



## 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

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## 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.

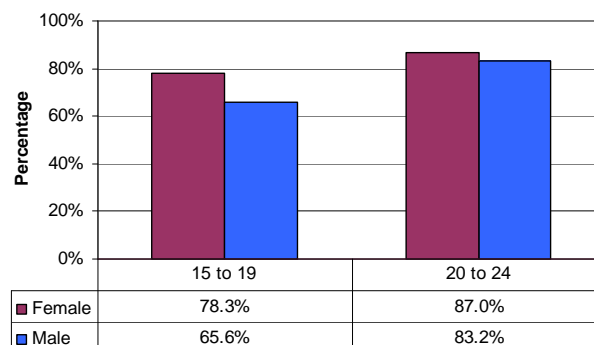
The Canadian Community Health Survey (CCHS) Cycle 2.1 included questions about the use of contraceptives among youth aged 15 to 24 years of age. This question was asked of those who reported that they had had sexual intercourse in the preceding 12 months, and who were not pregnant at the time of the 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

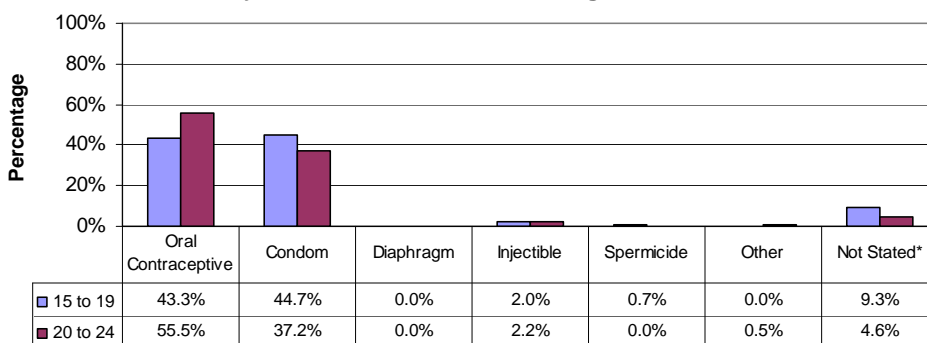
of young women aged 15 to 24. Just over half of respondents indicated that this was their usual method of contraception, followed by condoms, which was the usual method of about 40% of these young women [8]. Earlier research about the use of oral contraceptives by Ontario women showed that single women, 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

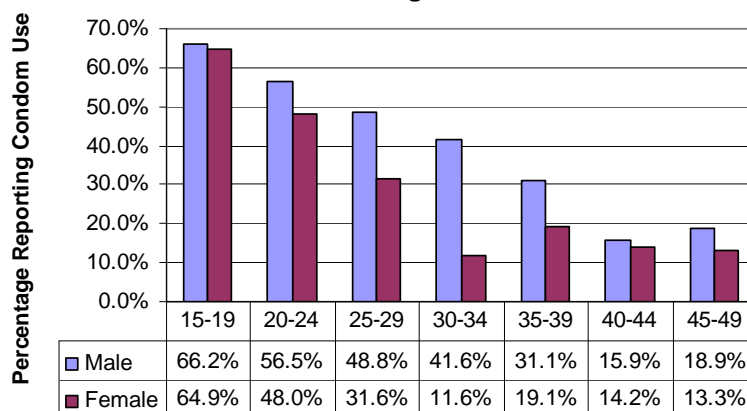
Proper condom use is an effective means of preventing STIs, such as Chlamydia, gonorrhoea, and HIV. Sexually active individuals who do not use a condom in penetrative sexual activity make decisions that fundamentally affect their lives and their health. The risks and impacts of unprotected sex are particularly 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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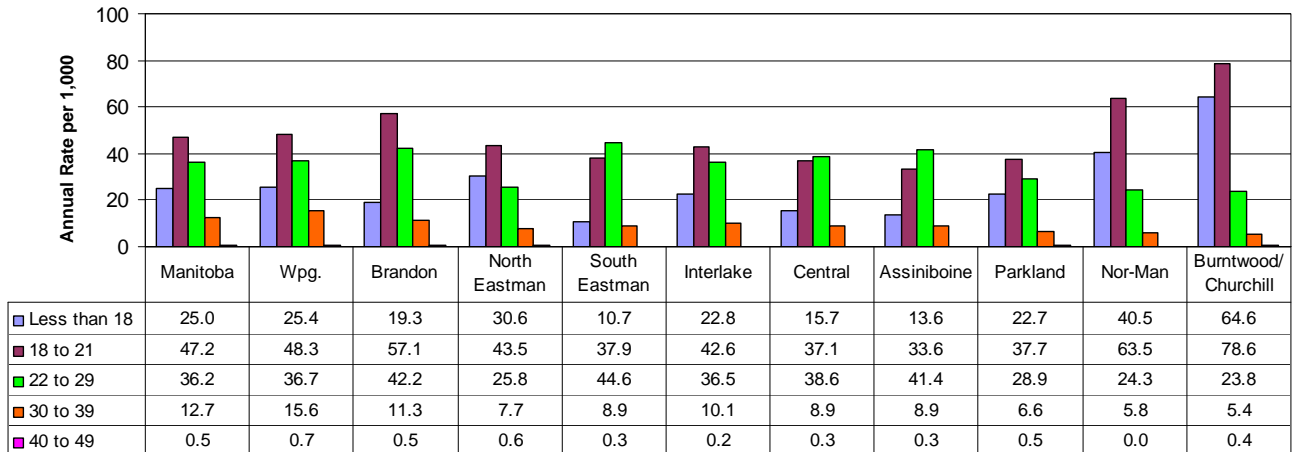
<sup>3</sup> Age at first intercourse, while important as a measure of risk of pregnancy and sexually transmitted infections, is limited because it excludes the sexual lives of lesbian and transgendered women, and defines sexual activity as only vaginal intercourse.

