



# POPULATION-SPECIFIC HIV/AIDS STATUS REPORT

## Women



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## FOREWORD

The Public Health Agency of Canada (PHAC), with the support of many partners, is pleased to release this status report as the third of eight reports intended to summarize current evidence<sup>1</sup> about the impact of HIV/AIDS among key populations in Canada. Communities, governments, public health practitioners, non-governmental organizations, researchers and others are encouraged to use this report to inform the future direction of HIV/AIDS policy, programming and research to positively affect the health and well-being of Canadian women.

This series of status reports was initiated to support the actions set out in *The Federal Initiative to Address HIV/AIDS in Canada*<sup>2</sup>, the Government of Canada's framework for federal investment in HIV/AIDS, and to provide a comprehensive evidence base for other partners and stakeholders involved in the Canadian response. Launched in 2005, the Federal Initiative identifies the need for more effective interventions and improved HIV/AIDS prevention, research, diagnosis, care, treatment and support initiatives for specific populations with, or at risk of, HIV and AIDS. These populations include people living with HIV/AIDS, gay men, people who use injection drugs, Aboriginal peoples, people in federal prisons, youth at risk, women, and people from countries where HIV is endemic.

In addition, these status reports support the objectives of the report *Leading Together: Canada Takes Action on HIV/AIDS (2005-2010)*<sup>3</sup>. Developed and launched by stakeholders in 2005, Leading Together renews Canada's collective efforts to deal with not only HIV/AIDS but also with the underlying health and social issues that contribute to new infections and have devastating effects on people who are living with HIV/AIDS. Leading Together encourages collaboration and the sharing of knowledge, skills and resources so that together we can stop HIV.

This status report was guided by a national working group with expertise in research, epidemiology, community development, policy and program development, public health, and the lived experiences of women living with, and affected by, HIV/AIDS. Their input and advice was instrumental in ensuring that the report presents the most current, relevant evidence and innovative responses that exist in Canada today.

This population-specific HIV/AIDS status report focuses on how HIV/AIDS affects Canadian women. This is the first time PHAC has presented HIV/AIDS-related information relevant to this population in a comprehensive manner. The decision to focus on women stems from a need to better understand how women's experiences affect their lives and create resilience or increase vulnerability to HIV/AIDS. The report takes an intersectional approach and recognizes that women are not a homogenous population. For instance, social differences related to diversity and equity may, in some cases, be more important than shared gender identity in understanding women's lived experiences.

The preparation of this report has yielded a number of lessons that will influence future reports in this series. As is the case in any work of this nature, limitations were encountered in the data gathering, analysis and reporting phases. Nevertheless, the report

1 There are many different forms of evidence including research evidence, anecdotal reports, and personal experience which can be disseminated to improve practices. These include, but are not limited to, the following: (1) research evidence including findings from individual studies, systematic reviews, and primary research including community-based research; (2) informed practices including "best" practices and "wise" practices; (3) expert opinion from researchers and service providers; (4) lived experience from people living with HIV/AIDS; (5) reports and evaluations from a range of sources including government, community-based agencies, universities and funding agencies; and (6) practice-based evidence including programming materials informed by practice such as training manuals, guidelines, and position papers.

2 More information on *The Federal Initiative to Address HIV/AIDS in Canada* is available at <http://www.phac-aspc.gc.ca/aids-sida/fi-if/index-eng.php>.

3 More information on *Leading Together: Canada Takes Action on HIV/AIDS (2005-2010)* is available at [www.leadingtogether.ca](http://www.leadingtogether.ca).

FOREWORD

is comprehensive and includes valuable information to further our knowledge and understanding of HIV/AIDS among women. PHAC welcomes comments on the report to assist with the development of future population-specific HIV/AIDS status reports.

After 25 years of collective commitment and investment, HIV/AIDS continues to be a major public health challenge that requires a concerted, collaborative and comprehensive response. An examination of the underlying factors and conditions that create resilience or increase vulnerability to HIV/AIDS is key to understanding how to best structure efficient and sustainable responses to the challenge. It is with this objective in mind that this report was prepared.

## EXECUTIVE SUMMARY

The proportion of HIV infection attributed to adult women has gradually increased over the last 10 years. As of 2008, it is estimated that women account for 17% of people living with HIV and 26% of all new HIV infections in Canada. While the annual number of positive HIV tests among women has varied over the last decade, it is not declining. Approximately three quarters of the new infections that occurred among women in 2008 can be attributed to heterosexual sex exposure, and more than one third of new infections can be attributed to exposure through injection drug use. On a positive note, the proportion of infants confirmed to be infected with HIV through perinatal transmission decreased from 9.3% in 2000 to 1.7% in 2008.

The report recognizes that certain groups of women in Canada, such as Aboriginal women, women from countries where HIV is endemic, women who use injection drugs, and women in prison, continue to be over-represented and disproportionately affected by HIV/AIDS. For instance, Aboriginal women are almost as equally affected by HIV as Aboriginal men, and women who come from countries where HIV is endemic represent more than half (54.2%) of the positive HIV test reports attributed to women. Also notable is that the rate of HIV infection for women in prisons is higher than the rate of HIV infection for men in prisons (4.7% as compared to 1.7%).

While women's biological differences render them more susceptible to HIV than men, a number of socio-economic factors, also known as "determinants of health", influence women's vulnerability to HIV. Determinants of health, such as gender, income, education, unemployment, access to stable housing, access to health services, social support services and social networks, social environments (e.g., geographically isolated communities, prison environments, disadvantaged urban or rural environments), racism, and early childhood development, can either increase or decrease women's vulnerability to HIV. In addition to the broad determinants of health, other factors,

such as sexual violence, culture, and HIV/AIDS-related stigma and discrimination, have also been shown to contribute to women's vulnerability to HIV.

This report details some of the lived experiences of women in relation to these determinants and underscores the need for approaches that address the root causes of HIV. It is important to consider how gender, a key determinant, intersects with multiple other forms of social inequality to contribute to women's vulnerability to HIV. In identifying and discussing the factors that create resilience or increase vulnerability to HIV/AIDS, the report strives to reflect the diversity of the female population and the complexity of women's lives.

The report identifies 87 Canadian time-limited research projects underway between 2006 and 2009 that focused on HIV/AIDS among women in Canada. General areas of research included prevention, interventions and treatment strategies. Many projects also focused on specific population segments of women, including women living with HIV/AIDS, women involved in sex work, women from countries where HIV is endemic, female youth at risk, Aboriginal females, women who use injection drugs, lesbian and bisexual women, transwomen, and women in prison settings.

The report also examines the current response to HIV/AIDS among women at the policy and programmatic levels. This includes an overview of population-specific strategies at the national and provincial/territorial levels; population-specific networks, coalitions and advisory bodies; and organizations and projects focused on the delivery of programs and projects addressing HIV/AIDS among women and the response to HIV/AIDS for women in prisons. The report found that interventions which focus on women's empowerment and recognize the importance of building leadership among women at risk of HIV/AIDS play an important role in building women's resilience against HIV.

Projects and research synthesized as part of the report indicate that a broad range of organizations are involved in delivering prevention, care, treatment and support services to women. Organizations involved in the response include community-based HIV/AIDS service organizations, health or sexual health services, and governmental organizations. These communities and organizations across Canada have taken up the challenge and are doing their part to reduce the number of HIV infections in this population and to meet the needs of women living with, and at risk for, this disease. Despite these important and significant efforts, much remains to be done. Effective, tailored and continued efforts in preventing the transmission and acquisition of HIV and improving the quality of life of women living with HIV/AIDS are required to successfully address HIV and AIDS among women.



# ACKNOWLEDGEMENTS

PHAC would like to acknowledge the individuals, population representatives, community representatives, researchers and government officials who contributed their time, expertise and experience to the development of this population-specific HIV/AIDS status report. Thank you also to members of the Federal, Provincial and Territorial Advisory Committee on AIDS, PHAC staff in the Centre for Communicable Diseases and Infection Control (CCDIC), and PHAC Regional Offices for their insightful contributions at various stages of the report.

## Working Group Members

PHAC also acknowledges and thanks the following working group members for their exceptional commitment and for ensuring this report accurately reflects the reality of HIV/AIDS among women in Canada:

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## LIST OF TERMS<sup>4</sup>

<b>AIDS</b>	Acquired Immunodeficiency Syndrome – The syndrome caused by HIV and a diagnosis made on the basis of certain clinical criteria (e.g., AIDS-defining illnesses, specific blood tests). Also known as late-stage HIV disease.	<b>F/P/T AIDS</b>	Federal/Provincial/Territorial Advisory Committee on AIDS
<b>ART</b>	Anti-Retroviral Therapy – Treatment with western medicines that suppress or inhibit the ability of HIV to multiply in the body.	<b>Gender</b>	“The array of socially constructed roles and relationships, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis” (see Chapter 4, Section 4.1.1 Gender).
<b>ASO</b>	AIDS Service Organization – An organization providing AIDS services.	<b>Sex and Gender-Based Analysis</b>	– According to Health Canada, Sex and Gender-Based Analysis (SGBA) is an analytical approach that integrates a sex and gender perspective into the development of research, policies and programs, as well as planning and decision-making processes.
<b>Bisexual woman</b>	– A woman who is romantically and/or sexually attracted to both men and women.	<b>HAART</b>	Highly Active Anti-Retroviral Therapy (see ART – Anti-Retroviral Therapy)
<b>CAHR</b>	Canadian Association of HIV Research	<b>HCV</b>	Hepatitis C Virus – A virus that infects the liver. Prolonged and acute hepatitis C infection can often result in liver disease and cirrhosis. The virus is transmitted largely by blood transfusion or percutaneous inoculation, such as needle sharing among people who use injection drugs.
<b>CCDIC</b>	Centre for Communicable Diseases and Infection Control – A Centre of the Infectious Disease Prevention and Control Branch, Public Health Agency of Canada.	<b>HIV</b>	Human Immunodeficiency Virus – The virus that causes AIDS.
<b>CIHR</b>	Canadian Institutes of Health Research	<b>Homophobia</b>	An irrational fear of, aversion to, or discrimination against homosexual people or homosexuality.
<b>CSC</b>	Correctional Service of Canada – A government agency responsible for maintaining Canada’s federal correctional system.	<b>IDU</b>	An epidemiological classification for HIV transmission among people who use injection drugs.
<b>First Nations</b>	A term which usually refers to both Status and Non-Status Indians. First Nations People are one of the three recognized Aboriginal peoples in Canada, along with Métis and Inuit.	<b>Inuit</b>	Canada’s Aboriginal people of the Arctic. Inuit are one of the three recognized Aboriginal peoples in Canada, along with First Nations and Métis.
<b>FNIHB</b>	First Nations and Inuit Health Branch – A branch of Health Canada.		

<sup>4</sup> This list was adapted from a list of commonly used HIV/AIDS terms and acronyms prepared for the *Population-Specific HIV/AIDS Status Report: Aboriginal Peoples*.

**Lesbian** A woman who is romantically and/or sexually attracted to women.

**LGBTQ** Lesbian, Gay, Bisexual, Transgender and Questioning

**Métis** Peoples of mixed Aboriginal and European ancestry. Métis are one of the three recognized Aboriginal peoples in Canada, along with Inuit and First Nations.

**Microbicide** A term used to describe any substance or compound whose purpose is to reduce microbes, such as HIV.

**Perinatal** A medical term used to describe the period immediately before and after birth.

**PHAC** Public Health Agency of Canada

**RHAN** Regional HIV/AIDS Network – A network of Public Health Agency of Canada Regions focusing on HIV/AIDS issues and programs.

**Reserve** A First Nations community.

**Sex Work** A term used to describe an exchange of sexual services for money or goods.

**SSHRC** Social Sciences and Humanities Research Council of Canada

**SRAD** Surveillance and Risk Assessment Division (as of June 22, 2011, the Surveillance and Epidemiology Division) – Provides overall strategic direction and coordination for PHAC’s HIV/AIDS surveillance and epidemiological work.

**Transwomen or transgender women** – A term used to describe a person, born male or physically assigned as male at birth, whose biological sex is not consistent with her sense of self. As a result, she lives and identifies as a woman. Male-to-female (MTF) is another term used to describe a transwoman or transgender women.

**STI** Sexually Transmitted Infection

**Survival Sex Work** – A term used to describe an exchange of sexual services for shelter, food and/or drugs.

**Two-spirit** The organization 2-Spirited People of the 1<sup>st</sup> Nations defines the term as follows: “Native people who are gay, lesbian, bisexual, transgender, other gendered, third/fourth gendered individuals that walk carefully between the worlds and between the genders” [1]. The term is primarily used by some First Nations people.

**Unstable Housing** – A term used to describe temporary housing or living arrangements, such as sleeping on a friend’s couch, living in a shelter or car, etc. This term is often used to describe the “hidden” homelessness.

**WSW** Women Who Have Sex with Women – A broad term used to explain same-sex sexual behaviour. Women who have sex with women may or may not include women who self-identify as lesbian, gay, bisexual, or two-spirit.

## References

[1] 2-Spirited People of the 1<sup>st</sup> Nations. 2 spirits flyer [document on the Internet]. Toronto: 2-Spirited People of the 1<sup>st</sup> Nations; n.d. [cited 2009 Aug]. Available from: <http://www.2spirits.com>

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# CHAPTER 1 - Introduction

# 1

## 1.1 Background

Canada's most marginalized populations continue to be at disproportionate risk for HIV infection. Epidemiological data indicate that the groups most impacted by HIV/AIDS continue to be men who have sex with men, Aboriginal peoples, people who use injection drugs, people from countries where HIV is endemic, and women who are represented in the above groups or who engage in high-risk activities with others in these groups. The proportion of women living with HIV/AIDS has not decreased over the last decade, and women continue to represent approximately one quarter of all new infections in Canada.

Particular groups of women in Canada, such as women involved in sex work, women in prisons, female youth at-risk, women who use injection drugs, Aboriginal women, women from countries where HIV is endemic, and transwomen, are particularly vulnerable to HIV. The distribution of HIV infection among these groups of women reflects the extent to which social inequities and other factors, such as race, culture, class, age, religious affiliation, and sexual orientation, increase women's vulnerability to HIV infection. Thus, in reviewing the available Canadian data and research, the report goes beyond a strict interpretation of sex and gender-based analysis to consider how women's lives are shaped by the intersections of gender, race, ethnicity, culture, and other determinants of health.

While sex and gender-based analysis is an important tool to help identify and clarify the differences between women and men, intersectionality goes a step further to look at the complex interaction between various forms of oppression [1-4]. Intersectionality is especially important to consider in the context of HIV/AIDS as it sheds light on how HIV prevention, diagnosis and access to care, treatment and support are experienced differently by certain groups of women who are marginalized by society [4;5]. By applying an intersectional perspective, PHAC endeavours to respect the working group's advice on the importance of highlighting the complexities of women's lives in the context of HIV/AIDS in Canada.

## 1.2 Methodology

To support the development of this status report, PHAC established a working group composed of community and population representatives, non-governmental organizations, researchers, and policy and program experts. The working group acted as an advisory body, providing guidance and feedback on the report's progress, themes and drafts. The non-governmental working group members were selected following a stakeholder consultation in November 2005. The working group also included representation from PHAC.

The report is a "scoping review", developed and adapted for the purpose of mapping out the literature and evidence on women and HIV/AIDS in Canada [6]<sup>5</sup>. The methodology for each chapter was designed to ensure that the most current and relevant evidence was synthesized and presented. Demographic data were extracted from various sources, including Statistics Canada. Epidemiological information and surveillance data were gathered from reports published by PHAC and other existing published data.

Data and information on women's vulnerability to and resilience against HIV/AIDS were collected from peer-reviewed publications and grey literature. The literature identified for inclusion in the report met the following criteria: focused on HIV/AIDS; published between 2002 and 2010; focused on women in Canada; addressed one or more of the 12 health determinants related to HIV or AIDS, or characterized HIV or AIDS in the context of prevention, care, treatment, support or diagnosis for women populations; and written in English or French. A list of terms and databases searched can be found in Appendix A. Additional information was also included in the report to provide context and/or address gaps identified by the working group.

5 The goal of a scoping review is to identify, retrieve and summarize literature. It is broader and more comprehensive than a systematic review that is generally guided by specific questions [6].

Information on current research (underway between 2006 and 2009) was gathered from the following organizations: Canadian Institutes of Health Research (CIHR); Canadian Association for HIV Research (CAHR); Canadian Foundation for AIDS Research (CANFAR); Social Sciences and Humanities Research Council of Canada (SSHRC); Ontario HIV Treatment Network (OHTN); and Michael Smith Foundation.

To gather information on the current response to HIV/AIDS among women, including time-limited projects, networks, coalitions, committees, strategies, and policy initiatives in place between 2006 and 2009, information-gathering templates were circulated to federal, provincial and territorial officials through the following mechanisms: Federal/Provincial/Territorial Advisory Committee on AIDS; PHAC national and regional HIV/AIDS program consultants; the Federal/Provincial/Territorial Heads of Corrections Working Group on Health; and Health Canada's Regional HIV/AIDS Sub-Working Group. Responses were received from all provinces and territories. Projects funded by the Toronto Public Health AIDS Prevention Community Investment Program were also included in the analysis. The expert working group was also instrumental in identifying additional networks, coalitions, strategies and projects for inclusion in the report.

One limitation of the report is that its analysis only considers HIV/AIDS-specific responses that explicitly address women. While many HIV/AIDS-specific programs and services serve female clients in addition to other key populations, only time-limited HIV/AIDS projects that focus on women or target them directly within a broader group are included in this report. A second limitation of this report is that, due to time and methodological constraints, Chapters 5 and 6 focus on HIV/AIDS-specific projects and do not consider projects related to other determinants of health.

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## CHAPTER 2 - Demographic Profile

The purpose of this chapter is to draw a demographic portrait of women in Canada. This chapter provides statistics on various population segments at particular risk for HIV infection, including women involved in sex work, women who use injection drugs, women in prison, and women in unstable housing and homeless women. The 2006 Statistics Canada Census served as a main reference, while other data were retrieved from academic and grey literature.

### 2.1 General Trends: 2006 Census of Population and Projected Growth

In 2006, the population of Canada was 31,612,897, an increase of 1,605,803 people since the 2001 Census [1]. Just over half of Canadians (51.04% or 16,136,925) were women or female children in 2006 [2].

### 2.2 Vital Health Indicators: Life Expectancy and Morbidity

Life expectancy in Canada is estimated at approximately 76 years for men and 81 years for women. Women's life expectancy in Canada has consistently ranked among the top 10 of all Organization for Economic Co-Operation and Development (OECD) countries for several decades [3]. Although women tend to outlive men in Canada, women are more likely to experience chronic conditions and disability [4]. At the same time, senior women are more likely than men to live out their later years in poverty<sup>6</sup>.

Morbidity can be commonly defined as “departure from an overall state of health” but often refers more specifically to the effects of illness, disease or injury in a population [3]. For the purposes of this section, morbidity relates to hospitalization rates, prevalence of chronic conditions, and disability. In 2000-2001, statistics reveal that hospitalization rates were higher

among women than men. The most common causes of hospitalization for women are pregnancy and childbirth (which account for more than 50% of all hospitalizations among women between the ages of 20 and 44). However, when childbirth and pregnancy are excluded from the data, the gap in hospitalizations rates between men and women narrows [3].

The prevalence of having more than one reported chronic condition is greater among senior women than senior men, as 71% of senior women and 60% of senior men reported more than one chronic condition [3]. In addition, women who reported a disability were more likely to be in a lower income bracket, single with dependent children (or senior women), and have few social supports. This reveals a socio-economic gradient in health whereby women who live in poorer economic and social circumstances experience worse health than their more economically and socially affluent counterparts [5].

A phenomenon called the “healthy immigrant effect” occurs when recent immigrants (less than 10 years) experience better health than non-immigrants or established immigrants [6;7]. For instance, studies have shown that recent immigrants are less obese and overweight than established immigrants. This is often explained by the more sedentary lifestyle and “western” diet established immigrants tend to adopt [6]. Other factors, such as starting tobacco and alcohol use once in Canada, have been shown to erode immigrants' health status over time [6]. While both immigrant men and women initially benefit from the “healthy immigrant effect”, data show that established immigrant women are more susceptible to mental health problems than their male counterparts [7].

### 2.3 Age

Canada's female population continues to grow older, but it remains one of the youngest among the world's developed nations. In 2001, the median age for women was 38.4 and 36.8 for men. The 2006 Census indicates

6 Statistics reveal that nearly one quarter of senior women, as compared to 12% of senior men, live below the poverty line [4]. Moreover, rates of poverty are even higher for single and widowed women (just under 50% live below the poverty line).

that the median age has grown to 40.4 for women and 38.6 for men. Women make up a greater proportion of the 65 years and older age population category, representing 57.2% and 56.5% in 2001 and 2006 respectively. An examination of Canada's youth population, defined as those between the ages of 10 and 24 years<sup>7</sup>, reveals that 19.9% of the total Canadian population fell under this category in 2006 [2].

## 2.4 Mental Health

According to the 2002 Canadian Community Health Survey (CCHS), fewer women than men reported having good mental health. For instance, although 69.0% of men and 65.1% of women who took part in the CCHS reported having very good or excellent mental health, 56.7% of women and 43.4% of men reported having either fair or poor mental health [9]. The CCHS also indicated that women are more likely than men to suffer from specific types of mental health disorders, including major depressive episodes (62.2% women vs. 37.8% men), panic disorders (66.6% vs. 33.3%), social anxiety disorder (58% vs. 42%), and agoraphobia<sup>8</sup> (75.9% vs. 24.1%) [9].

The CCHS also revealed that women are more likely than men to suffer from specific types of mental health problems<sup>9</sup>. For example, women reported a greater likelihood of having suffered from eating disorders (84.9% women vs. 15.1% men). However, women reported less illicit drug dependence than men (0.5% of women 15 years and over reported this vs. 1.1% of men)<sup>10</sup> and less alcohol dependence than men (1.3% of women vs. 3.8% of men, 15 years and over) [9].

More women than men who participated in the CCHS reported having contacted support services for problems related to emotional or mental health or use of alcohol or drugs – 65.4% versus 34.5% [9]. However, women in the survey also reported being more likely than men to encounter barriers accessing mental health services due to accessibility issues, such as cost, lack of transportation, knowing how or where to get help, or issues such as childcare or scheduling (66.5% of women). Moreover, a greater proportion of women (62.9%) than men (37.1%) who took part in the survey reported acceptability issues as a barrier to accessing health services<sup>11</sup>.

