lack of choice in health care providers and high turn over rates limiting the continuity of care, and which may reduce the quality of care [29].

Aboriginal women's dissatisfaction with health services also stems from the system's lack of appropriateness and sensitivity for the distinct value systems of Aboriginal peoples. Traditional Aboriginal cultures generally view health as a holistic state of being, with spiritual, emotional, physical and mental dimensions, and which involves the whole community [28]. Bartlett described concerns raised by Métis women with the lack of collective experience around diagnoses and treatment in mainstream health services. Women reported feelings of isolation in the individualized health system and society. Current services, based on westernized models, fail to account for the unique value systems of Métis women around collective identity and communal support [30].

Similarly, a study among women in a northern BC reserve community, which brought First Nations women's perspectives to bear on health care encounters, demonstrated the need for health service providers to account for the historical and social contexts of women's lives. Though both positive and negative aspects of women's encounters were examined, participants described more negative experiences, including having their health concerns and knowledge invalidated by service providers; racism and discrimination; apprehension of children brought for care; services being withheld from women who were homeless or who suffered from alcoholism; feelings of being an "intruder" or being excluded by the system; and punitive rules (e.g. fines for missed appointments) that failed to account for barriers inherent to their social circumstances (e.g. remote communities, lack of a phone, transportation, low income). As well, past experiences of the residential school system affected some women's encounters with the health care system, which was perceived as another colonial authority with the potential to re-victimize women. Harms suffered in the schools, including sexual abuse, shaming of the body and self, and the reinforcement of non-assertiveness and stoicism, heightened women's anxiety and delayed their seeking care. Women's health care encounters were recognized to greatly influence not only their own health, but that of their family members and communities, due to the culturally defined role of women [29].

## Policy Implications

National and provincial health policy trends in recent decades have progressed in addressing issues that are consistent with women's health priorities, even though gender influences on health and health care have not always been recognized or acknowledged. For example, the 2002 report of the Romanow Commission made few mentions of women or gender, yet the report called for a reinforced commitment to a universally accessible, publically funded health care system and expanded support for home care, which showed progress toward addressing some of the key challenges for women, such as low income and barriers to health insurance, and high demands for care in the home and community [31].

As well, recent decades have seen provincial health departments move toward a population health approach and multisectoral initiatives that recognize the breadth of factors that influence health, many of which fall outside the health sector. This too has been appropriate to women's health and health service





priorities, as the broader social and economic arena is an important contributor to women's health risks through the effects of an unequal distribution of power and resources. Research has demonstrated that socio-economic status and other factors beyond individual control are more important to women's health status than are lifestyle factors. Thus, women's health promotion initiatives that focus only on lifestyle will have limited effect until more is done to address economic inequality and women's poverty [32].

There is increasing recognition that health policies that account for differences in women's and men's biological and social vulnerability to health risks, their health outcomes, and health service use patterns are more likely to be successful and cost-effective compared to those that are not concerned with such differences. Health Canada's adoption of a policy that commits to gender-based analysis throughout the department has provided an important example for this work at the federal level. Furthermore, the development of women's health strategies, both at national and provincial levels, help to raise the profile of gender sensitive and women-centred health care.

Considerable community and research capacity exists in Manitoba to support the advancement of gender-sensitive, women-centred care (see the Gender and Health Planning resources on Prairie Women's Health Centre of Excellence website [www.pwhce.ca](http://www.pwhce.ca) and the Women's Health Clinic's model for women-centred care [www.womenshealthclinic.org](http://www.womenshealthclinic.org) ).

**Manitoba Women's Health Strategy Goals:**

- To reduce the risk factors that contribute to the poor health of many women
- To support development of a health system that is sensitive and responsive to women's health
- To establish an effective mechanism for women to influence the health care system
- To promote a wellness model based on adequate public education and prevention of disease, in addition to the existing treatment model
- To ensure that the continuum of care for women spans all life stages
- To build broad understanding that women's health status includes their physical, emotional and mental health [33]

Some good practices for women's care include consideration of women's needs for respect, safety, involvement and participation, and empowerment in care environments. As well, models of women-centred care recognize the importance of accommodating women's service access barriers, which commonly include low income, transportation challenges, care giver burden, role conflicts associated with paid and unpaid work, and child care needs [34, 35, 36]. With regard to Aboriginal women, Browne and colleagues proposed that policies should recognize Aboriginal women's centrality as care givers in the family, safeguard against negative stereotyping of women, and support education for health providers, staff and administrators that includes an analysis of the socio-political and historical factors influencing health care encounters [29].

Health policy and program initiatives should be informed by the context of women's whole lives and social circumstances. In particular, there is a need for greater sensitivity for the influence of gender-based violence on women's physical and mental health, as well as for the health consequences of gendered power relations. For example, health promotion messages often target women in their role as care givers in the family, yet such initiatives too often overlook important power imbalances within the household





that may limit women's ability to make decisions about implementing health promotional measures [37], or ignore women's own wellbeing [25]. Finally, health service planning for women's needs also requires comprehensive information on important health issues for women, which include reproductive health issues, but also such concerns as women's greater burden of chronic disease and chronic pain conditions.

Because women hold strong values with respect to health, are major consumers of health services, and have an important role in the formal and informal provision of care, it is essential that they also have a major role in determining the future of health care. Furthermore, it is important that community consultation for health program planning and evaluation reflects the diversity of Manitoba's women and involves women with demonstrated health vulnerabilities and health service challenges, including women living on low income, women with disabilities, and women living in rural and remote communities, among others.

According to Women and Health Care Reform<sup>10</sup>, women will soon outnumber men among family physicians in Canada, and are affecting the nature of physician practice in beneficial ways. However, they are not the main decision-makers in primary health care, as greater authority rests in economic policy makers, managers and specialist physicians, most of whom are still men. Women have a large stake in the future of primary health care, yet their limited voice in reform processes can lead to policies that are not sensitive to women needs or, in fact, are detrimental to their health. For example, the transfer of services to the community level holds potential for improving the relevance and accessibility of services for women, yet too often this shift has also seen a transfer of responsibilities for care to under-resourced community level agencies and to care givers in the home, who are more often women [9]. Considering that care giving has not only positive, but also negative effects on the health of women (see Chapter Two, Unpaid Work and Consequences for Women's Health), the potential danger for the costs of reform to outweigh benefits becomes clear.

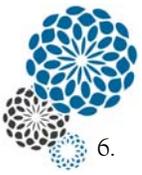
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<sup>10</sup> Formerly the National Coordinating Group on Health Care Reform and Women.





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# Women’s Use of Complementary and Alternative Health Care Services

## Introduction

This section presents a review of women’s use of complementary and alternative health care services (CAHC). It does not discuss the evidence of either the safety or the efficacy of any of these treatment modalities. Also excluded from this chapter is a discussion of the use of natural health products (such as vitamins, herbs, homeopathic agents and nutritional supplements).

CAHC services range from specific interventions (such as reflexology and acupuncture) to complete systems of belief about the origins, prevention and treatment of disease (such as Aboriginal healing, traditional Chinese medicine and Ayurvedic medicine) [1]. We refer to these treatments collectively as “complementary and alternative health care” since they are most commonly used to supplement, rather than to replace, conventional medical care. One estimate found that only six percent of Canadians used CAHCs and natural health products without also using conventional medical care [2]. CAHC services encompass a wide range of practices, with varying levels of use, evidence and consumer confidence [3].

What is considered “alternative health care” rather than “conventional health care” is culturally dependent. That is, how a particular practice is viewed on the continuum from “conventional” or “mainstream” to “alternative” care varies from country to country, and within and across countries, from culture to culture. For example, traditional Chinese medicine is a dominant healing practice in China, as is Ayurvedic medicine on the Indian subcontinent. Homeopathy is more widely accepted by physicians in Britain than by those in Canada, and has a much higher profile there than it does in Canada. In Scandinavian countries, unlike Canada, reflexology is practised widely [1].

The definition of what is, and what is not, a CAHC has also changed over time. An excellent example of this is the practice of midwifery in Manitoba. Historically, in both European and Aboriginal cultures, midwives provided mainstream care for pregnant and birthing women. When maternity care became the sole prerogative of medical practitioners, the practice of midwifery was criminalized. With the growth of the women’s health movement, beginning in the 1970s, activists sought to reclaim the practice of midwifery as a legitimate form of maternity care, based in the belief that pregnancy and childbirth are normal life events for women, and not states of illness. During this time, some women did practise informally as midwives, gaining their training either in countries where midwifery was considered a form of conventional care, or informally in Canada, through apprenticeships with practising midwives, or through some combination of means. In 2000, midwifery became a regulated health profession in Manitoba. Midwives are now employed by Regional Health Authorities in the province, and may attend women giving birth in and out of hospital. We have therefore seen midwifery go from mainstream practice, to criminal activity, to alternative care, and now, to a regulated health profession, part of the continuum of conventional care in Manitoba. See Chapter Four for a more complete discussion of midwifery in Manitoba.





CAHC treatments, while diverse, have several important elements in common. While some of these are shared with mainstream medical practices, they are emphasized in CAHC. CAHC treatments are generally viewed by those who practice them, and by those who use them, as:

- working in conjunction with the body's own self-healing mechanisms;
- “holistic” treatments for the whole person (not just of separate systems of the body);
- actively involving the patient in the treatment process;
- focusing on disease prevention and well-being [1].

The reasons people give for using CAHC services range widely, from prevention, to health maintenance, to dealing with chronic diseases and conditions. American research found that about 60% of CAHC treatments were used for prevention or health maintenance, while about 40% were used to treat existing illness [2]. Other American research found that most of those who chose CAHC treatments did so less because of dissatisfaction with conventional medicine and more because CAHCs were congruent with their values, beliefs and philosophical orientation to health and life [4].

Canadians with chronic pain and chronic conditions such as fibromyalgia, back problems, multiple chemical sensitivities, bowel disorders, migraine, chronic fatigue syndrome, thyroid disorders, asthma, ulcers, or arthritis or rheumatism all report higher use of CAHC services [2, 5]. Reported CAHC use was highest among those with fibromyalgia (37%), back problems (36%) and multiple chemical sensitivities (33%) [5]. Many of these conditions are more common among women. For example, Manitoba women were more likely than men to have received treatment for arthritis and inflammatory bowel diseases [6]. Women are also more likely to have been diagnosed with fibromyalgia [7]. Those living with cancer and HIV/AIDS are also more likely to use CAHC services to cope with the long term effects of living with these diseases, to improve their quality of life, and to cope with the side effects of treatments [2, 8].

CAHC services are also important for women because they offer non-pharmaceutical treatments for symptoms associated with women's reproductive health, especially menstruation, pregnancy and menopause. This is consistent with the desire many women have to take greater control over their personal health and well-being, and to avoid the medicalization of normal physiological aspects of women's lives [2, 9].

The services included in this review of CAHC services are those generally considered as “alternative” in Canada at this time. They include massage therapy, homeopathy, acupuncture, Feldenkrais and Alexander techniques, relaxation therapy, biofeedback, Rolfing, herbal remedies, reflexology, spiritual and religious healing [10]. None of these treatments are insured through Manitoba's universal health care system (“medicare”), although they may be insured through private extended health benefit plans (usually employment-related). While some discussions of CAHC include chiropractic treatments, these have been excluded from the analyses presented here, as residents of Manitoba have coverage through the medicare system for some chiropractic treatments.





## Manitoba Women and Complementary & Alternative Health Care

Manitobans are making significant use of services that, until recently, were considered outside the scope of “mainstream” health care [2]. The use of CAHC services has increased over time in Canada, and women consistently report higher use than men [2, 5, 9]. In 2003, 19% of Manitoba women and 11% of men consulted a CAHC practitioner<sup>11</sup> [11].

Figure 1 shows the percentage of Manitoba women and men using CAHC services in 2003. Women (19.1%) were significantly more likely than men (11.0%) to report that they had seen or talked to a CAHC provider during the previous year. Massage therapy was the most commonly used form of alternative care, with 14.7% of Manitoba women visiting a massage therapist in 2003 [10]. Thus, the reported use of alternative services is higher among women than among men. While research has not been done to definitively determine why this is the case, a number of contributing factors have been identified.

The treatments offered by conventional medicine for chronic diseases and chronic pain (both more common among women) may not be effective in relieving symptoms. As well, there are the long term physical and emotional consequences of domestic and sexual violence. CAHC practitioners are more likely than physicians to speak to women about “holistic health”, understanding the influences of the multiple stresses and experiences (both past and present) in women’s lives. This is especially important for women who have experienced sexual and physical violence, both as adults and as children [9]. Lesbian and bisexual women are also significantly more likely than heterosexual women to use CAHC services. In a study combining results from the 2003 and 2005 cycles of the Canadian Community Health Survey, Statistics Canada found that 33.1% of lesbian women consulted CAHC providers, compared with 27.1% of bisexual women

### Measuring the Use of Complementary and Alternative Health Care Services

The data presented here are drawn from the Canadian Community Health Survey, Cycle 3.1, for the population aged 18 years and older. Respondents were asked whether, in the past 12 months, they had seen or talked to an alternative health care provider such as an acupuncturist, homeopath or massage therapist about their physical, emotional or mental health.

Those who responded in the affirmative to this question were then asked specifically about consultations with massage therapists, homeopaths, acupuncturists, Feldenkrais or Alexander teachers, relaxation therapists, Biofeedback teachers, Rolfers, herbalists, reflexologists, spiritual healers, religious healers, and others [10].

Chiropractic care has been excluded from the analyses presented here, as residents of Manitoba have coverage through the medicare system for a maximum of 12 chiropractic visits per calendar year.

<sup>11</sup> These analyses are based on Statistics Canada’s Canadian Community Health Survey Cycle 3.1, Public Use Microdata file, which contains anonymous data collected in the year 2003. All computations on these Microdata were prepared by Prairie Women’s Health Centre of Excellence and the responsibility for the use and interpretations of these data is entirely that of the authors. The CCHS does not include residents of Nunavut, Yukon, or Northwest Territories, First Nations Reserves, Crown lands, residents of institutions, full-time members of the Canadian Forces, and residents of some remote regions.

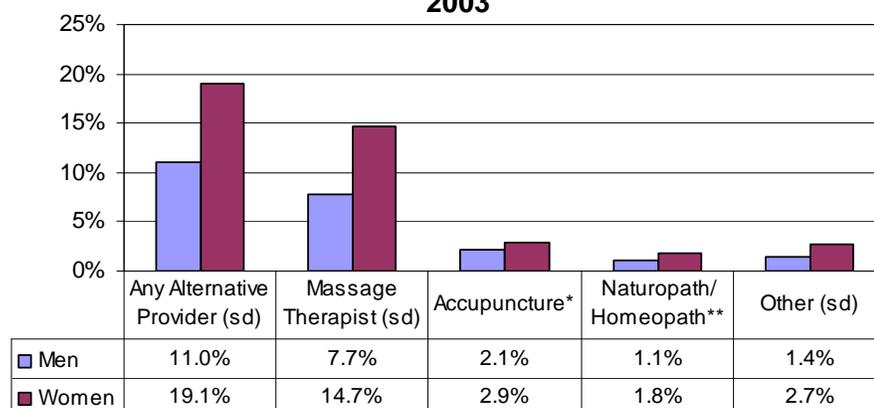




and 20.6% of heterosexual women [12]. Generally, CAHC practitioners spend more time with clients than physicians do with their patients. Many women appreciate these differences, and this may in part explain women's greater use of these treatments [9].

Manitoba women were also more likely than their Canadian counterparts to have used CAHC services [5]. This is consistent with other research that has found that the use of CAHC services is higher in Western Canada [2].

**Figure 1**  
**Use of Alternative Health Providers**  
**Manitoba Men and Women**  
**2003**



Source: Statistics Canada, CCHS 3.1 [10]

Notes:

(SD) indicates that the difference between women and men is statistically significantly ( $p < .05$ ).

\* For men only, the data should be interpreted with caution as the coefficient of variation is between 16.6% and 33.3%.

\*\* For both women and men, the data should be interpreted with caution as the coefficient of variation is between 16.6% and 33.3%.

## The Costs of Alternative Care

As noted, alternative and complementary care are outside of the mainstream medical system and thus are not funded through Manitoba medicare. Manitobans pay for them either through extended health benefit plans, or personally, or some combination of both, with the individual and the plan each paying a portion of the costs. Women's lower average incomes than men place them at a disadvantage in purchasing CAHC services. Employed women are also less likely than their male counterparts to have employment-related extended health benefits (see Chapter Two). Across Canada, 54% of employed men and 45% of employed women had employment-related extended medical and/or dental and/or disability and/or life insurance [13]. Some women also can receive employment-related health benefits through their husbands' or partners' employment.

It is therefore not surprising that, despite the greater burden of illness that is found in lower income groups, the proportion of women using alternative health care services increases with income. This is in contrast to the patterns of use of conventional medical services, where women with the lowest incomes see physicians more frequently, and are more likely to be admitted to hospital, than are women with higher incomes [6] (see Physician and Hospital Service Use, this chapter).

There are several different ways of measuring income. In this discussion, we consider two of these – household income and personal income. The advantage of using household income in considering

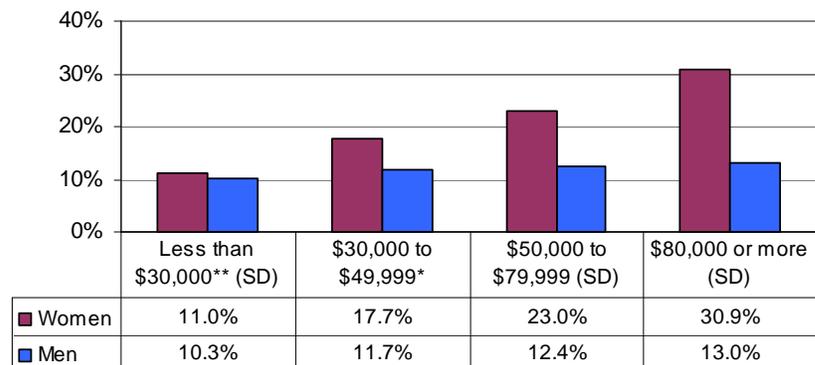




women’s income is that it gives a better picture of women’s potential access to resources than a measure of individual income. However, the disadvantage is that it assumes that women and men have equal access to household resources, regardless of their personal incomes. We have therefore examined use of CAHCs considering both household and individual incomes.

Figure 2 illustrates the use of CAHC services by women and men by *household* income in 2003. Household income was strongly related to women’s use of CAHC services, but not to men’s. Nearly three times more women reported using CAHC services in the highest household income quintile (31%) compared to women in the lowest household income quintile (11%). By contrast, the proportion of men who reported using CAHC services varied only slightly from the highest income quintile (13%) to the lowest (10.3%). There was almost no difference (<1%) in the CAHC use among women and men in the lowest income group, and the difference increased with household income to 18% between women and men in the highest income group. This suggests that women’s increased use of CAHCs, unlike that of men, is directly linked to household income [10].

**Figure 2**  
**CAHC Use by Household Income**  
**Manitoba 2003**



Source: Statistics Canada, CCHS 3.1 [10]

Notes:

(SD) indicates that the difference between women and men is statistically significantly ( $p < .05$ ).

\* For men only, the data should be interpreted with caution. The coefficient of variation is between 16.6% and 33.3%.

\*\* For both women and men, the data should be interpreted with caution. The coefficient of variation is between 16.6% and 33.3%.

Among both women and men, increased *personal* income is more strongly linked to increased use of CAHC services than is household income (Figure 3). Use is highest among both women and men with 2003 personal incomes above \$50,000 [9]. Again, the relationship between increased income and use of CAHC services is stronger among women than among men.

Whichever measure of income is used, women are more likely than men to use some of their additional income to purchase CAHC services.





When comparing these two means of measuring income, it is apparent that increased use of CAHC services is more strongly linked to women’s personal incomes rather than to their household incomes, suggesting that women’s willingness and/or ability to spend money on their own personal care is greater when they earn the money themselves. This is consistent with research done in Ottawa with 300 husband-wife families that found that the family should not be viewed as “a model of harmony and sharing in a world of discord.” Woolley found that access to, and control over, the family’s financial resources were shaped by each family member’s circumstances and that those with higher earnings had more control over money, placing women at a disadvantage. Her results challenge the notion that the family can be treated as one for purposes of economic theory or public policy [14]. CAHC use is perhaps one example of this phenomenon. Unfortunately, we have no survey data that address the extent to which women control their own incomes, and to what extent they have decision-making power over family income.

**Figure 3**  
**CAHC Use by Personal Income**  
**Manitoba 2003**



Source: Statistics Canada, CCHS 3.1 [10]

Notes:

(SD) indicates that the difference between men and men is statistically significantly ( $p < .05$ ).

## CAHC & Women with Chronic Conditions

Chronic health conditions, especially chronic pain, are also linked to use of CAHC services. Women with chronic conditions<sup>12</sup> are more likely to use CAHC services than are other women or men with chronic conditions (Figure 4). They were about 50% more likely to use CAHC services than either women without chronic conditions, or men with them. These data do not tell us why women with chronic diseases use CAHC services. However, other research suggests that women with chronic diseases are turning to CAHC providers to provide additional care for symptoms that are not well managed or controlled by conventional medical treatments, because CAHC approaches offer them the opportunity to be more actively involved in managing their conditions, because they prefer the additional time and

<sup>12</sup> Respondents to the CCHS 3.1 were asked if they had a condition that was expected to last, or had already lasted 6 months or more, and which had been diagnosed by a health professional. They were asked about each of the following: food allergies, other allergies, asthma, fibromyalgia, arthritis, rheumatism, back problems, high blood pressure, migraine headaches, chronic bronchitis, emphysema, chronic obstructive pulmonary disease, diabetes, epilepsy, heart disease, cancer, stomach or intestinal ulcers, the effects of a stroke, urinary incontinence, bowel disorders, Crohn’s Disease, or colitis, cataracts, glaucoma, thyroid conditions, chronic fatigue syndrome, multiple chemical sensitivities, mood disorders, anxiety disorders, learning disabilities, other long term physical or mental health conditions [10].