<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**



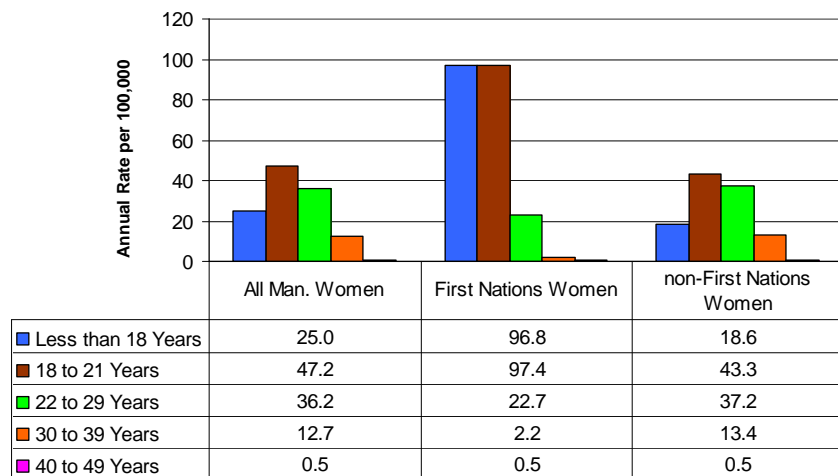
\* See Footnote 4.

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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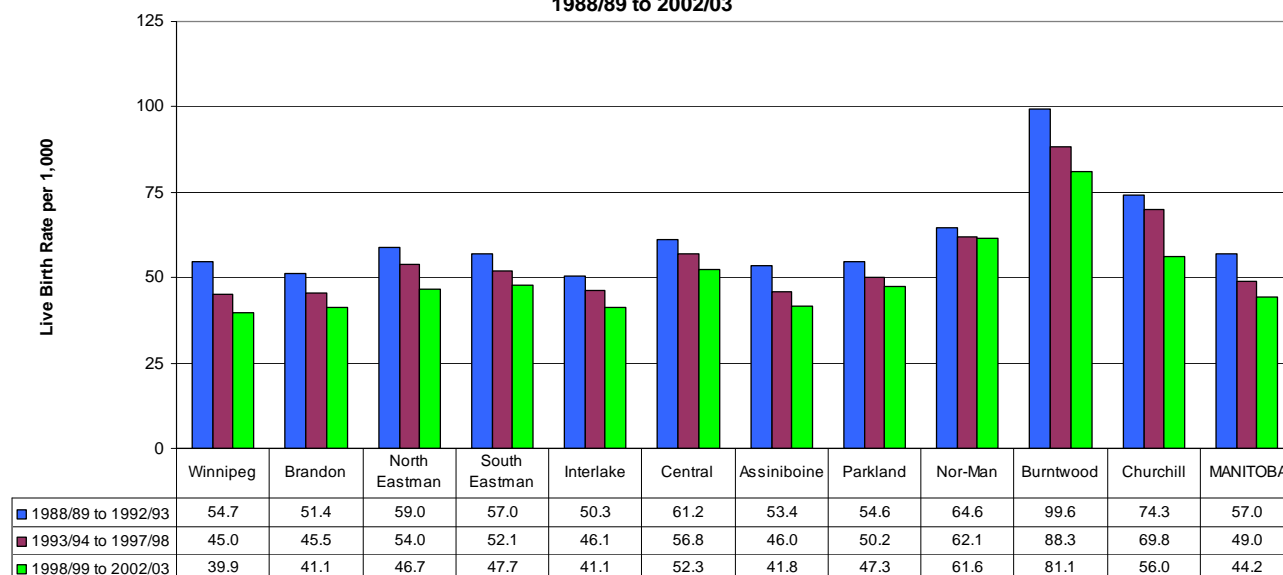
<sup>8</sup> The term “births” is used here to refer to live births. Stillbirths are not included.

<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**



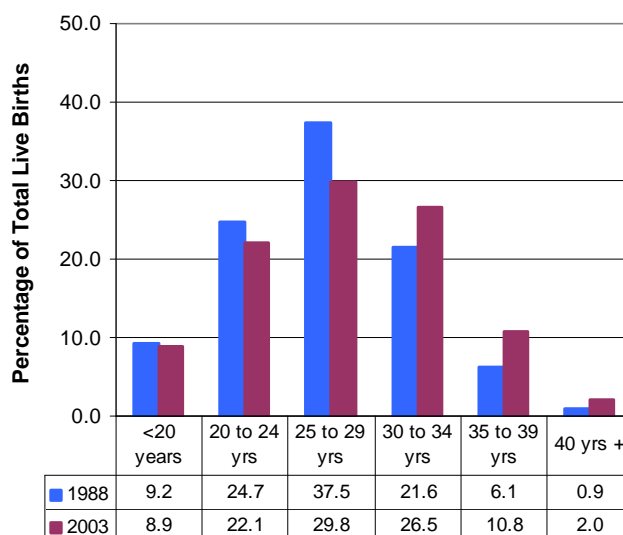
Source: Manitoba Health. Report of Manitoba Health's Ministerial Working Group on Maternal/Newborn Services [40]  
 Birth rate is rate of live births per 1,000 females aged 12 to 49.