## 2.5 Aboriginal Identity: First Nations, Inuit and Métis<sup>12</sup>

In 2001, almost half a million women (3% of the total female population) self-reported as being First Nations, Inuit or Métis [11]. The female Aboriginal population increased to 600,695 in 2006, representing about 52% of all Aboriginal peoples in Canada (and 3.7% of the total female population) [12]. Of the total female Aboriginal population, 359,975 (59.9%) identified as First Nations, 196,285 (32.7%) as Métis, and 25,460 (4.2%) as Inuit [12]. When comparing gender for each group, the ratio shows slightly less women than men in the Métis and Inuit populations. This trend runs opposite to the gender ratio seen among the general Canadian population where a slightly higher proportion of females to males is found.

7 This age category varies slightly from the UN Assembly which defines youth as those between 15 and 24 years. [8]

8 Agoraphobia is defined as the fear and avoidance of being in places or situations from which escape might be difficult [9].

9 Canadian Community Health Survey defines "mental health problems" as emotional or mental conditions that may need treatment from a mental health professional [9].

10 The disparity between sexes remains relatively the same for the youth population (aged 15-24): 3.5% of male youth and 1.8% of female youth who responded to the survey reported illicit drug dependence [9].

11 Acceptability issues are those where individuals chose to do without health care either because of competing demands on their time or because of their attitude towards illness, health care providers or the health care system [9].

12 This section is impeded by the limited amount of Inuit- and Métis-specific health data available. This can be attributed to limitations in provincial and territorial health data collection and reporting and a lack of routine data collection mechanisms specific to Inuit and Métis populations. Currently, health information for Inuit and Métis populations is mainly derived from census data, and surveys such as the Aboriginal Peoples Survey, and university-based research studies. This section draws on this information where possible. For further analysis of Aboriginal Peoples, consult the *Population-Specific HIV/AIDS Status Report: Aboriginal Peoples* [10].

The Aboriginal population is younger than the general population. In 2006, the median age for Aboriginal peoples was 27 years compared with 40 years for non-Aboriginal peoples [12]. Moreover, almost one third (29.8%) of Aboriginal peoples are less than 15 years of age, irrespective of gender, as compared to 17.3% of the general population. Aboriginal birth rates reflect this trend. From 1996 to 2001, the fertility rate of Aboriginal women was 2.6 children as compared to 1.5 for non-Aboriginal women [12].

Aboriginal women also give birth at a younger age than their non-Aboriginal counterparts. Data suggest that more than one quarter (27%) of off-reserve First Nations children less than 6 years had mothers between 15 and 24 years, as compared with 8% of non-Aboriginal children [13]. Data for Inuit and Métis children reveal the same trend [14]. The focus on larger families, the higher participation of other relatives in raising children [13] and women's younger age at conception may account for increased fertility rates seen among Aboriginal women. However, there are indications that Aboriginal women are more likely than non-Aboriginal women to be single parents. For instance, data from the 2006 Census showed that 41% of First Nations children were living with only one parent as compared with 13% of non-First Nations children. A similar trend is seen among Inuit (one quarter of children were living with one parent) and Métis (31% of children were living with one parent) populations [15].

## 2.6 Immigrant Population and Visible Minority Status

In 2006, the female immigrant population represented 20.3% of the country's total female population [16]. Moreover, within the immigrant population, men and women were almost equally represented at 47.9% men and 52.1% women. These numbers coincide with the profile of the general Canadian population in which there are more females than males.

According to the same 2006 data, more women (32.4%) than men (23.3%) came to Canada under the family class<sup>13</sup> category of immigration which requires sponsorship by a family member who is either a Canadian citizen or permanent resident living in Canada [17]. A breakdown of the family class category shows that 67.1% of women came to Canada as a spouse or partner as compared with 59.9% of men, while the remainder came to Canada as a parent or grandparent [17]. In addition, while more than half of the female immigrant population (51.2%) came to Canada under the economic class<sup>14</sup>, a closer analysis reveals that within this category, 72.7% of women immigrated to Canada as a spouse or dependant of a principal applicant as compared to 47.7% of men [17]. This overrepresentation of women as spouses or dependants in both the family and economic classes is significant as it indicates that immigrant women are socially and economically dependent on their partners. Women's social and economic dependence on partners is relevant to HIV vulnerability as this dependence may translate into women assuming subordinate positions within their relationships.<sup>15</sup>

13 Family class refers to "permanent residents sponsored by a Canadian citizen or a permanent resident living in Canada who is 18 years of age or over. Family class immigrants include spouses and partners (e.g., spouse, common-law partner or conjugal partner); parents and grandparents; and others (e.g., dependent children, children under the age of 18 whom the sponsor intends to adopt in Canada, brothers, sisters, nephews, nieces and grandchildren who are orphans under 18 years of age, or any other relative if the sponsor has no relative as described above, either abroad or in Canada). Fiancé(e)s are no longer designated as a component of the family class under the *Immigration and Refugee Protection Act*" [17].

14 Economic immigrants refers to "permanent residents selected for their skills and ability to contribute to Canada's economy. The economic immigrant category includes skilled workers, business immigrants, provincial or territorial nominees and live-in caregivers" [17].

15 This has been extensively researched by scholars [18;19]. Boyd and Pikkov (2005) add that the processing fee to enter Canada, which is considered to be high, may deter many women from initiating the migration process [18].

The 2006 Census Metropolitan Areas (CMA) data indicate that 68.9% of the total foreign-born female population who arrived between 2001 and 2006 resided in Toronto (40.6%), Montreal (14.4%), or Vancouver (13.9%) [16].

Data show that over half (54.7%) of individuals belonging to the immigrant female population self-identify as visible minority women. Women who self-identify as visible minority women make up 11.1% of the total female population [20]. In 2006, of those women who self-identify as visible minority women, 24.3% self-identified as Chinese, 24% self-identified as South Asian, and 15.7% self-identified as Black (15.7%) [20].

In the 2006 Census, more than half (52.2%) of Canada's Black population<sup>16</sup> self-identified as first generation immigrants<sup>17</sup> (50.4% male/54.5% female). Recent Black immigrants, that is, those arriving between 2001 and 2006, accounted for 22.1% of the total Black population (23.5% male/20.8% female). In addition, the immigrant cohort of Canada's Black population is older than the non-immigrant cohort as statistics reveal that more than half of Black immigrants are between 25 and 54 years of age (58.2% females vs. 58.0% males) while one-fifth are more than 55 years old (23.3% females/20.7% males). Of the non-immigrant Black population in Canada, more than half are less than 15 years of age (53.3% males vs. 55.2% females) and one-fifth are between 15 and 24 years of age (20.6% males vs. 21.3% females); consequently, three quarters of the non-immigrant Black population are less than 25 years old, irrespective of gender.

## 2.7 Language and Education

### 2.7.1 Official and Non-Official Languages

In 2006, over half (57.6%) of Canadian women reported English as their first language, followed by French (22.2%) and non-official languages (20.2%) [21]. Most women who reported a non-official language as their first language reported being knowledgeable in one of the official languages: three quarters (74.6%) of this group reported knowing English, 11.6% of this group reported knowing both official languages, and 4.0% of this group reported knowing French [21].

Allophones, whose first language is neither English nor French, are increasing in Canada as a result of immigration patterns, thereby reducing the proportion of individuals who report English or French as their first language. In the CMA, those who reported having a first language other than English or French represented 44% of the total population of Toronto, 41% of Vancouver and 22% of Montreal [21].

Of First Nations people, 7.9% identified an Aboriginal language as their first language (single response). First Nations people identifying an Aboriginal language as their first language varies greatly among First Nations people living on- and off-reserve: 66.6% of First Nations women living on-reserve and 61.7% of First Nations men living on-reserve identified an Aboriginal language as their first language, as compared with 38.3% of First Nations women living off-reserve and 33.4% of First Nations men living off-reserve [22].

<sup>16</sup> The demographic profile of the Black population is presented because 92.7% of people associated with the epidemiologic heterosexual contact exposure HIV-endemic subcategory self-identify as Black.

<sup>17</sup> According to Statistics Canada, first generation immigrants include "persons born outside Canada. For the most part, these people are now, or have been, landed immigrants in Canada."

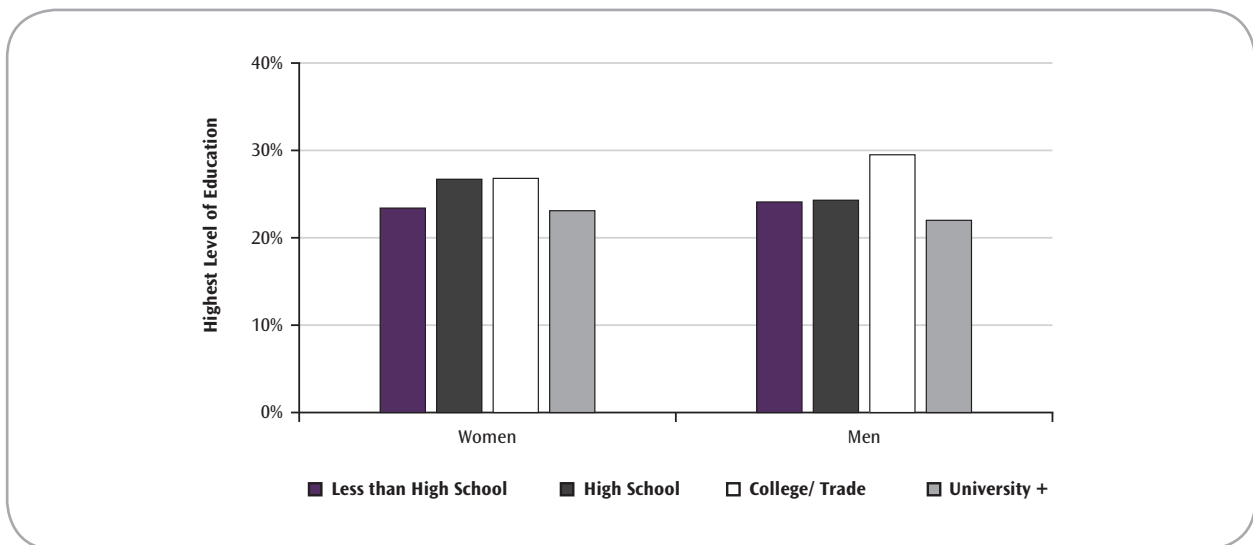


### 2.7.2 Education

In examining the education levels<sup>18</sup> of Canadian women and men, statistics reveal that equal numbers of women reported having attained either a college/trade diploma (26.7%) or high school education (26.7%), while a slightly larger number of men reported having attained a college/trade education (29.5%) [24]. However, slightly more women (23.1%) than men (22.0%) reported having attained a university education (Figure 1).

in provinces or territories, except for British Columbia, Northwest Territories, Yukon and Nunavut, is a trade or college degree. Nunavut (48.3%)<sup>19</sup>, Newfoundland and Labrador (25.4%) and Northwest Territories (21.6%) have the highest proportion of women with less than a high school diploma. Yukon has the largest proportion of women with a post-secondary education, university and trade/college combined, (63.7%) while Nunavut has the lowest (41.3%). Newfoundland and Labrador (18.4%) and Nunavut (16.6%) have the lowest proportion of women with a university education. The most educated female populations in Canada reside in British Columbia and

Figure 1: Highest level of education, by sex, Canada



Reference: Census 2006, 20% Sample Data

In comparing the education level of women by provinces/territories, the 2006 Census reveals that the highest education level attained by most women living

Ontario where 31.2% and 31.1% respectively reported having a university education [24].

Figure 2 cross tabulates education for various female populations, including Aboriginal, immigrant and Black populations. It illustrates that immigrant women are relatively well-educated. In 2006, 30.0% of immigrant

18 Levels of education are defined in the following way: 1) less than high school: no certificate, diploma or degree; 2) high school: certificate or equivalent; 3) college or trade: apprenticeship or grades certificate or diploma and college (CÉGEP- French acronym for “Collège d’enseignement général et professionnel”, meaning “College of General and Vocational Education”- or other non-university) certificate or diploma; 4) university: certificate or diploma in all levels (bachelor and above) [23].

19 The fact that 51% of Inuit peoples 25 years and older have not completed high school helps to explain why such a high number of women in Nunavut have less than a high school diploma [25].

women reported having a university education, as compared with 23.1% of the total female population. A closer examination reveals that close to two thirds (60.5%) of immigrant women received their university education outside Canada [26]. When looking at the distribution of Black immigrant women, data reveal that over one third (36.9%) of Black immigrant women had a college or trade education and more than one fifth (21.2%) of Black immigrant women had a university education [27]. However, Black non-immigrant women reported being less-educated than their immigrant counterparts and less-educated than the overall female population, as more than a quarter (28.0%) of Black non-immigrant women reported having less than a high school diploma or certificate [27]. In summary, more immigrant women reported having a university education than the general female population, while fewer Black non-immigrants reported having a college/trade or university education than their immigrant counterparts.

Aboriginal women reported having less education than the total female population. Statistics show

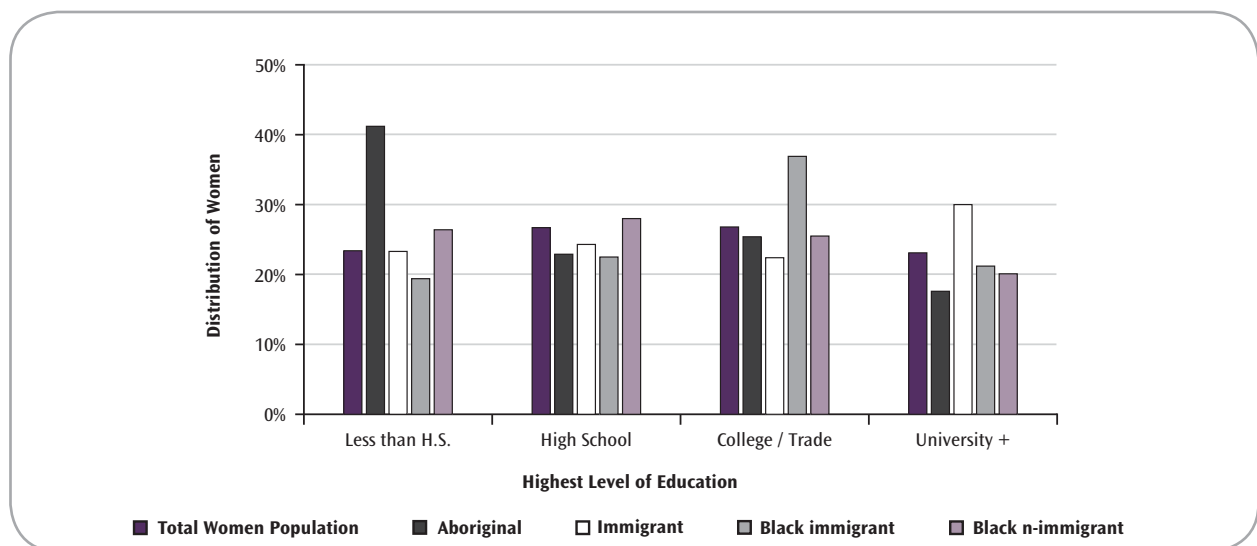
that 41.2% of Aboriginal women reported having less than a high school diploma (compared to 23.4% of the total female population) [24]. In addition, a lower proportion (17.6%) of Aboriginal women reported having a university education as compared with the total female population (23.1%) [24]. Compared with other female populations identified in census data, fewer Aboriginal women reported having post-secondary education and more Aboriginal women reported not having finished high school.

## 2.8 Labour Force Activity, Class of Worker, Work Activity

### 2.8.1 Labour Force Activity

Women are less represented in the labour force than are men. In 2006, 61.6% of women age 15 years and over reported participating in the labour force as compared with 72.3% of men [27]. These percentages decrease further when immigrant status is factored in, as only

**Figure 2: Women within Aboriginal, Immigrant and Black Populations (≥15 yrs of age) by Highest Level of Education, Canada**



Reference: 2006 Census, 20% Sample Data

55.8% of immigrant women and 69.2% of immigrant men reported participating in the labour force.

A higher proportion of Black immigrant women (67.8%) and immigrant men (77.5%) reported participating in the labour force as compared to the overall immigrant population and the general female population [27]. This trend also holds true for non-immigrant Black women, as 67.5% of non-immigrant Black women reported participating in the labour force. A closer look at data shows that, when cross-referencing Black Canadians' education levels to their participation rate in the labour force, educated Black women are more likely to report participating in the labour force than less educated Black women, regardless of immigration status<sup>20</sup>.

Statistics on female labour force participation among people who identify as Aboriginal are comparable to rates among the general population. Statistics show that 59.2% of Aboriginal women in Canada participate in the labour force as compared with 61.7% of non-Aboriginal women [28]. Their participation is not affected by area of residence, since 60.2% of Aboriginal women in rural settings and 63.1% of Aboriginal women in urban centres participate in the labour force<sup>21</sup>. Statistics reveal, however, that less than half (48.7%) of on-reserve First Nations women participate in the labour force [28]. Moreover, when cross-referencing the participation rates of Aboriginal peoples in the labour force with level of education, data indicate that the more educated Aboriginal peoples are, the higher their participation

rate in the labour market, irrespective of area of residence. Conversely, the less educated Aboriginal peoples are, the less likely they are to participate in the labour force.

### 2.8.2 Class of Worker<sup>22</sup>

Of the total female labour force, 91.0% reported being wage earners, 8.4% reported being self-employed and less than 1% (0.4%) reported being unpaid family workers [24]. When comparing gender, the self-employment category consisted of one-third (34.4%) women and two-thirds men (65.7%). This ratio is reversed in the unpaid family workers category (which includes individuals who work in a family business, on a farm or in a professional practice owned or operated by a related household member) where more women than men reported not being paid for their work (68.5% versus 31.5%) [24]. Women's over-representation in the unpaid work category may contribute to an increased workload for women and an increased susceptibility to financial dependency. This is especially true if women are also involved in paid work or in other types of unpaid work (such as care for the elderly or children, housework or volunteer work).

### 2.8.3 Work Activity

In 2006, of the total employed female population, 19.4% of women reported working part-time while 80.6% reported working full-time [24]. However, an examination of the part-time employment category by sex reveals that a higher proportion of part-time employees were women (70.8%) as opposed to men (29.2%).

20 Statistics Canada data show that more than 80% of the Black population with a university degree and above reported participating in the labour market, irrespective of gender and immigrant status. Further, 54.6% of male immigrants within the Black population and 39.4% of female immigrants within the Black population who have less than a high school education reported participating in the labour force, while non-immigrant members of the Black population reported participating in the labour market at rates of 40% (men) and 36.7% (women) [27].

21 Statistics Canada distinguishes between 3 categories of residency: 1- on-reserve; 2- urban; and 3- rural [23].

22 This variable includes persons who reported having a job in one of the following categories: persons who work mainly for wages, salaries, commissions, tips, piece-rates, or payments 'in kind' (payments in goods or services rather than money); persons who work mainly for themselves, with or without paid help, operating a business, farm or professional practice, alone or in partnership; and persons who work without pay in a family business, farm or professional practice owned or operated by a related household member. Unpaid family work does not include unpaid housework, unpaid childcare, unpaid care to seniors and volunteer work [23].

When looking at the presence of children in a home in conjunction with female and male labour force activity, the 2006 Census reveals that rates of participation in the labour market differ between the sexes [29]. Women with children at home reported participating in the labour force at a rate of 72.8%, while men with children at home reported participating in the labour force at a rate of 87.5% [29]. Further, women with children less than 6 years of age reported participating in the labour force at a lower rate (70.5%) than those with children over 6 years of age (74.0%). These data show that more women stay at home during childbearing years as compared to later years, thereby putting themselves in financially dependent relationships.

Further, an in-depth examination of data on households with children under 6 years of age reveals that younger women (15-24 years of age) are less represented in the labour force than older women (25-54 years of age), irrespective of whether they have a spouse (common-law or married) present or not [29]. These findings are important as they indicate that younger women with young children, who are more likely to be financially dependent, may be at higher risk of poverty than their older counterparts.

## 2.9 Income

In 2006, Canadian women earned less than their male counterparts. The Census reveals that in 2005 women earned an average employment income<sup>23</sup> of \$28,073 as compared to \$43,869 for men [24]. Data show that for part-time work, women's average earnings in 2005 amounted to \$18,211 as compared to \$27,304 for men [24]. Women working full-time also earned less than men. In 2005, women employed full-time earned an average income of \$41,331 as compared to \$58,537 for men [24].

Data also show that some groups of women earn less than others. For example, Black women reported earning less than the overall immigrant women population, and Aboriginal women reported earning less than Black and immigrant women. Women who reported knowing neither English nor French also reported earning less than all other demographic categories identified.

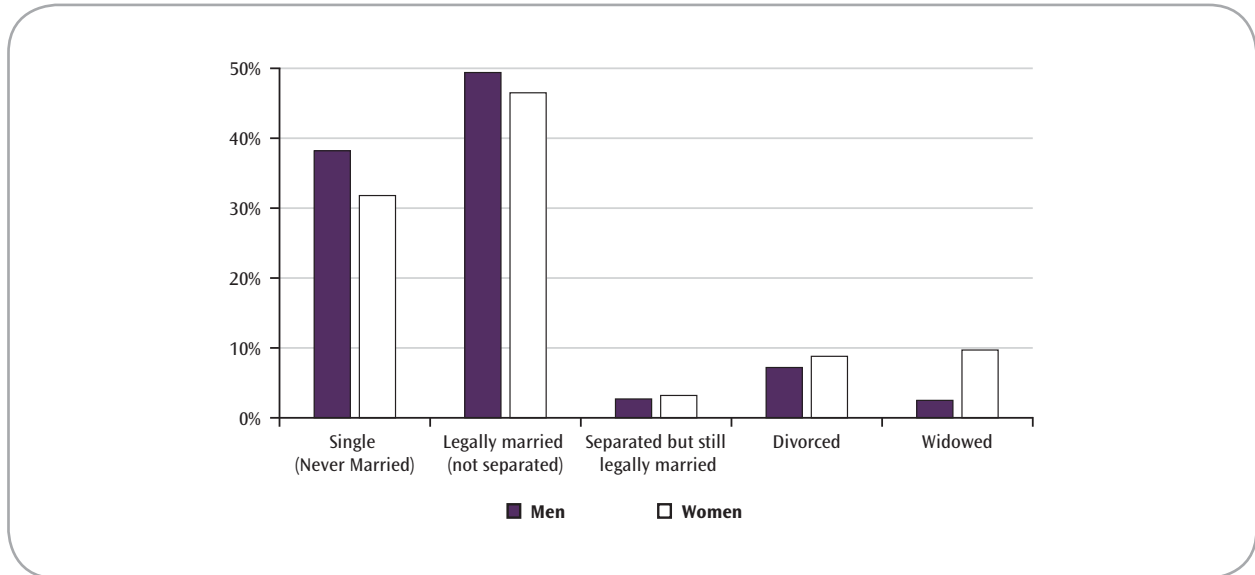
In 2006, more women than men headed lone-parent families in Canada (in 2006, 80.1% of all lone-parent families were headed by a woman [24]). Data on lone-parent families with children under 18 years of age reveal that female lone-parent families experience lower income than male lone-parent families. For instance, in 2006, female lone-parent families reported income of \$40,536, as compared to \$60,221 reported by male lone-parent families [30]. Moreover, 32.2% of female lone-parent families identified having low income status<sup>24</sup> as compared to 16.0% of male lone-parent families.