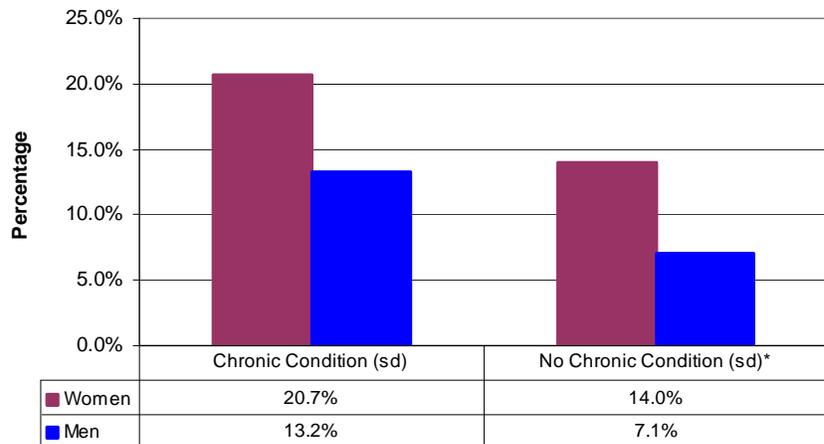


relationship-building generally offered by CAHC practitioners, and because they wish to reduce their dependence on prescription drugs [9].

Self-rated health (or self-perceived health) is how individuals describe their own health. In Canada, self-rated health is measured using the following five point scale: excellent, very good, good, fair and poor. Self-rated health can reflect aspects of health not captured in other measures, such as incipient disease, disease severity, aspects of positive health status, physiological and psychological reserves and social and mental function [15]. A substantial body of international research has found self-rated health to be significantly and independently associated with specific health problems, use of health services, changes in functional status, recovery from episodes of ill health and mortality [16]. (See Chapter Five for a more complete discussion of Self-rated Health.)

In 2003, 60% of Manitoba females (aged 12 years and older) reported themselves to be in “excellent” or “very good” health, while 11.4% reported that their health was only “fair” or “poor”. Considering CAHC use by Self-Rated Health status provides additional information about the users of these services in Manitoba (Figure 5).

**Figure 4**  
**CAHC Use by Chronic Condition Status**  
**Males & Females Manitoba 2003**



Source: Statistics Canada, CCHS 3.1 [10]

Notes:

(SD) indicates that the difference between women and men is statistically significantly ( $p < .05$ ).

\* For men only, the data should be interpreted with caution as the coefficient of variation is between 16.6% and 33.3%.

**Figure 5**  
**Use of Alternative Health Care Providers**  
**Manitoba Men and Women by Self-Rated Health**  
**2003**



Source: Statistics Canada, CCHS 3.1 [10]

Notes: (SD) indicates that the difference between women and men is statistically significantly ( $p < .05$ ).

\* For men only, the data should be interpreted with caution. The coefficient of variation is between 16.6% and 33.3%.

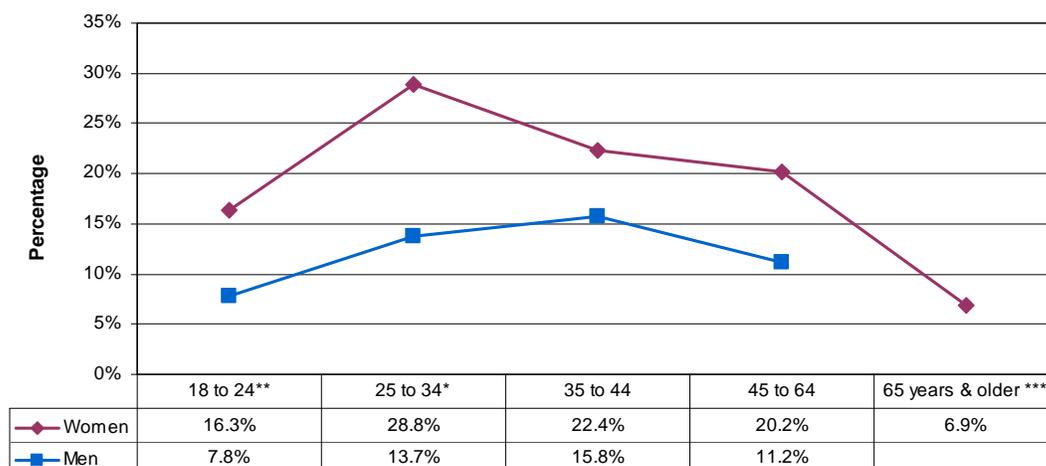
\*\* For both women and men, the data should be interpreted with caution. The coefficient of variation is between 16.6% and 33.3%.





It is interesting that women who rated their own health as “good” were the least likely (15.9%), and women who rated their own health as “excellent” (23.6%) were the most likely, to have to have used CAHC services. This same pattern of use was also true for men [10]. However, it is important to interpret these results cautiously, since self-rated health is also related to income, with higher income women more likely to report very good or excellent self-rated health. Of course, these are also the women best able to afford, and most likely to purchase CAHC services. Note as well that women who rated their own health as “fair” or “poor” were more likely to use CAHC services than those with “good” self-rated health. This is consistent with the higher use of CAHC services by women with chronic conditions.

**Figure 6**  
**Use of Alternative Health Care Services By Age**  
**Manitoba 2003**



Source: Statistics Canada, CCHS 3.1 [10]

Notes:

\*\* For both women and men, the data should be interpreted with caution. The coefficient of variation is between 16.6% and 33.3%.

\*\*\* The data for men aged 65 years and older have been suppressed due to high sampling variability.

The age of Canadians using CAHC services has changed over time. Earlier research found that CAHC use was a mid-life phenomenon, with use highest among those aged 25 to 44 years [4, 17]. However, it should be noted that these findings included use of chiropractic care, not included in our analyses here. In 2003, CAHC services were highest among young Manitoba women aged 25 to 34 years of age, perhaps reflecting a greater openness on their part to these therapies (Figure 6).

## CAHC as Part of Women’s Health Care

In 2003, over 82,200 (or 19%) Manitoba women reported using CAHC services [10]. Other research has found that over 90% of CAHC users also use conventional health services [2]. In fact, CAHC users were found to be *more likely* than other Canadians to have a regular physician, to have seen a specialist in the last year, and to be high users of the health care system (reporting 10 or more physician visits per year). This is consistent with a population with a higher burden of chronic diseases. However, even after controlling for the presence of chronic diseases and pain, Canadian CAHC users were found to be more frequent users of conventional medical care than non-CAHC users with a similar profile [17].





Ontario research has found that the use of CAHC services has increased among women diagnosed with breast cancer. In 2005, 57.4% of respondents (compared with 39.4% in 1998) reported visiting a CAHC practitioner in the previous year. When CAHC practices are used by over half of women with breast cancer, their use can no longer be regarded as “alternative” [18].

The use of CAHC services among women to ameliorate the symptoms associated with menopause has also increased. The results of the Women’s Health Initiative study in the US demonstrated health risks associated with the use of estrogen-progestin hormone treatments to reduce menopausal symptoms [20]. As a result, more women are trying alternatives to relieve menopause-related symptoms [9, 21].

Women’s perceptions that the CAHC services that they use will not be accepted, either by their family physician or by specialists, also creates conflict and anxiety, contributing to their reluctance to discuss their use of CAHC with their physicians [19]. In a time when conventional medical practitioners are under increasing pressure to use evidence-based interventions, the relative lack of conventional evidence (such as clinical trials) in support of CAHC treatments may have increased their resistance and scepticism to these practices [19].

Women are more likely than men, however, to discuss CAHC use with their physicians. They are also more likely to discuss using conventional medicine with a CAHC provider than to discuss CAHC use with a physician [9]. Given the increased use of CAHC services, the ability and willingness of CAHC providers and of physicians to communicate clearly both with their patients and with each other is essential for women’s health [3]. Unfortunately, this is often not the case, creating both conflicts for women who use CAHC services, and potential risks to their health [1, 9, 17, 19]. The decision not to disclose CAHC use to physicians can itself be hazardous to women’s health [19]. Alberta research with women using CAHC services and natural health products (NHPs) for symptomatic relief of symptoms related to menopause, found that while family physicians were valued as a credible source of information for many women, others felt that their family physician would be unable or unwilling to provide them with unbiased information about CAHC treatments. This contributed to their unwillingness to discuss these issues with their family physicians [22]. Research in British Columbia has described how this environment creates conflicts and stress for women with breast cancer, trying to decide whether, and if so, which, CAHC treatments, and NHPs to use. The authors of the BC report challenge health professionals to address some of the underlying biases that may compromise open discussions with cancer patients about their choices of CAHC services and NHPs, and to promote informed decision-making that will support them to develop individual integrative care plans that safely incorporate complementary and alternative treatments along with conventional cancer treatments [19].

It is noteworthy that CancerCare Manitoba has recognized these issues, advising that the majority of cancer patients use complementary therapies, especially in the post-treatment phase. CancerCare’s approach is to invite cancer patients to share their decisions about, and experiences with, using CAHC services and NHPs, promising that their questions will be treated with respect and compassion. They stress the importance of letting CancerCare staff know if they are using a product or supplement because of potential interaction with cancer treatments. Cancer Care offers staff consultations upon request to





those with questions about these interactions. Informed decision-making about these issues is difficult because reliable information may be difficult to find, and because conventionally trained doctors often do not have expertise in this area [23].

## Policy Implications

This review has illustrated the value of considering sex and gender in understanding women’s use of CAHC services. Outdated assumptions about women’s use of CAHC services, such as the belief held by some that women seek these treatments because of underlying mental health problems, manifested as psychosomatic conditions, in which they seek cures for imaginary diseases, are just that – outdated assumptions [9].

Trying to negotiate different systems of care, based on different philosophies and beliefs, can create stresses and conflicts for patients. There is, therefore, now some support in Canada for “integrative health care”, based on effective communication among all parties (CAHC providers, physicians and patients). Integrative care is more than using CAHC, natural health products and conventional care together. Its basis is the belief that consumers should have the ability to make informed choices about all their health care options. Integrative care removes the burden from patients of trying to bridge the divide between “alternative” and “conventional” forms of care [1]. Health Canada has funded some pilot projects in integrative health care, including work on the development of materials about CAHC treatments for undergraduate medical education [24].

There are also jurisdictional issues involved in the provision of CAHC services. Establishing standards for those providing CAHC treatments, and determining if and how these should be regulated, is a matter of provincial jurisdiction. For example, massage therapy in Manitoba is not a regulated profession, though massage therapists have a voluntary accreditation program through their professional association [25]. Similarly, those practising as naturopathic doctors are not regulated in Manitoba, although they are in other provinces, including Ontario [26]. On the other hand, the regulation of natural health products, such as herbal remedies, vitamins, and minerals, is a matter of federal jurisdiction [27].

As increasing numbers of women turn to CAHC services to complement the treatments provided by conventional medicine and allied health professions, issues related to their use become increasingly important. These include:

1. the dearth of research on the effectiveness of many CAHC treatments;
2. the lack of regulatory oversight of providers of CAHC services;
3. physicians’ lack of knowledge about CAHC treatments;
4. patients’ reluctance to disclose their use of CAHC services to their treating physicians.

Because of sex and gender differences in the use of, and the response to, CAHC treatments, it is imperative that sex and gender be included in addressing these issues.





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# Women's Use of Home Care

## Introduction

While there is no single, commonly accepted definition of home care, home care refers to services that allow individuals with mental or physical impairments to stay at home and in their communities. Home care support generally includes:

- services provided by health professionals such as nurses, physiotherapists, occupational therapists and speech therapists;
- personal care including assistance with the activities of daily living such as toileting, transferring and grooming; and
- household and home support services such as cleaning, laundry and meal preparation [1].

Home care programs in Canada began as replacements for hospital care. Despite this, home care is not currently considered a medically necessary service under the *Canada Health Act*. Provincial governments are not, therefore, required to provide home care services, and there are wide disparities in the both the provision of public home care services, and their costs, across Canada [1].

Home care services can prevent, delay, shorten or substitute for care provided in hospitals or personal care homes [2]. As hospital stays for many procedures have been shortened or eliminated, home care services are essential to support those discharged. Home care services are also important to promote the independence and autonomy of persons with disabilities, for many of whom home care is essential to community life. Without it, they would be forced to depend on family and friends, or live in institutions. More recently, home care services have been expanded to include palliative care, providing medical and nursing care, personal care and other important services to those who wish to remain at home in the final stages of a terminal illness.

Home care services are an important women's health issue for three main reasons. Firstly, women are more likely to need home care services than are men, both because they bear a greater burden of chronic diseases and because they have longer average life expectancies than do men. Secondly, women provide more informal, unpaid care to family members and friends than do men. Gaps in home care programs are, therefore, more problematic for women. Thirdly, the overwhelming majority of paid home care workers are women. Paid and unpaid caregiving can have positive and negative effects on women's health and well-being - economic, physical and emotional [2]. (For a discussion of unpaid work and its consequences for women's health see Chapter Two.)





## The Manitoba Home Care Program

Manitoba's Home Care Program is the oldest comprehensive, universal home care program in Canada, established by the Provincial Government in 1974. It forms part of the Continuing Care Program, which operates as a single-entry point for home care services and long term care facilities. Home Care was delivered by Manitoba Health from 1974 until the establishment of Manitoba's Regional Health Authorities in 1997. Since that time, RHAs have been responsible for the assessment, coordination and delivery of home care services [1, 3, 4, 5]

The Program's mandate is: 1) to provide home care services to persons assessed as having inadequate informal resources to return home from hospital or to remain at home in the community; and 2) to assess and place individuals in long term care facilities if and when home care cannot provide them with the services they need, and to provide them with care until they are placed. These services are provided free of charge to those who meet the assessment criteria for admission to the Home Care Program [4]. There is no age requirement, and services are provided to children as well as to adults. In order to be eligible for services through the Program, an individual must:

- be a Manitoba resident, registered with Manitoba Health;
- require health services or assistance with activities of daily living;
- require service to be able to stay in their home for as long as possible; and
- require more assistance than that available from existing supports and community resources [4].

Though Manitoba has a well-established, comprehensive and well-respected Home Care program, it was not intended to replace the informal care provided by family members and friends.

### Manitoba Home Care Program Services

#### Personal Care Assistance

Home care workers provide help with mobility and personal care. Services are provided in homes, in the workplaces and in post-secondary educational institutions. Services for children attending school are provided through their school divisions.

#### Home Support

Home care workers provide meal preparation, light housekeeping and laundry.

#### Health Care

Nurses, physiotherapists, occupational therapists and others provide health teaching, counseling and direct services.

#### Family Relief

Home care workers may provide short term periods of in-home relief for informal caregivers.

#### Supplies and Equipment

Some supplies and equipment needed for in-home care are available for loan.

#### Respite Care and Adult Day Programs

Adult day programs are available for a fee. Respite care in hospital is available at no cost. There is a charge for respite care provided in personal care homes [4].





## Financing Home Care

Across Canada, approximately 77% of home care expenditures are for publicly funded services and 23% for private services. However, spending on private sector home care in Manitoba accounted for less than 8% of total home care expenditures in 2000-2001. This was the least among all of the provinces. This reflects the strength of the Home Care Program, and means that much more of the home care required was provided by the public system (and at no cost to the individuals) than is the case in other Provinces. This is clearly an advantage for Manitoba women. In 2003/04, the Home Care Program accounted for 5.8% of Provincial government health care spending, compared to the national average of 4.2% [6, 7].

The costs of the Home Care Program have also grown more quickly in Manitoba than in other provinces, reflecting the provincial government's commitment to the program. In 2003-04, Manitoba had the second highest home care expenditure per capita (\$140.15/person) after New Brunswick. The Canadian average was \$91.14. The federal government also provides some home care services in Manitoba, through Veterans Affairs Canada to eligible veterans, to First Nations people living on Reserves, and to RCMP personnel. In 2003/04, this totaled \$1,493,000 in Manitoba, while expenditures under the provincially funded Home Care Program totaled \$194,129,300. In addition, some home care services are provided through the Workers Compensation system to workers living with disabilities as a result of their compensable injury or illness. In Manitoba, this totaled \$1,320,000 in 2003/04 [7].

The need for action on home care has long been recognized by advocates and policy experts. More recently, the 2002 Romanow Commission on the Future of Health Care in Canada, the Health Council of Canada and the First Ministers have all called for the inclusion of some types of home care services under the *Canada Health Act* [1, 8, 9]. The Romanow Commission recommended the expansion of the *Act*, to include medically necessary home care services in just three areas:

- Home mental health case management and intervention
- Home care services for post-acute patients for a maximum of 14 days, and for a maximum of 28 days if rehabilitation is required
- Palliative home care services to support people in their last six months of life [1].

The narrow scope of the Romanow Commission recommendation has been criticized, both by the Health Council of Canada, which found the two week limitation to be insufficient [8] and by the National Coordinating Group on Health Care Reform and Women<sup>13</sup>, which noted that these recommendations would not relieve the disproportionate burden of providing long term informal care born by women [2]. Despite the commitment of the previous federal government to implementation of these recommendations, through the *First Ministers Accord on Health Care Renewal* [9], the funding for these improvements to home care services has not been received, leaving Manitoba and other provinces to fund home care services without ongoing federal support.

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<sup>13</sup> Now called Women and Health Care Reform [www.womenandhealthcarereform.ca](http://www.womenandhealthcarereform.ca)





In some provinces, private delivery of home care services is the norm and has been promoted as a way to deliver services more “efficiently”. Experience in Manitoba has shown that that is not the case. In 1996, the Province announced its intention to privatize some elements of the Home Care Program in Winnipeg. Unionized home care workers went on strike over this issue. The agreement that ended the strike provided that a maximum of 20% of jobs would be privatized, on an experimental basis, with an evaluation to take place within two years. Olsten Health Services, a subsidiary of the Olsten Corporation, the largest home care company in the US, and the only private bidder for this contract, eventually took on just 10% of home care cases in Winnipeg. The experiment was abandoned, when it became clear that despite promises of financial savings and increased efficiencies, private services could not be delivered at the same or lower cost than through the public system. This was the case even though workers employed by private home care companies usually earn less, have fewer benefits, less job security, and, as a result have greater job turnover than do those employed by the Manitoba Home Care Program [10, 11]. This resulted in less continuity of care, which is vital to home care recipients and their families [12].

During this time, it also became clear that Manitoba’s public Home Care Program, and those employed in it, enjoyed widespread public support. This was an issue of “core values” for many Manitobans, who expect the provincial government to provide quality community care to its vulnerable citizens [10].

## Home Care Program Use in Manitoba

The number of Home Care clients has dramatically increased in Manitoba since the Program was first established. From 1990/1991 to 1998/1999, the number of Manitobans receiving home care services increased from 24,022 to 32,238, an increase of 34.2% [3]. The proportion of Manitobans receiving Home Care services increased from 2.3% of the population in 1995/96 to 2.7% in 1998/99 [5] to 3.0% in 2003/04 [12]. About 63% of all Home Care clients are female, and this percentage has not changed over time [5, 13].

Increased home care use is associated with age. In 1998/99, approximately 21% of Home Care users were under 65 years of age; 79% were 65 years and older and 60% were 75 years and older [5]. In 2003/04, 62% of all Home Care users, and 66% of all female users, were 75 years and older [13]. While this is related in part to Manitoba’s aging population, there are other health care system factors that contribute to increasing demand for home care services: earlier hospital discharges, greater use of day surgery, advances in technology and pharmacology that allow more care to be provided at home, reductions in the number of hospital beds and a reduced ratio of nursing home beds to the population aged 75 and older [5, 14]. Demographic changes have also contributed to increased demand for home care – informal caregivers (mostly women) have less time available for informal care than those in their mothers’ generation due to paid employment and responsibilities for their own children [5]. Personal preference is also a factor. Most Manitobans prefer to remain in their homes, rather than be admitted to long term care facilities.

In 1998/99, 25% of Home Care clients used the Program for up to 60 days, 39% used the Program from 61 to 364 days and 37% of clients used the Program for the full year. The majority of Home Care clients (71%) were single, widowed, or divorced, illustrating the importance of immediate family members in providing informal home care. During that year, 8% of all Home Care clients were admitted to a personal care home, and 9% died while in receipt of Home Care [15].





In urban areas of Manitoba (Winnipeg and Brandon), among seniors aged 65 years and older, lower neighbourhood income is associated with higher mortality rates, higher hospitalization rates, and higher rates of death. Home Care use by income is therefore an important measure of the system's responsiveness to those in need. In 1998/99, 21.2% of seniors in the lowest income quintile received Home Care services, as did 17.1% in the second lowest income quintile, 15.0% in the middle income quintile, 13.7% in the second highest income quintile and 12.8% of those in the highest income quintile [3]. While these data do not measure the adequacy of the services received, or the perceived unmet needs of care recipients, they do illustrate an important point. The services of the Manitoba Home Care Program are used more by those with lower incomes, and higher burdens of ill health, as was intended.

The analysis that follows is based on data that were provided by Manitoba Health for clients of Manitoba's Home Care Program. It includes information about clients who received at least one service from the Program, in the 2003/04 fiscal year. Those who were assessed, but did not receive any in-home services during that year were not included in the data [13]. We are not able to include analyses of the different types of home care services provided, their intensity or frequency of their use, as these are not currently available from Manitoba Health [5, 15].

In the 2003/04 fiscal year, the Manitoba Home Care Program had 21,815 female Home Care clients and 12,653 male clients. This represented 3.7% of all Manitoba females, and 29.2% of women 75 years and older, compared with 2.2% of all males and 22.4% of men 75 years and older [13].

While Figure 1 shows some regional variations in the male to female ratio of Home Care users, more noticeable are the variations among RHAs. Home Care use in females ranged from a low of 10/1,000 in Burntwood and Churchill to a high of 56/1,000 in Parkland. These differences are in part due to the differing age structures of the populations in those regions.