## 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]

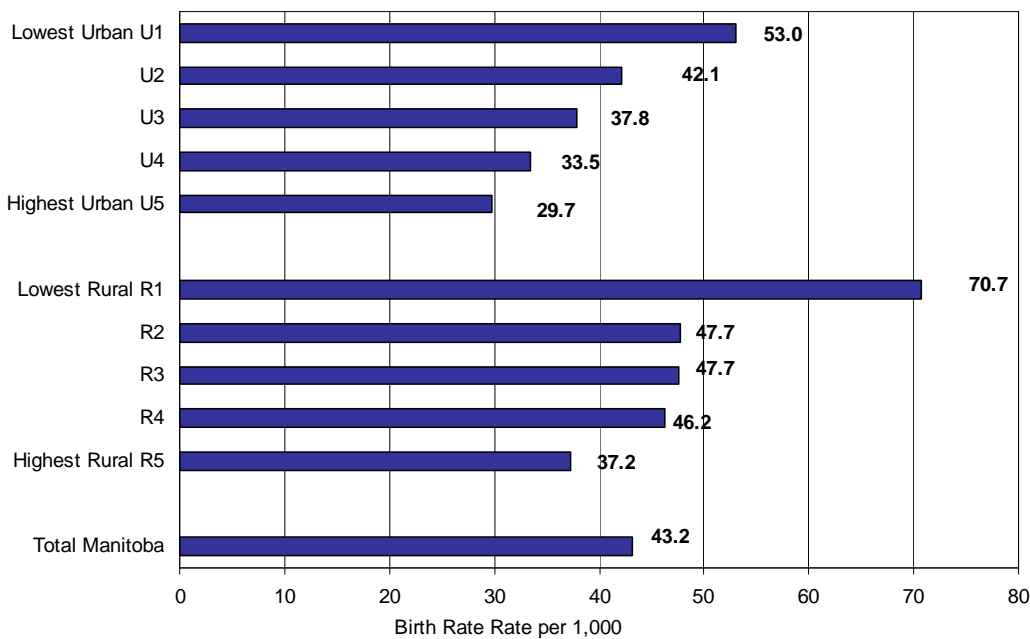




There are powerful economic incentives to delay childbirth. Increasingly, women are opting to postpone childbirth until they have completed their post-secondary education, and have become established in a career. Economically, this makes sense, since higher levels of education are linked to higher incomes, 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].

**Figure 8**  
**Birth Rate by Income Quintile Manitoba Women 2003/04**



Source: Manitoba Centre for Health Policy

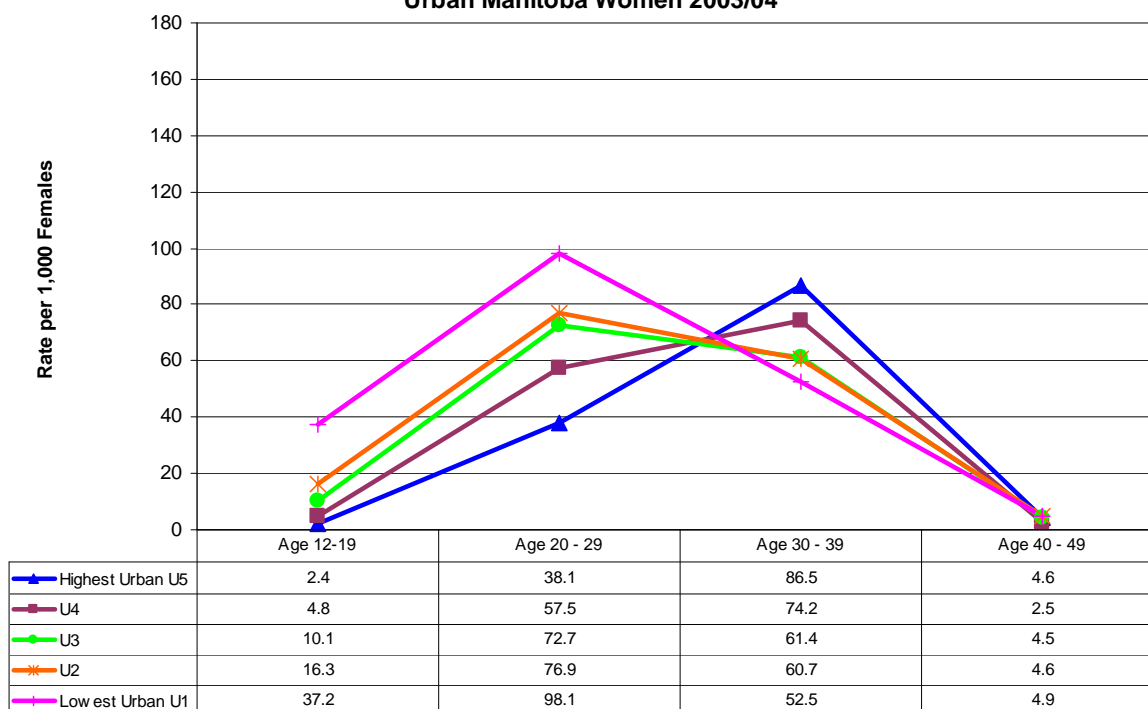




Figure 8 shows the birth rates by income quintile for urban and rural Manitoba women who gave birth in the 12 months from April 1, 2003 to March 31, 2004<sup>10</sup>. In 2003/04, about 44% of births in Manitoba were to rural women and about 56% were to urban women. Urban women have lower birth rates 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**



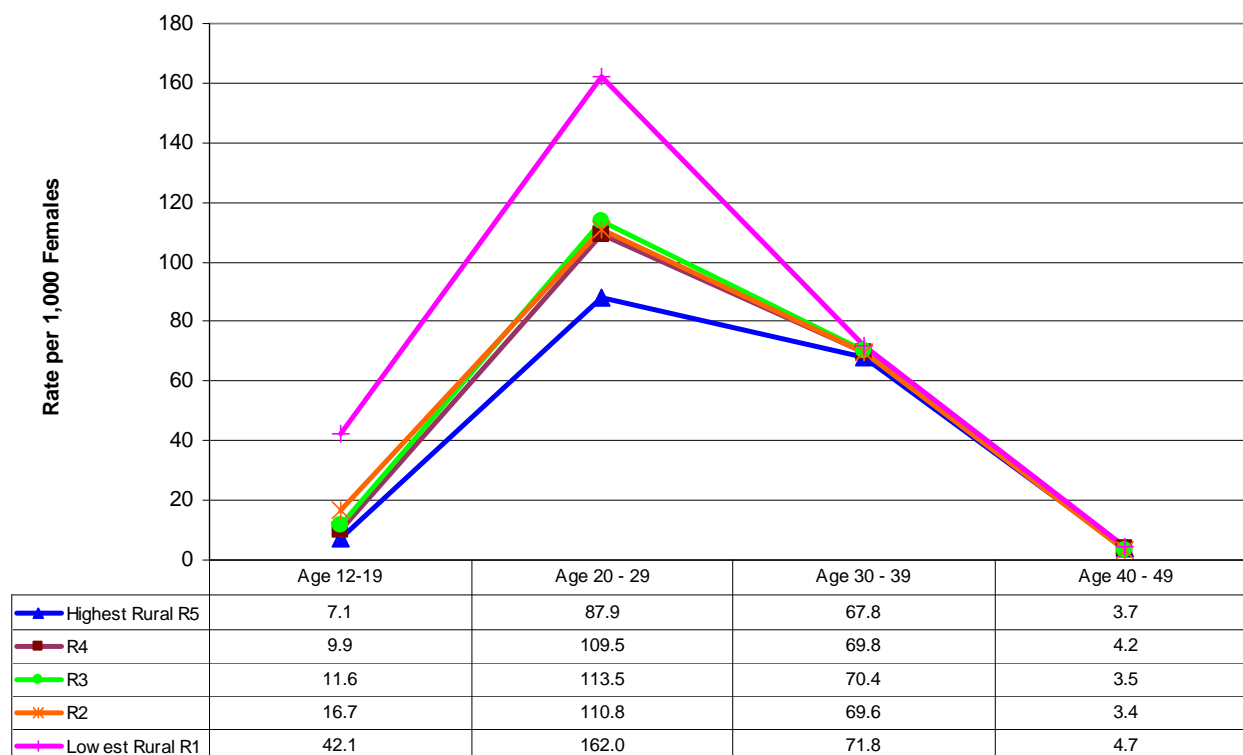
Source: Manitoba Centre for Health Policy