According to the Canadian Labour Congress, women are more disadvantaged than men in Employment Insurance (EI) programs because they follow different patterns of work over their life-course [31]. While a significant majority of women in Canada participate in paid employment, many take extended leave to care for children or others [31]. More women than men work part-time or in temporary employment, thereby reducing or excluding them from eligibility for EI. In 2006-2007, women who qualified for EI received an average benefit of \$298 weekly as compared to \$360 for men [31].

23 Average income of individuals refers to "the weighted mean total income of individuals 15 years of age and over who reported income for 2005. Average income is calculated from unrounded data by dividing the aggregate income of a specified group of individuals (e.g. males 45 to 54 years of age) by the number of individuals with income in that group" [23].

24 Low-income status refers to "income levels at which families or persons not in economic families spend 20% more than average of their before-tax income on food, shelter and clothing" [23].

Figure 3: Marital Status by Sex, Canada



Census 2006, 100% Data

## 2.10 Lesbian and Bisexual Women

According to data from the 2003 and 2005 Canadian Community Health Survey, an estimated 346,000 Canadian adults (18 years+) self-identify as gay, lesbian or bisexual [32].<sup>25</sup> Within this cohort, 71,000 (20.5%) women self-identified as lesbian and 85,000 (24.6%) self-identify as bisexual<sup>26</sup>. Further, compared to heterosexual and lesbian women, bisexual women are younger: 35.9% of bisexual women are between 18 and 24 years of age, while only 15.4% of heterosexual women and 10.5% of lesbian women [32] fall into this age category.

<sup>25</sup> The author combined the data from the 2003 and 2005 *Canadian Community Health Survey*. Like other studies, this survey only represents people who self-reported as being gay, lesbian or bisexual. The number of gay, lesbian or bisexual individuals may be underreported, and, as a result, these data have inherent limitations.

<sup>26</sup> These numbers differ widely with Statistics Canada, 2006 Census of Population, in which 20,605 Canadian women reported being in a same-sex couple.

## 2.11 Relationships

When looking at marital status by sex (Figure 3, includes same-sex couples), data reveal that, in 2006, close to half of the total female (46.5%) and male (49.4%) populations reported being legally married (not separated), while another 38.2% of women and 31.8% of men reported being single (never married) [24]. Further, 7.2% of women and 8.8% of men reported being divorced, 2.7% of women and 3.2% of men reported being separated but still legally married, and 2.5% of women and 9.7% of men reported being widowed [24].

Census data reveal that married-couple families have seen a slight decrease from 70.5% in 2001 down to 68.6% in 2006, while the proportion of common-law families has seen a slight increase from 15.7% in 2001 to 15.9% in 2006 [24].

## 2.12 Women Involved in Sex Work

The number of women involved in sex work is hard to quantify, as statistics on sex workers are not kept. Many studies have attempted to quantify this population, but official numbers are unavailable. Canadian criminal and municipal law affects sex workers' working conditions. Laws related to sex work limit sex workers' choices concerning their work and drive the trade underground [33-36]. As a result, it is difficult to satisfactorily determine the exact number of women involved in sex work.

Other difficulties in estimating the number of sex workers come from the complexities of defining this population. For example, the "Venus Project", an intervention program for female sex workers, located in Laval, Québec, includes in its definition of sex workers anyone who earns her living by providing sexual services such as street prostitution, escort services, exotic/erotic dancing, or other types of performance [37]. Given that sex services extend to many forms of activities, this definition may be expanded to include sex for money, food, alcohol and drugs [38-40].

For the purposes of this report, which looks exclusively at women involved in sex work, sex work is defined as any transaction involving money, goods or favours (including rent or protection) for sexual services, either regularly or occasionally, formally or informally, and, where individuals may or may not define the transaction as sex work. Sex work includes a variety of activities, including exotic/erotic dancing, phone sex, webcam porn/sex, acting in pornography, hustling, escorting, erotic massages and prostitution. Women involved in sex work may work in formal settings, such as brothels, nightclubs and massage parlours, or informal street-based settings. While some women freely choose sex work as their occupation, for others it is a survival strategy.

One of the limitations of this report is that peer-reviewed literature tends to focus on women involved in street-based or survival sex work and is localized. As a result, this report discusses sex workers with the strong caveat that research in this field cannot necessarily be extrapolated and applied to the various types of sex work in different regions across Canada. As described by Shannon et al [40], "sex work is a rational, economic strategy adopted by women to meet basic subsistence needs in the face of large scale social and structural inequities". Many social and economic factors experienced by women involved in sex work contribute to these inequities and put them at a heightened risk of HIV infection.

## 2.13 Substance Use

Substance use entails the usage of various legal and illegal substances, including tobacco, alcohol, illicit drugs (including injection and non-injection drugs), and volatile solvents<sup>27</sup>. Regular usage of these substances over time creates dependence, resulting in harm for those who repeatedly consume them [41;42].

The Canadian Addiction Survey (2004), a study based on self-reported responses, attributes "the lifetime use of inhalants, heroin, steroids and drugs by injection [to] about 1% or less" of the total Canadian population [43]. The survey further indicates that injection drug use varies between 1.1% to 2.2% for men and 0.4% to 0.8% for women. However, based on this survey, women are less likely than men to report the use of injection drugs, hallucinogens, cocaine, speed and ecstasy. Women are also less likely to report a lifetime usage of any of these drugs.

<sup>27</sup> Volatile solvents are a chemical in a liquid or semi-solid state that dissolves other substances. They include paint thinner, glue, gasoline, paint, correcting fluid and felt-tip markers, all of which when used may create dependence [consult [www.ccsa.ca](http://www.ccsa.ca); [41]].

## 2.14 Women in Prison: Sentenced Custody and Custodial Remand

In Canada, persons charged with a crime can be remanded to custody prior to their case being heard by the court for the following reasons: if there is a risk they will not appear for their court date; if they are deemed to pose a danger to themselves or to others; or if detention is necessary to maintain confidence in the administration of justice (for example if the person charged is considered at risk to re-offend) [44]. Custodial remand is on the rise in various provinces and territories in Canada<sup>28</sup>. While fewer women are admitted to remand than men, statistics reveal that the rate at which women are remanded nevertheless increased from 10% (11,494) to 12% (15,640) between 2001/2002 and 2006/2007 [45]. Provincial and territorial correctional facilities house individuals serving sentences of less than two years. In 2006/2007, women made up 11% of the total adults admitted to sentenced custody in provincial and territorial facilities [45].

Correctional Service of Canada (CSC) reports that, in 2006, 401 (44%) women were federally incarcerated and 508 (56%) were on conditional release (N=909) [46]. Federally incarcerated women or those on conditional release were younger than the general female population [46;47]. Aboriginal women were over-represented in the federal correctional system, comprising 31% of the female incarcerated population, despite the fact that, according to 2006 Census data, Aboriginal peoples accounted for 3.7% of the overall Canadian female population. Black women were also over-represented in the federal system (comprising 5% of the female incarcerated population, despite the fact that, according to 2006 Census data, Black women accounted for 2.3% of the overall Canadian female population). In 2006, Caucasian women represented 57% of women who were federally incarcerated.

28 These statistics exclude PEI, Alberta and Nunavut, due to incomplete data for these regions [44].

Over half (55%) of federally incarcerated women in 2006 were serving time for a violent offence, while 25% were serving time for drug-related offences (e.g., drug possession) [47].

## 2.15 Homeless Women and Unstable Housing

The United Nations uses the terms “homelessness” and “unstable housing” to describe certain states of living. The first term is absolute, refers to visibly unstable housing, and is used to describe people living “on the streets” with no physical shelter of their own [48]. The second term is relative, refers to hidden unstable housing, and is used to describe people living in spaces that do not meet minimum standards (minimum standards include access to clean water and sanitation, security, affordability, employment, education and health care) [48]. Unstable housing includes living in cars, sleeping in temporary beds in church basements or abandoned buildings, and sleeping on somebody’s couch (“couch surfing”). People who experience unstable housing may include seniors on fixed incomes and adults with full-time jobs.

According to the Canada Mortgage and Housing Corporation (CMHC), in 2006 there were nearly 12 million Canadian households [49]. Of this total, 1.5 million (or 12.5%) households had core housing need for increased affordability, suitability and adequacy. This is significant because occupants of households with core housing need are at risk of homelessness<sup>29</sup>. In 2001, 12.7% of Canadian women lived in households with core housing need as

29 Michael Shapcott, Director of Community Engagement at the Wellesley Institute, maintains that there are no reliable numbers for homelessness either for Toronto or elsewhere. When data do exist, the information is usually flawed and undercounts the real number of homeless people. According to him, housing insecurity is best measured by “housing core need”. Statistics on this can be found at CMHC’s website at ([http://data.beyond2020.com/cmhc/HiCOMain\\_EN.html](http://data.beyond2020.com/cmhc/HiCOMain_EN.html)).

The Wellesley Institute is an independent, non-profit research and policy institute working to advance health equity through community-based research, community engagement, social innovation and policy development (source: [www.wellesleyinstitute.com](http://www.wellesleyinstitute.com)).

compared to 10.3% of Canadian men [50]. The highest incidence of core housing need for women occurred in Northern areas, including Nunavut (46.6%), NWT (17.8%) and Yukon (17.8%), and in urban cities such as Toronto (18.3%), Vancouver (15.9%) and Ottawa (14.7%).

Research done by CMHC shows that women living alone (28.3%) and those living in lone-parent families (31.0%) had the highest incidence of core housing need [50]. Among those living alone, one third (33.3%) of women over the age of 65 and 39.4% of Aboriginal women had core housing need [50]. In addition, a comparison between Aboriginal and non-Aboriginal women living in lone-parent families reveals that the incidence of core housing need was higher among Aboriginal women (50.9%) than non-Aboriginal women (29.9%). Moreover, the study reveals that women-led households have lower incomes and spend a larger portion of their incomes on shelter costs. As a result, women from women-led households, especially those led by Aboriginal and senior females, are at increased risk of homelessness, as their core housing need is elevated.

E-SYS, an enhanced surveillance of Canadian street youth monitoring STIs, risk behaviours and determinants of health relating to Canadian street youth, reveals that between 1999 and 2003 more than one third of street-youth were female (1999: 38.3%, 2001: 43.5%, 2003: 37.1%) [51]. E-SYS data also indicate that female street youth tend to be younger than their male counterparts: in 1999, 18.3 years vs. 19.3 years; in 2001, 18.6 years vs. 19.3 years; in 2003, 19.0 years vs. 20.1 years [51]. The data further indicate that female youth spend significantly less time on the streets than male youth. In addition, female youth were more likely than male youth to cite abuse as their primary reason for leaving home. E-SYS data also show that street youth's main source of income differs by sex: more females than males report collecting social welfare, and fewer females than males reported regular or occasional work. Regarding ethnicity, E-SYS data identify one third of street youth as Aboriginal and less than two thirds as non-Aboriginal.

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## CHAPTER 3 - Status of HIV/AIDS among Women in Canada

# 3

### 3.1 Information on Surveillance Data

The purpose of this chapter is to present the most recent data available on HIV infection and AIDS diagnoses among Canadian women. This chapter provides information on positive HIV test reports, reported AIDS cases, routes of transmission, age, pregnancy and perinatal transmission, HIV/AIDS data on specific population segments of women in Canada, and co-infection with other sexually transmitted and blood-borne infections (STBBI).

PHAC uses various types of epidemiological information, including surveillance data, research data and estimates, to monitor HIV infections and AIDS cases in Canada. There are benefits and limitations to each type of information, but multiple sources are required to create a comprehensive picture of HIV/AIDS in Canada.

Surveillance data are provided to PHAC voluntarily by the provinces and territories and consist of positive HIV test reports and reported AIDS diagnoses. As HIV and AIDS cases are reportable in all Canadian jurisdictions, PHAC has developed case reporting standards to facilitate data-sharing at the national level. While a minimum amount of information is provided for each case<sup>30</sup>, the amount of supplementary data provided varies by province or territory [1]. Supplementary data may include country of birth, ethnicity and exposure category. Supplementary data on ethnicity are important as they help to identify infection patterns among Aboriginal peoples, people from HIV-endemic countries<sup>31</sup>,

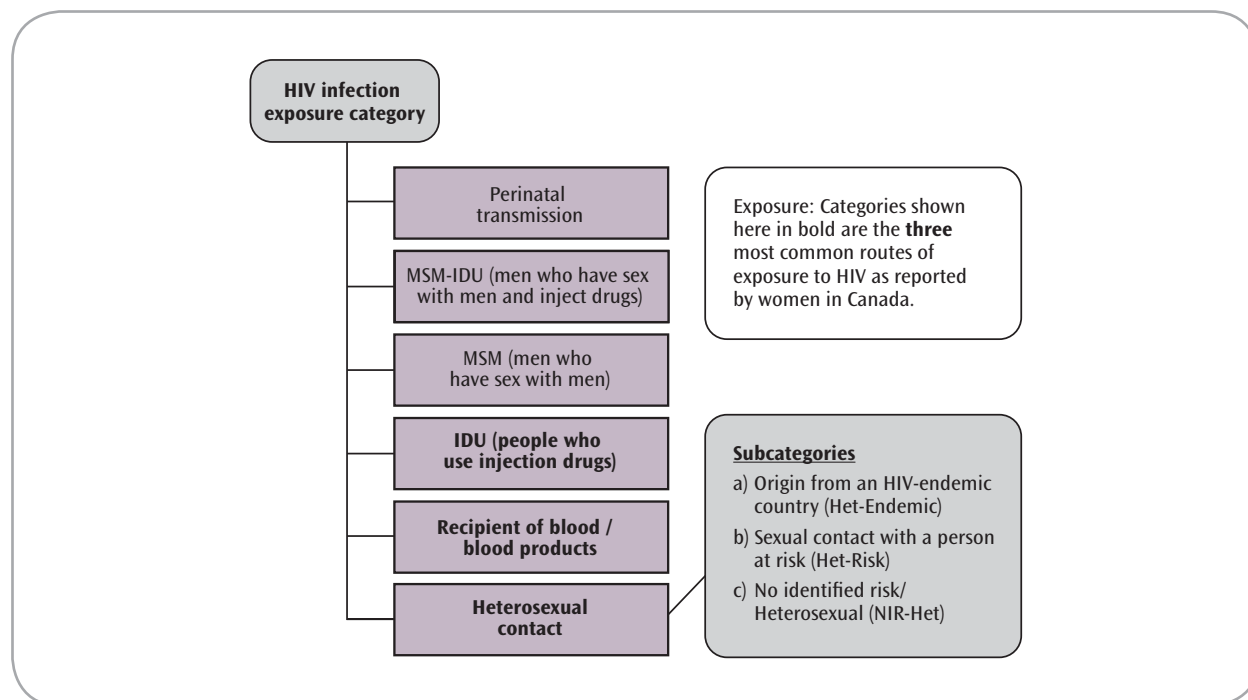
and other ethno-cultural groups. Supplementary data on exposure category are also important as they identify the most likely route by which an individual became infected.

Most reported HIV cases and AIDS diagnoses include one or more risk factors. For the purpose of national reporting, HIV/AIDS cases must be assigned to a single identified exposure category (as presented in Figure 4), according to a hierarchy of risk factors. Figure 4 lists the first six exposure categories in the hierarchy as follows: 1) Perinatal transmission; 2) MSM-IDU: men who have sex with men and have also injected drugs; 3) MSM: men who have sex with men; 4) IDU: people who use injection drugs; 5) Blood/blood products: recipient of blood or clotting factor; 6) Heterosexual contact (which includes “origin from an HIV-endemic country”, “sexual contact with a person at risk” and “NIR-Het”). Remaining exposure categories include Occupational exposure, Other, and No identified risk (NIR).

If more than one risk factor is reported, the case will be classified by the exposure category listed first (or highest) in the hierarchy. For example, if a case is received citing risk factors as IDU and heterosexual contact, the case would be attributed to the IDU exposure category for the purpose of national data collection, as IDU is accepted as the higher risk activity [3].

30 The identity of individuals is not part of the core set of variables provided to PHAC.

31 Countries with a generalized HIV epidemic are defined as those with an HIV prevalence among adults (15-49 years) that is 1.0% or greater and meet one of the following requirements: 50% or more HIV cases attributed to heterosexual transmission; or, a male-to-female ratio of 2:1 or less among prevalent infections; or, HIV prevalence greater than or equal to 2% among women receiving prenatal care. A list of these countries is maintained for surveillance purposes by the Centre for Communicable Diseases and Infection Control (CCDIC). For more information and a complete list of HIV-endemic countries, refer to Appendix 4 of HIV and AIDS in Canada: Selected Surveillance Tables to June 30, 2008, <http://origin.phac-aspc.gc.ca/aids-sida/publication/survreport/2008/pdf/survrep0608.pdf>

**Figure 4: HIV Infection Exposure Categories**

Source: [4] p. 102

The following three exposure categories, by hierarchy, are not included in the diagram: Occupational exposure, Other, and No identified risk (NIR).

Surveillance data alone do not reflect absolute numbers of HIV infections and AIDS cases in Canada at any given time due to considerations listed above, reporting delays, individuals' reluctance to report risk factors, and lack of routine testing for HIV in the general Canadian population. Consequently, mathematical modeling is used to estimate this data in Canada. By using statistical formulas, which incorporate secondary sources of data, estimates of the number of new infections (incidence<sup>32</sup>) and the number of people living with HIV infection (prevalence<sup>33</sup>) can be obtained. PHAC is responsible for reporting Canadian estimates

of national HIV incidence and prevalence rates to the Joint United Nations Programme on HIV/AIDS (UNAIDS) [5].

All available and pertinent forms of data, including national surveillance data, estimates, and provincial/territorial or local studies, will be used in this chapter to present relevant information on HIV and AIDS among women in Canada.

### 3.2 HIV Strains

Human Immunodeficiency Virus, commonly known as HIV, is a virus that attacks the immune system and can lead to Acquired Immunodeficiency Syndrome, also known as AIDS. HIV destroys CD4 blood cells that help the body fight off the disease.

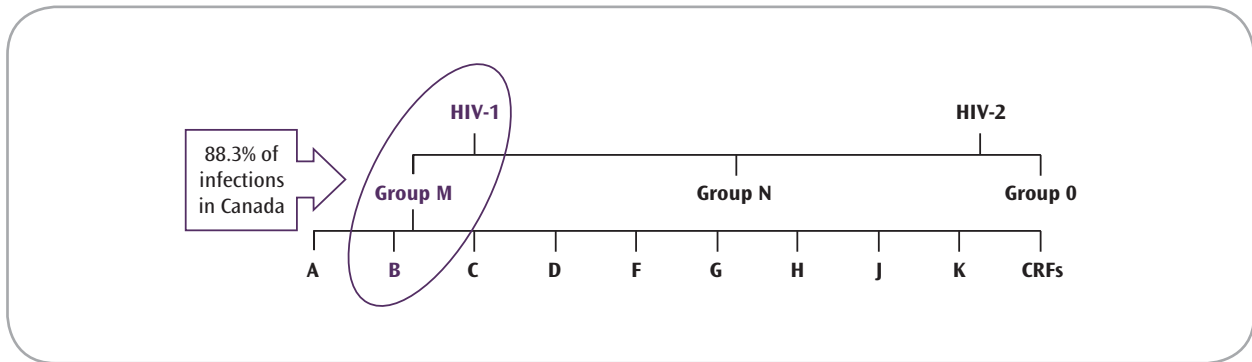
32 HIV incidence is the number of new HIV infections occurring in a specified period of time in a specified population.

33 HIV prevalence is the total number of people living with HIV, including AIDS, at a given time.

Two types of HIV, HIV-1 and HIV-2, cause illness in humans. HIV-1 is responsible for the majority of HIV/AIDS cases worldwide. HIV-2 is much rarer, much less lethal, and currently is mostly limited to Western Africa. Different subtypes or “clades” of HIV-1 have been discovered and exist worldwide. The most common strain of HIV in Canada is HIV-1, group M, subtype B, representing 88.3% of infections (Figure 5).

The distribution of HIV-1 strains differs between men and women. Figure 6 illustrates the distribution of HIV-1 subtypes by sex. While the differences in HIV-1 sub-type are not vastly different by sex, data from the HIV-1 strain surveillance reports show that the prevalence of non-B subtypes is somewhat greater among females (22.2%) than among males (8.0%). The heterosexual exposure category is associated

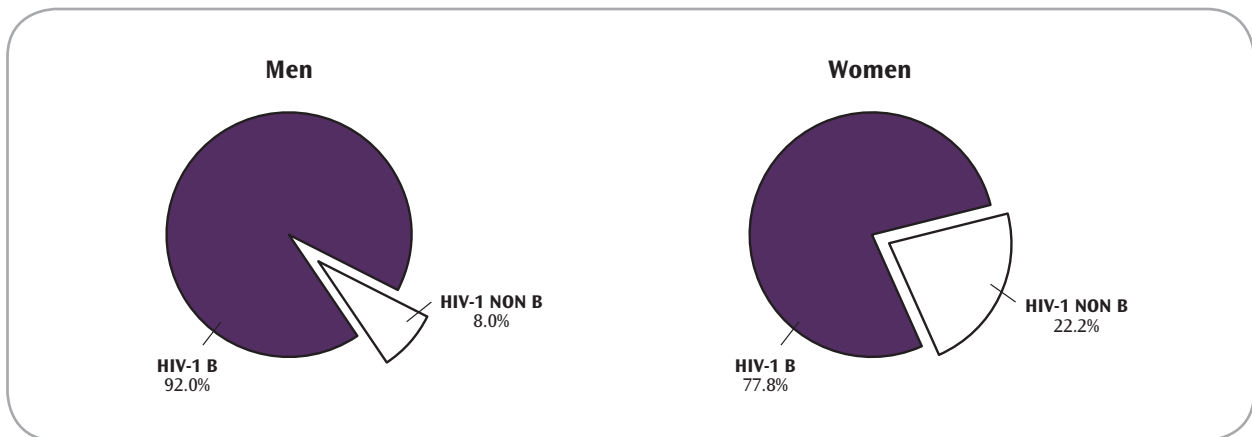
**Figure 5: HIV Strains**



Source [1] p. 3

Legend: Group M = main; Group N = new, non-M, non-O; Group O = outlier, CRFs = circulating recumbent forms i.e.: subtype AB, BD, or AG.