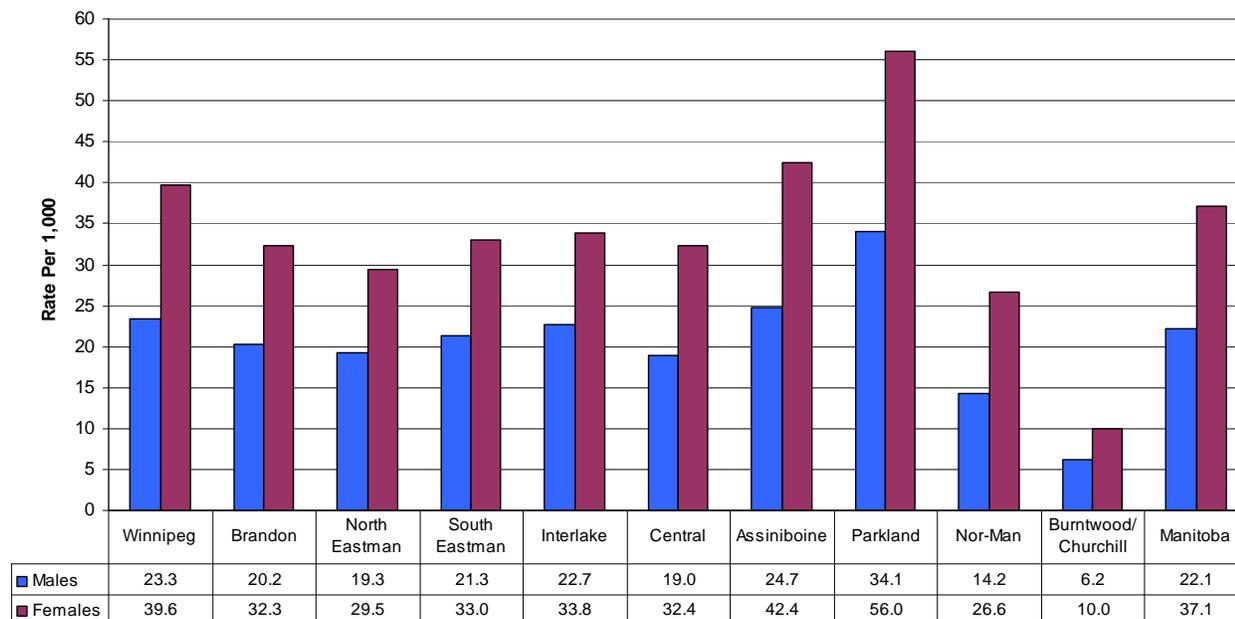
For example, the low usage in Burntwood/Churchill RHAs is in part due to the relative youth of their population when compared to Manitoba as a whole [14]. The Burntwood RHA is also home to a higher proportion of First Nations people living on Reserve, where the provision of home care services is a federal responsibility [15]. Services funded by the federal government have been criticized by the Assembly of First Nations as inadequate, insufficiently flexible, not grounded in a respect for culture and tradition, and not well-coordinated [16]. The dearth of appropriate home care services, particularly in remote communities, forces some Aboriginal Manitobans to move to larger centres such as Winnipeg. Jurisdictional disputes have also contributed to the lack of appropriate home care services for First Nations Manitobans on Reserves, forcing many, both children and adults, to leave their home communities [17, 18].

Regional differences in Home Care use in Manitoba have been examined using age- and sex- adjusted data for 1998/99 [15]. This method has the advantage of allowing inter-regional comparisons, adjusting for the differing age structure of the population across regions. However, it has the disadvantage of making sex differences invisible. Peterson, Shapiro and Roos examined all clients aged 65 years and older, and found that home care usage was significantly higher than the provincial average in the RHAs of Winnipeg,





**Figure 1**  
**Home Care Clients by Sex**  
**Manitoba & RHAs**  
**April 1, 2003 - March 31, 2004**



Source: Manitoba Health [13]

Interlake, Parkland and Nor-man. They found usage was significantly lower than the provincial average in the Central, Brandon, South Westman and Marquette RHAs<sup>14</sup>. The authors concluded that, despite Regional administration and delivery of Home Care, rates of home care use were very similar across the province. They noted that this finding was different than that found in other jurisdictions, and suggested that this may result from factors including: Home Care’s inclusion as a core program by Manitoba Health; province-wide assessment and eligibility criteria; and the use of public employees as both case managers and direct care workers [15].

As noted above, the need for Home Care services increases with age. Figure 2 illustrates the patterns of home care use in Manitoba among women and men aged 75 years of age and older in 2003/04. In that year, 29.2% of women and 22.4% of men in that age group received Home Care services.

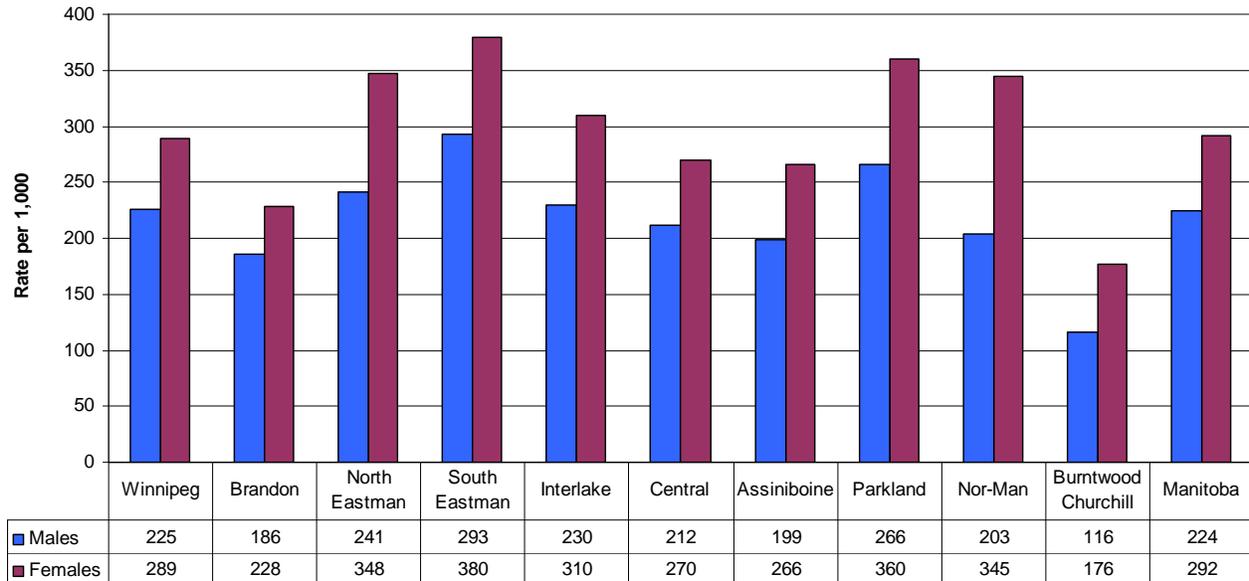
Given women’s longer average life expectancy, and increased likelihood of living with chronic diseases, it is not surprising that 68.2% of all home care clients 75 years of age and older were women, compared with 63% of all home care clients. Looking at it another way, in 2003/04, 21,815 Manitoba women and girls received Home Care services; 14,534 (66.6%) were 75 years of age and older [13]. In this same year, 6,768 men aged 75 years and older (53.5% of all male Home Care recipients) received services.

<sup>14</sup> South Westman and Marquette RHAs have since been merged to form the Assiniboine RHA. This analysis excluded Burntwood and Churchill RHAs because of the jurisdictional issues described above.





**Figure 2**  
**Home Care Clients 75+ by Sex**  
**Manitoba & RHAs 2003/04**



Source: Manitoba Health [13]

Women aged 75 years and older, living in the RHAs of South Eastman, Parkland, North Eastman and Nor-Man and Interlake were more likely than their counterparts in the rest of Manitoba to have received Home Care services, while those living in the Brandon RHA were the least likely to have received them. The factors influencing Home Care utilization are complex, including issues of access, as well as expectations and cultural beliefs about the provision of care to elderly family and community members. Other research has found that residents of the Brandon RHA had lower rates of Home Care use and higher rates of hospital use before death, suggesting that some Brandon residents were hospitalized in situations where other Manitobans would have been cared for at home[15].

### Use of Home Care by Manitoba Women with Disabilities

Data from Statistics Canada’s 2001 Participation and Active Living Survey show that about 14% of Manitobans reported living with some disability in 2001. Among adults 15 year of age and older 18.0% of females and 15.8% of males reported living with a disability<sup>15</sup> [18, 23].

<sup>15</sup> The Participation and Activity Limitation Survey uses the World Health Organization’s (WHO) framework of disability provided by the International Classification of Functioning (ICF). This framework defines disability as the relationship between body structures and functions, daily activities and social participation, while recognizing the role of environmental factors. For the purpose of PALS, persons with disabilities are those who reported difficulties with daily living activities, or who indicated that a physical, mental condition or health problem reduced the kind or amount of activities they could do.





Though the majority of Manitoba Home Care clients are elderly, the Home Care Program is vitally important for children and younger adults with disabilities. For those who require assistance with everyday activities, the Home Care Program is a key component of their independence. It is part of the larger portfolio of disability supports that includes such things as technical aids, transportation, support for independent living, job coaching, income assistance and housing. Without disability supports, including those provided by the Home Care Program, people with disabilities are prevented from fulfilling their social and economic potential [19, 20]. The Home Care Program provides care for adults with disabilities in their homes, in their workplaces and in educational settings. In Winnipeg, several nursing clinics for Home Care clients are available, enabling those who require nursing care to schedule these outside of their homes, for example, after work. For those who prefer, and are able, to directly manage their home care, the Self and Family Managed Care Program provides the same funding that would have been available for their care through the Home Care Program [21]. The majority of Self Managed Care program participants are women [20]. However, the tasks involved, including becoming the employer of those providing care, may be too daunting for many women with disabilities [20, 22]. Home care workers providing care in this way also lose the advantages of unionized, public sector employment, including pension contributions and other employment benefits.

Table 1 uses data from Statistics Canada’s Participation and Active Living Survey 2001 to highlight three key issues related to home care and people with disabilities – receiving help with everyday activities<sup>16</sup>, receiving help with the everyday activities from an organization or agency such as the Manitoba Home Care Program, and the extent to which people with disabilities report having unmet needs for help with everyday activities [18, 23].

<b>Table 1</b>				
<b>Persons Reporting Assistance/Need for Assistance with Activities of Daily Living 2001</b>				
	<b>Females 15 Yrs. &amp; Older</b>		<b>Males 15 Yrs. &amp; Older</b>	
	<b>Canada</b>	<b>Manitoba</b>	<b>Canada</b>	<b>Manitoba</b>
Persons with Disabilities	15.7%	18.0%	13.4%	15.8%
Persons with Disabilities Receiving Help with Activities of Daily Living	74.6%	72.0%	55.3%	48.9%
Persons Receiving Help Who Received Care from an Organization or Agency	23.1%	27.9%	19.8%	27.6%
Persons with Disabilities Reporting Unmet Needs for Help with Everyday Activities	26.2%	26.6%	18.1%	16.8%

Data Sources: Statistics Canada, Participation and Active Living Survey 2001 [18, 23]

<sup>16</sup> PALS defined everyday activities to include the following eight activities or tasks: (1) meal preparation; (2) everyday housework (e.g. dusting and tidying up); (3) heavy household chores (e.g. spring cleaning and yard work); (4) getting to appointments, running errands and grocery shopping; (5) looking after personal finances (e.g. making bank transactions or paying bills); (6) child care; (7) personal care (e.g. washing and dressing); (8) moving about inside the home/residence.





In both Canada and Manitoba, disabled women were much more likely than were their male counterparts to receive help with everyday activities – 72% of Manitoba women and 49% of Manitoba men. This may be due in part to women’s longer life expectancies, as the very elderly are more likely to require help with daily activities. Among people with disabilities who received help with everyday activities, Manitoba women and men were more likely than were their Canadian counterparts to have received this help from an organization or agency (including private companies, non-profit organizations and public home care programs). Interestingly, while across Canada men were much less likely to have received this care from an organization or agency, this difference was not present in Manitoba, where women and men were equally likely to have received formal home care. This suggests that one of the strengths of the Manitoba Home Care Program has been to create greater access for men in need of care, and to reduce their dependence on informal caregivers [18, 23].

However, Table 1 also points to the need for improvement in home care services for women. In both Canada and Manitoba, women were more likely than their male counterparts to report having unmet needs for help with everyday activities (27% of Manitoba women compared with 17% of men) [18, 23].

### Gaps in Service & Areas for Improvement

Manitoba has an excellent Home Care Program, providing access to services at no cost to about 22,000 girls and women in the Province. There are still gaps in service, however. Home care recipients and their families may feel that the services provided by the Home Care Program are insufficient. Those who can afford to purchase extra services may choose to do so, but this expense can cause financial hardship. For example, 27% of Manitoba women with disabilities reported having unmet needs for help with activities of everyday living [18, 19].

Current Home Care services are focused on meeting the needs of those with long or short term physical health limitations, and of those with intellectual disabilities. It is not designed to support those living with mental illnesses. This gap was one of the priority issues identified by the Romanow Commission [1]. Despite commitments by the previous federal government to the First Ministers, funding to expand home care programs to provide enhanced services to people living with mental illnesses has not been forthcoming. The Canadian Mental Health Association has noted that “in a comprehensive continuum of care, home care must address the needs of people with mental illness as well as the mental health needs of all home care recipients” [24].

Much of the care that Home Care clients receive is provided outside of the Program, by informal caregivers, care disproportionately provided by women<sup>17</sup>. Many informal caregivers are loving and supportive. However, the underlying assumption of the Home Care Program, that families can and will provide care, and that this is both desired by, and in the best interests of, those receiving care is not always the case. Relying on informal care by family members can exacerbate intergenerational conflicts in families, as for example, with young adults with disabilities striving for independence, who must still rely

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<sup>17</sup> As noted before, see Chapter Two for a discussion of women’s unpaid work and caregiving.





on their parents for personal care. It can place a strain on marital relations, when one spouse becomes dependent for personal care on the other. It can also create conflicts between elderly parents and their children, when caregiving roles are reversed. Challenging these assumptions will both reduce the burden on informal caregivers and strengthen relationships between those receiving and those providing care.

As Evelyn Shapiro stated in her synthesis of findings from the 45 Home Care pilot projects funded through Health Canada's Primary Health Care Transition Fund (1997-2001):

*It is time for both levels of government to implement a national home care program that treats all Canadians equally and equitably. The absence of a federal– provincial agreement on a national home care program means that where Canadians live, rather than what they need, determines access to services, residency requirements, the payment of user fees, and the continuity of service providers [25, p.ii].*

The absence of such a national program means that Manitoba has funded its Home Care Program without federal support. A properly funded, national home care program would enable Manitoba to enhance its current Program to better meet the needs of those who need home care services, and the family members and friends who are their informal caregivers.

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# Women's Use of Prescription Drugs

## Introduction

Pharmaceuticals represent the third largest health care expenditure in Manitoba, after hospital and physician services. Growing costs reflect increases in drug usage more so than increases in price of drugs [1]. In the context of increasing costs and the demographic reality of an aging population, sex-specific and gender-based analyses of drug prescription use may improve the efficiency of medical responses, helping to highlight areas of risk or unwarranted prescription of drugs that are less effective for women, or for men.

An analysis of women's prescription drug use is especially important in light of women's greater use of pharmaceuticals, women's longer life spans, which increase their exposure to drug treatments, and the greater degrees to which women's lives have come under medical management (e.g. pregnancy, fertility, and menopause). As well, women generally hold considerable interest in the safety and effectiveness of prescription medications in connection with their child-bearing role and as the major providers of care giving within the home and community. Canadian women's collective memory of the thalidomide tragedy, and more recent experiences with Hormone Replacement Therapy, underscore the importance of continued vigilance in identifying sex and gender-distinct effects and harms of drug use. Thus, a gender-based analysis of pharmaceutical use can also help to inform and involve women in the development of therapeutic approaches that are more appropriate to their health needs, risks and priorities.

## Manitoba Women's Prescription Drug Use<sup>18,19</sup>

Manitoba females are more likely to be prescribed medication than are males. Based upon data for 2003/04, the Manitoba Centre for Health Policy (MCHP) found a significantly higher prevalence of prescription drug use by females than males. Among females, 69.8% received at least one prescription compared to 61.1% of males (see Figure 1). This is consistent with findings from previous analyses of Manitoba data and from other Canadian studies [3, 4, 5].

**Pharmaceutical use** refers to the use of prescription drugs dispensed from community pharmacies. It excludes drugs provided to hospital patients.

**Prevalence of drug use:**

The percentage of Manitoba residents (all ages) who had at least one prescription dispensed in the 2003/04 fiscal year. As this includes any prescription medication, contraceptives are a common contributor to female but not to male rates. Values are age-adjusted to reflect the total population of Manitoba (males and females combined).

**Number of different drugs used:**

The average number of different drugs dispensed in 2003/04 to each resident who had at least one prescription dispensed in the year. 'Different' drugs means agents in different classes of the Anatomic, Therapeutic, Chemical (ATC) classification system. Thus, getting prescriptions for two types of antidepressants, for example, would not count as two different drugs [Fransoo et al. 2005].

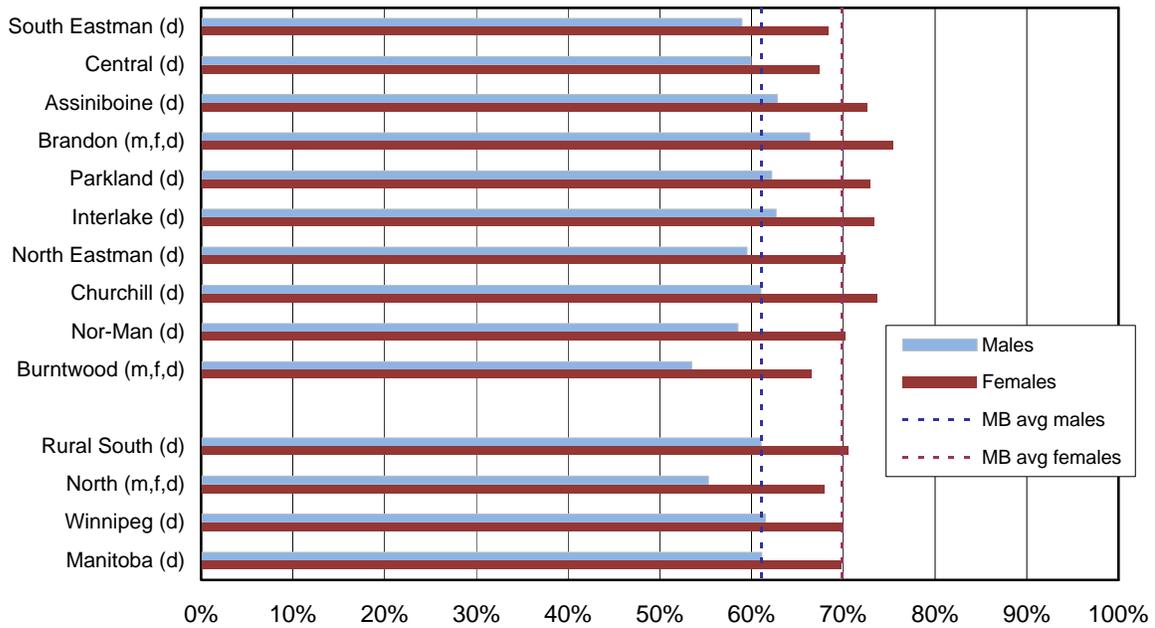
<sup>18</sup> Unless otherwise noted, data presented in this section were derived from Fransoo et al., Manitoba Centre for Health Policy, *Sex Differences in Health Status, Health Care Use, and Quality of Care*, 2005.

<sup>19</sup> The MCHP data are derived from the Drug Programs Information Network database (DPIN). Prescriptions dispensed from hospital pharmacies to patients are excluded [Fransoo et al, 2005].





**Figure 1: Pharmaceutical Use, by RHA, 2003/04**  
 Age-adjusted percent of residents with at least one prescription for any drug



'm' indicates area's rate for males was statistically different from Manitoba average for males  
 'f' indicates area's rate for females was statistically different from Manitoba average for females  
 'd' indicates difference between male and female rates was statistically significant for that area.  
 Source: Fransoo et al. , Manitoba Centre for Health Policy, 2005

Further comparisons of prescription drug use in Manitoba by sex and age (see Figure 2) showed that usage generally increased with age for both females and males. However, for females, usage escalated sharply in adolescence and young adulthood. By age 10, approximately 45% of girls and boys in Manitoba had received at least one prescription. For males, these rates changed very little until after age 25, whereas for females, by age 20, 75% of young women used one or more prescription drug. The large sex difference among young adults in part reflects contraception use by young women. However, higher drug use by women continued well beyond reproductive years. At ages 50 and 60, when 79% and 85% of women took some prescription medication, women's rates still exceeded men's by nearly 13% and over 7%, respectively. By age 80, women and men had similar rates of prescription drug use.

The number of medications prescribed per individual also increased with advancing age. Beginning at age 15, women of all ages were prescribed a greater number of drugs than men, though sex difference diminished somewhat after age 60. By age 80, nearly all women and men use pharmaceuticals, and the elderly were prescribed an average of seven or more drugs within the year.