<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].

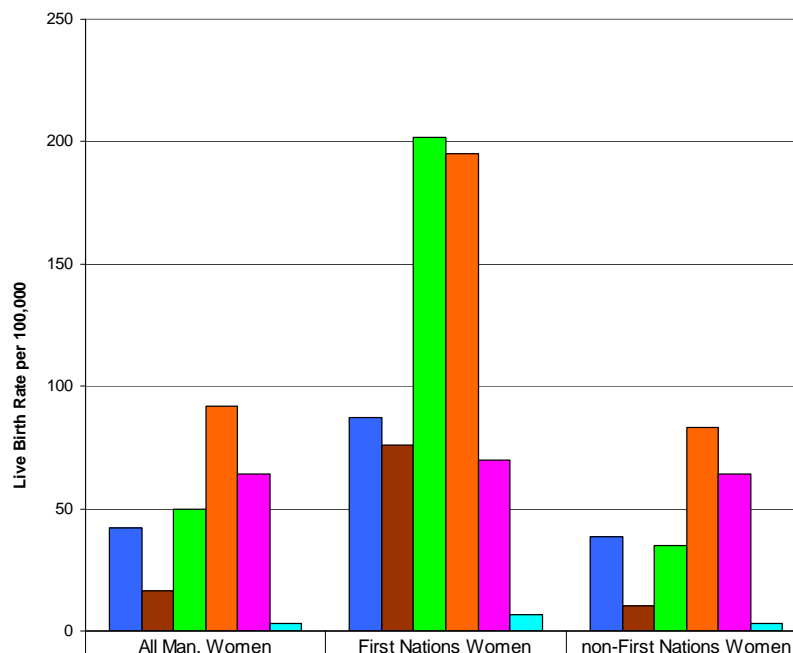
<sup>11</sup> “First Nations” refers here to women who self identified to Manitoba Health. See footnote 5.

<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.

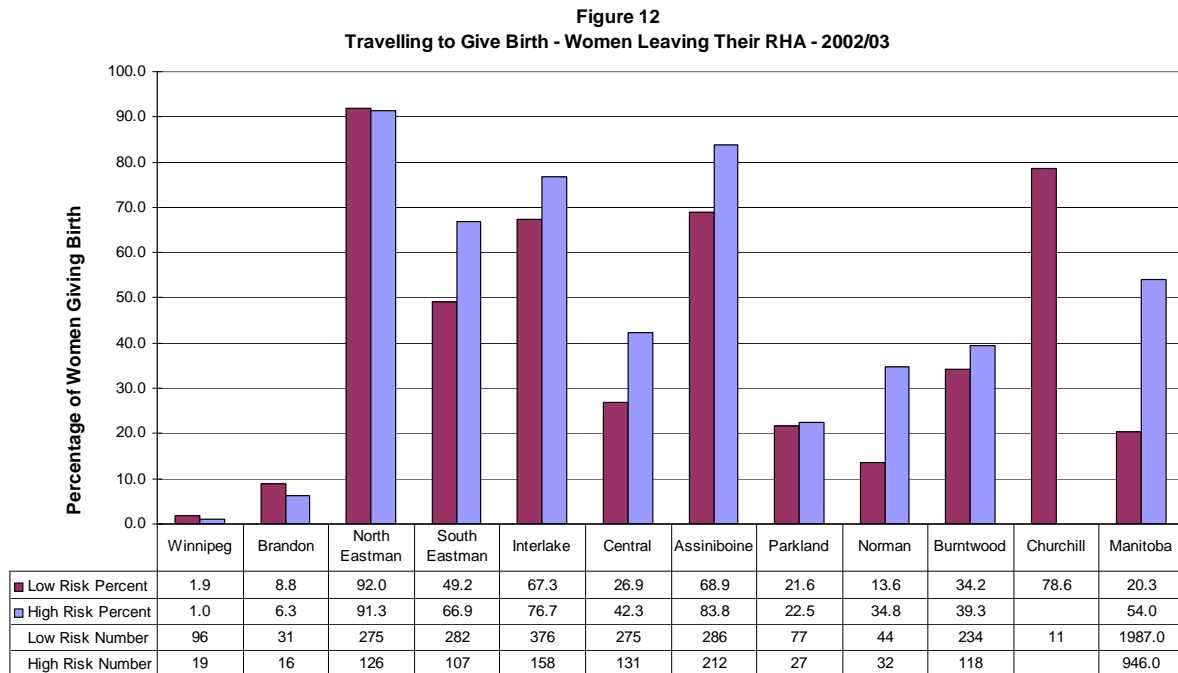




For rural and northern women, the departure of family physicians from maternity care is one factor that has led to the loss of their local maternity care services, since these hospitals currently rely on family physicians to provide most maternity care. Midwifery has been regulated and funded in Manitoba 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:

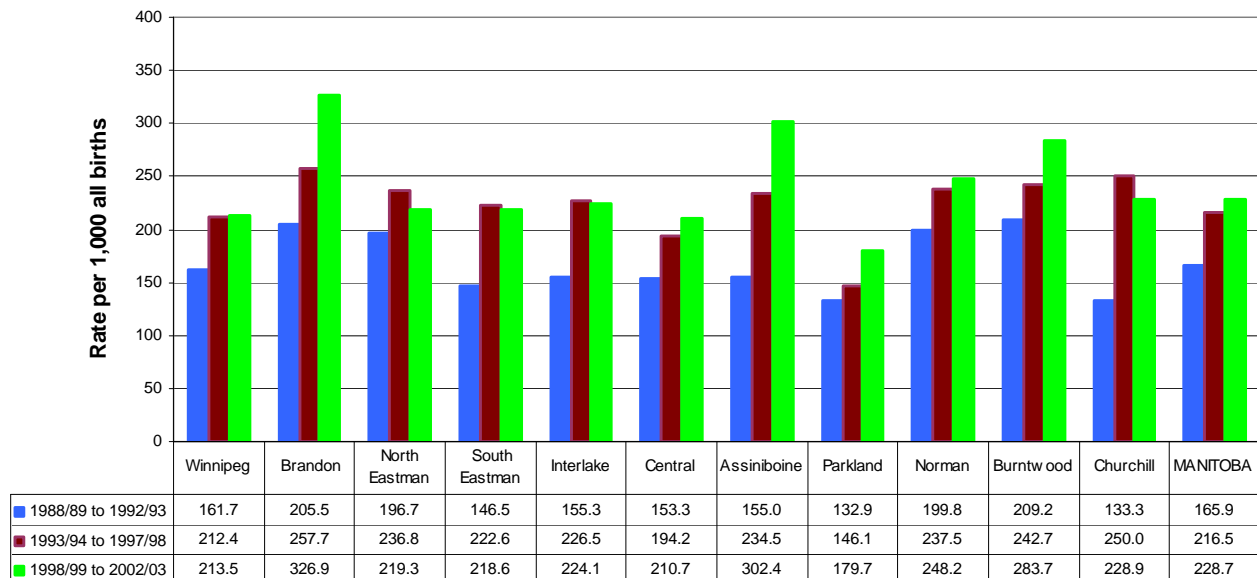
- inductions of labour
- analgesia and anaesthesia during labour
- assisted vaginal births (using forceps or vacuum extraction)
- Caesarean sections

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].

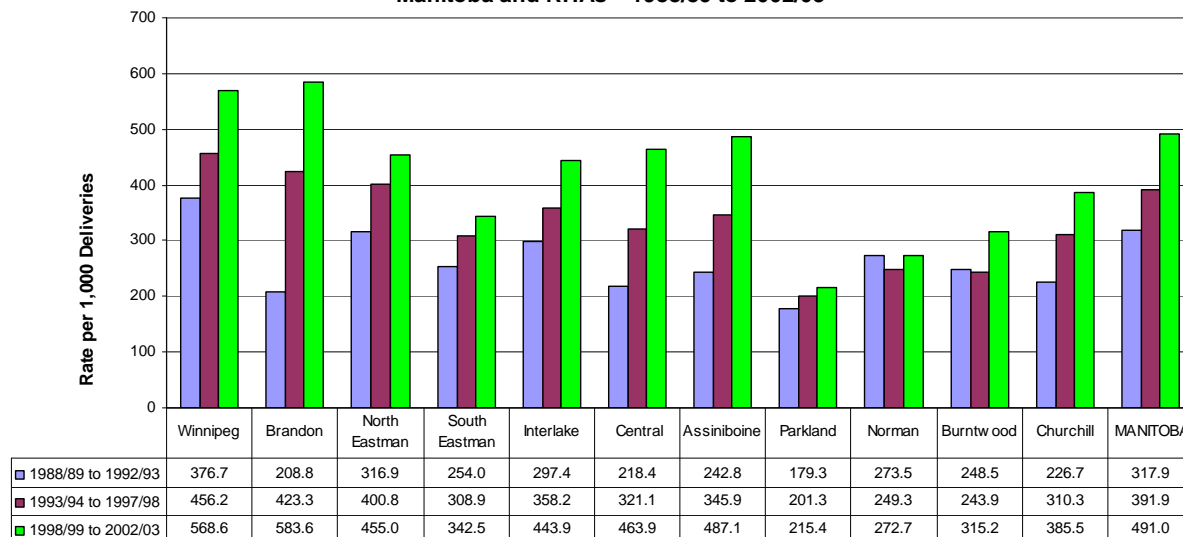
## Analgesia and Anaesthesia During Labour

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].