**Figure 6: Number and Distribution of HIV-1 Subtype by Sex**



Source: [1] p. 9

with higher proportions of HIV-1 non-B subtypes (due to the HET: HIV-endemic exposure subcategory). Since a greater percentage of females have heterosexual contact as their primary exposure category, this is not surprising [2]. Virus subtypes greatly affect future prevention efforts, such as vaccine and microbicides development, which will likely be strain specific [2].

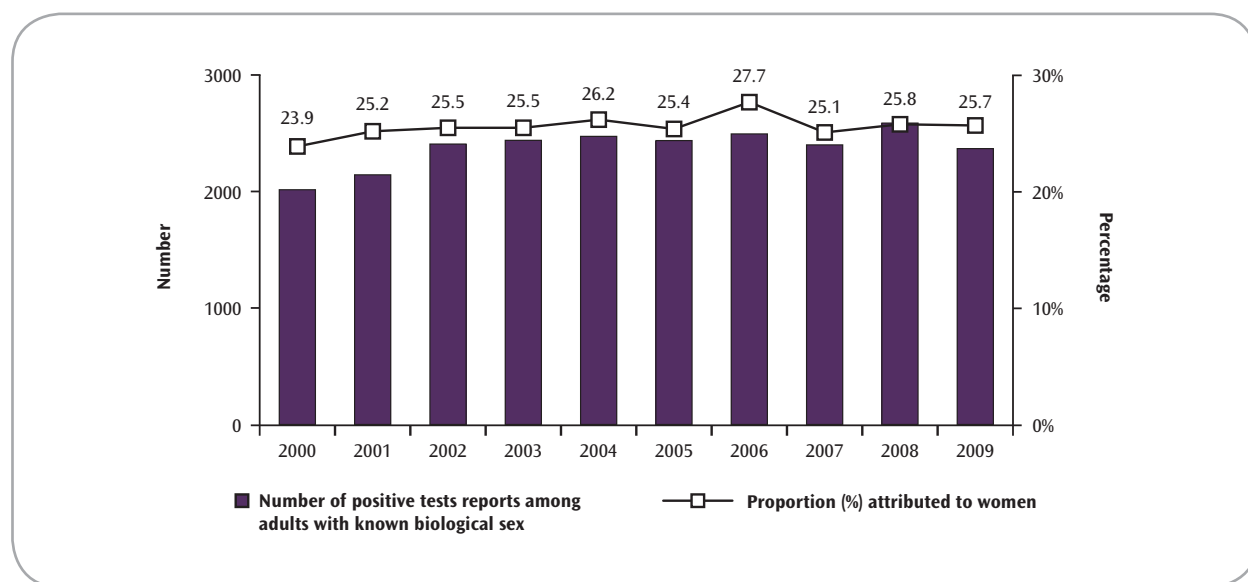
### 3.3 Overview of HIV/AIDS among Canadian Women

When positive HIV test reports and AIDS diagnoses first started being reported, the majority of HIV infection cases were attributed to the men who have sex with men (MSM) exposure category. While the greatest proportion of new HIV reports continue to be attributed to MSM, the number of positive test reports attributed to adult women has increased significantly since the beginning of HIV in Canada.

Surveillance data tell us that from 1985 to 2009 a total of 11,403 positive HIV test reports among adults ( $\geq 15$  years of age) with information on gender were attributed to women. This makes up 17.7% of the cumulative national total ( $n=64,335$ ) of adult cases with known gender. In 2009 alone, 609 HIV-positive test reports were attributed to women, accounting for 25.7% of the national total of positive tests with known gender ( $n=2,368$ ) for that year.

As shown in Figure 7, the proportion of HIV infection attributed to adult women has remained relatively stable over the last 10 years, accounting for roughly one quarter of annual HIV test reports. Consequently, while the annual number of positive HIV tests among women has fluctuated slightly in recent years, the overall trend illustrates that the number of reported HIV cases among women is not declining.

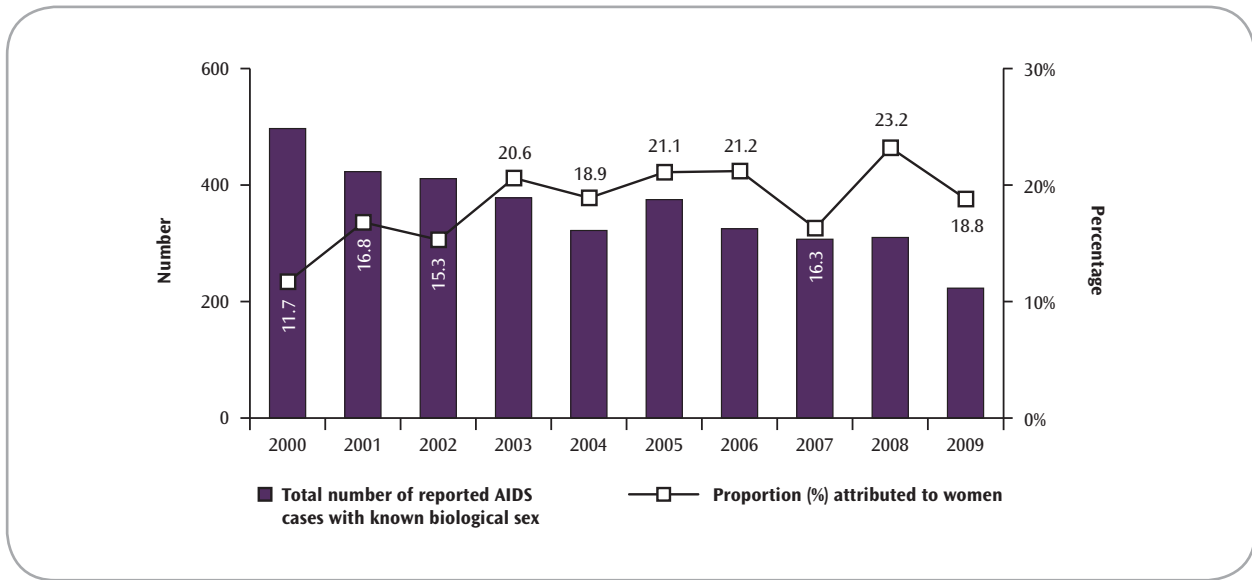
**Figure 7: Number of Positive HIV Test Reports among Adults ( $\geq 15$  yrs of age) with Proportion (%) Attributed to Women, 2000-2009 (N = 23,763)**



Source: [6] p. 19



**Figure 8: Number of Reported Adult AIDS Cases (≥ 15 yrs of age) with Proportion (%) Attributed to Women, 2000-2009 (N = 3,571)**



Source: [6] p. 46

Although the number of newly reported AIDS cases has dropped in recent years, the proportion (%) of AIDS cases attributed to women does not mirror this trend. Women accounted for just 11.7% of reported AIDS diagnoses in 2000, to a high of 23.2% in 2008 (Figure 8). Cumulatively, from 1979 to 2009, 2,050 adult women were reported as having AIDS. This number represents 9.6% of the total number of reported AIDS cases among adults with information on gender in Canada (n=21,433) [6].

With the increased use of antiretroviral drugs (ARVs) to treat people living with HIV, statistics used to describe AIDS cases are becoming increasingly difficult to interpret. While it appears that the proportion of women represented in AIDS cases in Canada is growing, caution must be used in interpreting these data, as they do not address issues which may leave women vulnerable to AIDS, such as access to treatment or treatment failure.

Estimates of national HIV prevalence suggest that at the end of 2008 there were 14,300 (12,200-16,400) women living with HIV, including AIDS, in Canada. This indicates a 17.2% increase from the estimated 12,200 (10,400-14,000) prevalent HIV infections among women in Canada at the end of 2005 [7].

### 3.4 Geographic Distribution

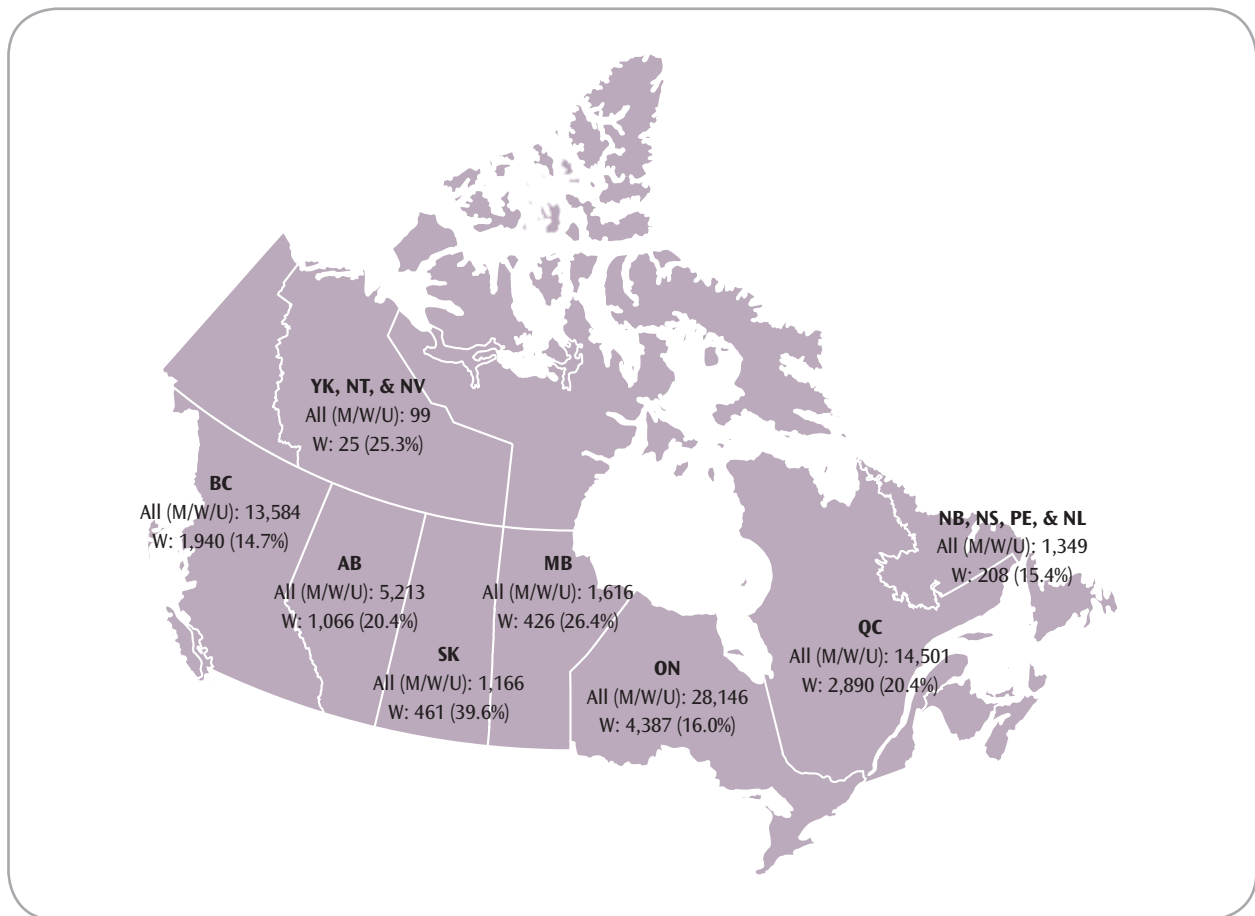
Across Canada, women are not uniformly infected with HIV (Figure 9). Ontario has the largest number of women affected by HIV, as determined by cumulative positive HIV test reports, representing 38.5% of the total number of positive test reports for women in Canada. Ontario is followed by Québec (25.3%) and British Columbia (17.0%). As Canada's three largest cities are based in these provinces (Toronto, Montreal, and Vancouver, respectively), these numbers are not surprising.

While the greatest number of women living with HIV, are located in the above three provinces, women from other areas of Canada are more likely to be affected.

Women in Saskatchewan form the largest proportion of cumulative HIV case reports by province, representing 39.6% of all test reports in that province. In other words, the male-to-female ratio for HIV reports is approaching 1:1 in the province of Saskatchewan. Women in Manitoba are the next disproportionately affected, comprising 26.4% of HIV test reports in the province. The combined average of the three territories finds that 25.3% of HIV test reports are among women. Geographically, women are least represented in HIV

test reports in the provinces of New Brunswick (13.7%) and Nova Scotia (13.9%). The proportion of HIV tests attributed to women reflects patterns evidenced in exposure category data. The MSM exposure category is the most commonly reported exposure category in British Columbia and Ontario, while IDU and heterosexual contact are the most commonly reported exposure categories in Saskatchewan, Manitoba, and the Territories.

**Figure 9: Distribution of Positive HIV Test Reports Attributed to Sex and Women Only by Province/Territory, Cumulative to December 2009 (N = 65,674)**



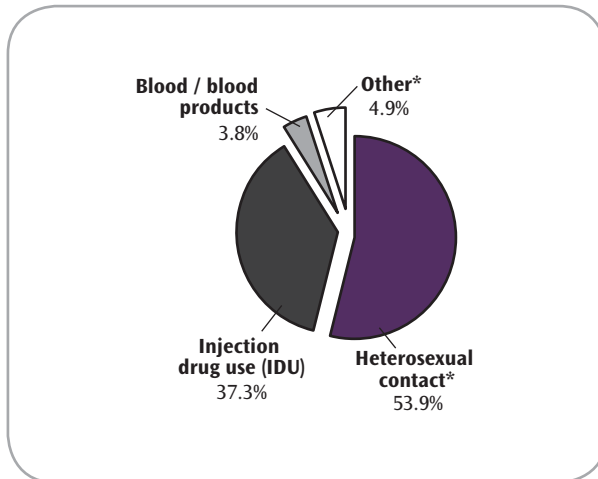
Source: SRAD, personal communication (2010) | Legend: M: men; W: women; U: unknown

Note: Percentages are based on the total number of cases reported by sex, minus reports for which sex was not reported or was reported as transgender.

### 3.5 Exposure Categories

As previously discussed, exposure categories are used to identify the most likely route by which transmission of HIV infection occurred. The two most common exposure categories for women are heterosexual transmission and injection drug use (IDU) [6]. Refer to Figure 10.

**Figure 10: Proportion of Positive HIV Test Reports among Adult Women (≥ 15 yrs of age) by Exposure Category, 1985-2009 (N = 5,643)**



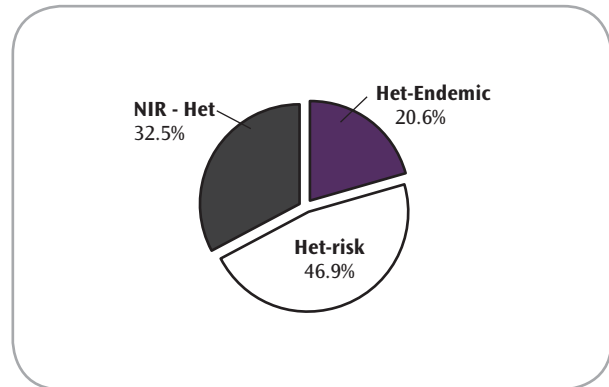
Source: [6] p. 25.

\* Heterosexual contact includes a) Origin from an HIV-endemic country (11.1%), b) Sexual contact with a person at risk (25.3%), and c) No identified risk (NIR) – Heterosexual (17.5%). “Other” includes positive HIV test reports in which the mode of HIV transmission is known but cannot be classified into any of the major exposure categories listed here.

#### 3.5.1 Heterosexual Transmission

Heterosexual transmission is the most common route of HIV infection in women, representing 53.9% of cumulative HIV infections (with known exposure category) among adult females [6]. Data are collected and collated using the three following subcategories to further specify risks and routes of transmission: origin from an HIV-endemic country (Het-Endemic), sexual contact with a person at risk (Het-risk), or No identified risk - heterosexual (NIR – Het). Data reveal that the most

**Figure 11: Proportion of Positive HIV Test Reports among Adult Women (≥ 15 yrs of age) Attributed to Heterosexual Exposure Categories, 1985-2009 (N = 3,041)**



Source: [6] p. 25.

commonly reported heterosexual exposure subcategory among women is sexual contact with a person at risk, accounting for 46.9% between 1985 and 2009. Refer to Figure 11 for the cumulative distribution by heterosexual exposure subcategories from 1985 to 2009.

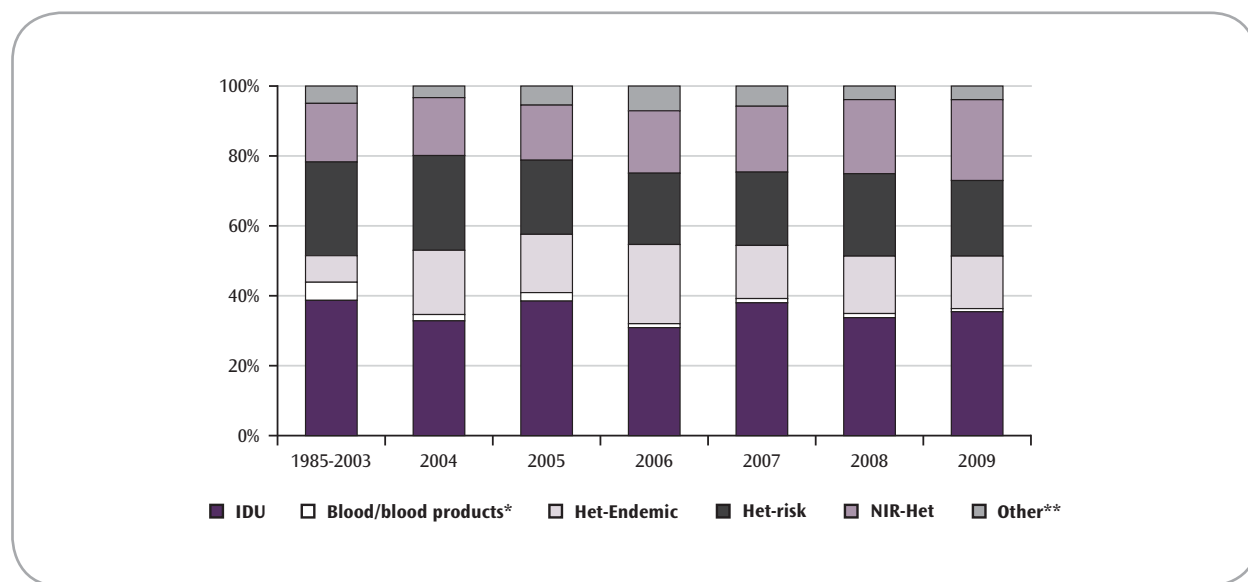
##### a) Sexual Contact with a Person at Risk

Women may identify a sexual partner who is HIV positive or who engages in risk behaviour, such as using injection drugs or having sex with men, as their most likely route of transmission. Within the heterosexual exposure category, this ‘Het-risk’ exposure subcategory has frequently accounted for the highest number of HIV case reports among women in Canada. In 2009, sexual contact with a person at risk represented 36.2% of HIV reports in the heterosexual exposure category, and 21.6% of all HIV reports among women with known exposure category [6]. Refer to Figure 12 for proportions of positive HIV test reports attributed to the six most common exposure categories (including subcategories) among women by year.

##### b) No Identified Risk – Heterosexual (NIR-HET)

As shown in Figures 11 and 12, No Identified Risk – Heterosexual (NIR-Het) constitutes a predominant risk

**Figure 12: Proportions (%) of Positive HIV Test Reports Attributed to Select Exposure Categories in Women (≥ 15 yrs of age), by Year**



Source: [6] p. 25.

\* “Blood/blood products” include collapsed data from 1) recipient of blood or 2) recipient of clotting factor.

\*\* “Other” includes positive HIV test reports in which the mode of HIV transmission is known but cannot be classified into any of the major exposure categories listed here.

category for women in Canada. This category captures individuals for whom heterosexual contact is the only risk factor reported and nothing is known about the HIV-related factors associated with the sexual partner or one’s country of origin. In 2009, this exposure subcategory represented 38.7% of all HIV reports attributed to the heterosexual exposure category among women, and 23.1% of all HIV reports among women with known exposure category [6].

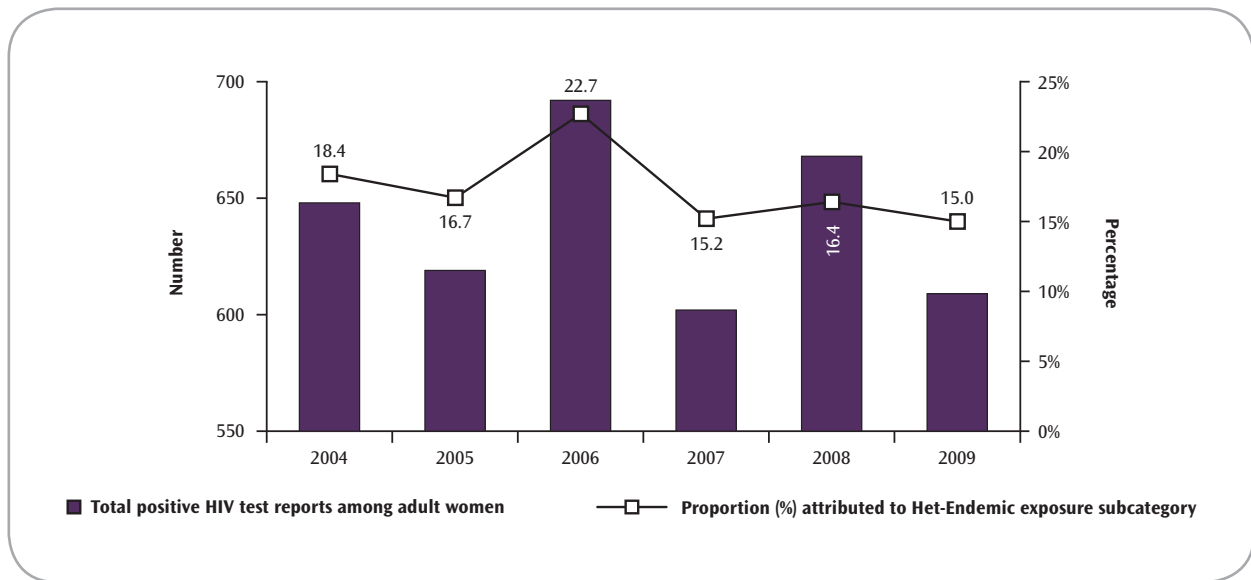
**c) Origin from an HIV-Endemic Country**

While Canada does test for HIV during the Immigrant Medical Examination (IME), a diagnosis of HIV does not automatically preclude an immigrant from entering Canada [8]. Positive HIV tests from IMEs performed in Canada are reported to the provinces and territories and shared at the national level like all other positive HIV test reporting [6]. Thus, the data presented as

“origin from an HIV-endemic country” from Surveillance Reports include a combination of test reports from routine medical testing (i.e., prenatal), IMEs and other sources. Due to the reporting system, it is not always possible to determine whether infections attributed to the HIV-endemic subcategory actually occurred in another country before the newcomer arrived to Canada, or if the infection occurred post-arrival.