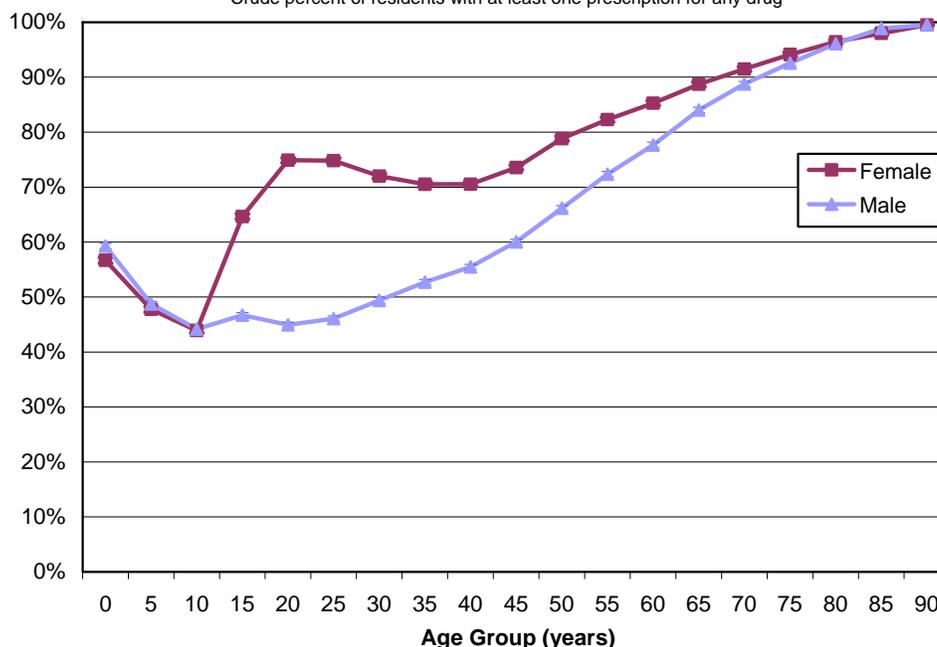
Regional comparisons showed quite a consistent pattern (see Figure 1). For all regions, females had a significantly higher rate of prescription use than males. Among females (and among males), those residing in the North, specifically within the Burntwood RHA, showed significantly lower rates of prescription drug use compared to the provincial female population, which is likely to reflect underreporting in the





**Figure 2: Pharmaceutical Use  
by Age and Sex, 2003/04**

Crude percent of residents with at least one prescription for any drug



Source: Fransoo et al. , Manitoba Centre for Health Policy, 2005

region<sup>20</sup>. As well, females (and males) in the Brandon region had higher than average rates of prescription drug use. Interestingly, Metge and colleagues found no significant difference in prescription drug use by urban-rural residence, despite lesser availability of health services in rural areas [3].

The MCHP analysis also demonstrated weak but significant differences in pharmaceutical use by income (area-level income). Higher rates of illness are found in low income areas, yet a lower proportion of residents of low income areas received one or more prescription, despite the Pharmacare program reducing financial barriers for those with low income.

The Manitoba data also show that a greater number of different prescription drugs<sup>21</sup> are prescribed to females than males (see Figure 3). On average, females were prescribed 4.0 different classes of medication, whereas males were prescribed 3.6 drugs, which represented a statistically significant difference. Compared to an earlier study [6] the number of drugs prescribed per user appears to have increased slightly between 1999/2000 and 2003/04.

<sup>20</sup> Prescription drug use in remote communities is subject to underreporting, as nursing stations dispense some medications without individual prescriptions being entered into the system. Approximately 20% of prescription drugs used by northern residents are not entered into the DPIN database [Fransoo et al, 2005].

<sup>21</sup> The average number of prescription medications is age-adjusted to allow a fair comparison between females and males and across regional populations, which may differ in age structure.

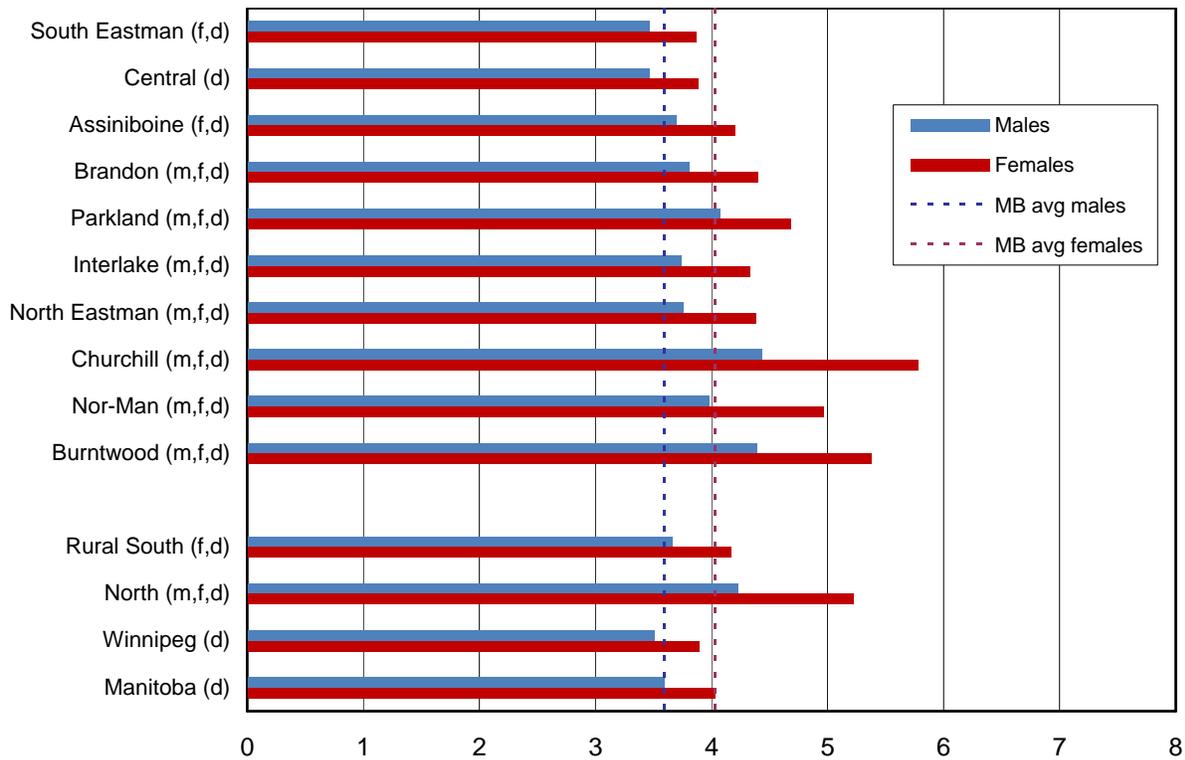




Women and men living in northern regions (Churchill, Burntwood and Nor-Man RHAs) were more likely to receive multiple prescriptions than were residents of other regions, despite underreporting of prescriptions in these regions. Women in the North received, on average, more than five prescriptions within the year compared to the provincial average for women of four prescriptions. A small, but significant difference was also found in the number of medications dispensed to women in the Rural South.

**Figure 3: Number of Different Drugs Per User, by RHA, 2003/04**

Age-adjusted average number of different drugs used per resident, with one or more prescriptions



'm' indicates area's rate for males was statistically different from Manitoba average for males  
 'f' indicates area's rate for females was statistically different from Manitoba average for females  
 'd' indicates difference between male and female rates was statistically significant for that area  
 Source: Fransoo R, Manitoba Centre for Health Policy, 2005.

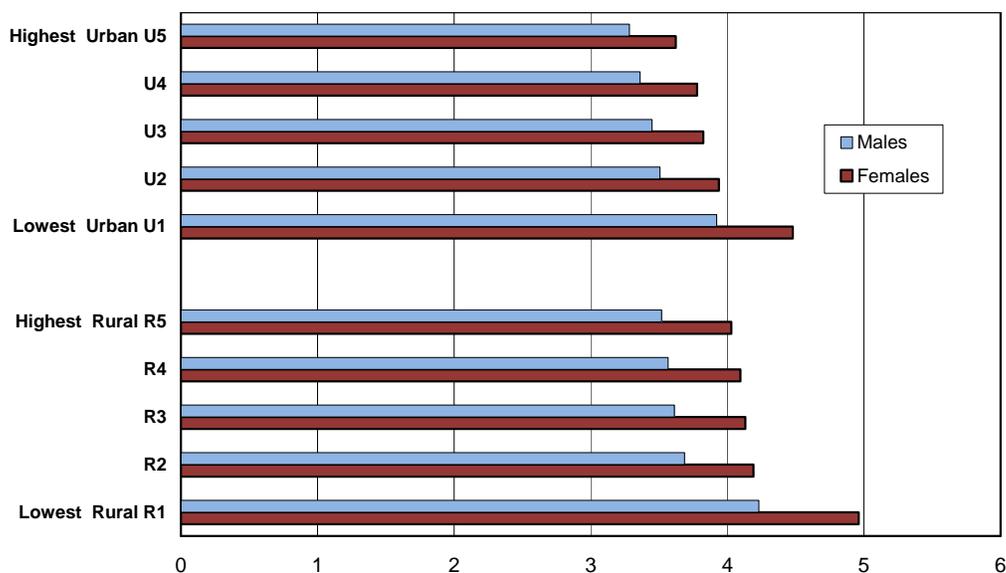
Although residents of low income areas were less likely than those in higher income areas to have been dispensed any medication, low income Manitobans who used any medications tended to take a greater number of prescription medications than residents of higher income areas (see Figure 4). Women living in rural, low income areas used nearly five drugs within a year, on average, which far exceeded the number of prescription drugs taken by rural women in the highest income group, as well as low income women in urban areas.





**Figure 4: Number of Different Drugs Per User, by Income Quintile, 2003/04**

Age-adjusted average number of different drugs used per resident, with one or more prescriptions



Linear Trend Test Results

Female: Urban: Significant ( $p < .001$ ) Rural: Significant ( $p < .001$ )

Male: Urban: Significant ( $p < .001$ ) Rural: Significant ( $p < .001$ )

Source: Fransoo R, Manitoba Centre for Health Policy, 2005.

Another common measure of prescription drug usage is the defined daily dosage (DDD) rate of drug use in a population, though this measure was not employed by the MCHP. The measure goes beyond a count of prescriptions and estimates the number of days of drug treatment an individual in the population would receive in a year. By this measure, Metge and colleagues showed that Manitoba women consume, on average, about one-third more doses of medication daily than men (175 versus 129 DDD in 1999/2000) [1].

## Women and Selected Prescription Drugs

Women and men differ in their use of some of the most commonly prescribed medications. The higher rate of prescription of psychotherapeutic drugs to women has long been a concern, and clearly affects women in Manitoba. For the 2003/04 fiscal year, females in the province were twice as likely as males to have two or more prescriptions for antidepressants<sup>22</sup> (8.6% versus 4.5%) and the two-fold difference was found in all RHAs and districts [2]. The sex difference in prescription of antidepressants may stand to reason, as Manitoba women also have twice the rate of treatment for depression as men (23.6% versus 12.6% for population aged 10 and older, 1997/98-2001/02) [7]; (also see Chapter Five, Depression). More concerning, perhaps, is that rates of prescription for antidepressants have also been steadily increasing. In

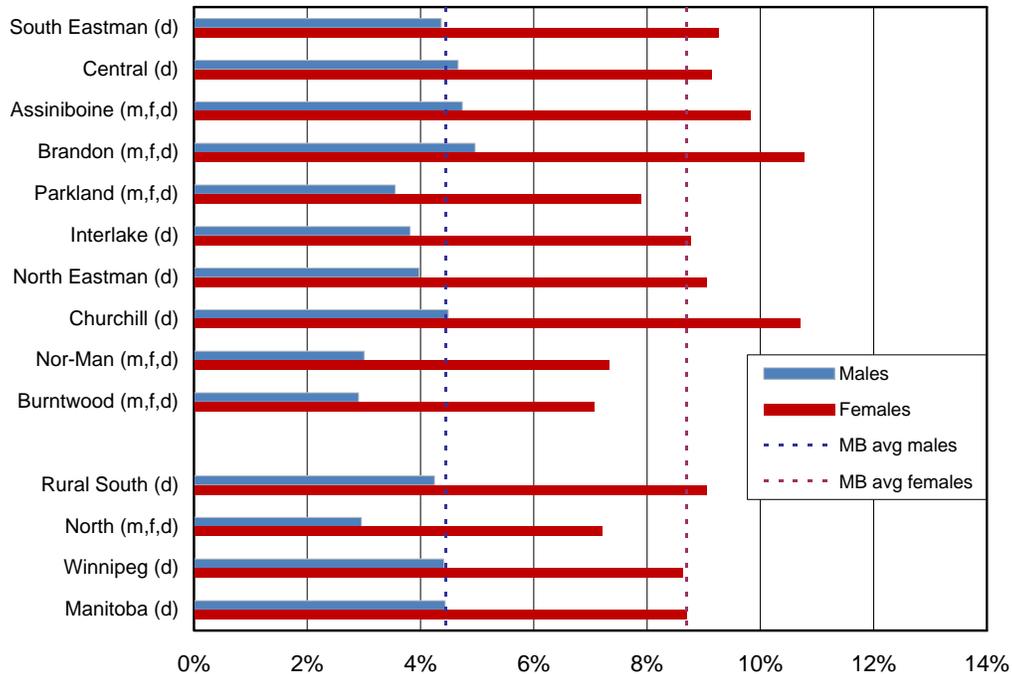
<sup>22</sup> Selective serotonin reuptake inhibitors (SSRIs) like paroxetine (Paxil) and fluoxetine (Prozac) are most frequently prescribed for depression [Martens 2004]. [7]





Manitoba, for the female and male population combined, age-adjusted rates have increased from 4.3% in 1996/97-1997/98, to 5.5% in 1999/2000-2000/01, to about 6.5% in 2003/04 [6, 2]. As well, depending on the type of antidepressant prescribed (to be discussed later in the chapter), it may be concerning that 3.6% of 15 year old girls and 1% of 10 year old girls in Manitoba are prescribed antidepressants.

**Figure 5: Antidepressant Use by RHA, 2003/04**  
Age-adjusted percent of residents with two or more prescriptions for antidepressants



'm' indicates area's rate for males was statistically different from Manitoba average for males  
 'f' indicates area's rate for females was statistically different from Manitoba average for females  
 'd' indicates difference between male and female rates was statistically significant for that area  
 Source: Fransoo R, Manitoba Centre for Health Policy, 2005.

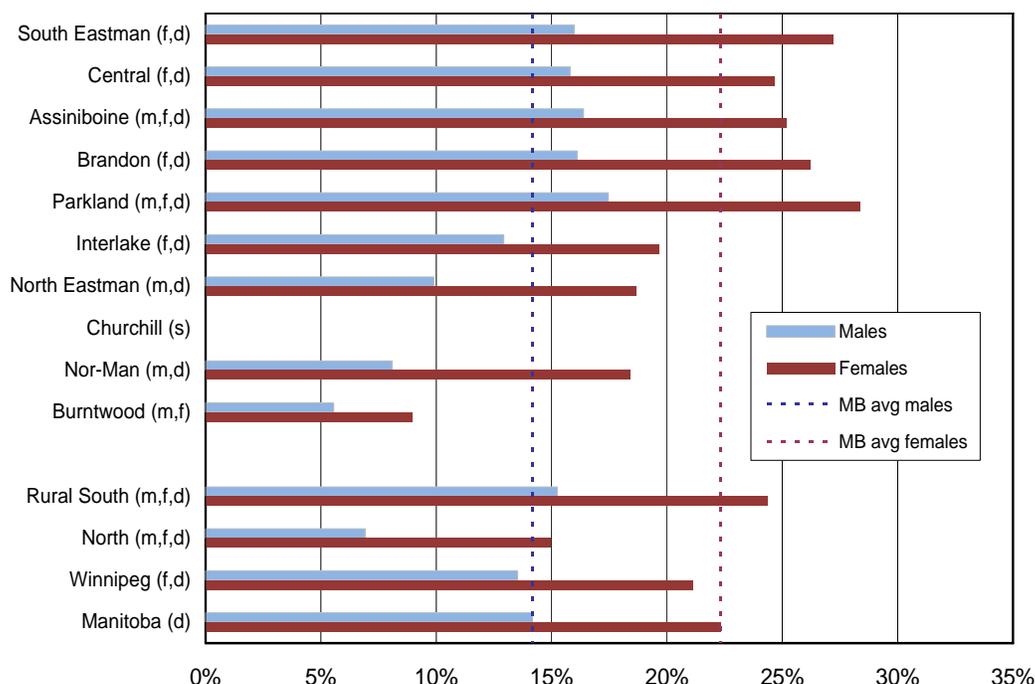
**Benzodiazepines** are a class of drugs that have a hypnotic and sedative action, used mainly as tranquilizers to control symptoms of anxiety. They are not recommended for use by older adults, as they have been associated with several adverse effects in this population (discussed later in the chapter). Still, many senior women continue to be prescribed benzodiazepines. According to the MCHP, more than one-in-five (22.3%) Manitoba women age 75 or older, who were not living in personal care homes, were given at least two prescriptions or more than a 30 day supply of benzodiazepines in 2003/04. This far exceeded the rate of prescription for men of the same age (14.2%). Regional comparisons showed the highest rate of benzodiazepine prescription among elderly women occurred among residents of the Rural South (24.36%) [2]. These findings are generally consistent with the results of other Canadian and international studies that have found that 20-50% of women over age 60 may be prescribed benzodiazepines, and that long-term use increases with age [8].





**Figure 6: Community-Dwelling Seniors with Benzodiazepine Prescriptions by RHA, 2003/04**

Crude percent of non-PCH seniors with 2+ prescriptions or greater than a 30 day supply, age 75+



'm' indicates area's rate for males was statistically different from Manitoba average for males  
 'f' indicates area's rate for females was statistically different from Manitoba average for females  
 'd' indicates difference between male and female rates was statistically significant for that area  
 Source: Fransoo R, Manitoba Centre for Health Policy, 2005.

Manitoba men are more likely to receive a prescription for an **Angiotensin Converting Enzyme (ACE) Inhibitor** than women. ACE inhibitors are primarily prescribed to treat high blood pressure, though they are also prescribed to patients with congestive heart failure, those experiencing a heart attack, and for diabetes. Rates of ACE inhibitor use<sup>23</sup> were 10.0% for men and 8.7% for women, a seemingly small difference but significantly higher rate for men than women. However, usage was much higher among residents of the rural North, particularly for women, among whom a 20% rate of ACE inhibitor use was nearly twice that for Manitoba women overall, and significantly higher than rates for men in the same region (17%). In the Burntwood region, rates of ACE inhibitor use were consistently higher for females than males and exceedingly high among women in some districts within the region (e.g. 45% of females in Island Lake)<sup>24</sup>. The result is generally consistent with high rates of diabetes and hypertension reported for First Nations people, who make up a large proportion of the population in many northern districts, and particularly for First Nations women. ACE Inhibitor use is strongly associated with income for women and men in both urban and rural areas [2], and this association appears stronger for women than for men (see also Chapter Five, Diabetes and Cardiovascular Disease).

<sup>23</sup> Rates of ACE inhibitor use for women and men are age-adjusted and calculated for residents aged 20 and older, based on at least one prescription within the 2003/04 fiscal year.

<sup>24</sup> Rates represent small numbers in these populations, which may fluctuate considerably from year to year.





**Statins**, which are used to lower blood cholesterol, are more often prescribed to Manitoba men than to women<sup>25</sup> (10% and 7%, respectively). Men's higher rates appear consistent with their greater risks for high cholesterol and cardiovascular disease. As well, in light of research that has shown less clear benefits for women, and some indications of adverse effects [9], lower statins prescription rates for women would seem appropriate. However, in Manitoba's northern regions, there is no significant difference in the rate of prescription for statins to men and women (12.7% versus 12.8%). Interestingly, the relationship between income and statin use is the reverse in women compared to men. Among women, in both urban and rural areas, there is a strong relationship between income and statin use, women in low income areas having the highest rates of use. The opposite is seen among urban men, among whom residents of high income areas have the highest rates of use, while no relationship was found among rural men. This pattern seems consistent with results for body weight (overweight being a risk factor for hypertension), where men in high income groups were more likely to be overweight than men in lower-middle income groups, whereas the opposite was found for women (see Chapter Three, Healthy Body Weight).

Among Manitoba women aged 40 and older, both the prevalence and the incidence of **hormone replacement therapy** have declined in recent years. That is, there are both fewer current users and fewer new users in 2002/03 than in 1997/98. The proportion of Manitoba women receiving HRT fell from 13% to 10.8% over the period, a significant decline. The rate of first time use decreased dramatically over the period, with the rate decreasing by more than half from 3.4% in 1997/98 to 1.5% in 2002/03. Notably, the decline in new HRT use was more pronounced among younger than older women (i.e. the largest declines were seen for women aged 50) [2]. These trends in HRT use are understood to have occurred in response to the findings of the 2002 Women's Health Initiative study, which found that the potential harms associated with HRT outweighed their benefits. For many years, hormone therapy had been prescribed to post-menopausal women in the belief that it would prevent heart disease and cancer of the uterus, slow the progression of osteoporosis, and alleviate symptoms of menopause. The WHI study found that, on the contrary, women who took combination HRT (estrogen and progestin) therapy had an elevated risk of stroke and breast cancer [10]. The findings of the MCHP analysis are consistent with results of a report from the Canadian Institute for Health Research, which found that HRT use among senior women in five Prairie and Atlantic provinces<sup>26</sup> declined by 17% per year between 2001/02 and 2006/07, and by 30% per year in the two-year period following publication of the WHI 2002 study [11]. (See "Menopause" in Chapter Four.)

## Accounting for Women's Use of Prescription Drugs

Explanations have been sought for women's overall greater use of prescription drugs compared to men, some addressing women's high rate of prescription for psychotropic drugs in particular. As observed by Payne and colleagues, most explanations fall into a few types of hypotheses [4]. Firstly, women may be prescribed more medications as a general consequence of their more frequent visits to physicians and their

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<sup>25</sup> Rates of statin use for women and men were age-adjusted and calculated for residents aged 20 and older, based on at least one prescription for statins within the 2003/04 fiscal year.

<sup>26</sup> Included Manitoba, Saskatchewan, Alberta, New Brunswick and Nova Scotia.





greater likelihood of having a regular physician, which may increase their access to prescription drugs [4]. Currie has argued that, compared to men, women have more distinct physiological events that bring them to doctor (menstruation, pregnancy, menopause, lactation). Moreover, the pharmaceutical industry has medicalized women's life events by redefining them as conditions requiring the care of physicians and drug therapy (for instance, defining menopause as a chemical "deficiency state" in women) [12].