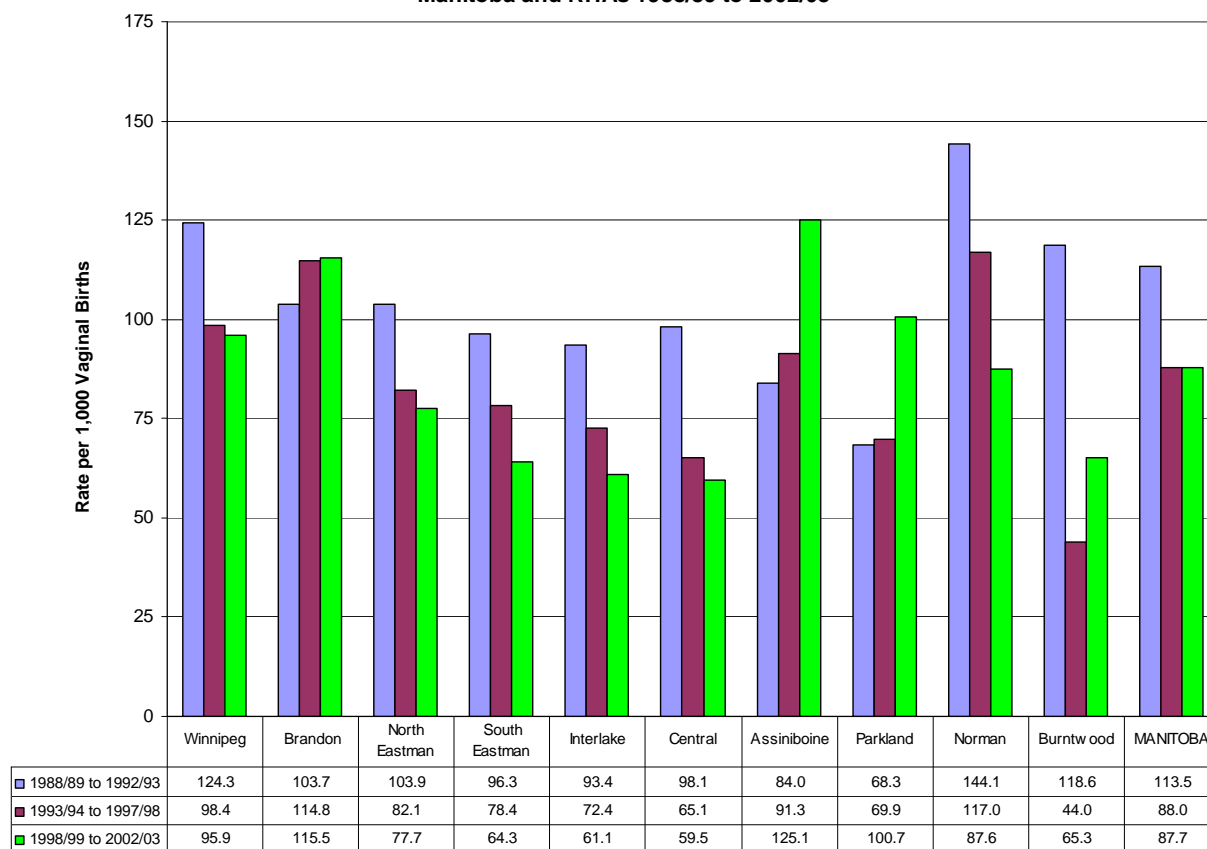
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<sup>18</sup> In labour support terminology, doula refers to a specially trained birth companion (not a friend or loved one) who provides labour support. It is a Greek word meaning "a woman who serves".





**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].

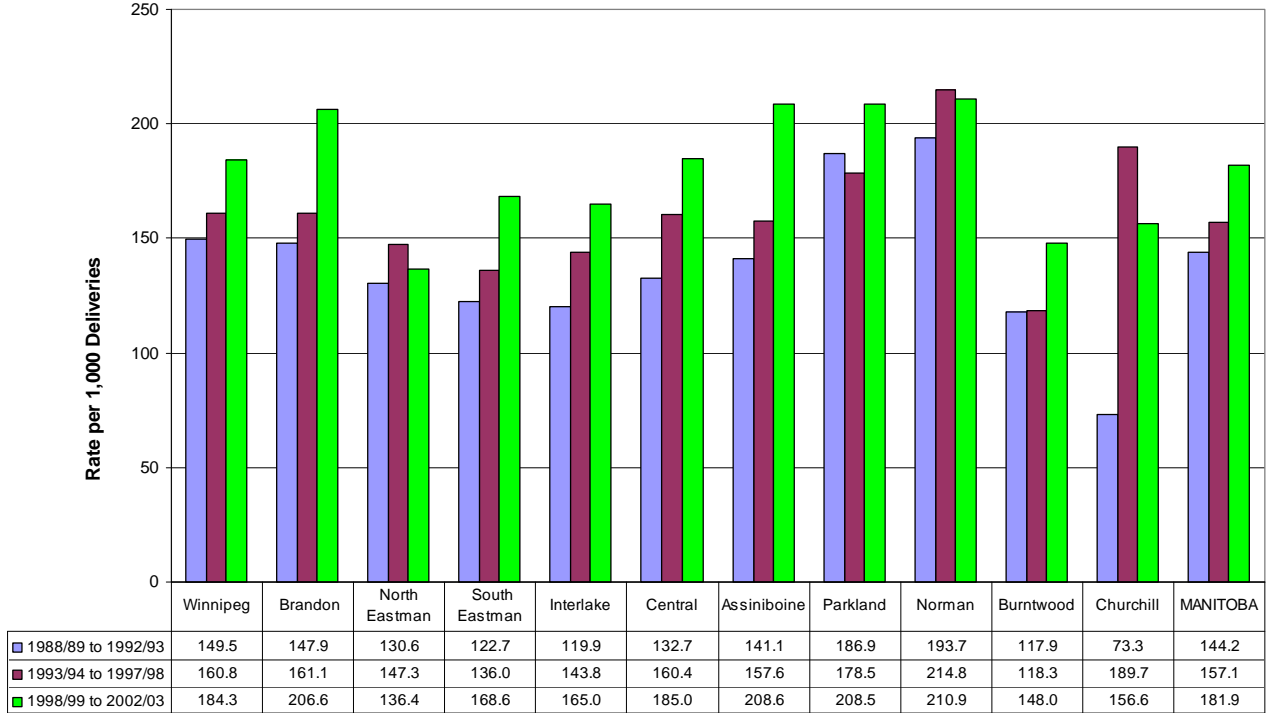
In Manitoba, as in the rest of Canada and in many other developed countries, the rate of birth by Caesarean section has increased markedly. In the late 1960s, the Canadian Caesarean section rate was about 5% of all births. By 2005, it had increased to 26.3%. Manitoba's rate was lower than the Canadian 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.