In 2009, the HIV-endemic exposure subcategory represented 5.5% of all HIV reports in adults, 15.0% of reports among women, and 25.1% of reports among women in the heterosexual exposure category [6]. Women who come from countries where HIV is endemic are largely exposed to HIV through heterosexual contact and cumulatively (from 1985-2009) have represented roughly half (51.8%) of the positive HIV test reports attributed to the HIV-endemic exposure subcategory [6].

**Figure 13: Number of Positive HIV Test Reports among Adult Women (≥ 15 yrs of age) and Proportion (%) Attributed to the Het-Endemic Exposure Subcategory, 2004-2009 (N = 3,838)**



Source: [6] p. 25

Since 2004, there have been year-to-year fluctuations in the annual proportion of cases attributed to this subcategory, with a peak of 22.7% in 2006 and a low of 15.0% in 2009. Refer to Figure 13.

In Canada, the vast majority of individuals (95.8%) associated with the HIV-endemic exposure subcategory identify as being of Black ethnicity [6]<sup>34</sup>. As HIV surveillance and research are two of the few disciplines that collect data specifically on people who come from HIV-endemic countries, information on Black Canadians is used – when available – to help situate epidemiologic data in the Canadian context. This will be further explored in Chapter 4.

**d) Sex Work**

Women involved in sex work are at greater risk of acquiring and/or transmitting HIV. Sex work is not an

HIV exposure category that is routinely collected by provinces or territories in Canada. Consequently, it is not included as an exposure category in national HIV/AIDS surveillance reports. However, the prevalence of HIV and associated risk factors (such as high-risk injecting behaviours) among women involved in sex work in Canada has been examined in several research studies.

The Vancouver Injection Drug Users Study (VIDUS) reported that in a cohort of young IDUs (≤ 24 years) there was an HIV prevalence rate of 10%. Of the 117 young female injectors, 20 were HIV positive at baseline, suggesting a prevalence rate of 17.1%. HIV-positive female youth were more likely to work in commercial sex trade, to have had more than 20 lifetime partners, and to inject speedballs (i.e., an injection mixture of heroin and cocaine) daily [10].

Another study, The Maka Project, examined HIV prevalence and risk factors among female sex workers in Vancouver using an interview-administered questionnaire. Baseline HIV prevalence was 26% and

34 According to PHAC, “immigration alone cannot explain the high prevalence of HIV/AIDS in this population. Canada is now able to identify, through testing, immigrants and refugees who are HIV positive and link them with appropriate services.” [9]

HIV infection was associated with early age of sex work initiation (< 18 years), Aboriginal ethnicity, daily cocaine injection, intensive/daily crack smoking, and unprotected sex with an intimate partner [11].

### 3.5.2 Injection Drug Use

Injection drug use is the second most reported HIV exposure category among women in Canada. Where exposure category information was reported, the proportion of positive HIV test reports in adult women who inject drugs was 32.8% in 2004. This proportion increased to 38.5% in 2005 before decreasing again to 33.7% in 2008 [6]. In 2009, the IDU exposure category accounted for 35.4% of HIV case reports among women.

People who use injection drugs also have an increased risk of contracting the hepatitis C virus (HCV), as the sharing of used needles and injection equipment provides the route of transmission for both HIV and HCV infections. As a result, HCV infection can be used as a marker to indicate risk behaviour among IDU. Many studies on people who use injection drugs collect epidemiologic data for both.

PHAC's national enhanced surveillance system, I-Track, which monitors HIV risk behaviours among people who use injection drugs in Canada, has been in place in sentinel sites since 2002. Using interview-administered surveys and blood or oral fluid samples, researchers collect information regarding drug use, injecting and sexual practices, HIV and HCV testing patterns, and the prevalence of HIV and HCV<sup>35</sup>.

35 HIV screening was performed using the Bio-Rad GS rLAV HIV-1 EIA (enzyme immunoassay). Confirmatory testing was subsequently performed using the Bio-Rad Genetic Systems™ HIV-1 Western Blot assay. A positive result indicates a current HIV infection. Both the HIV screening (EIA) and confirmatory assay (Western Blot) are approved by Health Canada as diagnostic assays for use with dried blood spot (DBS) specimens.

HCV testing was performed using the Ortho® HCV version 3.0 EIA. Confirmatory testing is not performed for samples that test positive. A positive result indicates past or present HCV infection and does not discriminate acute from chronic or resolved infections. Validation of commercially available laboratory tests on dried blood spot (DBS) specimens for HCV is ongoing.

Results from Phase 1 I-Track (2003-2005) revealed 12.2% of female participants to be HIV positive, as compared with 16.3% of male participants. Moreover, 11.1% of female participants were both HIV and HCV positive, as compared with 14.9% of males who were co-infected [12]. Data also showed HIV/HCV co-infection to be more than two times higher among female participants who self-identified as Aboriginal (First Nations, Inuit or Métis), as compared to HIV/HCV co-infection prevalence among female non-Aboriginal participants (17.1% vs. 7.4%, respectively) [12].

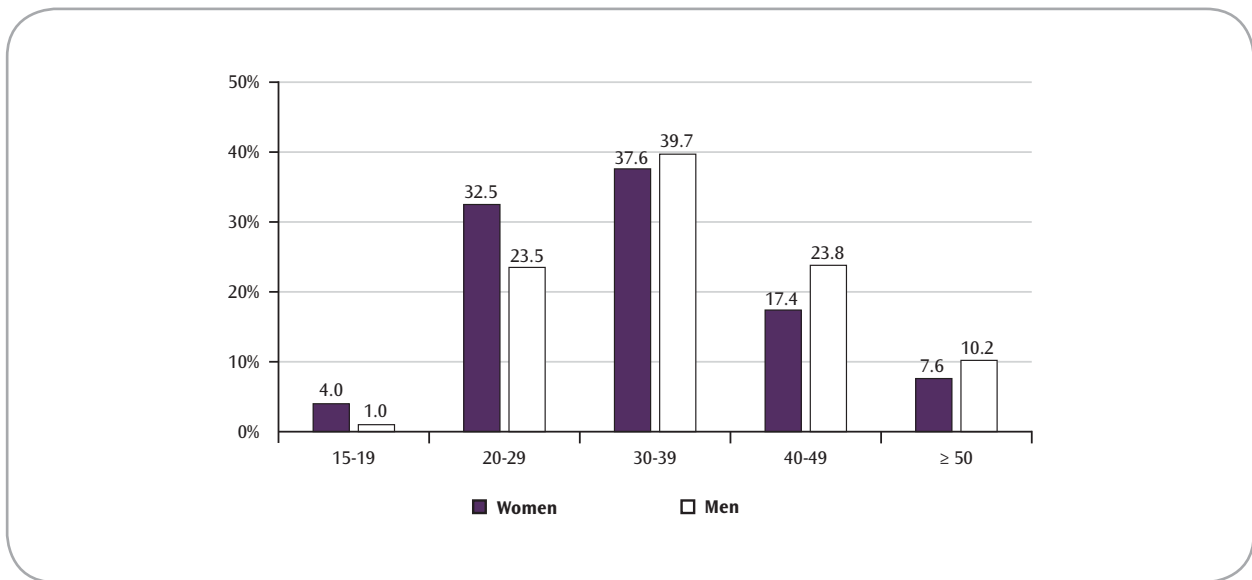
Similarly, results from Phase 2 I-Track (2005-2008) revealed that 11.4% of female participants to be HIV positive, as compared with 13.9% of male participants. Moreover, 9.9% of female participants were both HIV and HCV positive as compared with 12.0% of males who were co-infected [12]. Data also showed HIV/HCV co-infection to be higher among female participants who self-identified as Aboriginal (First Nations, Inuit or Métis) as compared to HIV/HCV co-infection prevalence among female non-Aboriginal participants (12.3% vs. 8.5%, respectively) [13].

### 3.6 Age

HIV affects women of all ages. Cumulative surveillance data from 1985 to 2009 show that the largest proportion of HIV positive test reports – 37.6% of the total number of adult women cases (n=11,403) – occurred in women aged 30-39 years (where age group was reported) [6]. Women aged 20-29 represented the second greatest proportion of HIV positive test reports at 32.5% (Figure 14) [6]. While these data are useful, it is important to keep in mind that the latent nature of HIV infection can delay testing, and age at time of diagnosis is not necessarily an indicator of when the virus was contracted.

Women tend to be diagnosed with HIV at an earlier age than men. Figure 14 presents the cumulative proportions of positive HIV test reports stratified by sex.

**Figure 14: Proportion (%) of HIV Positive Test Reports Attributed to Men and Women by Age Category, 1985-2009**



Source: [6] pp. 21, 22

A greater proportion of positive HIV test reports in women than men are found among the 15-19 year and 20-29 year age categories [6]. There are many reasons to explain this trend. Some argue women access health services more often than men (e.g., for sexual health services or prenatal care) so their likelihood of testing positive at a younger age is greater. Others maintain that this trend is a result of women’s increased vulnerability to HIV as a result of age-related power differentials in sexual relationships or gender-power dynamics in injection drug use (i.e., women are more likely to requiring help injecting) [14;15]. These vulnerabilities are explored in Chapter 4.

As the majority of women living with HIV in Canada are of reproductive age, it is important to consider women’s desire to have children and related fertility issues, mother-to-child transmission (MTCT), and post-pregnancy vertical transmission risks (e.g., risks related to breastfeeding).

### 3.7 Perinatal Transmission

HIV may be transmitted vertically from mother-to-child during pregnancy, childbirth, or breastfeeding. Since 1994, advances in testing and treatment technology have shown marked declines in the rates of MTCT [16]. In 2009, for example, 3 out of 177 exposed infants (1.7%) were confirmed HIV infected [16].

Data on perinatal transmission rates for Canada are available but do not necessarily give us a clear picture of the situation. The numbers reported to PHAC reflect only those infants who were perinatally exposed to HIV and are currently receiving care [6]. As not all women are aware of their HIV infection, test for HIV infection during pregnancy, or know how HIV presents in young infants, cases may go unreported. Surveillance data do tell us that since 2000, there were between 140 and 240 Canadian perinatally HIV-exposed infants annually. In 2009, 177 HIV-exposed infants were reported; however, not all of these infants later tested positive for HIV. Of

**Figure 15: Prevalence of HIV Infection and Testing Rates among Pregnant Women by Selected Provinces / Territories and by Prenatal HIV Screening Strategies**

	Opt-in Strategy		Opt-out Strategy
Province / Territory	BC	ON	AB
Percentage of women screened for HIV	83.4%	97.6%	97.0%
Year	2003	2009	2006

Reference: SRAD, Epi Updates 2010

the 15 infants born without the use of antiretroviral (ART) prophylaxis in 2009, 1 was confirmed HIV positive. Of the 162 perinatally HIV-exposed infants born with the use of ART prophylaxis that same year, 2 were confirmed HIV positive [6]. According to surveillance data, while the number of infants exposed to HIV has increased over time, the proportion of infants confirmed to be HIV-infected has decreased from 10.7% in 2001 to 1.7% in 2009 [6].

Provinces and territories have developed strategies around pregnancy and HIV testing to reduce the risks of MTCT in Canada. All routine prenatal care in Canada employs one of two HIV testing approaches. The “opt-in” approach involves pre- and post-test counselling and a mandatory offer of HIV testing that a woman can choose to accept or reject. The “opt-out” approach includes HIV testing as a standard prenatal procedure, unless a woman specifically declines the test [16]. Currently, five provinces/territories use the opt-in approach (British Columbia, Yukon, Ontario, Québec, Nova Scotia), while the remainder use the opt-out approach.

As shown in Figure 15, both opt-in and opt-out approaches result in high HIV test rates for pregnant women (note that data are only available for select regions). Further, HIV prevalence among pregnant women who receive prenatal care and who are tested for HIV is low (less than 1%). However, these data do not capture women who do not receive prenatal care and go untested. This is of concern because this group of women may be the same group who are at greatest risk of HIV infection.

It should be noted that the Canadian Medical Association [17], along with the Society for Obstetricians and Gynecologists of Canada, the College of Family Physicians of Canada and the Canadian Paediatric Society [18], have endorsed the routine offering of HIV testing to pregnant women unless an individual actively opts-out.



### 3.8 HIV/AIDS in Diverse Female Populations in Canada

Studies have shown that women who are subject to compound discrimination<sup>36</sup>, such as women from certain ethnocultural groups, women who use injection drugs, and women in prison, are at increased risk of HIV/AIDS [19-24]. Current data describing HIV infections and AIDS cases among certain populations of women are presented in this chapter (Chapter 4 takes a closer look at the reasons why certain populations of women have an increased likelihood of HIV infection).

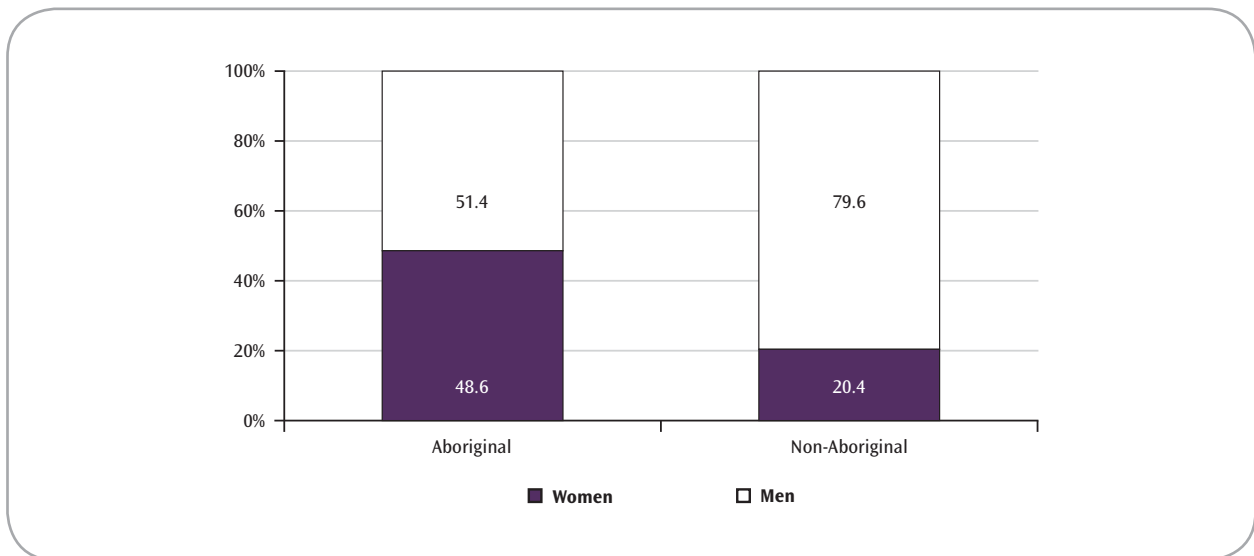
#### 3.8.1 Aboriginal Women

As previously discussed, women have consistently comprised between 23% and 28% of the proportion of positive HIV test reports over the last 10 years.

However, among Aboriginal peoples, women make up a substantially larger proportion. HIV surveillance data indicate that of the positive HIV test reports with Aboriginal ethnicity reported, women and men are almost equally represented. The average proportion of women among positive HIV test reports in Aboriginal persons was 48.6% during the time period 1998 to 2009 (Figure 16). For non-Aboriginal test reports, the corresponding proportion was 20.4%.

The proportion of reported AIDS cases among Aboriginal peoples attributed to women was 29.5% from 1979 to 2009, reaching a peak of 50.0% in 2008. Non-Aboriginal women made up 14.3% of AIDS cases for the same time period<sup>37</sup>. Refer to Figure 17 for a breakdown of AIDS cases in First Nations, Inuit and Métis women.

**Figure 16: Proportion (%) of Positive HIV Test Reports by Sex and Aboriginal / Non-Aboriginal Ethnicity, 1998-2009**

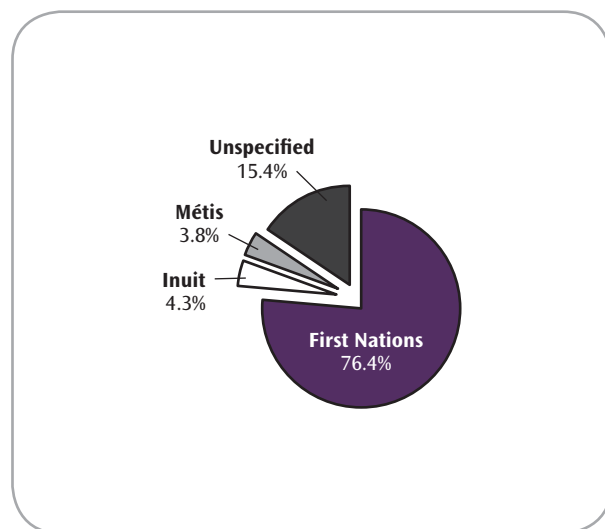


Source: [6]

36 Compound discrimination is a situation in which discrimination on the basis of two or more grounds add to each other in one particular moment, resulting in an individual's increased disadvantage.

37 SRAD: Unpublished Surveillance Data (2010).

**Figure 17: Distribution of Reported AIDS Cases, 1979-2009 in Women Who Self-Identified as First Nations, Inuit, Métis or Unspecified Aboriginal Heritage (N = 208)**

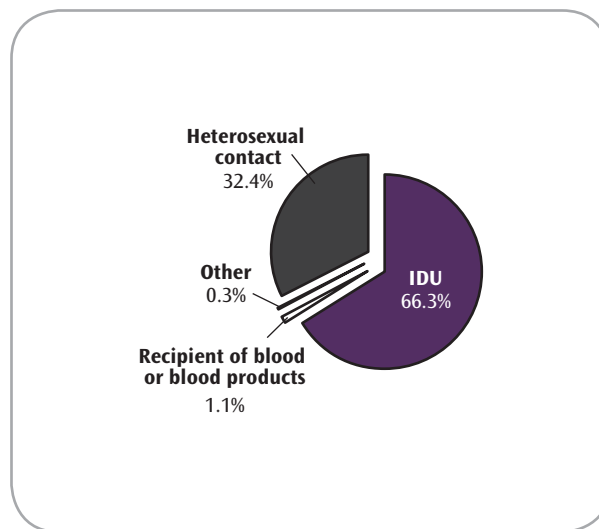


Source: [6]

As referenced in Figure 18, between 1998 and 2009 the main exposure category for HIV in Aboriginal women was IDU, representing 66.3% of total positive HIV test reports. The second most common exposure category was heterosexual contact, representing 32.4% of all reports. Recipient of blood or blood products, “Other” categories accounted for few of all the total reported positive HIV tests among Aboriginal women [6].

Of the total number of perinatally HIV-exposed infants from 1984 to 2009 with reported ethnicity data (n=3,053), 16.2% were Aboriginal. This number is disproportionately high as Aboriginal peoples make up approximately 3.8% of the population of Canada [25]. A three-year study conducted in Vancouver suggested that Aboriginal women were seven times more likely to be HIV positive than their non-Aboriginal counterparts [26]. Of those Aboriginal infants exposed from 1984 to 2009, 10.4% have been confirmed HIV positive [6].

**Figure 18: Distribution of Exposure Categories among Positive HIV Test Reports of Aboriginal Women 1998-2009 (N = 1,044)**



Source: [6]

It should be noted there are some limitations with ethnicity reporting at the national level. Specifically, Canada’s two largest provinces, Ontario and Québec, do not provide information on ethnic origin to PHAC when reporting data. This hinders Aboriginal-centred national policy, prevention, and program planning, as the two provinces account for over two thirds of all positive HIV test reports in Canada and includes three large urban centres (Toronto, Montreal and Ottawa) with large multicultural and off-reserve Aboriginal populations [6]. However, Québec’s provincial surveillance report does include data which show that Aboriginal women make up 2.7% of new diagnoses in women in Québec, the majority of which (1.8%) are First Nations women [27].

### 3.8.2 Women in prison<sup>38</sup>

The population of women in prison in Canada is not static. Constant movement of women in and out of the prison system makes it difficult to track epidemiologic data. However, available data indicate that HIV and HCV rates are higher in prisons than in the general population [4].

The 2007 National Inmate Infectious Diseases and Risk-Behaviours Survey conducted by Correctional Service of Canada (CSC) puts women's self-reported HIV rate at 7.9%. The self-reported HIV prevalence rate for men in prison during the same period was 4.5% [28]. A closer examination of data on women in prison reveals that Aboriginal women in prison reported the highest rates of HIV infection (11.7%) [28].

CSC surveillance from 2002-2004 for new admissions to federal prison who took part in voluntary testing indicates that although the estimated HIV prevalence among women fell from 5.0% in 2000 to 3.4% in 2004, women continued to have a higher rate compared to men. Further, the same report identified Québec and the Pacific Region as having the highest regional prevalence among women in federal prison [29].

The following studies also provide information on HIV infection rates in federal and provincial or territorial penitentiaries:

- In a study of Ontario remand facilities in 2007, women were found to have an HIV prevalence rate of 1.8%, an HCV prevalence rate of 30.2%, and an HIV/HCV co-infection rate of 1.5% [30].
- Results from a Québec study reveal that women in federal penitentiaries had an HIV prevalence rate of 4.7% as compared to 1.7% for men [31].
- In 2007, a study conducted in Québec provincial prisons identified HIV prevalence in women to be significantly higher than in men, at 8.8% compared to 2.4%. HCV infection was 18.5% in women [32].
- A survey of women at the Burnaby Correctional Centre for Women in British Columbia had a self-reported HIV prevalence rate of 7.7%. The self-reported HCV prevalence rate was 51.9% [33].

### 3.8.3 Transwomen<sup>39</sup>

Limited data indicate that transwomen have particularly high HIV prevalence rates. While no Canadian-specific data were found, a recent meta-analysis estimated an HIV prevalence rate of 27.7% for male-to-female transgender persons (MTF) in North America [34]. Other studies show that transgender persons living in specific regions in Canada, specifically Vancouver (DTES) and Montreal, have a higher prevalence of HIV infection [35]. Further, certain groups of transgender persons have higher HIV prevalence rates than others. These groups include transgender persons who are also ethnic minorities, sex workers and people who use injection drugs [35]. However, it is difficult to track epidemiological data on this population since MTF HIV test reports are likely included among women's responses given that transwomen identify and live as women.