A study by Payne et al. found that, for both women and men, medication use increased with the number of visits to physicians. Interestingly, the ratio of female to male prescription use was highest when the least medication use might be expected, that is, when few visits had occurred (F:M ratio = 1.89 for 0-1 visit; 1.01 for 5 more visits) [4]. Thus, it appears that factors other than contact with the health system account for higher medication usage by women.

Secondly, women's higher rate of illness, chronic disease, and particularly pain and musculoskeletal conditions, than men is offered in explanation for sex differences in prescription rates [4]. An analysis of health survey data for 1998/1999 found that among the seven most common types of medications<sup>27</sup> taken by males and females (age 12 and older) in the previous month, a larger percentage of females reported the use of each, and the greatest difference was found for the use of pain relievers (71% females versus 58% of males). The sex difference was attributed to the greater prevalence of painful conditions such as arthritis and migraine among females, as well as social norms that encourage males to not acknowledge pain [5].

According to Metge and colleagues, the sex difference in prescription usage is largely accounted for by women's increased use of: diuretics (for high blood pressure), estrogens (oral contraceptives and hormone replacement therapy), thyroid replacement, anti-infectives<sup>28</sup>, nonsteroidal anti-inflammatory drugs (NSAIDs - for inflammation, pain and fever), opioids, such as morphine (for pain), anxiolytics (for anxiety), hypnotic/sedatives (for anxiety and as a sleep aid) and antidepressants (for depression and as a sleep aid) by females. Specifically, females are prescribed anti-infectives 1.5 times and anxiolytics and antidepressants twice as often as males from the mid-teenage years to 65 years of age [3]. Presumably, women's greater vulnerability (whether biological or gender-based) to some conditions for which these drugs are prescribed (e.g. higher rates of arthritis, thyroid disease, sexually transmitted infections, depression and anxiety) influences their higher rates of usage, though other factors, such as prescribing behaviour or patient preference may also play a part.

Women's socialized roles, social status, and life and work circumstances are also important contributing factors in their levels of prescription drug use, particularly relating to their mental health and higher rates of psychotropic drug use relative to men. Research has long explored the influence of women's social conditions on their greater use of psychotropic drugs. In the mid-1970s, a study conducted in Winnipeg, which surveyed women and reviewed prescription data, found a relationship between the stressful work and home life of women and their two-fold greater rate of prescription drug use. Other research followed up in this area and found that the disproportionately high rates of prescription for mood modifying drugs

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<sup>27</sup> Includes pain relievers, cough/cold remedies, stomach remedies, blood pressure medications, allergy medications, antibiotics, and asthma medications.

<sup>28</sup> Anti-infective is a general term that encompasses antibacterials, antibiotics, antifungals, antiprotozoans and antivirals.





to women, particularly older women, could be attributed to social isolation, poverty, a lack of alternatives, and family crises, conditions which are more likely to affect women [13].

Women's social status is acknowledged as an important factor in women's mental health and service needs worldwide. The World Health Organization recognizes that mental disorders affect women disproportionately, often triggered by risk factors such as gender-based violence, socioeconomic disadvantage, low income and inequality of income, and primary responsibility for caring for others [14]. Canadian women commonly experience high levels of stress stemming from the 'double workday' of paid labour and domestic work carried out by many women, a lack of time for rest or play, single parenthood, and a lack of control in the workplace [8, 12]. Poverty disproportionately affects women, and factors large in the mental health of women. Conditions of poverty increase women's vulnerability to anxiety, depression and sleep problems for which they may be prescribed benzodiazepines (tranquilizers) or sleeping pills [8]. A study of social factors contributing to the use of medications identified several key factors that were predictive of depression among women, including: previous depressive episodes, feelings of being out of control or overwhelmed, chronic health problems, traumatic events in childhood or young adulthood, lack of emotional support and a low sense of mastery [4].

Research has shown that women's greater contact with the health service system and higher rates of mental health disorders do not fully account for their greater use of prescription drugs. A US study<sup>29</sup> conducted in 1975 found that physicians were more likely to prescribe medications to women than to men, despite male and female patients presenting with the same complaint or diagnosis. The study concluded that differences in prescribing behaviour could not be accounted for by differences in the health conditions of women and men. The remaining sex difference may be accounted for by gender bias in physician prescribing behaviour, as well as by patient expectations and requests for prescriptions [4]. In 1998, another study found that women's visits to a physician were 55% more likely to result in a prescription for a psychotropic drug than were men's interactions with physicians, a significant difference which was not accounted for by other predictive factors, including diagnosis and physician specialty [15]. Payne and colleagues also demonstrated a gender influence on medication use that was distinct from and contrary to the influence of health status. The authors found that the highest female to male sex ratios occurred when the likelihood of medication use was the lowest. When chronic disease and pain were absent or self-rated health was perceived as excellent, women had higher rates of medication use relative to men than when men and women in poor health were compared.

Presumably, patient gender affects both patient and physician behavior, and carries influence throughout a range of individual service seeking behaviors and health care interactions which lead to prescription drug use. For example, we know that compared to men, women are more likely to visit a doctor. However, they also are more likely to bring psychological concerns to the doctor and to describe their problems in psychological or social terms. Conversely, men tend to handle stress more often outside of the medical system, for example with the consumption of alcohol. Furthermore, when women visit a doctor, they are

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<sup>29</sup> Update to McKinley





more likely than men to be diagnosed with a mental health conditions, such as psychoneurosis or anxiety and to be prescribed medications [12]. Physicians are known to prescribe benzodiazepines and sleeping pills to help women cope with work or family stress, pre-menstrual syndrome, grief, and adjustment to life events such as childbirth and menopause, as well as for chronic illness and pain [8].

## Questioning Levels of Prescription for Psychotropic Drugs to Women

For many women affected by serious mental health disorders, psychotropic drugs, including antidepressants and anxiety medications, bring much needed relief, restore the quality of life and help to prevent suicide and self-harm. Yet, the evidence from population health research and community-based knowledge has raised concerns about whether the level of prescription to women is appropriate and warranted.

Community health and women's health advocates have been critical of physicians' over-prescription of drugs, especially for natural life processes and depression. Harding hypothesizes that prescription represents a method of social control. That is, prescribing psychotropic drugs has the function, if not the intent, of managing social and economic stresses between generations, sexes and economic classes in society [13]. In this sense, symptoms of mental health conditions are a product of the stress inherent in power imbalances and social change, the solution for which is controlled by those who hold authority in society. The influence of a profit-motivated industry on prescribing and consumer behaviour is often the unacknowledged factor in women's rates of prescription drug use. Psychotherapeutic drugs (primarily anti-depressants, benzodiazepines and antipsychotics) are among the most profitable for pharmaceutical companies, and women are a heavily targeted "market" for these drugs. US research has found that direct-to-consumer advertising targets women more than twice as often as men and results in increased prescription drug use by women, as well as large market gains for the products [8].

Currie contends that the influence of the pharmaceutical industry extends to how we decide what constitutes disease and its appropriate treatment. Although depression was once considered to be largely a self-limiting condition, in that only a small proportion of cases were considered to require treatment, through the influence of the pharmaceutical industry, the condition has been redefined to include milder forms of depression and moods that are now recommended for treatment. Furthermore, the pharmaceutical industry has long promoted the idea that women's emotional distress is rooted in a biological disorder and, more recently, has promoted the theory that depression is caused by a lack of serotonin, which can be corrected with drug therapy, despite scientific evidence that refutes this as the cause. Thus, the ideology that guides theory and practice with regard to depression has seen a dramatic shift over the past 50 years, from a psychotherapeutic approach to the pharmacological approach of biological psychiatry [12].

While there has been a diversification in central nervous system drugs and shifts from prescribing older to newer varieties of these drugs (e.g. from tranquilizers to sleeping pills, to serotonin uptake inhibitors [SSRIs]), there has been no fundamental change in how emotional and social health problems are addressed [13]. Lippman has raised a largely unaddressed question; that is, whether women may benefit more from non-drug or holistic therapies than from pharmacological therapies [16]. Canadian culture has





largely accepted drug therapies as efficacious treatments and appropriate priorities for funding. Individuals are perceived as having responsibility to manage disease and risk of disease through medication, though this has deflected attention from upstream causes of illness. Cheaper and safer prevention methods are available but receive little support, and the role of structural determinants of health (poverty, social exclusion, stress from multiple roles) is often not assessed [16]. As one example, antidepressants (e.g. the SSRIs) are the most common therapy recommended by physicians for depression (81% of physician visits for depression), and are also prescribed for anxiety, panic attacks, obsessive compulsive disorder, “pre-menstrual dysphoria” and “social anxiety disorder”. Although the cost of antidepressants has escalated (e.g. in Ontario, a 347% increase in cost from 1993 to 2000), in large part due to the increased cost of SSRIs, other interventions with proven success in reducing depression, such as regular exercise, group or peer support, cognitive therapy, and nutritional improvements, are not adequately supported and funded by government [12].

## Women and Prescription Drug Related Harms

Adverse reactions to prescription drugs increase the risk of morbidity and mortality, and are associated with added costs through additional drug use, hospitalization and physician visits. Sex is a significant risk factor for adverse drug reactions, which occur in women at a higher rate in both hospital and community settings. Clinical research has shown a 1.5- to 1.7-fold greater risk of adverse reaction to drugs among female patients as compared with male patients. These differences appear to be only partly due to women’s more frequent use of prescription drugs. As one illustration, in the U.S., eight of 10 prescription drugs withdrawn from the market in the 1997 to 2001 period had greater health risks for women than for men. For four of these drugs, the risks could not be attributed to greater use by women. While these results led to conclusions that greater health risks for women may be due to a degree of physiological susceptibility among women [17], biological factors do not operate in isolation—social factors and medical practice also influence women’s risks.

Simply by virtue of women’s greater exposure to multiple prescriptions, women have a greater risk for harms resulting from drug interactions. As well, women consume, on average, about a third more doses of medication daily than men [1] and, due to a longer life span associated with more chronic disease, may be exposed to a longer duration of drug therapy than men. Such exposures contribute to risk, as most drug therapies are associated with adverse effects as well as benefits.

As women predominate in older age groups in the population, and older individuals are also vulnerable to adverse drug effects, women make up a disproportionate number of those in the population who experience harmful effects of pharmaceutical use. Research has demonstrated that elderly women generally have the greatest risk of adverse drug reactions. A study conducted in 2002 found that 28% of visits to hospital emergency departments were drug related, 70% of which were preventable, and that women and elderly individuals were at greatest risk [18]. In part, older women’s greater risks are due to sex differences compounded by age-related changes in the way drugs are processed by the body. For example, older persons are more sensitive to drugs that affect the central nervous system [19, 20]. Research has demonstrated that elderly women are at the greatest risk from drug interaction and accumulation problems involving mood-modifying and other CNS prescriptions [13].





Older adults are at risk for adverse drug effects also due to the more complex drug therapies they receive. Based on the MCHP data reviewed above, we can expect Manitoba women aged 75 and older to be taking six different prescription drugs within a one year time frame. One in four women of this age takes statins or ACE inhibitors, and one in six takes anti-depressants [2]. The data speak plainly of the degree of pharmaceutical interventions that women of this age experience—certainly indicative of good access to drug therapies, though they also suggest a greater potential for the health ‘costs’ or harms associated with these benefits.

Inappropriate prescription practices play a role in the risks to seniors and senior women. A study of drug claims made by seniors (age 65 and older) in Manitoba, Alberta, Saskatchewan, and New Brunswick from 2000 to 2006 focused on several drugs identified by Dr. Mark H. Beers as commonly, but potentially inappropriately prescribed to seniors due to an elevated risk of adverse effects—drugs on the so called “Beers list”. In Manitoba, the age-sex standardized rate of Beers list drug use among seniors was 25.2% and 20.7% of seniors were prescribed the most high-risk Beers drugs<sup>30</sup>. In all four provinces, chronic use<sup>31</sup> of Beers drugs was higher for females than males (e.g. in Manitoba 14% females and 12% males). Even when drug claims for estrogen, only prescribed to females, were eliminated from the analysis, senior women were still more likely than their male counterparts to make repeated claims for drugs on the Beers list [18]. However, research indicates that older women’s usage of potentially harmful drugs may respond well to improved health education. In the 2003 WOW (What Older Women Want) Survey, which gathered the views of older (age 55-95) women living in 10 Canadian provinces, most survey participants (88%; n=2600) identified the need for better information about their prescription drugs as their top priority for the improvement of health care delivery to older women [21].

Somewhat higher rates of prescription for Beers list drugs (28%) have been recorded for seniors living in nursing homes [22]. Other studies have found prescribing practice in nursing homes and hospitals to conflict with known risks to seniors. One study observed that within one year of admission to nursing homes, nearly one-quarter of residents with dementia were prescribed an antipsychotic to control behaviour, despite limited evidence of benefit and an increased risk of death (up to 60%) associated with their use. As well, nearly half of elderly patients prescribed benzodiazepines to help them sleep after discharge from hospital are still taking the drugs six months later, despite the known risks for mental confusion and injuries from falls and motor vehicle accidents [22], as well as a risk of dependency within as little as one or two months of use [8]. Research on the hospital safety and harms has found a higher incidence of in-hospital hip fractures among the “oldest of the old”, women, stroke patients, and those taking certain medications which may lead to dizziness [19]

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<sup>30</sup> These include conjugated estrogens, amitriptyline, oxybutynin, temazepam, and digoxin.

<sup>31</sup>“Chronic users” are defined as those seniors who made claims for a drug from the Beers list on a regular basis. For those making claims in Alberta, New Brunswick and Manitoba, chronic users claimed for a minimum of three prescriptions and a minimum of 100 solid dosage units in a given year, for any Beers drug. For those who made claims in Saskatchewan, two prescriptions was the minimum requirement.





For over 40 years it has been well known that benzodiazepines are highly addictive and have profound effects on the brain and body at therapeutic doses, particularly if they are prescribed for more than several weeks. It is estimated that 3 to 15% of any adult population is using and may be addicted to this class of drugs, and among this group, 60 to 65% are women. Recent data suggest that not only are women more likely to be prescribed benzodiazepines compared to men, but they are also more likely to be prescribed these drugs for longer periods of time [8]. Despite the documented harmful effects of benzodiazepines, they are still prescribed to Canadian women. Benzodiazepine dependence has been recognized as a serious problem among elderly women. In the elderly, benzodiazepine use causes confusion, cognitive decline and dementia. Long term use is linked to falls and fractures. Canadian and international studies indicate that 20 to 50% of all women over the age of 60 may be prescribed benzodiazepines or sleeping pills and that long-term use increases with age. A BC study showed strong association between falls in elderly women and prescriptions for anxiety medications, sedatives and hypnotics, of which 90% are benzodiazepines [8]. In 2000, one in three First Nations<sup>32</sup> women over 40 in western Canada was prescribed benzodiazepines.

In response to information on the harms of benzodiazepines, rates of prescription for SSRIs have grown dramatically. However, current literature also indicates that adverse reactions to SSRIs are common, and some may be serious. Spigset found the most common problems arising from SSRI use were neurological (22%), psychiatric (19.5%), gastrointestinal (18%) and dermatological (11.4%). Furthermore, women experienced a higher rate of the most harmful effects from SSRIs than men. Among the most serious harms recorded were the elevated risks for suicide (more than double of the relative risk) and suicide attempts for those on SSRIs when compared to those prescribed older antidepressants or not receiving treatment. Problems of withdrawal, worsening depression, appetite changes, insomnia and electric shock sensations have also been reported by patients using SSRIs. They can also be harmful to pregnant women or their babies and contribute to falls and fractures for the elderly [8]. The risks to children and youth are particularly great. In 2004, based on the results of clinical trials, Health Canada issued a warning that many SSRIs<sup>33</sup> posed a risk to patients under the age of 18 being treated for depression, due to elevated risks for suicidal behaviour. At that time, approximately 3 million Canadian children were taking antidepressants. In Manitoba, for the five year period ending 2001/02, 1,075 females and 502 males (1.7% and 0.76% of their respective populations) aged 12 through 19 were given at least one prescription for a SSRI, and approximately 83% of prescriptions were ascribed to SSRIs known to increase suicide risks [7]. According to the MCHP data presented above, approximately 1-4% of females under the age of 18 were prescribed antidepressants in 2003/04 [2], though the proportion receiving high risk SSRIs was not reported.

Pharmaceutical use poses hazards to women in pregnancy, to their fetus or breast-feeding child, as well as having long-term health impacts on their offspring. The disastrous effects for Canadian women of such

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<sup>32</sup> Refers to those individuals who hold Treaty Indian status or are a Registered Indian as defined by the Indian Act of Canada, and/or who are members of an Indian Band or First Nation.

<sup>33</sup> This did not include fluoxetine, i.e. Prozac.





drugs as thalidomide and the DES (diethylstilbestrol) hormone in the 1960s, which resulted in birth defects and serious adverse effects on women's reproductive health, have been well documented [17], and through the support of women's and community health movements, have raised public consciousness about potential risks of pharmaceuticals. Despite the decreasing prevalence of smoking and alcohol consumption during pregnancy over the last decade, there is some indication that pregnant women are increasingly being exposed to medications, following a societal trend of increasing pharmaceutical use in Canada. An analysis of survey data<sup>34</sup> found that Canadian women of reproductive age and pregnant women are consuming increasing amounts of medications, though the increase is largely due to the consumption of non-prescription, over-the-counter medications. In Manitoba, 31% of pregnant women had used a prescription medication and 38% had used a non-prescription medication within the previous month (not significantly different than Canadian rates of 27% and 33%). Women with a chronic condition were significantly more likely to take prescription and non-prescription drugs during pregnancy. The study's results suggested that trends in chronic disease and increasing average age of women at the birth of a child may be key factors that interact to contribute to the increasing use of medication by pregnant women [23].

The use of oral contraceptives (OC) is so common among Canadian women that, in common language, they are referred to as 'the pill'. Their widespread use and past harms associated with earlier contraceptive products have raised concerns about their safety. Many epidemiological studies have been undertaken, most focusing on an association between oral contraceptives and cardiovascular disorders and an increased risk of death. Decreases in the dosage of estrogen in oral contraceptives appears to have improved their safety, though some research still indicates a small increased risk of heart attack and stroke for users [24]. There is also evidence that oral contraceptives may be inappropriately prescribed to Canadian women with other risk factors for cardiovascular disease, for whom the risks of OC are compounded. For example, there is substantial evidence that smoking combined with oral contraceptive use sharply increases the risk of cardiovascular and cerebrovascular mortality, yet Canadian survey research shows that 34% of oral contraceptive users<sup>35</sup> smoke, a significantly higher proportion than non-users (30%). Other studies from Switzerland, Italy and the United States have also found smoking to be more common among users of oral contraceptives than non-users. The Canadian research also found that, although women aged 35 to 49 were less likely to smoke and use oral contraceptives (17% versus 30% for non-users), OC users in this age group were more likely to smoke heavily (at least 15 cigarettes per day). According to at least one medical opinion provided to the authors, "the combination of oral contraceptive use with smoking, despite clear evidence of the risks involved, signals an important shortcoming of medical care" [24]. It may also call into question the effectiveness of public health efforts to inform women of these risks.

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<sup>34</sup> Analyses were performed on 1996/1997 National Population Health Survey (NPHS) data and 2003 Canadian Community Health Survey (CCHS) data. The surveys covered the household population of the ten provinces, but excluded the territories. Both surveys asked women whether they were pregnant at the time of the interview and about their use of medication in the previous month. Information on the specific medication used were not collected. As the data are based on self-reports, the results may be subject to recall error.

<sup>35</sup> The source of the data is the 1996/1997 National Population Health Survey. Women aged 15 to 49, from 10 Canadian provinces, were asked whether they'd used oral contraceptives in the month preceding the survey.





## Prescription Drugs in the Environment

Women's vulnerability to adverse drug effects extends to environmental risks as well. Trace amounts of pharmaceuticals, including antibiotics, painkillers, anti-inflammatories, hormones, and chemotherapy drugs, to name a few, have been detected in Canadian waterways and tap water in some communities. While concentrations are low, chronic exposure and their concentration in the food chain may pose risks, which may include resistance to antibiotics and the disruption of endocrine systems. Women's greater biological vulnerability to chemicals may result in harms even at low levels. Compared to men, women's bodies are, on average, made up of a larger proportion of fatty tissue, which stores more chemical endocrine disruptors in their bodies. Minute quantities of a drug may also pose serious hazards to a pregnant woman's fetus at particular stages of development, which can cause deformities, cancer and subtle cognitive effects. Despite the evidence that chemicals cause greater harms for women and their offspring, safety standards have generally been based on healthy white adult males and have not considered the environmental consequences of human use of these drugs [25].

## Clinical Trials and Drug Surveillance

Women in general and women of childbearing age in particular have been underrepresented in or excluded from clinical trials, as are children and the elderly. Thus, despite their receiving official approval, drugs that come into use within the general population may not have been proven to be effective or safe for those to whom it is prescribed. As well, drugs are prescribed in different doses and for a longer duration of use than they were tested for, which may also affect the type and rate of adverse effects. Many drugs have been found to cause more harm than benefit or even death, after they have been approved for use. For example, Vioxx®, an anti-inflammatory painkiller and arthritis medication was withdrawn when the manufacturer acknowledged evidence that it increased risk of CVD in users [26].

Canada developed guidelines for inclusion of women in clinical trials in 1997, yet as of March 2006, there was no systematic process for monitoring conformity. Moreover, the guidelines did not make inclusion mandatory, but merely stated that women should not be excluded on basis of sex and reproductive status. Women continue to be underrepresented in clinical trials, particularly women belonging to ethnic minorities. As well, the high costs of clinical trials encourage trials of small size and limited generalizeability, which are unlikely to detect uncommon adverse effects. Elderly women, a large and growing consumer base for many pharmaceuticals, are also inadequately protected by trial evidence. Clinical trials commonly set an arbitrary cut-off age (e.g. 75), which may lead to drugs prescribed for an ever-growing population of women for whom the safety and effectiveness of those drugs is unknown. An important example is statins, which are being prescribed for women, even though women have not been included in sufficient numbers in clinical trials to determine the safety or effectiveness of these medications for primary or secondary prevention [16].