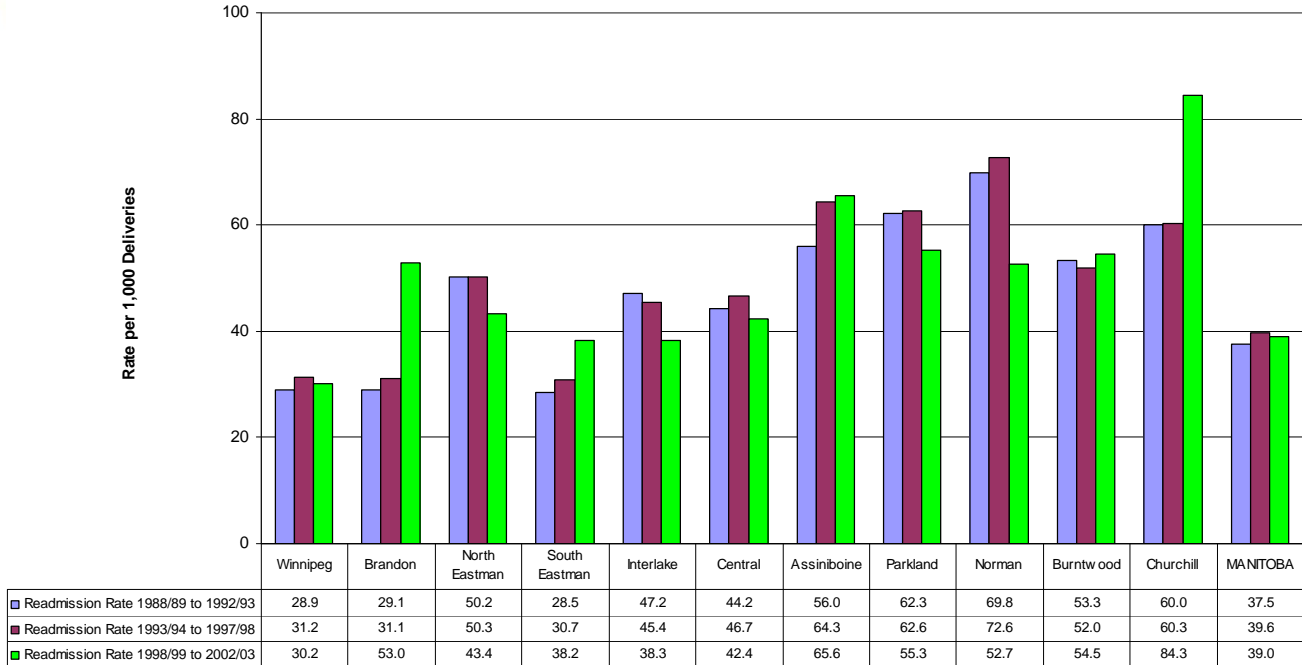
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disorders in the puerperium (including intra-cranial venous sinus thrombosis); uterine rupture; adult respiratory distress syndrome; pulmonary edema; myocardial infarction; acute renal failure following labour and delivery; cardiac arrest/failure or 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.

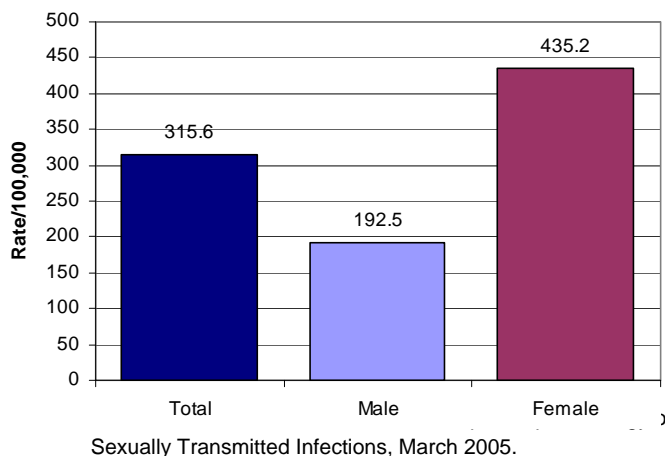
### Age-Sex Distribution of Chlamydia

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].

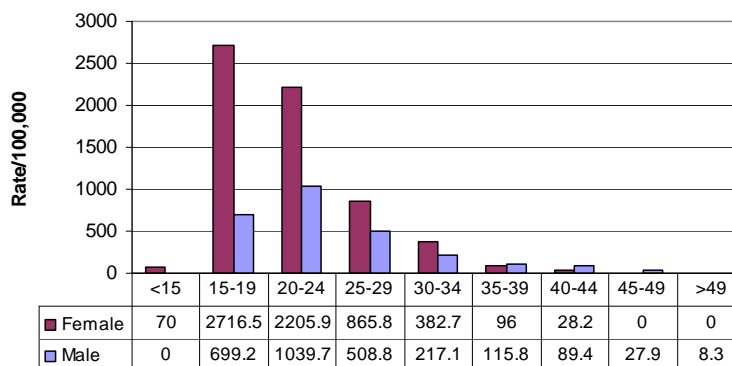
First Nations Manitobans<sup>21</sup>, especially young women, experience higher rates of Chlamydia infections than do other Manitobans. In 2003, the rate of Chlamydia reached 7,358 per 100,000 among First Nations

<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

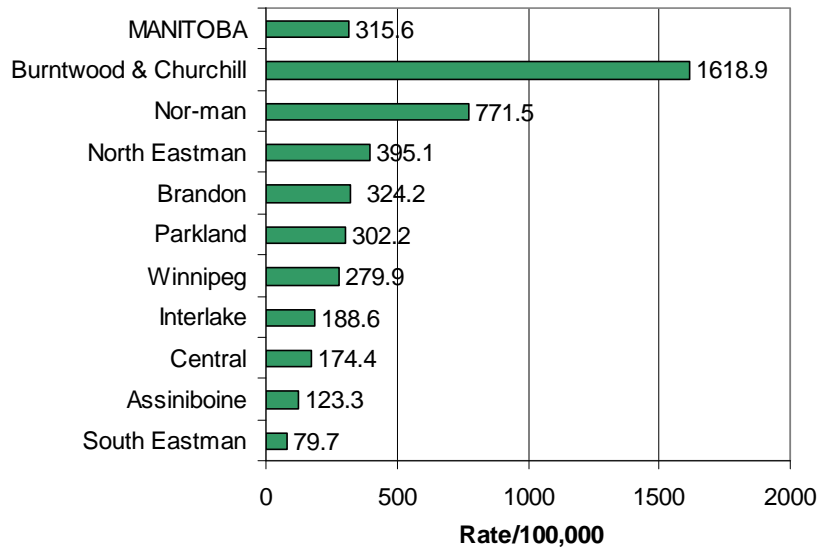
substantial margin are Norman and North Eastman. Thus, residents of northern and eastern regions have the highest rates of Chlamydia in the province [94]. Preliminary analysis of 2006 data show that

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.