### 3.8.4 Women who Have Sex with Women<sup>40</sup>

A growing body of evidence shows that women who have sex with women (WSW) are at increased risk of HIV [36-40]. While sexual transmission of HIV between two female partners is theoretically possible (HIV has been

38 HIV surveillance data on individuals in federal prisons in the provinces and territories are submitted to PHAC.

39 Transwomen are persons who were born male but identify and live as women. These individuals are also known as male-to-female transgender persons (National Centre for Transgender Equality, [www.nctequality.org](http://www.nctequality.org)).

40 WSW is a broad term explaining a behaviour which, depending on the individual, may include those who self-identify as lesbian, gay, bisexual, or two-spirit. Identification, however, does not always predict behaviour, nor does behaviour predict identification. Women having sex with women in itself may not be the high-risk behaviour facilitating contraction of HIV.

isolated in vaginal secretions, menstrual blood, and cervical biopsies), as of 2005 the Centers for Disease Control and Prevention (CDC) in the U.S. had reported no such confirmed cases<sup>41</sup>.

British Columbia includes WSW as an exposure category for HIV transmission and reported a total of 21 positive HIV test reports among this population between 1985 and 2007 [41]. While this province routinely collects information on WSW on HIV test reports, neither these data nor supplementary data (i.e., other potential risk behaviours / exposure categories) are reported to PHAC. More national data are required to identify trends and vulnerabilities in this female population.

### 3.9 Co-infections with HIV

Other sexually transmitted and blood-borne infections (STBBIs) are often concomitant with HIV as these diseases share common transmission routes, and populations affected by these diseases share common vulnerabilities and common risk behaviours [42;43]. Co-infections also impact on treatment, health management options, and eventual health outcomes. For instance, women who are co-infected with HIV and another STBBI may experience altered clinical outcomes or accelerated disease progression.

#### 3.9.1 Tuberculosis

Tuberculosis (TB) is a bacterial infection that, if active, generally displays symptoms in the chest and lungs (pulmonary) and can extend to the lymph nodes, organs or brain of the host. HIV weakens the immune

system resulting in increased chances of active TB if exposed to the TB-causing microbe [43]. It is reported that adults with latent TB infection have approximately a 10% chance of developing active TB disease in their lifetime [43]. In addition, if exposed, people living with HIV (PHAs) have a higher risk of contracting TB.

The World Health Organization (WHO) has estimated HIV prevalence in incident TB cases in 2007 to be 5.7% [43]. Also, an estimated 2% to 6% of PHAs have active TB [44]. Rates reveal that the populations vulnerable to TB infection overlap with those vulnerable to the HIV infection, including people who come from countries with higher rates of TB and HIV, Aboriginal peoples, homeless people and people in prisons [44].

In relation to gender, Canadian surveillance data reflect the following results [45]:

- Women represent 44.1% (N=683) of total TB cases (N=1547) in Canada
- Foreign-born females represent 77.6% (N=510) of total female TB cases
- For known HIV status, 2.5% (N=17) of females with TB are infected with HIV
- For known HIV status, 2% (N=10) of foreign-born women with TB are infected with HIV

Although these data offer some indication of TB/HIV co-infection among women in Canada, they fail to depict the “true picture” of co-infection among this population as 77.6% (N=530) of female TB cases fall under the category “unknown HIV status.” This, therefore, leads to an underestimation of HIV prevalence in women also infected with TB in Canada.

#### 3.9.2 Sexually Transmitted Infections

Studies have shown that women are more susceptible to being infected with a sexually transmitted infection (STI) than men and that the presence of a STI can increase the risk of contracting HIV. The likelihood

41 At the end of 2004, 7,381 HIV-infected women were reported to have had sex with women; however, most had other risk factors (such as injection drug use, sex with men who are infected or who have risk factors for infection, or, more rarely, receipt of blood or blood products). HIV-positive women who only reported sex with women are followed up for investigation. At the end of 2004, none of these investigations had confirmed female-to-female HIV transmission, either because other risk factors were later identified or because some women declined to be interviewed. However, despite the absence of HIV-confirmed cases of WSW, the Centers for Disease Control and Prevention (CDC) do not negate the possibilities [40].

of being infected may be explained in part by female hormonal factors which may alter the thickness of the cervical lining, making women more susceptible to STIs than men [46]. For example, women are four times more likely to get HSV-2 (Herpes simplex virus 2) than men, and, depending on outbreak frequency and severity, being infected with HSV-2 is shown to increase susceptibility to HIV by two to eight times [47].

Chlamydia is the most common notifiable disease and STI in Canada. In 2008, females accounted for over two thirds (N=54,967) of the 82,919 chlamydia cases reported in Canada [48;49]. Young women are disproportionately affected by chlamydia. Between 1999 and 2008, the greatest absolute increase in reported rates of chlamydia infections was seen in 20- to 24-year-old females from 1064.6 to 1824.3 per 100,000 [48;49].

Chlamydia infections are increasing in Canada. This indicates that unprotected sex in young women is on the rise and unprotected sex places women at increased risk of HIV and other STI transmission. Complications from untreated infection can include pelvic inflammatory disease, which can lead to chronic pelvic pain, ectopic pregnancy and infertility; and transmission from pregnant women to infants during childbirth, resulting in neonatal conjunctivitis or pneumonia. Complications can also include increased HIV acquisition due to inflammation in the genital tract, which increases susceptibility to HIV; and increased HIV transmission as a result of increased shedding of HIV-infected cells [50].

Although data show that men are more affected by gonorrhea and syphilis in Canada, like chlamydia, the number of reported gonorrhea and syphilis infections in females has been on the rise since the late 1990s [50].

The Enhanced Street Youth Surveillance System (E-SYS) for street-youth aged 15 to 24 years, reported a prevalence rate for HIV of 1.2%, Chlamydia of 11.3%, Gonorrhea of 2.4%, Syphilis of 0.7% and an HSV-2 of 24.5% among female youth in 2005 [51].

While not a notifiable disease in Canada, the Human Papilloma Virus (HPV) is described as the most common STI [51]. HPV is known to increase the risk of HIV infection, and, for those who are co-infected, HIV increases the progression of HPV to cervical cancer [51]. While there is a lack of published general population studies in Canada on HPV, data reveal that the prevalence rate of HPV in any given population in Canada is between 10.8% and 29.0% [51]. All published epidemiological studies in Canada have been conducted on women displaying varied prevalence rates by age, ethnicity and place of residence. The National Advisory Committee on Immunization (NACI) recommends HPV vaccination of HIV-positive individuals. NACI also cautions that immune response to the vaccine might be less than that of HIV-negative individuals since the immune response and efficacy in seropositive individuals are unknown [52].

### 3.9.3 Hepatitis B and Hepatitis C

As hepatitis B virus (HBV) and hepatitis C virus (HCV) are blood-borne, they share similar routes of transmission as HIV. For HBV, high-risk activities can include sharing of injection drug equipment or having unprotected sex with multiple partners. Data on HIV/HBV co-infection are limited; however, since the advent of an HBV vaccine, reported rates of HBV infection have been declining. Overall, the national reported rates of HBV significantly declined from 10.8 per 100,000 population (95% CI 6.0-18.1) in 1990, to 3.3 per 100,000 (95% CI 1.6-4.8) in 2007. The greatest declines have occurred among the cohort of children to whom the recommendations for routine HBV vaccination have applied [53]. However, throughout this time period, the reported HBV rates have been twice as high among men as among women [53]. The E-SYS data suggest that overall, 65.2% of the participating street youth were age-eligible for the school-based HBV immunization program. Among these youth, only 63.8% were vaccinated against HBV [54].

Women who come from countries where HBV is endemic<sup>42</sup> are also considered at risk for infection or co-infection with HIV; however, data are limited for this subpopulation. As referenced in Section 3.5.2, women who use injection drugs are particularly vulnerable to HIV/HCV co-infection. The use of contaminated needles for tattooing can also increase the risk to contract both HBV and HCV, further placing women at risk.

The I-Track Survey (Phase-2, surveys conducted in 2005-2008) offers the following HIV prevalence and HCV positivity rates among participants who use injection drugs [12]:

- 9.9% of female participants tested positive in HIV/HCV antibody (compared with 12% of male participants); and
- 12.3% of Aboriginal female participants tested positive in HIV/HCV antibody (compared with 8.5% of their non-Aboriginal counterparts).

Results from the Enhanced Street Youth Surveillance (E-SYS) suggest among survey participants who are HIV positive, 37.1% are co-infected with HCV. Among HCV-positive participants, 6.5% were HIV co-infected [51].

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# CHAPTER 4 - Current Evidence on Factors that Impact Women’s Resiliency and Vulnerability to HIV/AIDS

## 4.1 Determinants of Health

One of the major developments to emerge in the study of women’s health over the last few decades has been the recognition that women’s health encompasses a “state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Women’s health involves their emotional, social and physical well-being and is determined by the social, political and economic context of their lives, as well as by biology.” [1]. Complex intersections between social and economic factors, the physical environment and individual behaviour can create or enhance vulnerability and resilience regarding one’s health [2;3]. This chapter examines women’s vulnerability and resilience to HIV in Canada through a determinants of health lens [3].

### The Determinants of Health

- Gender
- Biology and Genetic Endowment
- Education
- Income and Social Status/Employment and Income
- Social Environments and Social Support Networks
- Physical Environments
- Personal Health Practices and Coping Skills
- Healthy Child Development
- Health Services
- Culture and Race

### 4.1.1 Gender

*Gender refers to the array of society-determined roles, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis. “Gendered” norms influence the health system’s practices and priorities. Many health issues are a function of gender-based social status or roles [3].*

Gender is distinct from sex, in that sex is generally viewed as having fixed biological characteristics<sup>43</sup>, whereas gender is considerably more fluid and culture-based [4]. It is the social constructs of gender and sexuality that shape and govern roles of masculinity and femininity, responsibilities, needs and expectations of men and women, and the gender division of labour, status and power [5-7].

This report recognizes gender as a key determinant affecting women’s health. Although all gendered groups are affected by social and economic factors, women are particularly affected by the way in which gender interacts with the other determinants of health. The compounding and intersecting nature of sex, gender, race, sexual orientation, age, class, and disability impacts how individuals negotiate health through intrapersonal, interpersonal, community, and institutional mechanisms. As a result, women’s experiences with health and illness are collectively quite different from men’s experiences.

*... (S)ocial mechanisms produce gender-based inequities and disparities (e.g., in women’s economic potential, women’s control of resources, and gender-based expectations of women’s role in society). These inequalities and disparities are apparent in the public health, social and behavioural sciences, and medical fields as exposures, risk factors, and biological properties. These exposures, risk factors, and biological properties all interact to increase women’s vulnerability to diseases, including HIV [9].*

Gender has a profound impact on women’s vulnerability to HIV [10]. As described by WHO [6], gender inequalities have been a “key driver” of the female HIV/AIDS epidemic worldwide. For women in Canada, the two most common exposure categories for HIV transmission, heterosexual sex and injection drug

43 However, the distinction between female and male may not be as clear or fixed, since individuals may display “non-standard” chromosomes, genitalia and/or secondary sex characteristics neither exclusively female nor male, resulting in female and male characteristics that fall along a continuum [8].

use (IDU), accounting for over 91% of positive HIV test reports among women between 1985 and 2008 [11], involve risk behaviour relating to power relationships and inequalities between genders. While gender is a determinant of health in its own right, its intersection with and influence on other determinants of health increases women's vulnerability to HIV.

For example, gendered roles of masculinity and femininity may support a stereotyped sexuality, whereby gendered norms associated with masculinity encourage men to have multiple sexual partners (either concurrent or not) and encourage men to have sexual relationships with younger women [7]. Stereotypes around what constitutes "masculine" behaviour may result in men hiding sexual relationships with other men and may also make men reluctant to access health services [5;7]. Conversely, gendered norms around femininity may encourage sexual innocence/ignorance and passivity, meekness, and submissiveness in women, resulting in their increased vulnerability and dependence on sexual partners [5-9;12]. For some women, gendered norms contribute to an inability to negotiate safer sex practices and increase risk of sexual assault. Gendered norms are also manifest in women's involvement in survival or street-level sex work. Gendered norms lie at the root of all of these behaviours, which facilitate HIV exposure and transmission in women.

Recent literature has also identified a strong association between requiring help injecting and HIV seroconversion in women who use injection drugs [13-16]. This link supports the premise that an injection-dependent relationship exists between injection drug-using women and men, effectively limiting women's power and control over drug preparation, needles, and injecting. Consequently, beyond increased risk of HIV transmission as a result of sharing contaminated needles, this group of women is further made vulnerable to HIV as a result of behaviour linked to gendered norms.

Gendered roles of masculinity and femininity also strongly impact transgender people. Emerging data on transgender people suggest that this population is at a heightened risk of HIV infection as a result of institutional factors that reinforce a bi-gendered culture. A needs assessment conducted in Québec on transgender people, marginalization, and HIV risk [17] identified that institutional barriers to changing one's name and sex on official documents prevent the social integration of transgender people. Institutional barriers affect transgender people's ability to find employment and satisfy social needs. These barriers also hinder transgender people's access to health services and secure housing, thereby increasing their vulnerability to HIV/AIDS.

#### 4.1.2 Biology and Genetic Endowment

*The basic biology and organic make-up of the human body are a fundamental determinant of health. Genetic endowment provides an inherited predisposition to a wide range of individual responses that affect health status. Although socio-economic and environmental factors are important determinants of overall health, in some circumstances, genetic endowment appears to create predispositions to particular diseases or health problems [2].*

Elements of biology and genetic endowment influence women's risk of HIV transmission, treatment outcomes, disease progression and comorbidities. For instance, when considering heterosexual sex, the risk of contracting HIV through penile-vaginal intercourse is greater for women than it is for men [5;18-23]. Male-to-female HIV transmission has been shown to be two to four times higher than female-to-male HIV transmission [24]. Reasons behind women's increased risk related to biology and genetic endowment include the following:

- Concentrations of HIV are higher in semen than in vaginal secretions [19-21].
- Physiologically, the vagina has a much larger area of exposed sensitive skin where HIV can survive longer than on the penis [21].

- While once believed impenetrable by HIV, research has shown that the genital lining in women is not an effective barrier against HIV [22;23].
- The delicate tissue of the female genital tract can be damaged during intercourse, particularly if sex is non-consensual or traumatic, increasing the likelihood of abrasions, vaginal bleeding, or tearing, leading to increased rates of transmission [5;18-21].
- HIV finds its way into the female reproductive tract by decreasing epithelial cells' (i.e., the protective barrier that keeps out infection) barrier resistance. This subsequently impacts prevention strategies, such as microbicides and vaccine [25].

While unprotected penile-anal intercourse is considered to be of higher risk for HIV transmission than penile-vaginal intercourse, the former is rarely reflected in the literature or discourse in the context of heterosexual HIV exposure or sexually transmitted infections (STIs) [19;26;27]. Although similar data were not available for Canada, research from the American National Survey of Family Growth [28] reported that 5.6% of girls aged 15-17 years had had heterosexual anal intercourse, with the percentage increasing to 29.6% for 20-24-year-old women. An American study, which examined heterosexual intercourse in young adults aged 15-21 years, significantly associated the practice of anal intercourse with being forced to have sex, living with a partner, and having two or more partners [27]. The study also found that some women may practise anal sex as an alternative to vaginal intercourse to avoid risk of pregnancy. Although no Canadian data were found, this study's findings suggest that condom use may not be consistent with anal sex [27].

As discussed in Chapter 3, the presence of another STI can augment risk of HIV transmission for women and men. Biological factors, particularly STIs which result in ulcers or vesicles, increase an individual's risk of contracting HIV as they may compromise the skin's physical barrier to infection. For women the situation is further complicated by the fact that STIs, such as

gonorrhoea, chlamydia, syphilis, herpes simplex virus (HSV) types 1 and 2, and human papilloma virus (HPV), may remain asymptomatic in women, and may, therefore, go undiagnosed. According to *The Canadian Guidelines on Sexually Transmitted Infections*, chlamydia, HPV, and HSV are the most commonly reported STIs in women in Canada [29]. HIV infection may also change the presentation of ulcerative STI, and treatment options need to be evaluated regarding specific HIV/STI co-infections [29].

#### a) Impact of HIV Treatment on Women Living with HIV

Women living with HIV are often underrepresented in clinical trials of Highly Active Anti-Retroviral Therapy (HAART) [30;31]. As a result, the full impact of treatment is often unknown and may pose health risks to, or impede the sustainable care of, women living with HIV. For example, a study comparing the side effects of HAART in women and men found that metabolic toxicities associated with treatment occur more frequently in women than in men [30]. Sex-based differences in body masses, fat composition, hormonal secretion and drug metabolism may explain these differences [30;31]. Another study, which examined the effects of HIV treatment on HIV-positive pregnant women, found higher levels of toxicity associated with Nevirapine-based HAART in pregnant women living with HIV as compared to those who took non-Nevirapine-based HAART [32]. These findings contributed to an international review of the drug for use in pregnant women living with HIV.

The inventory of published research included in this report identified a single study that indicated better HIV treatment outcomes for women than men [33]. This study found that women survived longer following HIV seroconversion, and found that HIV-positive women treated during the post-HAART era had a lower risk of progression to AIDS and non-AIDS mortality than treated HIV-positive men. This suggests that HIV-positive women may respond better to HAART than HIV-positive men.

**b) Osteoporosis and HIV**

Osteoporosis, a disease characterized by low bone mass and deterioration of bone tissue, has long been associated with aging women in the general population and is increasingly being linked to people living with HIV/AIDS [31;34]. A study on fragility fractures and bone mineral density (BMD) in women living with HIV reveals that they report a significantly higher risk of bone fragility compared to women in the general population, despite having normal BMD. The study identifies the need for additional research to assess bone fragility in women living with HIV and for a risk assessment tool on fractures [34].

**4.1.3 Education**

*Health status improves with level of education. Education is closely tied to socio-economic status, and effective education for children and lifelong learning for adults are key contributors to health and prosperity for individuals, and for the country. Education contributes to health and prosperity by equipping people with knowledge and skills for problem solving, and helps provide a sense of control and mastery over life circumstances. It increases opportunities for job and income security, and job satisfaction. It also improves people's ability to access and understand information to help keep them healthy [2].*

Studies show that women with limited education are hindered in their ability to access and understand HIV prevention and treatment information. One study found that women with limited education may have trouble communicating their needs to health providers, a disadvantage when it comes to accessing health services. Further, this group of women may not be able to obtain and fully comprehend health education and health promotion materials [35-37]. Limited language skills can also prevent women from accessing or understanding HIV prevention and treatment information [38]. Diminished educational opportunity combined with abuse, lack of economic opportunity, and experiences with child welfare system, make certain

groups of women, such as Aboriginal women, more vulnerable to sexual exploitation [39] and, as a result, to infections such as HIV.

Lack of information about sexual and reproductive health is common to all populations. One study found that female and male adolescents demonstrate a poor knowledge of sexual and reproductive health, despite having a reasonable knowledge of HIV/AIDS [19]. Another study, conducted among 234 undergraduate university students (145 women, 85 men, and 4 students sex and age not indicated; mean age, 21.14 years) on the perceived transmissibility of HIV and chlamydia after one sexual exposure (penile-vaginal intercourse), reported that 34.8% of the participants falsely estimated that chlamydia has a lower transmission probability than HIV. Only 3.9% and 5.6% of responses came within 0.5% of the correct probabilities of transmission for both HIV and chlamydia respectively [40]. Consequently, a lack of sexual and reproductive health education may increase girls' and women's susceptibility to HIV infection.

**4.1.4 Income and Social Status / Employment and Income**

*Health status improves at each step up the income and social hierarchy. High income determines living conditions such as safe housing and ability to buy sufficient good food. The healthiest populations are those in societies which are prosperous and have an equitable distribution of wealth. Unemployment, underemployment, stressful or unsafe work are associated with poorer health. People who have more control over their work circumstances and fewer stress-related demands of the job are healthier and often live longer than those in more stressful or riskier work and activities [2].*

Low income and poverty are associated with increased risk of HIV infection and disease progression [41]. As demographic data from Chapter 2 reveal, more women are involved in less stable work than men, more

women have part-time jobs than men, and women continue to earn less than their male counterparts and are required to do more unpaid labour than men [19;42]. Women's involvement in unpaid labour and the unequal impact of poverty on women are manifest in dependent relationships, in an inability to acquire stable housing (homelessness), and in their participation in survival sex as a means to make ends meet [10;43;44]. Gender disparities tend to be masked among those with higher incomes.

#### a) Vulnerable Female Populations

As data from Chapter 2 indicate, women are disproportionately affected by poverty and certain groups of women fall to the outer ends of the socio-economic hierarchy. For instance, Aboriginal women and women from racial minority groups are faced with the double discriminatory effects of gender inequality and racial inequality, which ultimately impacts their socio-economic status [41;45]. As one author notes, "the low socio-economic status of Black women compounds the unequal relationship between women and men. Poverty and lack of economic opportunities disempower Black women, and keep them engaged in an unhealthy relationship with a partner" [46]. Studies show that male-to-female transgender persons (MTF) also deal with multiple layers of discrimination and generally earn less than the overall population [47]; accordingly, transgender women also experience low socio-economic status [48].

*You hang around with a man who has money because he can take you out, because he buys you nice clothes... he pays your rent for you when you are unable to do it. Then you will have a relationship with him because that is the only way you can sustain his interest' – Woman [46].*

Women involved in street-level sex work are one of the most vulnerable groups in Canadian society. Laws and society's attitudes regarding sex work may prevent women involved in sex work from accessing services such as police services and health care. Women's

involvement in sex work may also subject them to excessive acts of violence, robbery, or abuse [49-51]. Street-level sex workers' desire to practise HIV prevention may be undermined by societal and personal factors such as gendered power differentials, a history of sexual abuse, violence and discrimination, age, drug or alcohol dependencies, mental health issues, and homelessness. These factors can significantly diminish women's ability to negotiate the use of condoms and ensure their consistent usage [45; 49;50;52-54; 56-59].

*Society has always looked down on working women. You can't tell anybody about it. You can't tell the doctor or the police. You should be able to tell doctors so you are medically safe and the police so you can be protected physically – Woman, sex worker [49].*

Several studies involving survival or street-level sex workers highlight the intrinsic relationship between survival sex and substance use. Combined, these behaviours may leave women few options for condom negotiation, as money for drugs or shelter may take precedence over self-protection [52;56;57;60]. A Vancouver study highlighted the correlation between drug market prices and the amount which street-level sex workers charge for sexual acts [61]. Studies have identified certain risk factors, such as drug use and incarceration, which put street-level sex workers at greater risk of HIV infection. For example:

- A comparative study between women who use injection drugs who are involved in sex work and those who are not reported that women involved in sex work were generally younger, and more likely to report use of injectable heroin, cocaine, speedballs (heroin and cocaine) and smokeable crack cocaine. They were also more likely to report syringe sharing and less likely to be enrolled in Methadone Maintenance Therapy (MMT) (N=591, 193 of which were sex workers in Montreal and Vancouver) [63].