The adverse drug reactions suffered by women have been seen as a consequence of inadequacies in Canada's Health Protection program, including the regulation of clinical trials and the post-market surveillance system. Fuller has identified several weaknesses in the system, including an underfunded post-market surveillance system; the reliance on voluntary reporting of adverse drug effects by physicians and pharmacists, which has seen reporting rates as low as 1-5%; a lack of systematic data collection on





adverse effects, including the sex of the individual who suffers the effect; a lack of guidelines to evaluate gender-related differences in adverse reactions to prescription drugs; and a lack of integration of Health Protection policies with gender initiatives adopted by Health Canada [17].

### Prescription Costs

Financial harms may also be associated with prescription drug use for some women, though Manitoba's Pharmacare program provides support to those whose income is seriously affected by high prescription drug costs. Compared to men, women's lower earnings, lower labour force participation rates, and more limited access to private insurance or coverage through employment insurance plans, increases their financial vulnerability to high and increasing pharmaceutical costs (see Chapter Two, Women, Income and Health). Financial effects may be the most concerning for older women. In Manitoba, the number of prescriptions per person increased for all seniors between 1995 and 1999, but especially for older seniors—by a surprising 80%. Yet increases in the amount older seniors spent on prescriptions over the same time period were even more alarming—more than double over five years [27].

The deregulation of prescription drugs, to allow for their sale over-the-counter, is a growing concern, which may result in a considerable financial burden on women, as the larger consumer of pharmaceuticals. In the UK, there is heavy pressure for increased deregulation of prescription medications, several of which are used in the treatment of chronic disease (e.g. statins and diuretics). Analysts believe that a similar trend in Canada is unavoidable. While deregulation may serve the interests of pharmaceutical companies, who stand to gain substantial profits from the increased sales of their products in an expanded market, as well as governments and private insurers looking to contain costs of coverage for prescription drugs, the benefits to consumers are less clear. The result of a change in the status of a substantial number of prescription drugs to over-the-counter medications could mean that a considerable portion of drug costs would be passed on to consumers, which is likely to result in more patients choosing not to treat their condition, perhaps conditions as serious as hypertension. Furthermore, increasing patient responsibility in the decision to initiate or continue treatment may increase the influence of a patient's socioeconomic class, education level and other non-medical factors, which could result in further social inequities in health outcomes [28].

### Women's Prescription Drug Misuse & Abuse

The extent of prescription drug misuse among Canadian women (and men) is largely unknown, due to a lack of data. Indirect evidence comes from examining annual trends in the distribution and sales of medications, though this may be confused with legitimate treatment. Such data raise a cautionary flag that, by international standards, Canadians are heavy users of psychotropic prescription drugs. In 2002, Canada had the fourth highest per-capita use of prescription narcotics and the second highest use of sedative-hypnotics (including benzodiazepines). Coroners' reports on overdoses and admissions data from detoxification programs and hospitals also show cause for concern over the abuse of prescription drugs among Canadians. A study by the Centre for Addiction and Mental Health found that 11% of admissions to substance abuse treatment programs in Ontario in 1999–2000 were for abuse of prescription drugs. In the U.S., the 2004 National Survey on Drug Use and Health, which directly examined prescription drug misuse, found that 24.3% of young adults (aged 18-25) used prescription





drugs for non-medical purposes during their lifetime, and a growing prevalence of misuse was demonstrated. Although a broad range of individuals abuse prescription drugs, the available evidence suggests that, in general, adolescents, older adults, women, and Aboriginal people are at elevated risk for prescription drug abuse [29].

Women are recognized as having greater risks for misuse of prescription drugs as a consequence of their greater likelihood of receiving a prescription for a psychotropic drug, as well as multiple prescriptions. In 2003, the Drug Abuse Warning Network (DAWN) reported that the majority of U.S. emergency room visits involving the misuse of prescription drugs included antidepressants, benzodiazepines, and opioid pain relief medications, and patients who misused medications were more likely to be female. In about 50% of cases, patients had taken more than one drug [29]. Studies of prescription opioid misuse among adolescents (12-17) have also identified greater risk of misuse for females, as well as adolescents with lower socioeconomic status, “detached” parents, and attitudes favourable to illicit drug use [29]. A recent Canadian study found that prescription opioids are gaining popularity in cities across Canada, replacing illicit drugs like heroin and cocaine as drugs of choice [30]. In the United States, the abuse of painkillers, stimulants, tranquilizers and other prescription medications has exceeded practically all illicit drugs, with the exception of cannabis, and according to the International Narcotics Control Board, a similar trend is seen in Europe, Africa and South Asia [31]. These trends indicate the need for increased attention to prescription drug misuse, particularly by young women.

Prescription drug misuse has been recognized as an important indicator of social distress in First Nations communities where it is associated with elevated rates of addiction and suicide. Although national and sex-specific data on First Nations prescription use and misuse are lacking, some research has demonstrated cause for concern. A survey of a high-risk group of Aboriginal<sup>36</sup> people entering addiction

<sup>36</sup> Refers to those clients of treatment programs who have voluntarily self-identified as belonging to the culturally defined Aboriginal population.

#### **Commonly Abused Prescription Drugs**

Although any prescription drug can be consumed for reasons other than its intended medical purpose, drugs with psychotropic (drugs that affect the brain) properties are most often abused. Some of the most commonly abused prescription drugs include opiate-based drugs, tranquilizers, sedatives, barbiturates, stimulants and amphetamines. Opioids, sometimes referred to as narcotics, are commonly prescribed to ease pain. Their active ingredients may be morphine, codeine or oxycodone (e.g. brand names: OxyContin®, Dilaudid® and Demerol®). Central nervous system depressants include benzodiazepines, such as diazepam (Valium®), chlordiazepoxide HCl (Librium®) and alprazolam (Xanax®), which are often prescribed to reduce stress and panic attacks. They also include the barbiturates, used to treat anxiety, sleep disorders and seizures such as pentobarbital sodium (Nembutal®) and mephobarbital (Mebaral®).

Stimulants may be prescribed to treat narcolepsy and attention deficit disorder, and include dextroamphetamine (Adderall®) as well as methylphenidate (Ritalin®) and amphetamines [29, 32].





treatment in Calgary found that approximately half (48%) of respondents reported misuse of prescription drugs [8]. Among Aboriginal<sup>37</sup> youth, rates of suicide have been reported that are seven times higher than among non-Aboriginal youth, and the predominant method for female suicide is drug overdose [33]. The low cost of pharmaceuticals, relative to illicit drugs, and high rates of prescription in First Nations communities may contribute to their use in suicides, and other abuses. In Alberta, central nervous system agents are the most commonly prescribed class of drugs to First Nations clients, and codeine containing analgesics (e.g. Tylenol 3) and benzodiazepines account for the majority of these prescriptions. Further, a six-fold greater dosage level (defined daily dose) of benzodiazepines were prescribed to Albertan registered First Nations people compared to Canadians overall (297 DDD versus 48 DDD per 1000 adults per day) [33]. Tylenol 3 is one of many drugs commonly used in suicides, is used recreationally, and is easily obtained on the street or through prescription. Benzodiazepines have been associated with dependency, depressive symptoms, and increased suicidal tendencies. Thus, pharmaceutical abuse among First Nations and Aboriginal people has been attributed to several factors, including a context of social and economic inequity, the impact of cycles of loss and abuse, inappropriate and unethical prescription practices, a lack of alternative therapies for pain and situational crises, and inappropriate demands for pharmaceuticals by clients influenced by a dominant culture that favours pharmacological solutions to physical and emotional illness [33].

Older women are particularly at risk for misuse of pharmaceuticals and associated harms, whether this results from intentional or unintentional misuse. Research has found that 20% of Canadians over the age of 60 have a long term prescription for pain medication, and that multiple prescriptions are common in this population. These factors alone contribute to the risk for misuse and problematic use, including dependence [29]. Seniors also more likely to misuse medication, for example by skipping or splitting pills, and difficulties with memory may affect their ability to comply with drug regimens. Older women are more likely than men to live in low income circumstances and to live alone, as they more often outlive a male partner, which may diminish their resources and access to support for compliance with medical prescriptions.

## Policy Implications

Although prescription medications bring great benefits to women, their use by women must be considered in the full context of women's lives and interactions with the health care system, as well as in balance with other more safe and sustainable options for treatment and disease prevention. Policy relating to prescription drug use may be enhanced by sex-disaggregated analysis of data and a gender-sensitive approach to safety, appropriate use, and access, among other topics. Key initiatives in these areas have typically not considered gender distinct needs, priorities and experiences. For example, as part of the development of a Canadian Pharmaceutical Strategy aimed at addressing access and quality issues, the national policy symposium, *Optimizing Prescribing Behaviors*, made no mention of sex or gender in its final summary report, though age was considered [22].

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<sup>37</sup> 'Aboriginal' has not been defined by the author, although she generally refers to the health status of residents of reserve communities, who may include First Nations individuals with Treaty Indian status or Registered as Indians under the Indian Act, as well as residents who do not hold Treaty status..





At the provincial level, Manitoba's Pharmacare program has been important in mitigating the effect of prescription drug costs on women living on low income. Pharmacare covers prescription drug costs (for approximately 2,000 approved medications) beyond an income-based deductible for individuals of all age groups, regardless of health condition. This makes Manitoba Pharmacare unique in that is inherently designed to reduce health inequities. Manitoba also has one of the most advanced systems in Canada for tracking prescription-related information to monitor the use of medications deemed at high risk for abuse and to prevent prescription duplication.

This analysis has highlighted several issues which indicate opportunities to improve the gender-relevance of policy, at both federal and provincial levels. Some key areas for focus would include:

- Ensuring that biologically-based differences between women's and men's sensitivity to pharmaceuticals are considered by initiatives on drug safety and effective prescribing practices.
- Monitoring conformity to Canada's guidelines for inclusion of women in clinical trials and supporting greater post-market evaluation of drug safety and effectiveness, including sex-specific data analysis and reporting.
- Requiring physicians and pharmacists to report adverse drug reactions (ADRs), and to report this information by sex. Ensuring that women's and consumer groups have an active role in pooling information about harms caused by drugs, informing government, and educating consumers [26].
- Safeguarding against over-use, inappropriate use, and the medicalization of healthy women's lives and enhancing support for holistic and alternative therapies with long-term benefits for women's mental and physical health.
- Addressing the breadth of social factors that contribute to women's emotional distress, including poverty, violence, poor housing, past trauma, job stress, time stress, unpaid care giving and lack of community support, through cross-sectoral and collaborative public policy [12].
- Developing and implementing guidelines for the prescription of benzodiazepines and sleeping pills to women to help ensure that women are prescribed these drugs for appropriate reasons and periods of time [8].
- Developing gender-sensitive approaches to the abuse of pharmaceuticals.
- Providing women with full and objective information about drugs, including their approved uses and risks involved in taking them, so that they may make informed choices.
- Addressing pharmaceuticals as part of environmental health risks to women (e.g. pharmaceutical products in drinking water) with recognition for the central role women play in purchasing, using and disposing of pharmaceuticals [25].

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# Emergency Medical Services

## Introduction

The availability and affordability of ambulance service is considered a core indicator for population health internationally [1]. Manitoba's geography and demography make medical transportation challenging. The province is home to 1.2 million people, spread over 649,950 square kilometres, approximately half of whom live outside the City of Winnipeg [2].

Material in this section was previously produced in *Manitoba Field Testing of Gender-Sensitive Core Set of Leading Health Indicators*, by Donner, Haworth-Brockman and Isfeld (2006). The authors are grateful to the WHO Kobe Centre for technical assistance.

Since not all emergency medical transportation is provided by ambulance, and also the care provided by emergency medical staff goes well beyond the transportation provided, it is more appropriate to consider Emergency Medical Services, consistent with current Canadian usage, in Manitoba.

## Provision of Emergency Medical Services in Manitoba

Emergency medical services (EMS) in Manitoba are the responsibility of the Province of Manitoba, Manitoba Health, Emergency Medical Services Branch. Manitoba Health funds the Regional Health Authorities to provide emergency medical transportation, while retaining regulatory oversight of the operation of the program, and providing provincial co-ordination. In 2002, Manitoba's EMS responded to over 103,000 incidents [2, 3].

Unlike physician and hospital services, EMS are not routinely an insured benefit under Manitoba's universal medicare system. Most Manitobans, most of the time, pay for their emergency medical transportation out-of-pocket, or through private insurance, often as an employment benefit. Women are more likely than men to be unemployed or employed in part-time or lower paying jobs which do not provide these additional benefits.

There are programs that provide emergency medical services, at no cost to Manitobans, under certain circumstances. These are:

- **Neonatal Transportation** - available for infants in need of treatment at a tertiary care paediatric hospital.
- **Interfacility Transportation** - when ordered by a physician for a hospital patient or personal care home resident who requires special care or diagnostic services that are not available at the originating facility, and where the patient is returned to the facility of origin within 24 hours [4].





- **Air Ambulance Transportation** - for patients who meet certain acuity requirements under the Manitoba Lifeflight Air Ambulance Program. This covers the air portion only. Individuals are still responsible for all costs associated with the land ambulance to and from the airport. [4]
- **Northern Patient Transportation Program (NPTP)** - subsidizes the cost of transportation for residents of Manitoba located in the north to obtain medical or hospital care at the nearest location available. NPTP covers both health conditions that require elective treatment, and those that require emergency treatment. Subsidy may include costs for an essential escort (as required for an infant or disabled person). Coverage is restricted to Manitoba residents north of the 53<sup>rd</sup> parallel on the west of Lake Winnipeg, and north of the 51<sup>st</sup> parallel east of Lake Winnipeg. When ground travel is complicated by freeze up and thaw, there are provisions for some isolated communities outside of these boundaries [5].
- **First Nations Residents Living on Reserves** - qualify for medical air, water or land transportation as a Treaty Entitlement, funded by the federal government [6].
- **Manitobans in Receipt of Income Assistance** - EMS are provided to Manitobans in receipt of Income Assistance.

Because EMS are not provided through the medicare system, detailed data are not available about emergency medical transportation services.

## Policy Implications

The lack of available data about the users of EMS makes analysis of inequities in access difficult. Certainly, many Manitobans are disadvantaged when EMS is paid for only through private insurance (as an employee benefit in some jobs) or through social assistance or entitlements, leaving persons without employee benefits to pay the costs themselves. Women are less likely to be employed in jobs that provide extended health benefits, and thus are probably more likely than are men to have to pay for emergency medical transportation out-of-pocket.

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# Cataract Surgery

## Introduction

Insured through Canada's universal, public medicare system, cataract surgery is the highest-volume surgical procedure in Canada. Over 200,000 such surgeries are performed annually in Canada, and about 85% of cataract surgeries are performed on people aged 65 years of age and older [3].

Cataract surgeries, and especially waiting times for cataract surgery, are topical issues in Canada. Manitoba research found that almost two-thirds of patients waiting for cataract surgery in Manitoba were women, and that their wait times tended to be longer than those for men (173 versus 147 days). Wait times were also higher among those 65 years of age and older, than for those under age 65 [3].

## Cataract Surgery in Manitoba

Women are more likely to have had cataract surgery than men. During the three year period from April 1, 2001 to March 31, 2004, cataract surgeries were performed 8,172 times on males and 13,634 times on females [4]. This difference is in large measure because the risk of cataract surgery is strongly related to age, and there are more elderly women than there are men in the province. It is therefore not surprising that cataract surgery rates were highest among those 80 to 85 years of age [females 62.4/1,000; males 55.6/1,000] [5].

The age-adjusted rates (population 50 years of age and older) were 20.4/1,000 for males and 22.2/1,000 for females. That is, women's increased likelihood of cataract surgery compared to men was reduced from 1.4:1 to 1.09:1 after controlling for age. The difference remains statistically significant [4, 5].

This is noteworthy, given that other researchers have found that women were more likely to have cataract surgery than men [6], which has been attributed to men's acceptance of greater loss of visual acuity than women, before requesting cataract surgery. However, more recent population-based Swedish research found that women did not request cataract surgery earlier than men, once preoperative visual acuities were compared [7].

### What are cataracts?

Normally, the lens of the human eye is clear. Cataracts are areas of the lens that have become opaque. Cataracts usually begin small, causing little interference with vision. However, as they grow, cataracts can cause blurred vision, sensitivity to light and glare, increasing nearsightedness, visual distortion and double vision [1].

### What is cataract surgery?

In cataract surgery, the cloudy lens is removed from the eye. In most cases, the natural lens is replaced with a permanent intraocular lens implant [2].

### What is being counted?

The Manitoba research described here includes all cataract surgeries done in Manitoba hospitals. It is important to note that residents may have had surgery on both eyes during this time, in which case each procedure was counted as a separate event [4].





Manitoba research has also shown a significant relationship between cataract surgery rates and neighbourhood income among urban residents for both males and females. Those from the poorest urban neighbourhoods were most likely to have had cataract surgery; those from the highest income areas were the least likely. This relationship was not found among rural and northern residents [5].

## Policy Implications

Women's longer waiting times for cataract surgery is an issue that requires further investigation. Given the findings of Mönestam and Wachtmeister [7] that Swedish women were not more likely to seek cataract surgery at an earlier stage of visual loss, women's longer wait times may reflect societal assumptions about women's presumed increased likelihood to seek medical care.

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Material in this section was previously produced in *Manitoba Field Testing of Gender-Sensitive Core Set of Leading Health Indicators*, by Donner, Haworth-Brockman and Isfeld (2006). The authors are grateful to the WHO Kobe Centre for technical assistance.





CHAPTER SEVEN

## Life Expectancy and Mortality for Manitoba Women

In this chapter, we look at the end of women's lives. This chapter examines life expectancy for Manitoba women and premature mortality, before considering the causes of women's deaths.

In this chapter you will find:

1. Life Expectancy at Birth
2. Life Expectancy at Age 65
3. Health Adjusted Life Expectancy
4. Premature Mortality
5. Women's Mortality and Causes of Death in Manitoba





# Women’s Life Expectancy in Manitoba

## Introduction

Life expectancy is used in Canada and internationally as a basic measure of the health of a population. There are typically two measures used. Life expectancy at birth describes the experience of all people for all ages [1]. It can describe the greater likelihood that children and infants die before the age of 5 in many countries. Life expectancy at 65 is an indicator of the health of elderly people, and in many ways is a measure of how well societies look after their older citizens.

Worldwide, women typically live longer than men [2]. This is also the case in Manitoba and Canada. Women live longer than men but also, as we have seen, have higher rates of some chronic diseases and are more likely to live with disabilities and mobility restrictions as they age (see Chapter Five on women’s experience of disease). To truly understand the health status of older women, measures of life expectancy, then, should be considered in the context of measures of self-rated health (Chapter Five) as well as the quality of life, as we do in this chapter with the indicator Health Adjusted Life Expectancy.

## Life Expectancy at Birth

Canadians still enjoy long lives compared to people in most other countries in the world. Canada ranks ninth for life expectancy among 30 countries considered by the OECD<sup>1</sup> in 2007 [2].

Life expectancy at birth in Manitoba is also high, and has not changed in over 10 years [1]. In 2005 Manitoba females had an average life expectancy of 81.3 years, and males had a life expectancy of 75.8 years, very similar to life expectancy for Canada as a whole (average 81.4 for females and 75.9 years for males in Canada)[3].

**Life Expectancy at Birth** is the number of years a person would be expected to live from the time of birth, if the age- and sex-specific mortality rates for a given year were held constant over the estimated life span [4].

Figure 1 shows life expectancy at birth for females and males in Manitoba, by Regional Health Authority (RHA). Although life expectancy differences may appear to be slight between the sexes, and between and among RHAs, even a couple of years’ difference can be noteworthy.

Manitoba females in the southern RHAs, including Brandon and Winnipeg, have longer life expectancies at birth, than women in the north who have life expectancies that are shorter by as much as 7 years. Fransoo et al note that there is considerable variation within RHAs (and between districts in some

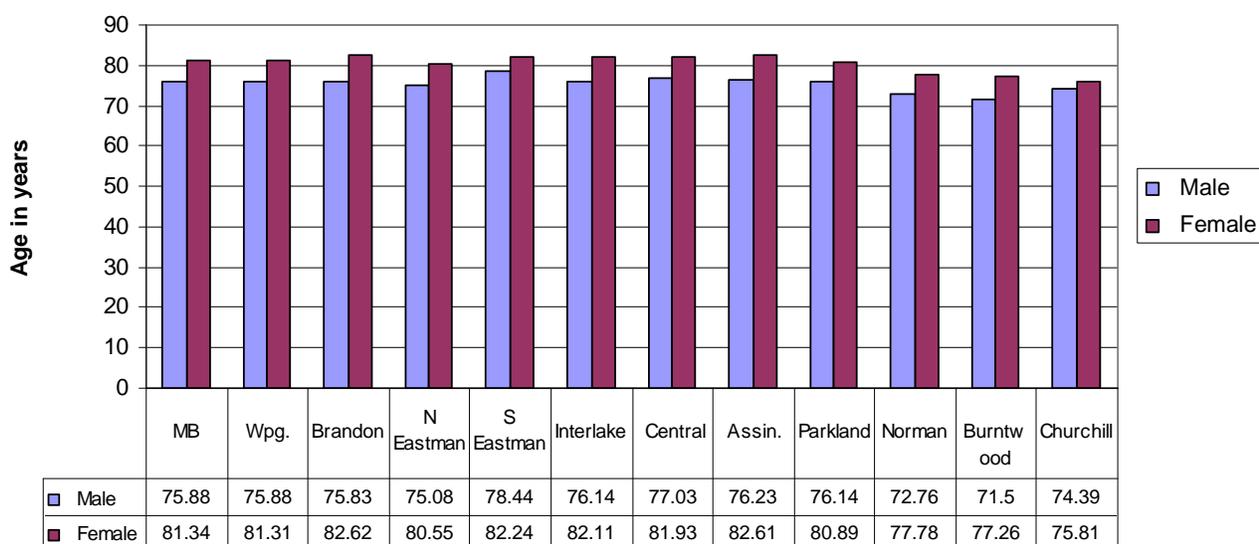
<sup>1</sup> OECD is the Organisation for Economic Cooperation and Development. The OECD member countries are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The Commission of the European Communities takes part in the work of the OECD [2].