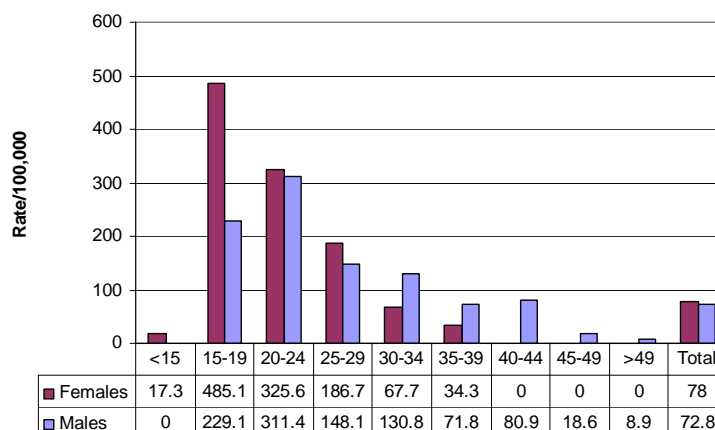
The age distribution of gonorrhoea follows a similar pattern to that for Chlamydia, with the highest rate of newly diagnosed infections found among women aged 15 to 19. A rate of 485.1 per 100,000 for this age group is six times higher than for Manitoba women of all ages and over twice the rate for men 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).

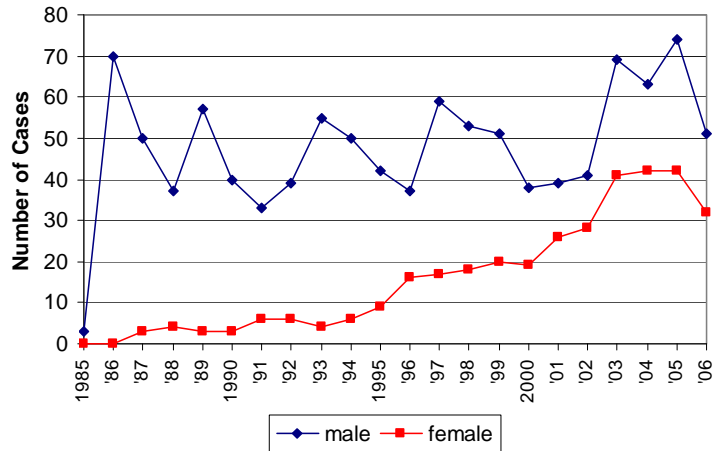
In 2006, 32 women were newly diagnosed with HIV, representing 39% of all new cases [99]. These numbers declined in 2006, but it is too early to know if this reflects a genuine decrease in cases.

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.

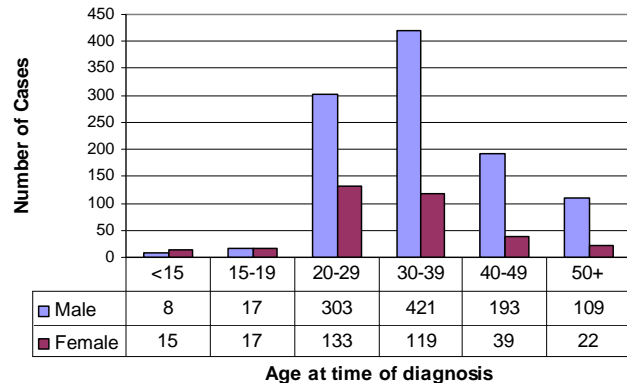
<sup>22</sup> Now more accurately referred to as men having sex with men – MSM.

**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].

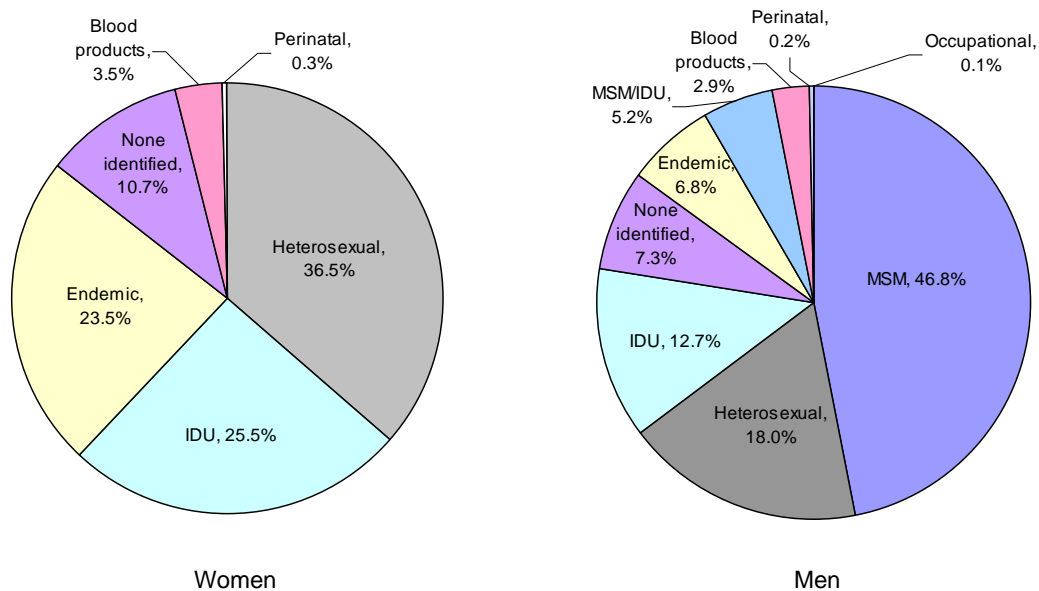
## Risk Factors

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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