- A Vancouver study identified the following factors associated with sex work and women who use injection drugs: incarceration, daily injected cocaine use, daily crack use, borrowing syringes, lending syringes, and having sought after but been unable to access addiction treatment during the previous six months [64].

*One of the prostitutes, Line, said to me: come with me. I'm going to show you how we get a customer. That didn't tempt me, but I had no choice. I wasn't able to be treated like this; I wasn't comfortable in my own skin. I got customers for a couple of weeks, but I didn't have it in me. To do that, I needed to get stoned two or three times more than usual. I wasn't able to get my first customer "straight". I told myself, this won't work, I'm going to beg (instead) – Woman, sex worker, living with HIV [62].*

Sex workers' regular sex partners also play a role in HIV transmission and acquisition. Literature shows that while the majority of sex workers consistently use condoms with clients, sex workers have unprotected sex with their regular partners. Additional research indicates that regular sexual partners of sex workers may themselves be using injection drugs or participating in other high-risk activities. This has the indirect effect of increasing sex workers' risk of HIV acquisition [13;59;63;65;66].

#### **b) Income of Women Living with HIV**

Women who have low incomes or who live below the poverty line are at greater risk of HIV progression to AIDS [67;68]. Some HIV-positive women live below the poverty line because their social assistance income benefits do not extend to cover their basic needs.

One study reports that source of income is considered a serious concern for the majority of women living with HIV [69]. In addition to source of income, women living with HIV/AIDS face additional financial concerns relating to travel to and from health services, treatment costs, time off from work with decreased pay, and fear

of employment loss. Many single mothers living with HIV/AIDS have the added stress of ensuring adequate daycare support and coping with poverty [70;71]. These issues were of special concern for single parents from Aboriginal and ethnic communities, as women from these communities make up a high number of people living in low- income situations [69].

According to a British Columbia study, risk factors for inadequate food security and hunger include being female, having a low income, having a low education, and being Aboriginal [72]. Other risk factors include living with children, having a history of injection drug and alcohol use, and unstable housing [72]. The study emphasizes the important role proper nutrition plays in the lives of women living with HIV, particularly in the case of single mothers with lower income. Ultimately, all of the studies cited in this report that examine the relationship between income and women living with HIV indicate a link between poverty and decreased participation in society.

#### **4.1.5 Social Environments and Social Support Networks**

*A healthy lifestyle can be thought of as a broad description of people's behaviour in three inter-related dimensions: individuals, individuals within their social environments (e.g., family, peers, community, workplace), and the relation between individuals and their social environment. Interventions to improve health through lifestyle choices can use comprehensive approaches that address health as a social or community (i.e., shared) issue. Social or community responses can add resources to an individual's repertoire of strategies to cope with changes and foster health. Support from families, friends and communities is associated with better health. Such social support networks could be very important in helping people solve problems and deal with adversity, as well as maintaining a sense of mastery and control over life circumstances. The caring and respect that occurs in social relationships, and the resulting sense of satisfaction and well-being, seem to act as a buffer against health problems [2].*



Social environments are largely created by gender and cultural norms which shape how women engage with society and how, in return, society engages with women. Gendered power dynamics ingrained in our social fabric are reflected in women's vulnerability to, or resilience against, HIV acquisition. For instance, research shows that men's violence against women and women's social exclusion as a result of sexism, racism, and transphobia put women at increased risk of HIV [36;52;53;58;73-79].

#### a) Violence and Abuse

Lack of societal power and status make women vulnerable to acts of men's violence. Research shows that the consequences of men's violence against women – whether it be sexual, emotional, or physical – include diminished self-esteem and sense of security, damage to physical and emotional health, and a negative impact on children (i.e., it creates a sense of fear and insecurity among children and perpetuates an intergenerational cycle of violence). Men's violence against women also negatively impacts women's financial security and may result in women's self-blame and loss of matrimonial home. Men's violence against women may ultimately result in women having to relocate outside of the community [80].

*He broke my arm one time trying to throw me off the balcony. He didn't let me go to the hospital for two days*  
– Woman living with HIV [52].

Some studies strongly associate repeated physical and sexual violence with a positive HIV test report [81;82]. For example:

- The Vancouver Injection Drug User Survey (VIDUS) cohort identified that of 503 women included in the analysis, 68.6% had experienced sexual violence. Of those who reported sexual violence, 53.4% revealed the age of first incidence was 12 years or less. Although not stratified by sex, the prevalence of HIV among those who experienced sexual violence was higher than those who had not.

This study indicates that individuals who have experienced sexual violence are at greater risk of HIV infection [73].

- The Cedar Project study (a Vancouver and Prince George cohort of young Aboriginal peoples, aged 14-30 years) found that 68.3% of women had experienced some form of sexual abuse at least once in their lifetime. HIV prevalence was greater for those participants with a history of abuse at 15.2% when compared to participants with no history of sexual abuse at 4.4% (results statistically significant, not stratified by sex) [76].
- Of a cohort of women who use injection drugs in Vancouver, researchers identified that “Young [HIV] seropositive participants were more likely to be female, to work in the commercial sex trade, to have experienced sexual abuse, to have had more than 20 lifetime sexual partners, to inject heroin and speedballs at least daily, and to use crack cocaine at least daily” [58].

Globally, street-level sex workers are one of the female groups most vulnerable to men's violence [83]. According to the Global Coalition on Women and AIDS, “violence is a manifestation of the stigma and discrimination experienced by sex workers. In all societies, sex work is highly stigmatized and sex workers are often subjected to blame, labelling, disapproval and discriminatory treatment” [83]. In a recent study of women using drugs and engaging in survival sex work in Vancouver, men's violence was found to impact women's access to resources and their ability to practise HIV prevention and harm reduction [59]. Forms of violence experienced and described by the women in this study included having boyfriends as pimps, the everyday violence of being a sex worker (e.g., discrimination, abusive johns, obstacles in accessing policing services), a lack of safe places to take dates, and displacement.

*If he don't want to use a condom, we're in extreme danger. I want to try to use one [condom], but the violence might ensue – Woman, sex worker [59].*

According to Statistics Canada, Aboriginal women are three times more likely to experience intimate male partner violence than non-Aboriginal women. Twenty-four percent of Aboriginal women said that they experienced violence from a current or previous spouse or common-law partner in the five-year period up to 2004. This is significantly higher than the 7% of non-Aboriginal women in Canada who reported experiencing violence during the same period. Aboriginal women who had experienced violence were also more likely to report having been beaten, choked, threatened with or having had a gun or knife used against them, or sexually assaulted [84]. According to the Native Women's Association of Canada, "the ongoing effects of colonization in Canada have led to the dehumanization of Aboriginal women and girls and [the Native Women's Association of Canada] considers this to be a root cause of the violence [Aboriginal women] experience" [85]. One additional study on Aboriginal women found a link between sexual violence and their initiation into sex work [39].

Black women, including women who come from countries where HIV is endemic, may also experience heightened levels of violence. For example:

- In many African and African-Caribbean cultures, underlying issues of violence are never discussed within the family and/or community. The few girls or women who come forward often face stigma and reprisal from family for speaking out and/or seeking support, particularly if the perpetrator is a member of the immediate or extended family or part of the larger African and African-Caribbean community [86].
- Forced sex, rape, childhood sexual abuse and incest may directly lead to infection, while fear of sexual and physical violence limits women's ability to negotiate condom use. Many African women

have fled persecution from war-torn countries of sub-Saharan Africa where they may have experienced rape and torture. This violence may have resulted in physical injury, pregnancy and exposure to HIV [86].

- Girls, young women, lesbian, gay, bisexual and transgender people, and people living with disabilities are often targeted for physical and sexual victimization. Although boys and men also experience sexual violence, it is important to acknowledge that girls and women are disproportionately affected regardless of their country of origin, culture, social class, religion or ethnic group. Their ability to practise HIV prevention may be affected by the aftermath of sexual violence (e.g., depression, loss of value, loss of sense of well-being) [86].

Other female populations are also at risk of violence, including transwomen and transwomen involved in sex work who come from racial minority groups [48;87]. Ultimately, men's violence against women and children, whether sexual or physical, has a direct impact on the ability of women and children to practise HIV prevention [86].

#### **b) Fear of Disclosure**

Under Canadian law, people living with HIV have a legal obligation to disclose their HIV-positive status to sexual partners before engaging in activities that pose a "significant risk of serious bodily harm" (transmitting HIV). Individuals who do not disclose before engaging in these activities may be charged with a crime on the grounds that failure to disclose one's HIV infection constitutes fraud, thereby invalidating consent to sex. In the absence of consent, the individual may be charged with a criminal offence. Differing court interpretations of which sexual activities pose significant risk of transmitting HIV has created confusion for people living with HIV. Given this context, partners can be a source of positive or negative support for women living with HIV when it comes to disclosure [69;88]. Studies show that

some women are reluctant to disclose their status to their partners for fear of being blamed or due to fear of reprisal (i.e., abuse or abandonment), yet they may yearn for a partner who can give them emotional support [69;82;88].

*Even though they say, 'well tell a partner you've got it', you're so scared to be rejected, to be alone you know, it's hard – Woman living with HIV [89].*

*You know I was scared, I was scared to tell them (family). Not knowing how'd they react... (feeling like) I'm going to lose my family over this – Woman living with HIV [88].*

*I didn't know how I was going to approach my husband (...) having to tell him, you know, such news of HIV. In Africa it's like a death sentence, as far as they're concerned and, you know, you're viewed as a moral disgrace, having HIV – Woman living with HIV [90].*

Many African and Caribbean women living with HIV fear disclosing their status to their partner because of ethnocultural assumptions that link HIV/AIDS to promiscuity. Fear of HIV-related stigma and discrimination is particularly real for women living with HIV, as they are often presumed to be more promiscuous than are HIV-positive men and they risk being ostracized from their cultural community. Women fear that disclosure of HIV infection may lead to physical harm and abandonment by a partner, who may, in turn, prevent them from seeking health services for fear of reprisal from community members [88]. Some women would rather sacrifice their health than sacrifice their anonymity and confidentiality [36]. In addition, fear of disclosure has kept many women from African and Caribbean communities from accessing health services and from establishing contacts with other HIV-positive women [36].

Disclosure is considered one of the most difficult aspects of living with HIV in Aboriginal communities because of the resulting stigma, discrimination and feelings of

being ostracized [91]<sup>44</sup>. As one woman explained, “The worst punishment that can happen in an Aboriginal community is banishment and this is happening to people with HIV/AIDS” [91]. Discrimination against Aboriginal women living with HIV is compounded as gender discrimination adds to the stigma they experience [91;92]. An Aboriginal woman living with HIV/AIDS may be branded as promiscuous, a “bad mother”, or “deserving of HIV/AIDS” if she discloses her HIV-positive test result to community members [92].

### c) Social Exclusion

Social exclusion, which involves “disintegration from common cultural processes, lack of participation in societal activities, alienation from decision-making and civic participation, and barriers to employment and material resources” [93], limits women’s power and choices regarding health, health services, social capital and equity. Examples of exclusion are particularly pervasive in the lives of women who already experience other forms of discrimination, such as heterosexism, homophobia, transphobia, or racism.

Women who have sex with women (WSW) are believed to be at increased risk of HIV due to their participation in behaviours that result in their discrimination and exclusion. Studies report that growing up in a heterosexist, and, at times, homophobic environment can enhance WSW’s isolation and exclusion and may potentially foster risk behaviours such as injection drug use and sexual experimentation [77-79;94]. For example, a study conducted in British Columbia (multiple locations) and Seattle, WA (USA) [79], which used comparative data from surveys administered to high school students, revealed that gay, lesbian or bisexual adolescents report higher HIV risk behaviours than their heterosexual counterparts. Risk behaviours included, use of injection drugs, age at sexual debut, number of lifetime sexual partners, condom use during last sexual intercourse, history of previous STI

<sup>44</sup> For further analysis of the Aboriginal community, consult the *Population-specific HIV/AIDS Status Report: Aboriginal Peoples* [41].

diagnoses, and alcohol or drug use during last sexual encounter. Another study conducted in Montreal found that having a female sexual partner or having a female sexual partner involved in sex work were predictors of involvement in sex work for street-involved female youth [57]. No other sexual behaviours predicted initiation into sex work among this cohort of females.

Sex workers also face increased vulnerability to HIV as a result of factors linked to their social exclusion. For example, laws and society's attitudes regarding sex work stigmatize sex work, thereby limiting sex workers' access to services and health care for fear of discrimination. Further, difficult working conditions reduce sex workers' ability to negotiate and enforce safer sex behaviours. This has the effect of increasing sex workers' susceptibility to violence and coercion [95].

Being transgender has also been identified as a factor that increases women's HIV risk behaviour [68]. Transgender women's vulnerability to HIV infection increases for transwomen who also identify as Aboriginal, an immigrant, young, or who are involved in sex work, as these factors can contribute to women's vulnerability to HIV infection.

Racism and discrimination leave groups of people particularly vulnerable to HIV infection by excluding them from the social and economic mainstream and by denying them the social support needed to enhance and preserve life [96]. Studies show that for Black women, the experience of racism intersects with other issues, such as gender, sexual orientation and socio-economic status. This results in a level of social exclusion that elevates their risk of HIV infection and compounds their ability to cope with the disease [35;36;97]. Thus, Black women's risk of HIV infection can not simply be attributed to individual behaviour as this trait is a product of a larger system.

Aboriginal women also feel the effects of racism and social exclusion in Canada. The complex vulnerabilities that Aboriginal women face stem from a legacy of

colonization and the multigenerational effects of social isolation, discrimination, entrenched poverty, and the residential school system [59;81].

#### d) Women's Support Groups

Support groups may be a source of resilience for women living with HIV. Support groups can encourage and inspire women living with HIV and remind them that they are not alone [88]. In some cases, support groups act as alternate communities for women living with HIV, and can empower women by promoting their participation in society [88;90]. In addition, women's interaction with other women living with HIV can help foster a sense of community [98].

For example, a Vancouver-based study of female sex workers who use illicit substances found that peer-driven interventions positively affect HAART adherence for this population [99]. Another study reveals that seropositive mothers rely on the support of family, friends and professionals, while men rely solely on one or more friends for support [69]. Other studies show that a supportive network is a valuable asset for women living with HIV [88;100]. Respondents in these studies explained that feeling supported was important for helping them deal with the everyday experience of living with HIV/AIDS.

However, some women living with HIV feel that support groups focus too heavily on the negative aspects of living with HIV and complain that not enough women are involved. In the words of a woman living with HIV, "HIV and support groups...it's always about the disease...it's like you don't have anything else in your life...People who have HIV don't have relationships. It's like that part of life does not exist. Nothing else exists except having HIV." [98]

Community norms and values are propagated through social institutions and networks, which can either help with or act as barriers to HIV prevention. For instance,

a qualitative study addressing HIV prevention and Black women in Toronto identified the church as an existing community structure that could be used to spread HIV prevention messaging to a key audience [46]. However, the church's lack of engagement on HIV in the community was also identified as a barrier to HIV prevention. One key informant described the social impact and influence that churches have on Black women, "There's lots, I mean thousands of Black women that fill up the churches in Toronto. They may not be the highest income earners, but can find money to support their churches. So we're talking about emotionally, economically, and spiritually tied [sic] to these institutions . . . unless it comes from the pulpit, it is not happening" [46]. Given their influence, churches should be considered as potential partners to foster resilience and begin dialogue about HIV and its affect on the Black community.

#### e) Role as Primary Caregiver

As demographic data in Chapter 2 indicate, women act as primary caregivers for their families more often than men, caring for partners, children and/or aging parents. The role of primary caregivers involves the provision of emotional support, bringing with it related pressures and stress. Acting as primary caregiver and living with HIV can be taxing, especially for single mothers [88]. Mothers living with HIV/AIDS must deal with the added stress of ensuring their children's welfare, which is especially difficult if the woman is ill or dying [88]. Mothers may also face additional stress about their partner's ability to adequately care for the children and maintain the household in the event of their illness or death [69].

*It's a lot of hard work for me because as someone who is HIV positive, I've become a caregiver to everyone around me. I have suppressed all my emotional needs so that becomes another source of stress. I don't want everyone around me to be depressed or feel sorry for me. So I put on a face that everything is OK or fine, which I do feel most of the time, but not always*  
– Woman, mother, living with HIV [69].

#### f) Role of Children

Children represent a positive force and a source of strength for mothers living with HIV/AIDS. A study has found that HIV-positive mothers depend more often on their own children for social support than they do on friends [71]. The positive influence of children is one of the factors behind the strong presence of women living with HIV in society and their increased participation in the workforce [70;98].

#### 4.1.6 Physical Environments

This section describes the HIV-related vulnerabilities associated with women who are homeless or unstably housed, those living in rural areas, and those in federal and provincial/territorial prisons.

##### a) Unstable Housing and Homelessness

Many studies clearly illustrate the relationship between homelessness, low income and socio-economic status and HIV risk behaviour [54; 61]. For instance, urban areas with concentrated homeless populations are ripe for non-market economies, such as theft and drug trafficking, that give rise to increased HIV risk behaviours, including sex work and drug use. However, even when socio-economic conditions are poor, neighbourhoods can reduce HIV risk behaviour by addressing the underlying issues related to physical environment – for example, by providing increased access to stable housing. As one study explains, "stable housing could make a critical difference in a woman's ability to escape violence (and) remain safe" [101].

Vancouver's Downtown Eastside (DTES) has received much attention regarding HIV infection. It should be noted that while this community has been identified as "having one of the highest rates of HIV infection in the developed world" [102], the DTES has shown some resilience of late. Many projects have been put in place to address the poor socio-economic conditions, which characterize the area. These projects, which include affordable housing initiatives, mental health services,

harm reduction services, addiction treatment services, and treatment for people living with HIV (including women), are discussed in more detail in Chapter 6.

*We're like the living dead down here, in the Eastside.  
We're on the news now... We're all dyin', we're fallin'  
off the face of the earth... it's bad, it's really bad*  
– Woman, sex worker [103]

One study, based in Vancouver's DTES, looked at 25 women who used Vancouver's supervised injection site, *Insite*. The study found that the female cohort of the study considered the facility a refuge from men's violence and an escape from male-female power dynamics related to injection drug consumption [104]. However, in spite of *Insite's* proven benefits, vulnerable populations of women continue to have trouble accessing its services. For example, another study conducted in Vancouver's DTES of 198 substance-using women involved in street-based sex work identified violence and policing activities as barriers which prevented these women from accessing *Insite's* services [105]. The study noted that of the cohort (from the MAKA project), the women who were most vulnerable – including young women of Aboriginal ethnicity, people who use injection drugs, and daily cocaine smokers -- were the least likely to use its services [105].

Activities associated with drug use have been shown to increase risk of HIV and other STIs and blood-borne illnesses [43;57;106]. Further, studies indicate that homelessness, drug use and HIV/AIDS are linked. For instance, one study conducted in Toronto on mortality in homeless women found that homeless women 18 to 44 years of age were 10 times more likely to die prematurely than women in the general population of Toronto. The most cited known causes of their early death were HIV/AIDS and overdose [107]. Another study based in Vancouver also found that mortality for women who used drugs was associated with unstable housing and HIV infection [103].

Another study of street-involved women who inject drugs and who are also involved in sex work in two Canadian cities (Montreal and Vancouver) found that more women involved in sex work had a higher incidence of unstable housing than those who were not involved in sex work [63]. Although the women involved in sex work who participated in this study reported high condom use, the study also found that the practice of borrowing used syringes was independently associated with the sex trade. These studies are evidence of a clear link among homelessness, drug use and HIV risk behaviour.

One study, *Positive Spaces, Healthy Places* looked at the housing and health needs of people living with HIV across Ontario. The study, which examined the link between HIV and housing insecurities among women living with HIV, found higher rates of homelessness among women living with HIV (12.7%) than among men living with HIV (5.6%) [108;109]. In addition, one third of the study's female respondents reported having been homeless at least once in their lifetime. This study also revealed that women living with HIV were more concerned about unstable housing than men living with HIV. This was especially true for HIV-positive women living with children (78% of women living with HIV in the cohort reported living with children). Women living with HIV also reported higher rates of depression and lower overall mental health scores than male participants.

Housing security has also been shown to impact women's well-being. For example, one study found the quality of life for women from African and Caribbean communities was improved by living in affordable housing [110]. Certain factors have also been shown to shape the meaning and experience of "home" for women. For instance, one study that examined the housing needs and experiences of African and Caribbean mothers living with HIV in Toronto found that this group's housing experience was influenced by factors relating to racism, gender and poverty. Findings

from this study highlight the need for culturally appropriate supportive housing services for this group of women and their children [111].

### b) Rural and Remote Environments

Some studies have found that women in rural or remote environments mistakenly associate HIV with particular “urban” populations or behaviours, which they perceive as not belonging to or participating in [37;112]. For example, a qualitative research study conducted in the Maritimes suggests that isolation from urban centres has left many women with only a partial understanding of the facts surrounding HIV. Respondents in this study viewed HIV/AIDS as a disease affecting men who have sex with men (MSM) or as a disease affecting people living in other countries [112]. This study helps to explain how abstinence-based sexual education may prevent women from obtaining information on harm reduction and safer sex practices.

*Access to services is the biggest barrier. You go to a community that is isolated, and you don't have access. You don't have a doctor. You don't have the medications. You may not have the knowledge. You may not have the ability. At least in the city we can go to the clinic or the hospital but in the small communities, you don't even have that. – AIDS educator working with Aboriginal people [92].*

Aboriginal people who live in remote communities may believe that their location, far from urban centres, offers them protection from HIV infection [113;114]. A study of 262 street-involved young Aboriginal women found that there were few differences in terms of HIV risk behaviour (e.g., participation in sex work, injection drug use) experienced by those living in a large urban centre (Vancouver, BC) versus those living in a smaller northern city (Prince George, BC) [75]. A study of the migration patterns of First Nations people from on-reserve communities to urban centres also indicates that issues associated with HIV/AIDS and related risk behaviours, including illicit drug use, are not limited to urban centres [115].

Moreover, women living in rural and remote environments may be unable to access accurate HIV risk information, care or related services, as these services are more commonly available in larger urban centres. Many Aboriginal people face unique risks and barriers to good health as a result of the geographic isolation of their homes and communities.<sup>45</sup>

For example, Aboriginal women who live in remote and isolated communities may experience decreased access to health and social services as “small and isolated communities generally lack healthcare professionals, transportation, and counselling services, and confidentiality is a greater concern” [114].