RHAs), even in RHAs where the population overall is “healthy”<sup>2</sup> [1]. These geographical differences are important and may illustrate where health programs and prevention and promotion initiatives should be directed [1].

**Figure 1. Life Expectancy at Birth for Manitoba Males and Females, 1999-2003**



Source: Manitoba Centre for Health Policy 2005. Life expectancy is not age-standardized [1].

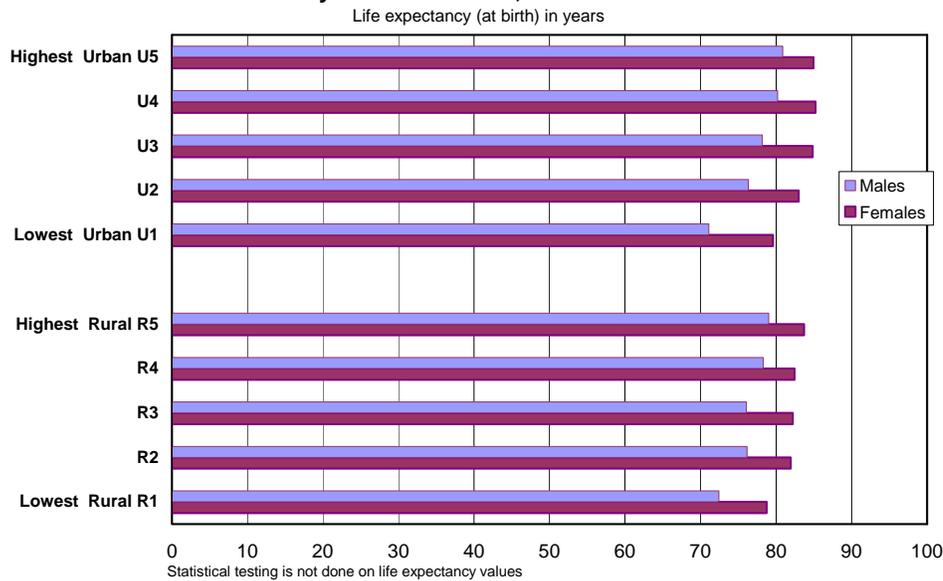
A closer investigation of life expectancy at birth by income quintile, not surprisingly, found that living with lower income shortens women’s and men’s lives (Figure 2) [1]. Furthermore, the difference in life expectancy between the sexes became larger with reduced income. That is, although both females and males with lower incomes have shorter life expectancies than those who live in higher income areas, females with low income have a life expectancy at birth that is as much as 8.5 years longer than the life expectancy at birth for low income males.

<sup>2</sup> See Figure 2.1.2 Life Expectancy by District, 1999-2003, in Fransoo et al [1].





**Figure 2: Life Expectancy at Birth for Manitoba Males and Females by Income Quintile, 1990 – 2003**



Source: Manitoba Centre for Health Policy 2005.

These findings are consistent with what we know about the health of low income women and men in the province, the incidence and prevalence of disease and complications they live with, and the interaction of social conditions with diet, smoking and other lifestyle choices and opportunities (Chapters Two and Five). Low income women, for instance, consistently have higher rates of diabetes, heart disease and cancers, compared with women with more income. This greater burden of disease and poor health ultimately leads to shorter life expectancies for the women with low income.

The actual mechanisms explaining sex differences in life expectancy are not entirely understood [5]. A Canadian exploration of national data did find that “external” and preventable causes were responsible for a large portion of the gap in life expectancy in males and females [5]. Young men, for example, are more likely to engage in dangerous behaviours, and in fact are more likely to die from their risky endeavours [5, 6]. Women may not have a biological advantage over men, but are at lower risk of preventable death [5].

### First Nation Women<sup>3</sup>

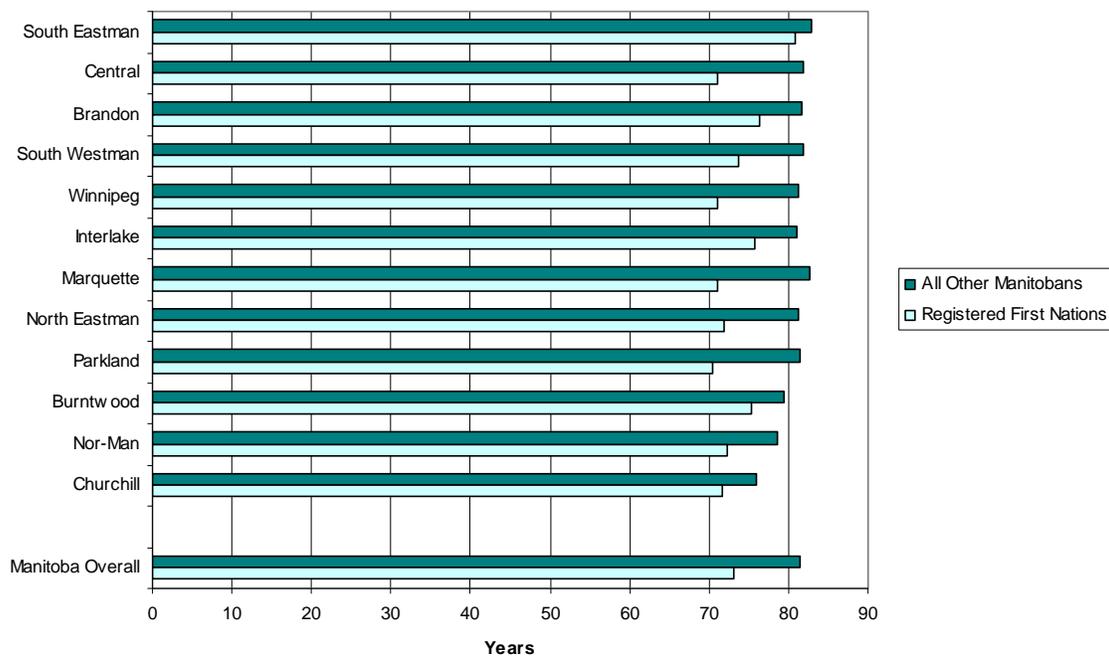
Manitoba First Nations women have, in general, shorter life expectancies than the non-First Nations population (73.2 years compared with 81.4 years in 1999). However Martens et al found that life expectancy among First Nations women varies widely across the province, with no discernable patterns [7], as illustrated in Figure 3.

<sup>3</sup> The 2002 Manitoba Centre for Health Policy report *The Health and Health Care Use of Registered First Nations People Living in Manitoba: A Population-Based Study*, cited in this section, used special data runs that linked Manitoba health care-use data with the Status Verification System (SVS), in consultation with the Assembly of Manitoba Chiefs. Linking the Manitoba health data to the SVS was done strictly for this one report [7]. This makes the findings here different from, and not fully comparable to, other data used to describe First Nations women’s health in this *Profile*.





**Figure 3. Life Expectancy at Birth (years) for Females Registered First Nations vs All Other Manitobans by RHA 1995 - 1999**



Source: Manitoba Centre for Health Policy 2002

First Nations women live, on average, 8 fewer years than all other Manitoban women, an alarming difference<sup>4</sup>. This reflects a history and current conditions of disadvantage and discrimination faced by many First Nations women. Martens et al found, for instance, that the reasons for First Nations women’s shorter lives are not easily explained by how close they live to health care resources. Two of the more northerly and remote communities (Keewatin and Island Lakes) had the highest life expectancies among First Nations, but the lowest life expectancies were among residents of First Nations communities that are close to Brandon and Winnipeg (communities that are part of Dakota Ojibway Tribal Council and Southeast Resource Development Council) [8]. Furthermore, “on reserve” women had a life expectancy that, on average, was one year longer (73.8 years) than those who lived “off reserve” (72.8 years) [7]. The authors note that access to health care alone will not resolve the great discrepancy in health or life expectancy seen between First Nation and non-First Nation women in Manitoba [8], or even among First Nations communities. This is in keeping with what Aboriginal women have said in qualitative studies: that their health and the health of their communities will improve when systemic problems are addressed, primarily poverty, discrimination, violence and poor housing, among others [9, 10].

<sup>4</sup> No test of statistical significance was done on life expectancies [7].





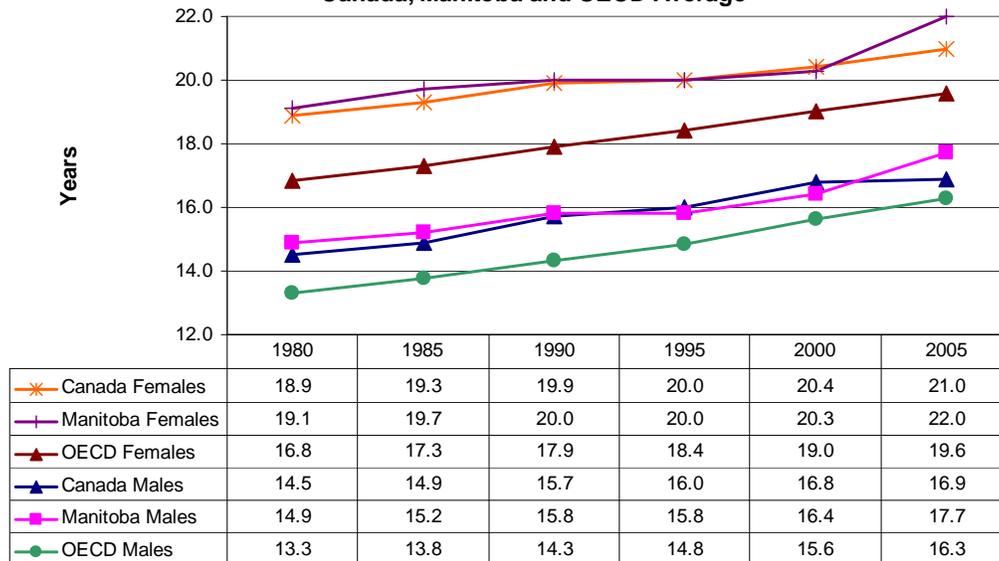
## Life Expectancy at Age 65<sup>5</sup>

Life expectancy at age 65 is used as a population health measure of quality of life, social and economic conditions for seniors, and may point to inequalities between sub-populations.

Life expectancy at age 65 has increased for both men and women over the past few decades in Canada [4]. In 1980, the average life expectancy for Canadian women at age 65 was 18.9 years (that is, living to age 83.9) and 14.5 years for men (that is, living to age 79.5). By 2005, the average life expectancy for women at age 65 had increased to 21.0 years and for men it had increased to 16.9 years. Currently, Manitoba women and men live slightly longer than the Canadian average. In 2005, the life expectancy for Manitoba women at age 65 was 22.0 years (living to 87 years of age) and for men it was 17.7 years (living to 82.7 years) [3, 11].

**Life Expectancy at Age 65** is the number of years a person would be expected to live, starting at age 65, if the age- and sex-specific mortality rates for a given year were held constant over the estimated life span [3].

**Figure 4. Life Expectancy at Age 65  
- Canada, Manitoba and OECD Average**



Sources: Statistics Canada CANSIM Tables 102-0025 and 102-0511 and OECD *Health at a Glance* 2007

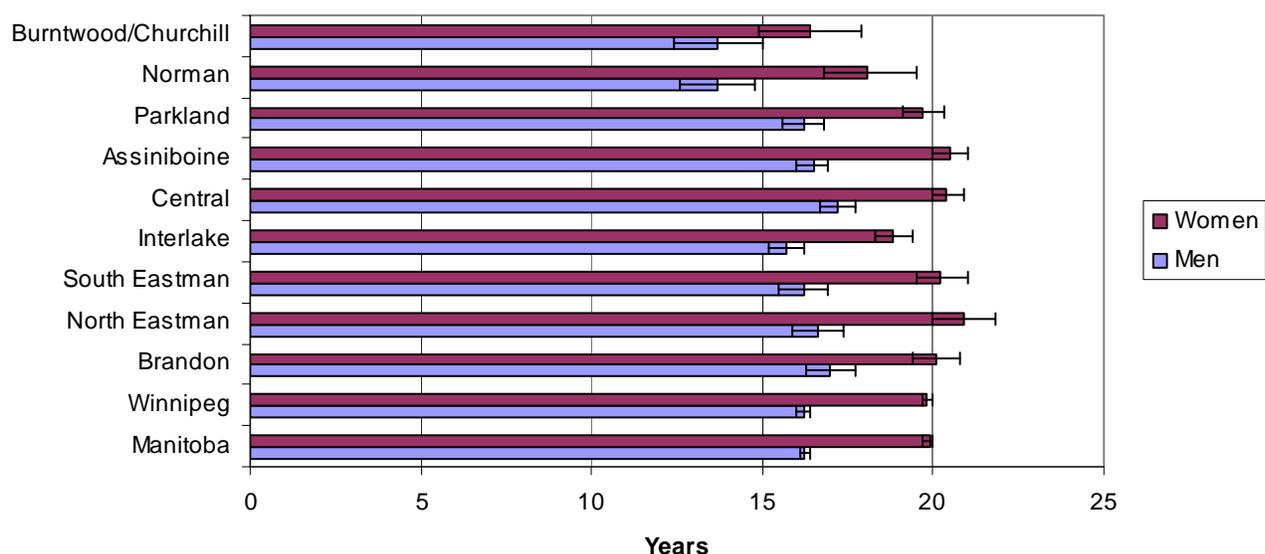
Both Manitoba women and men fared better than the average for their counterparts in OECD countries as illustrated in Figure 4 [2].

<sup>5</sup> Material in this section was previously produced in *Manitoba Field Testing of Gender-Sensitive Core Set of Leading Health Indicators*, by Donner, Haworth-Brockman and Isfeld (2006). The authors are grateful to the WHO Kobe Centre for technical assistance.





**Figure 5. Life Expectancy at Age 65 for Manitoba Women and Men by RHA, 1997**



Source: Statistics Canada, Health Indicators, November 2003

Within Manitoba, there are wide variations in life expectancy at 65<sup>6</sup> among Manitoba's Regional Health Authorities (RHAs) as there are for life expectancy at birth (Figure 5). Generally, women and men in rural and southern Manitoba have longer life expectancies at age 65 than those in northern Manitoba. The exception to the general trend is the longer life expectancy of women in the North Eastman RHA [12].

The gap in life expectancy between men and women at age 65 has been decreasing over the past 25 years. In 1980, Manitoba men aged 65 lived, on average, 4.2 years less than their female counterparts. By 2002, this difference had decreased to 3.9 years [13], although as Figure 4 shows, the gap increased again to 4.3 in 2005. In Canada as a whole, the gap between the sexes decreased from 4.4 years to 4.1 years over this period [3, 11]. Among all OECD countries, the gap in life expectancy has remained relatively unchanged, from 3.5 to 3.3 years during this time [1]. The shrinking gap in life expectancy between men and women has been attributed to better health of men in general and better treatments for diseases and conditions in both men and women [14, 15].

Both indicators of life expectancy – at birth, and from age 65 – show that women live longer than men in Manitoba. Manitoba women also live longer now than they ever have before. The narrowing gap between the sexes is attributed to smaller differences between the sexes in rates of tobacco smoking and other high risk lifestyle habits, as well as decreased mortality for men from cardio-vascular diseases [2]. Lower mortality from heart disease, stroke and cancers (particularly breast cancer) also accounts for more women living longer than ever before. On the other hand, increases in diabetes and overweight in women

<sup>6</sup> The 95 % confidence interval (CI) illustrates the degree of variability associated with a number. Wide confidence intervals indicate high variability, thus, these numbers should be interpreted and compared with due caution.





may soon be seen to reduce women's life expectancies, and although fewer women now smoke tobacco, women's past smoking habits and past exposures, are currently leading to some reduction in life expectancy because of increasing lung cancer and other smoking-related diseases in women [14, 15].

Living longer, however, is not the same as living with good health, as an examination of Health Adjusted Life Expectancy demonstrates.

## Health Adjusted Life Expectancy<sup>7</sup>

Increased life expectancy at age 65 is not necessarily accompanied by additional years of good health and functional status. "Health Adjusted Life Expectancy" (HALE) was developed to address this issue [16] and HALE is included in *Healthy Canadians: A Federal Report on Comparable Health Indicators* 2006 and in the corresponding provincial reports, as it is one of the Comparable Health Indicators mandated for reporting by the First Ministers [17].

Statistics Canada describes HALE as follows:

*Health-adjusted life expectancy is a more comprehensive indicator than that of life expectancy because it introduces the concept of quality of life. Health-adjusted life expectancy is the number of years in perfect health that an individual can expect to live given the current morbidity and mortality conditions. Health-adjusted life expectancy uses the Health Utility Index<sup>8</sup> (HUI) to weigh years lived in good health higher than years lived in poor health. Thus, health-adjusted life expectancy is not only a measure of quantity of life but also a measure of quality of life. [16]*

Figure 6 shows the differences in Health Adjusted Life Expectancy at age 65 among Canadian and Manitoban women and men in 2001. It is important to note that the gender gap in HALE is much smaller than the gender gap in life expectancy. That is, even though women live longer than men, they have a higher incidence of chronic diseases, and so their last years are not necessarily healthy. This was illustrated in the measure of self-rated health which found that older women (aged 65 years and more) were more likely to rate their health as poor or fair (Chapter Five). Fifty percent or more of women with heart disease, arthritis or diabetes in 2001, for instance, living in the lower two of five income quintiles, reported their health to be only fair to poor, and worse than the year before [18].

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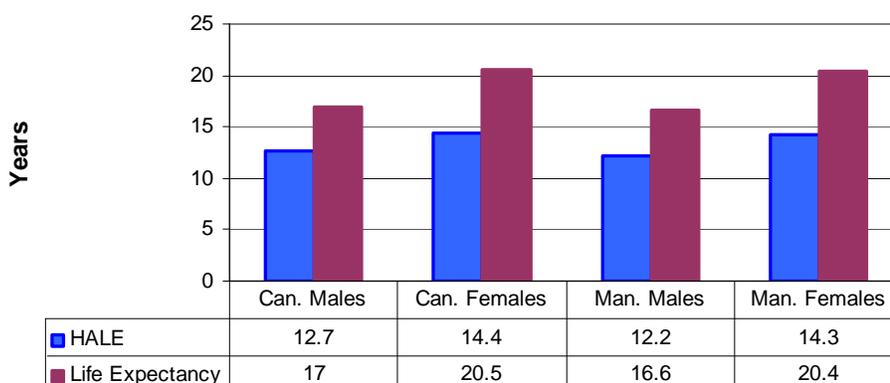
<sup>7</sup> See footnote 5.

<sup>8</sup> The Health Utility Index is a summary measure of an individual's overall health. It is a single index based on functional capacity: vision, hearing, speech, mobility, dexterity, emotion, cognition and pain. The HUI score range is 0 (death) to 1 (perfect health). A score equal to or less than 0.8 is considered poor health [18]. The HUI does not recognize that persons living with long term disabilities may consider their own health to be excellent.





**Figure 6. Life Expectancy and Health Adjusted Life Expectancy - Canada & Manitoba 2000-2001**



Source: Statistics Canada, CANSIM Table 102-0121  
 Note: HALE is at age 65.

## Discussion – Life Expectancy & Health Adjusted Life Expectancy

The long lives Manitoba women enjoy overall bear more scrutiny, particularly for some sub-populations, since women’s longevity is closely related to the socio-economic conditions in which they live [4]. Poor women have considerably shorter lives, whether they live in urban or rural areas. (Rural living is linked to a somewhat reduced life expectancy for the Canadian population as a whole [5].) Life expectancies for First Nations women in Manitoba are considerably lower than for the non-First Nations women. As income disparities in Canada are growing – the gap between the wealthiest and poorest is widening– we cannot hope that poor women’s life expectancies will increase just by allocating more funds to acute health care treatments.

A number of studies have found that life-expectancy and health-adjusted life expectancy<sup>9</sup> are affected by women’s experience of chronic pain [19, 20], chronic disease such as diabetes [21], smoking [5, 22] and asthma [21]. Some authors also found links between life expectancy and non-clinical factors such as migration [23] and sexual orientation (when marginalized) [24]. In Canada, more women than men (4 million compared to 3 million) report having two or more chronic conditions and 500,000 more women than men report having disabilities that affect their daily functioning [5, also 18]. The data available for HALE do not yet allow for investigation of the overall health of elderly women who are poor, Aboriginal women, women with disabilities or other sub-populations. As Aboriginal women, for instance, cope with more chronic diseases, it would be valuable to establish HALE for Aboriginal women, and then to use this information to monitor Aboriginal women’s health if improvements are made for other indicators of health.

<sup>9</sup> Some health indicator research examines Disability-Free Life Expectancy, which is similar to, but not an exact equivalent of HALE. For an in-depth discussion of HALE and similar measurements, see Mathers et al [25].





Increases in life expectancies in developed countries are attributed, as noted, to better overall nutrition, good health care where available and affordable, and better treatment and survival of cardio-vascular disease and cancer, but the correlation between income and life expectancy remains. A study in the UK noted that women in the highest of five status categories, with well paid jobs and good control over their work and lives, lived longest. Women with less income had poor diets, and were more likely to drink and smoke tobacco, and had much less decision-making power in their jobs, which contributed to their lower life expectancies, but were not the exclusive causes [15]. Twenty previous years of improved life expectancies in the U.S. began to reverse from 1983 to 1991, attributed to “increased mortality from lung cancer, chronic obstructive pulmonary disease, diabetes and a range of other non-communicable diseases, which were no longer compensated for by the decline in cardiovascular mortality.” Declines in life expectancy were most notable among the worst-off portions of the American population, and life expectancies in women declined primarily because of chronic diseases related to smoking, overweight and high blood pressure [14].

Chapter Five of this *Profile* documented that women are more likely to have high blood pressure, hypertension and arthritis, particularly as they age (with considerably higher rates seen for First Nations women). Women in Manitoba are more likely to be treated for hip fractures, which are associated with considerable pain for women. As our provincial population continues to age, life expectancy and HALE remain important measures of how well Manitoba social and health systems care for the women who live here. Whether longer life expectancy is accompanied by good health and independent functioning among seniors has important implications for health care and social services systems, and for women, who overwhelmingly bear the burden of informal care to seniors. It is therefore important to monitor both life expectancy and HALE. Programs, plans and services designed for seniors need to include consideration of women’s quality of life, not just the duration of their lives.

## Premature Mortality

Premature mortality is a measure of women’s (and men’s) rate of death before reaching their life expectancy and is considered a robust measure of health status [33].

The Manitoba Centre for Health Policy *Sex Differences* report provides information about women’s mortality and premature mortality<sup>10</sup>. Figure 7 illustrates the rate at which Manitoba women and men died prematurely (per 1,000) in the 10 years 1994 – 2003. Women were much less likely to die prematurely than men (2.6 versus 4.4 premature deaths per 1,000 residents). This was true for

**Premature Mortality Rate** is the number of deaths per 1,000 residents, aged 0 to 74 years [1]. That is, death before age 75.

<sup>10</sup> The Manitoba Centre for Health Policy more recently released new analyses of premature mortality rates. See Martens et al (2008) [33].

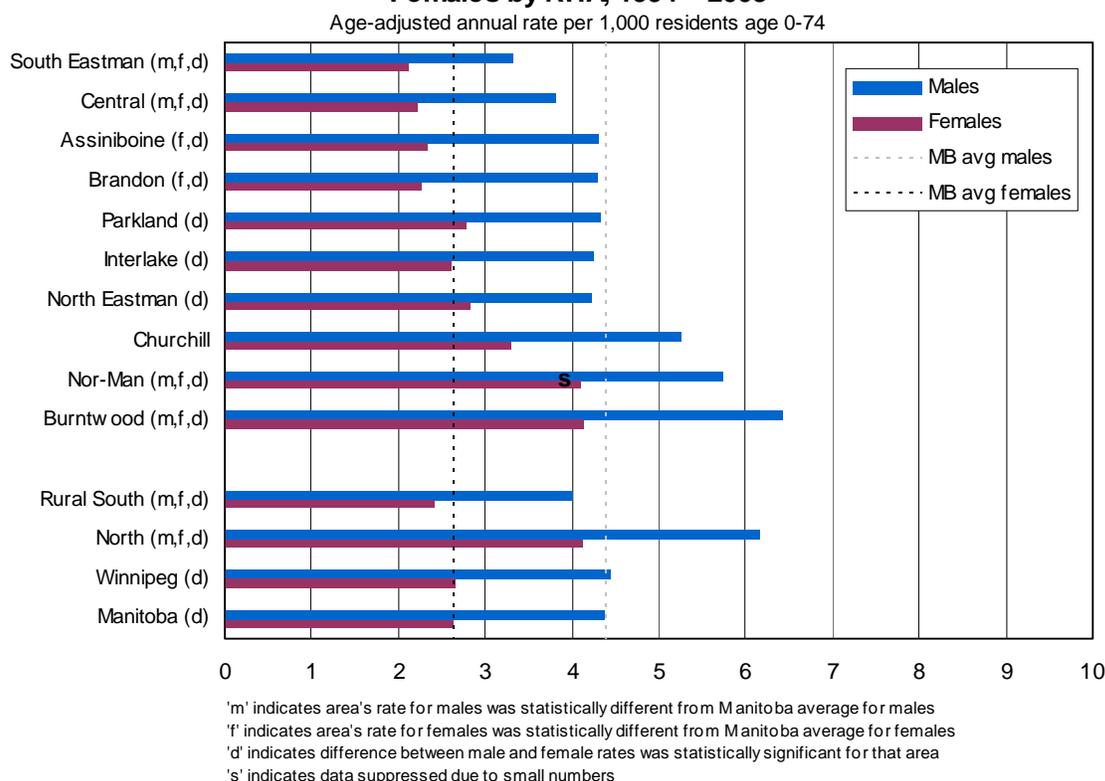




all RHAs and for all districts within RHAs [1]. That is, men are more likely than women to die before the age of 75. Premature mortality rates have declined over time, in keeping with increases in life expectancies from birth and at age 65 [1].

There was however considerable variability among RHAs and even within RHAs<sup>11</sup> in Manitoba [1]. Women in the north were significantly more likely to die before the age of 75 than women in the rural southern regions, Brandon or Winnipeg [1].

**Figure 7: Premature Mortality Rates for Manitoba Males and Females by RHA, 1994 – 2003**



Source: Manitoba Centre for Health Policy 2005.

Women were progressively more likely to die prematurely as income declined in both rural and urban Manitoba (Figure 8). While differences for women are not as large as for men, both rural and urban women were nearly twice as likely to die prematurely in the lowest income groups than in the next highest quintile.

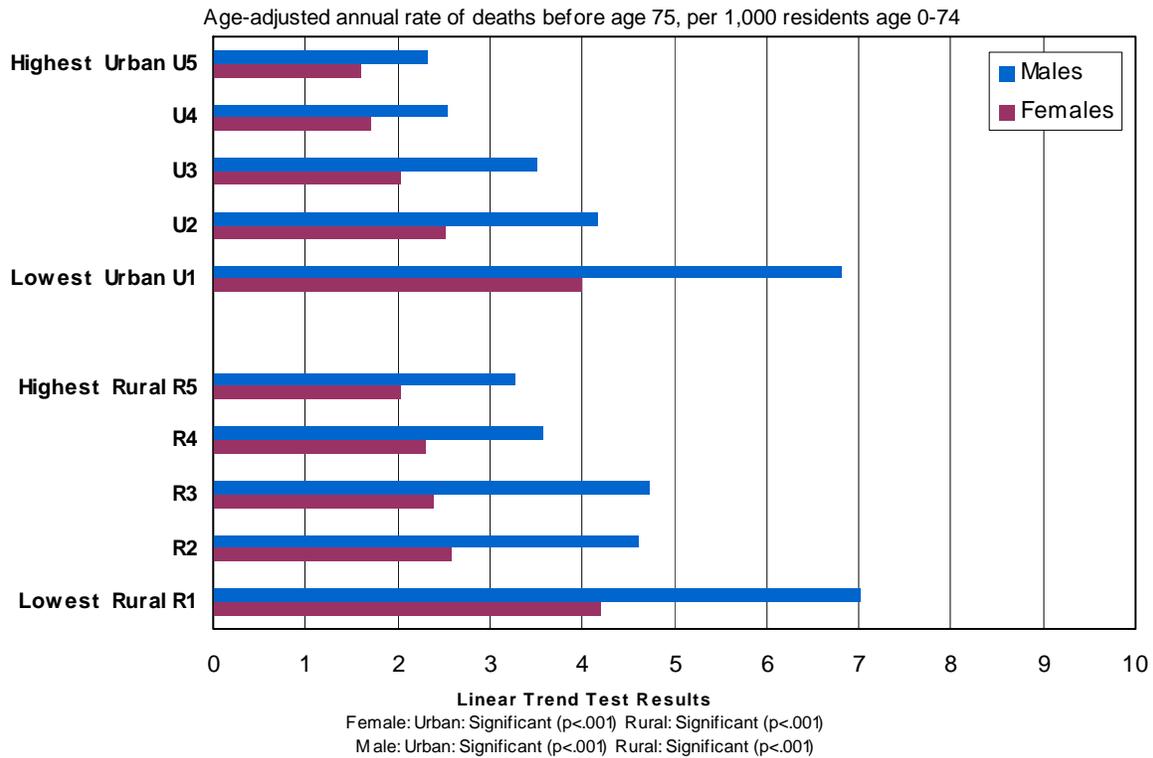
<sup>11</sup> See Figure 2.4.2 Premature Mortality Rates by District 1994-2003 in Fransoo et al [2], and also Figure 2.2 Premature Mortality Rates for Females by District in Martens et al [33].





In a meta-analysis of U.S. data from 1960 to 2002, Krieger measured premature mortality by income quintile (here premature mortality was measured as death before age 65). Premature mortality declined in all quintiles and across ethnic categories between 1966 and 1980. However relative health inequities widened after 1980, a factor the authors link to American rollbacks of federally-funded social programs [26]. Given that premature mortality is demonstrably higher for low income women in this province, and as low income women are receiving health care treatment proportional to rates of illness in Manitoba, health care access alone is not the only issue at play. In a number of qualitative studies published and supported by Prairie Women’s Health Centre of Excellence, women have pointed out that they need their basic and structural needs met in order for their health to improve, since their health is tied to non-clinical issues such as bad housing, low income, limited availability of child care and their need for improved education and employment [27, 28 for instance].

**Figure 8: Premature Mortality Rates for Manitoba Women and Men by Income Quintile, 1994 – 2003**



Source: Manitoba Centre for Health Policy 2005.





# Women’s Mortality & Causes of Death in Manitoba

## Introduction

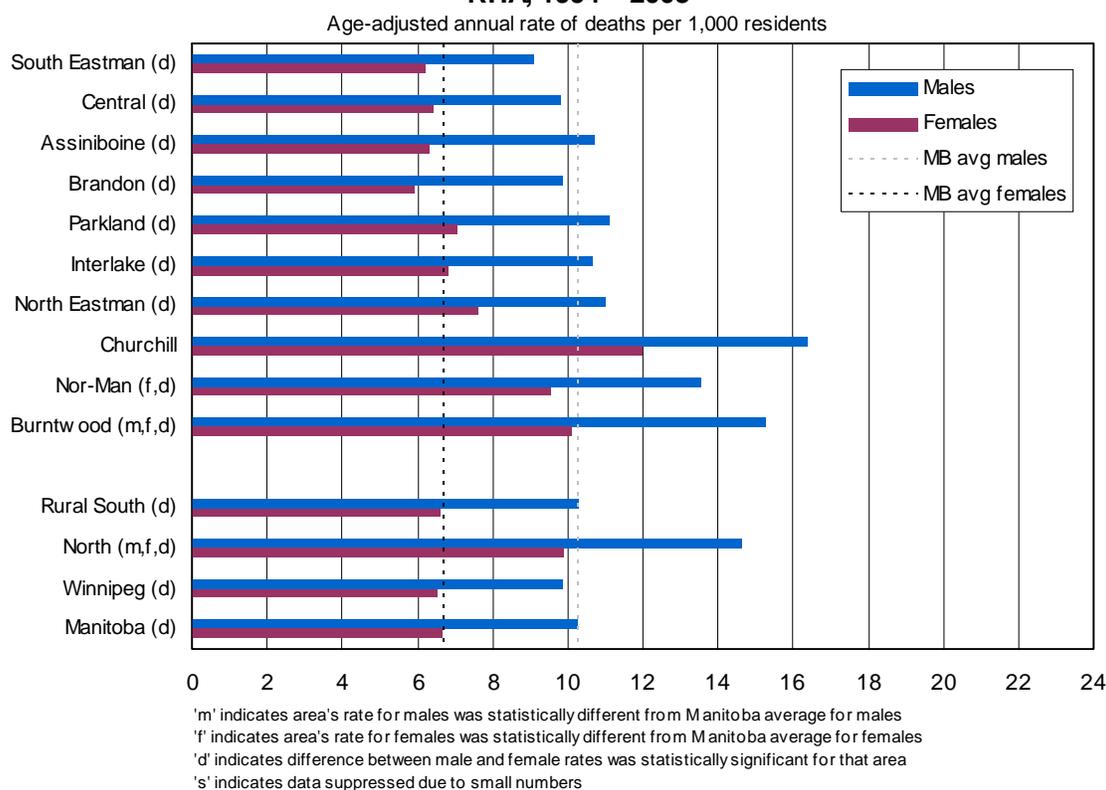
Women’s increasing life expectancies means that women do not die as young as they did in previous generations, and this is for a number of reasons. Infant and child mortality rates have dropped dramatically, particularly since the first half of the 20<sup>th</sup> century; maternal mortality in Manitoba is also very low (Chapter Four). In general Manitoba women enjoy safer working conditions and better nutrition and hygiene than ever before<sup>12</sup>. Screening programs and prevention of disease, treatments, and surgeries all contribute to longer lives for Manitoba women and lower mortality rates than in the past.

## Total Mortality Rates

Figure 9 shows the total mortality rates (per 1,000) residents for Manitoba residents by RHA. Manitoba women have considerably lower mortality rates overall and in all RHAs than their male counterparts.

**Total Mortality Rate** is “the total number of deaths in a population, divided by the total number of residents” (including those deceased) [1].

**Figure 9: Total Mortality Rates for Manitoba Males and Females by RHA, 1994 – 2003**



Source: Manitoba Centre for Health Policy 2005.

<sup>12</sup> However not all women have all the same advantages, and these are indicators that must be monitored.





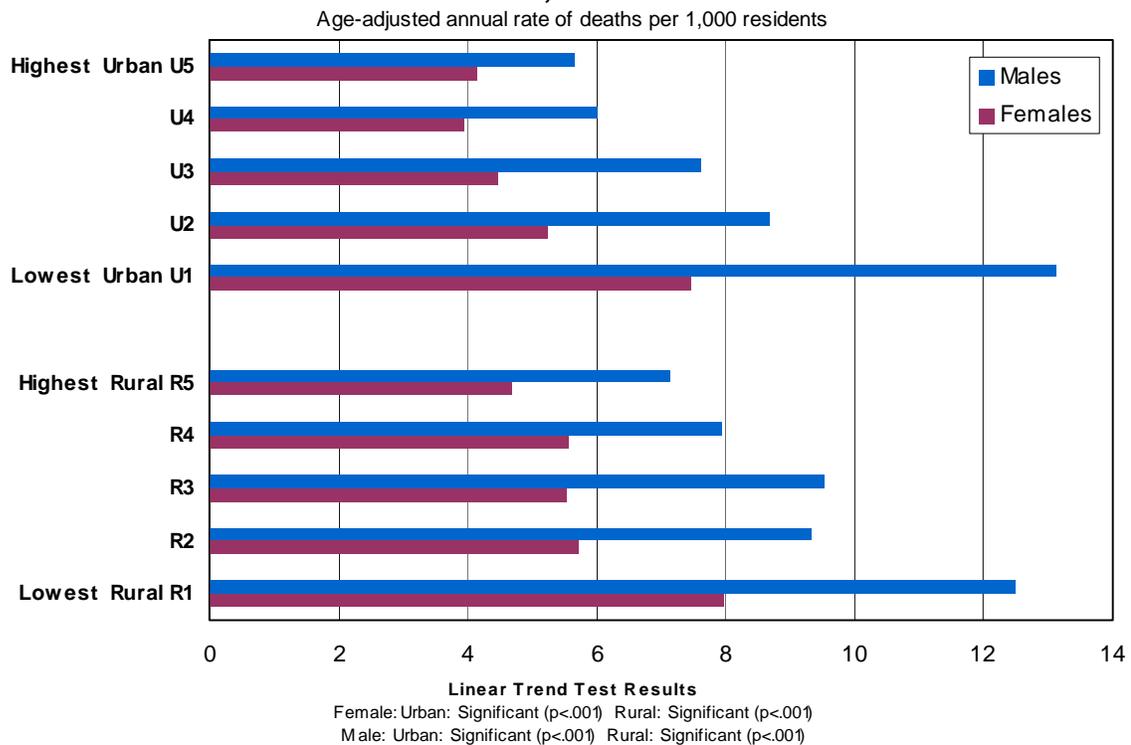
Although there is some variation among the RHAs, the difference between men and women remains fairly constant, with age-adjusted female mortality 60 – 70% of that for males [1]. As mentioned, child and infant mortality in Manitoba is quite rare and deaths increase with age, particularly among elderly women and men. Annual mortality is increasing slightly in the province, a reflection of our older population [1].

Figure 9 also illustrates that women’s mortality rates in northern Manitoba are statistically higher than for southern residents. The Canadian Women’s Health Surveillance project similarly found that women in northern Canada had higher mortality rates, a trend that had not been observed in earlier studies. The authors note:

*“The mortality burden of biologically-based, sex-specific cases is actually greater among women in terms of mortality rates and potential years of life lost (for northern Canadian women)” [5].*

Total mortality rates by income quintile, reproduced here in Figure 10, continue to illustrate the strong relationship between area-level income and mortality. As was seen in life expectancy and premature mortality data, women have higher mortality rates in the lowest income quintiles, for both rural and urban residents. As seen in Figure 10 although mortality does not evenly decline with greater incomes in either setting, there are statistical differences in the mortality rates from the highest income areas to the lowest.

**Figure 10 Total Mortality Rates by Income Quintile for Males and Females, 1994 – 2003**



Source: Manitoba Centre for Health Policy 2005.

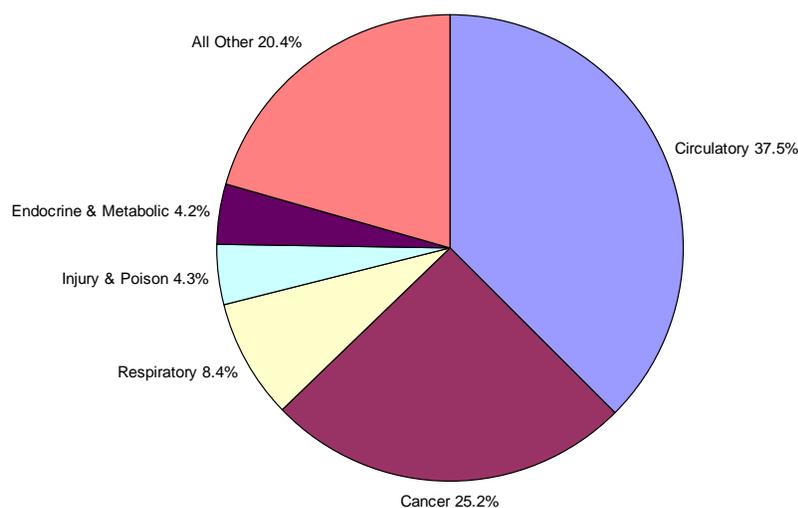




## Causes of Women’s Deaths in Manitoba

Manitoba women die for many different reasons, but the leading causes of death are circulatory diseases, cancer, respiratory diseases, injury and poisoning and endocrine and metabolic disorders (this would include diabetes, for instance) (Figure 11) [1]. Although men die for the same list of reasons, with the same five primary causes [1], we have seen throughout this *Profile* that diseases affect women and men in different ways, at different ages and have gendered influences and implications.

**Figure 11. Mortality by Cause (ICD-9-CM) for Manitoba Females, 1994 -2003**



Source: Manitoba Centre for Health Policy 2005.

For women who live in the north, the leading causes of death are circulatory disease, cancer, injury and poisoning, and respiratory illnesses, followed by endocrine and metabolic causes, confirming that women in the north are more likely to die of injuries than their southern counterparts [1].

A study of Canadian women found more women die of heart disease and related causes, including COPD than any other cause. DesMeules et al found that death due to cardiovascular disease was declining, whereas deaths attributable to accidents (injuries), poisoning and violence were the second largest category in their study [5]. The authors also found a more than 50% decrease in the female age-adjusted mortality rate, from all causes, compared with males (39% decrease) since the 1950s, particularly with the decline in mortality of older people since the 1980s [5]. In this *Profile*, we have documented that although women are less likely to die of cancer than men, women’s deaths due to lung cancer are increasing (Chapter Five), and more women than men are likely to die of cancer in the 35-54 year age range.

There may be other ways in which gender influences cause and time of death. One study found that women over age 50 were less likely to receive life-supporting treatments or be admitted to intensive care





units. The authors found that women's symptoms of critical illnesses may be factors, and decisions made by providers may contribute, but there are likely other confounding factors [29].

Other research examined the interactions of personal life choices and found that people who smoke, drink alcohol, are physically inactive and do not eat enough fruits and vegetable (measured as Vitamin C intake), have a four-fold likelihood of reducing their life spans by as much as 14 years [30]. In a different vein, a study from the UK found a causal interaction between advanced diabetes and material deprivation, leading to increased mortality [31]. These studies and others thus exemplify the complex interactions of personal choices, social standing and income, and disease on overall health and mortality.

## Summary

Women in Manitoba have life expectancies that continue to increase. Women have benefited, as have men, from better recognition of, and treatment for, heart disease, heart attacks and stroke – particularly in the case of heart attacks, where better understanding of women's specific symptoms has led to improved outcomes. There is evidence however that the effects of women's smoking habits in the past 40 years may lead to decreases in life expectancy and increased mortality, somewhat later than was observed for men.

But as this *Profile of Women's Health in Manitoba* has demonstrated across the many indicators examined, the patterns seen for the province as a whole include different trends and patterns that bear examination by income, geography and other variables. Low income women consistently have higher rates of diabetes, heart disease and cancers, compared with women with more income, leading ultimately to shorter life expectancies for women with low income. Similarly, First Nations women have life expectancies on average, that fall considerably short of the Manitoba average [22, also 32]. Better understanding of how the determinants of health interact and their effects on life expectancy for other sub-populations of women is needed and could lead to improved health care and programs. Allocating health care funds only to treatment of acute conditions will not bridge the health inequities.

## Policy Recommendations

Life expectancies and mortality rates and causes should be monitored in conjunction with health adjusted life expectancy or some equivalent. A study of life expectancies world-wide concluded that:

*“Despite the fact that people live longer in the richer, more developed countries, and have greater opportunity to acquire non-fatal disabilities in older age, disability has a greater absolute (and relative) impact on healthy life expectancy in poorer countries. Separating life expectancy into equivalent years of good health and years lost to sub-optimal health thus widens rather than narrows the difference in health status between the rich and the poor countries.” [25].*

Considering the evidence in this *Profile*, and in similar reports on the health of Manitoba women, it is reasonable to expect that Manitoba women will also show such differences in their health and life expectancies until the gaps between the advantaged and disadvantaged in our society are reduced and health disparities can be reduced.





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