Lack of services, such as harm reduction programs and social supports, in smaller and remote communities may also contribute to the vulnerability of residents who are at risk of, and living with, HIV/AIDS [75]. A study examining people living with HIV/AIDS in Ontario identified Aboriginal peoples and people living in northern Ontario as those with the most need for improved access to family physician services [117]. Another study found that Aboriginal women living with HIV/AIDS are more affected by lack of social supports and services than their male counterparts at it is most often women who act as primary caregivers for their families and as primary caregivers for family members living with HIV/AIDS [118]. As a result, Aboriginal women living with HIV/AIDS may experience a diminished position within their communities as a result of discrimination linked to their positive HIV serostatus and limited access to services and social supports as a result of their remote geographic location.

### c) Federal and Provincial/Territorial Prisons

Women in prisons are at increased risk of HIV infection when compared to the general population as a result of existing high prevalence rates and continued high-risk

<sup>45</sup> Nearly half (47%) of all Aboriginal people in Canada live either on reserve or in a rural location, which includes remote and wilderness areas, and small towns, villages and other populated areas with a population of less than 1,000 [116]

behaviours while incarcerated [119;120]. HIV prevalence among females in prisons is significantly higher than that of the general population. HIV prevalence among females in federal prisons is higher than HIV prevalence among males in federal prison [121]. Women in prison continue to engage in many of the same risk behaviours that they engaged in prior to their incarceration, such as drug use, needle sharing, unprotected sex, and sharing of tattooing equipment [121;122]. These issues will be discussed in greater depth in the *Population-Specific HIV/AIDS Status Report: People in Prisons*.

In 2007, the following three health education programs were available to individuals in federal prisons: the Reception Awareness Program, the Choosing Health in Prisons Program, and the National HIV/AIDS Peer Education and Counselling Program [120]. Findings from Correctional Service of Canada's 2007 National Inmate Infectious Diseases and Risk Behaviours Survey revealed that more women than men participated in these programs [120]. However, in spite of higher participation rates among women, women in prison also reported that their access to these programs was limited by a lack of awareness, limited space, and competing clinical demands on nursing staff [120]. In addition, while the vast majority of women in the survey cited no difficulty in accessing bleach in federal prisons for the purpose of harm reduction (72%), 28% of women nonetheless reported concerns relating to access. Concerns cited included maintenance issues<sup>46</sup>, having to request bleach, lack of confidentiality when accessing bleach and other inmates' behaviour<sup>47</sup>. Other studies also found that women in prisons faced difficulty in accessing harm reduction supplies and health services and/or programs, despite their availability in prisons [123;124]. Women participants in a study conducted in 2001-2002 on 156 women in prisons (approximately 40% of the total number of

women in federal prisons) reported that they did not receive consistent support from HIV/AIDS community-based groups while in prison, despite the fact that they engaged in high-risk behaviours [122;125]. Further, only 30% of women living with HIV (and/or HCV) reported having received support from community-based organizations [125]. Also, while the majority of respondents described having had positive experiences regarding care and their ability to access community-based organizations while in prison, 34% reported having had problems [125].

*If you want it [information on HIV/AIDS], you have to go down to health care and search it out yourself and it's hard to get in the door unless you have a doctor's appointment. Like, it's impossible to go down there and say, 'Can I come in and get some AIDS material to read?' – Woman in Canadian prison [125].*

Access to educational material on reducing risk has also been reported as lacking in prisons [122]. HIV prevention efforts directed at women in prison are limited by a number of factors, including the low number of women in prison (because it may be expensive or difficult to provide services to a low number of participants), the proximity of prisons to major urban centres (because prisons tend to be located outside large urban centres, it decreases women's ability to access community-based programs), the smaller size and multi-levelled structure of federal women's institutions, and high turnover rates (which prevents the continuous use of peer intervention programs) [126].

#### 4.1.7 Personal Health Practices and Coping Skills

*Personal health practices and coping skills refer to those actions by which individuals can prevent diseases and promote self-care, cope with challenges, and develop self-reliance, solve problems and make choices that enhance health [2].*

46 Maintenance issues included dispensers that were empty, broken and/or provided diluted bleach [120].

47 Other inmates' behaviour included other inmates hoarding and/or limiting access to bleach [120].



When women lack the power to make decisions about personal health practices and coping skills, they are more vulnerable to HIV infection. This is especially true for women struggling with sexual and reproductive health issues and issues around substance use.

#### a) Sexual Health

Women face increased risk of HIV infection when they lack the power to negotiate safer sex in intimate relationships. Power imbalance in relationships, coupled with the fear of male partner violence, may impact women's ability to make choices, such as the ability to negotiate condom use, to prevent HIV transmission. Condom use is still the most effective way to prevent HIV transmission during heterosexual intercourse. Both male and female condoms are available in Canada; however, their consistent use is still not practised among all women and their sexual partners.

Women who do not perceive themselves to be at risk for HIV or other STIs may not be concerned with using condoms regularly [38]. For example, condom use is much more common among younger generations. A survey conducted among the general population in Québec found that respondents over the age of 40 years were less likely to use a condom [127]. This may be explained by the fact that HIV prevention campaigns tend to target younger women. Consequently, women over the age of 40 may not perceive themselves as at risk for HIV or other STIs.

In a Montreal study, 430 sexually active women not living with a partner were surveyed on the subject of condom use. Approximately one third (32%) of women surveyed reported using condoms consistently with their last two partners (vaginal intercourse) [128]. Forty-three percent (43%) of survey respondents reported never having used condoms. Of those engaging in anal intercourse, 21% of respondents reported regular condom use and 75% reported no condom use. It was found that women who reported never or occasionally using condoms adopted

“relational strategies” when negotiating condom use, whereby women based their perception of risk on a number of factors related to their relationship with their partner. These factors included how well they felt they knew their partner (or whether he was known to a friend or relative); their overall feelings toward their partner; and their partner's good physical or clean appearance. In this study, women's social networks formed a basis for feelings of ‘trust’ and ‘knowing one's partner’. Findings from this study indicate that heterosexual women's social networks may have more influence over their perception of risk for HIV or STI than actual risk associated with certain sexual activities.

In another Montreal study of young women accessing sexual health services, participants cited having a stable sexual partner and taking the birth control pill as principal reasons for not using condoms with partners [129]. These findings are consistent with findings from another study which found that occasional partners use condoms more frequently than regular partners [127]. While a monogamous sexual partner may reduce risk of HIV infection, monogamy does not eliminate risk. For instance, as HIV and other STIs may not be accompanied by symptoms [29], a partner may enter into a monogamous relationship unknowingly infected. Also, repeat sexual exposure can increase the likelihood of transmission of infection, particularly for HIV [130].

*It's like telling women, 'Here is a condom you have control over, but for you to be able to use it you still have to go and talk with your partner.' Women need more, more prevention strategies and tools which they have control over – Woman [46].*

Extramarital or extra-relational affairs also create opportunities for introducing HIV or other STIs into seemingly monogamous partnerships. One report explains the double-standard that exists in Canada's African and Caribbean community. The community “lauds male promiscuity” but penalizes and labels “women who are knowledgeable about their sexuality and express their desire to engage in safer sex practices . . . as being promiscuous” [97]. These types of culturally

specific attitudes about male and female sexuality present challenges in HIV prevention for this group of women.

Data addressing condom use in women who are involved in sex work vary across Canada [54;63;65;66; 75;131]. However, the majority of findings indicate that women involved in sex work are less likely to use condoms with regular partners than with occasional partners or clients. This contributes to the vulnerability to HIV of women who are involved in sex work, especially women who also use injection drugs or who have a partner who uses injection drugs. Regarding condom use with clients, a recent study attributed the inability of women who are involved in sex work to negotiate condom use to fear of client aggression and language barriers (especially for migrant sex workers) [132]. However, a recent meta-analysis suggests that peer-based interventions can increase condom use among women who are involved in sex work and their clients and may serve to empower women to refuse clients without a condom [133].

Another study showed that transgender women tend not to use condoms as unprotected sex “validates their female gender identity and boosts their self-esteem” [134]. According to the U.S. Center for AIDS Prevention Studies, male-to-female transgender sex workers are willing to forgo the condom with paying partners if they are offered more money [134].

Condom use also affects the ability of women living with HIV to achieve intimacy. Women living with HIV may struggle with issues of intimacy as they are counselled to either cease having sex or negotiate safer sex to avoid HIV transmission [135]. Women living with HIV may live in fear of transmitting HIV to their partner. They may also live with feelings of guilt if HIV transmission to their partner occurs [135].

Women need more female-controlled barrier methods that they can initiate themselves. A female condom currently exists but is often overlooked as a means of

preventing the spread of HIV infection. While there are disadvantages associated with the female condom, such as cost and aesthetics, currently it is the only effective non-pharmaceutical female-controlled barrier on the market that prevents the acquisition or transmission of HIV and other STIs [136;137]. Promising results from recent studies offer hope that an effective microbicide may one day be made available for women. To date, 11 of 60 microbicide<sup>48</sup> products have made it past animal tests with human trials now underway [138].

#### **b) Reproductive Health**

As the result of improved HIV treatment, women living with HIV are living longer and with an improved quality of life. As a result, women living with HIV share many of the same needs and desires as their HIV-negative counterparts. For instance, one study reports that women living with HIV have increasingly expressed an interest in having children, and their desire for children has reached levels comparable to those of women who live without HIV [139]. However, in spite of their desire, women living with HIV in certain areas of Canada may have limited access to fertility services and advanced reproductive technology [140]. Women's limited access to specialized fertility and reproductive technology has implications for healthcare providers who work with HIV-positive women to secure healthy pregnancies and birth outcomes [139;141;142]. Canadian safer pregnancy guidelines for HIV-positive men and women are currently being developed by a team of over 30 Canadian experts [143-145].

#### **c) Substance Use**

Substance use may increase women's vulnerability to HIV in a number of ways. Studies show that women's increased vulnerability to HIV infection may arise as a direct result of ways in which substances are administered (e.g., injecting drugs with contaminated

48 A microbicide is “a compound whose purpose is to reduce the infectivity of viruses or bacteria. The term has come to refer to a potential product which would prevent the transmission of HIV and other sexually transmitted infections (STI) inside a woman's vagina. A rectal microbicide would act similarly to protect men who have sex with men and women during anal intercourse.” [138].

needles), or more indirectly as a result of the physical, mental, and economic effects of dependency. While the reasons behind substance use vary, many women cite being introduced to substances through a spouse or common-law partner [146]. In addition, literature indicates that many people use substances as a mechanism for coping with childhood sexual, emotional or physical abuse, stress, violence, isolation, neglect and other mental health issues (i.e., they may engage in substance use as a form of self-medication) [19;76;103;146-148].

*Using alcohol and drugs was helping me forget the mistakes I made and that kind of thing. But in the same sense, I was making new mistakes. And that's where I became really sexually active, ... two straws short of a hooker but didn't get paid – Woman [135].*

Being under the influence of substances can impair women's judgement and decision-making ability when faced with choices between behaviours that can put them at risk for HIV infection. Alcohol, for example, may lower inhibitions and diffuse consenting partners' discussions around safer sex and condom negotiation [150;151-153]. Similarly, crystal methamphetamine is said to lead to increased risk of HIV infection "through unprotected and uninhibited sex while under the influence. The liberating feeling that comes with crystal meth use means that safer sex is often discarded while higher sexual risk activity increases greatly" [154].

*"I guess it's my only tool of knowing how to cope [using drugs]... they help you forget about your problems, push them away, push them down, push them deeper and that is nothing but creating your own volcano, then it all comes exploding out. Learning the coping skills other than drug use to deal with my problems is important – Woman living with HIV [149].*

The disorienting effect of other street drugs may also place women who use them at risk. A study conducted among sex workers in Vancouver found that "disorientation and lack of control due to intensive cocaine use impeded women's self-protection and

ability to insist on condom use" [59]. According to the Canadian Medical Association Journal, alcohol is the number one drug used in instances of drug-facilitated rape, followed by marijuana and cocaine. However, the use of other more potent "date-rape drugs" such as flunitrazepam (Rohypnol) and gamma hydroxybutyrate acid (GHB) is becoming more common [155].

*Because the high is so addictive, it's not uncommon to inject 50 times a day if you have the money. Once on a coke high, using a clean rig is less of a priority than getting the next fix – Woman living with HIV [102].*

Injection drug use is an identified risk behaviour for HIV infection. The act of injecting substances can put a user in direct contact with the virus if the user shares injection equipment and preparation paraphernalia. Injection drug use is the second most common HIV exposure category for women in Canada [130]. According to the I-Track Study [131], cocaine is the most common drug injected in Canada. While the actual number of people who use injection drugs in Canada is not known, in 2005, the Canadian Centre on Substance Abuse estimated that between 75,000 and 125,000 of Canadians used injection drugs [156]. Women were estimated to account for approximately one third of those people [156].

*At the time I was drinking and partying a lot. I was drunk at the time and you don't think about using condoms – Young woman, mother [150].*

Women are also more likely to share injection equipment than men, putting them at greater risk of HIV infection. The At-Risk Youth Study (ARYS) of 154 IDU participants (N=50 females) in Vancouver noted that 42% of women reported sharing syringes in the past 6 months as compared with only 12% of men [157]. Another study of people who use injection drugs (VIDUS) reported that of the 565 female participants, 37.5% (N=212) had borrowed syringes in the last 6 months and 41.8% reported lending syringes [63]. Finally, a Montreal-based study on people who use injection drugs found that HIV-positive women were

more likely to obtain syringes from “shooting galleries” (a place where people go to “shoot up” or inject in groups) than were HIV-negative women [158].

Reasons behind sharing injecting and preparation paraphernalia are complex. Inability to obtaining clean syringes and other paraphernalia, trusting partners to be free of infections, not believing one is at risk, or requiring help injecting are explanations cited in the literature [15;16]. Some studies have found that women are more likely to require help injecting than men as they have smaller surface veins than men and may be more prone to anxiousness or dopesickness. Women are also more likely than men to engage in “jugging” (i.e., injection through the jugular vein located in the neck), may lack knowledge about how to self-inject [16], and are more likely to trust a male partner’s knowledge of injecting [15]. In addition, men more often control the administration of drugs [13;14]. VIDUS found that needing help injecting was an independent predictor of HIV seroconversion, even in a setting with widespread access to needle exchange. This study also concluded that women were more likely to be injecting drug recipients (odds ratio = 2:3) and those who required help to inject were twice as likely as those who were able to self-inject to become infected with HIV [14].

The dependencies that addictions can create – especially dependencies related to drugs, such as crack, cocaine, and heroin – can further exacerbate women’s vulnerability to HIV infection. The need to support a drug habit has been cited as a possible reason as to why women enter sex work and engage in survival sex [14;159]. As described by Spittal et al. [14], there is an “established connection between the HIV-related vulnerabilities of female injectors and the practice of using sex to secure money or drugs”.

For example, a study conducted among 265 young street-involved women in Montreal [14] found that women involved in sex work were more likely to have

reported a history of injection drug use as compared to women with no history of sex work. Another study conducted in Vancouver among a cohort of people who use injection drugs [14] found an association between sex trade involvement and elevated rates of HIV infection. This study reported that the HIV prevalence at baseline for participating women who use injection drugs was 17% compared to only 3% of participating men who use injection drugs. This study shows that survival sex work is positively associated with injection drug use and an increased risk of HIV seropositivity [160].

Initiation into injection drug use at a young age is also a risk factor for HIV seroconversion. A study conducted among young (under 29 years of age) VIDUS participants revealed that women made up the highest proportion of young initiators. Over one half of the women in the sample population had initiated injection drug use before the age of 17. Younger initiation was positively associated with both HIV and HCV, and those women who initiated drug use early also engaged in other HIV risk behaviour, including drug bingeing and sex work [160]. This study’s findings are consistent with other data showing that women are more likely to be initiated into injection drug use at a younger age than men [131].

Much of the literature available on women who use injection drugs indicates that Aboriginal women make up a disproportionate number of this population [13;63;131]. For example, a study identifying risk factors for HIV infection in a cohort of people who use injection drugs found that HIV incidence was 40% higher for women than for men in Vancouver’s DTES and that over 40% of the total women in the study self-identified as Aboriginal [13]. These findings are mirrored in HIV surveillance data, as nearly two thirds of Aboriginal women with positive HIV test reports are exposed through injection drug use, with only one third exposed via heterosexual sex. This contrasts sharply with data on non-Aboriginal women, in which approximately two thirds of non-Aboriginal women with positive HIV test reports are exposed through heterosexual sex and one third are exposed through injection drug use [11;161].

The illegal nature of injection drug use means that when women who use injection drugs are subject to men's violence they receive little protection from traditional sources. As described by Spittal et al. [63], "this is one of the challenges of harm reduction programming, particularly for women whose negotiating powers may be affected by violence, homelessness and drug-related interactions out of their own control". Supervised injection sites, such as *Insite*, have been identified in the literature as a safer space for women to inject to avoid intimate partner violence and street violence [104].

#### d) Other Coping Skills

Some studies highlight the different coping skills or strategies used by women living with HIV in their day-to-day lives. A study of people living with HIV/AIDS using complementary or alternative medicine (CAM) revealed that more women than men use marijuana for pain management (45% of women versus 5% of men) [162]. Moreover, more women than men reported using CAM as treatment – a trend that is also seen in the general population [163]. However, another study on CAM found that supplement use among people living with HIV/AIDS is evenly distributed among both sexes but varies from that of the general population [164].

One study found that African and Caribbean women living with HIV preferred using culturally based traditional medicine to deal with illness and only used mainstream medicine as a last resort. This group of women's preference for traditional medicine may reduce their likelihood of obtaining mainstream medical services and HIV treatment [26].

HIV-positive women use different coping skills than men to deal with their illness. One study found that women seek social support and cry for emotional release as a form of coping more often than men. Other differences in coping strategies employed by women and men include housework and walks (women) and sports and exercise (men) [69].

### 4.1.8 Healthy Child Development

*Childhood represents a highly sensitive developmental period that is unique to each child. These developmental needs are currently not considered within the existing system and, as a result, they need particular considerations. A missed opportunity to support children's health at any stage in this cycle may reverberate negatively across the lifespan. Scientific research has demonstrated that early detection of developmental problems of challenges coupled with a swift, appropriate response are critical to a healthy childhood trajectory [165].*

#### a) Childhood Abuse

Some studies show that childhood physical, emotional or sexual abuse may contribute to risk behaviours in later life which, in turn, may facilitate the acquisition of HIV. One study [76], looking at Aboriginal youth who use injection and non-injection drugs in two Canadian cities, identified that 68.3% of the females included in the analysis (179/262) had experienced sexual abuse at least once in their lifetime. The average age reported for the first incident of abuse was 6 years old. Although the study did not stratify results by sex, the study did find that individuals who had experienced sexual abuse (n=258) were more likely to have spent more than three nights on the street or to have been involved in survival sex than those who had never been sexually abused (n=285). HIV and HCV prevalence were also higher among those who had experienced sexual abuse, with rates of 15.2% and 32.6% respectively, as compared to those individuals who had never experienced sexual abuse (4.4% and 29.1%; differences statistically significant). The study also found that individuals who had experienced sexual abuse were more likely to have overdosed and to have used injection drugs.

As previously discussed, various studies have found that many women involved in sex work (or survival sex) and many women who use injection drugs have histories of abuse including sexual abuse [56;75;76;135;149;166]. For example, a study conducted among VIDUS

participants found that childhood sexual violence was predictive of HIV risk behaviours, such as entering the sex trade at or before age 17, ever having been in the sex trade, and borrowing needles from a known HIV-positive person [73]. In another study in Vancouver's DTES [167], in which 100 street-level sex workers were interviewed, 82.0% of participants reported a history of childhood sexual abuse by an average of four perpetrators; 72.0% reported physical abuse; and 86.0% reported current or past homelessness. While this study indicates there is a relationship between childhood abuse and sex work, it should be emphasized that not all women who are abused get involved in the sex industry and not all sex workers are or have been abused.

For many Aboriginal peoples, the legacy of residential schools and cultural disruption has resulted in family breakdown, and contributed to childhood sexual abuse and overrepresentation of Aboriginal children in state care [76;80;149;166;168]. Aboriginal youth's current experiences are strongly impacted by a loss of culture, historical trauma and the legacy of residential schooling. This issue is explored in greater depth in the *Population-Specific HIV/AIDS Status Report: Aboriginal Peoples* [41].

#### 4.1.9 Health Services

*Health services, particularly those designed to maintain and promote health, to prevent disease, and to restore health and function, contribute to population health. The health services continuum of care includes treatment and secondary prevention [2].*

The World Health Organization's report on gender inequity in health maintains that "women in most places need more health services than men. A large part of this can be attributed to women's use of preventive services for contraceptives, cervical screening, and other diagnostic tests, but it can also be attributed to excess female health problems that are not caused by reproductive morbidity" [169]. In spite of the increased need for health services, many women in Canada face barriers to accessing mainstream health services. Barriers facing women include language barriers and

lack of available information in languages other than English or French [37], logistical barriers, such as limited access to childcare or child-friendly services for mothers accessing the health care system, and stigmatizing attitudes expressed by health professionals. Women from visible minority groups and certain ethnocultural communities face an additional set of barriers, including a lack of cultural understanding among health professionals, and a lack of culturally appropriate health services and health information [37;170]. Ultimately, these barriers have the effect of limiting women's access to diagnostic, care and treatment services, thereby increasing their vulnerability to HIV infection.

Studies show that women who are also members of a visible minority face barriers in accessing mainstream health services as a result of systemic discrimination relating to race and stigmatizing attitudes about HIV. Aboriginal women face particular challenges resulting from discrimination and face challenges in accessing health information and referral resources for HIV-positive women. For example, one study cites that "while many Aboriginal women continue to search for services that are gender-sensitive, culturally competent and inclusive of their children, others live in isolation as a result of multiple stigmas and barriers to services" [171]. The same study found that Aboriginal women experienced discrimination within the mainstream health care system and found that Aboriginal cultural practices were not respected by healthcare providers [172].

In addition, the health care system is not always sensitive to the needs of women from other visible minority groups. For instance, participants in a study of Toronto visible minority female youth cited racism as a factor that limited their access to health services and affected their ability to trust in their healthcare providers. The study concluded that "systemic issues such as the lack of available healthcare providers from particular ethnic groups, [and] the availability

of culturally/linguistically appropriate services and health information" [173] may limit women from visible minority groups' ability to access health services.

Evidence indicates that some healthcare providers fail to demonstrate sensitivity to the needs of women from culturally diverse backgrounds [35;172]. For instance, a study of African and Caribbean communities conducted in Toronto found that HIV-related stigma and discrimination stemming from healthcare providers and community-based health organizations impacts this population's access to health services [90]. The same study found that "African and Caribbean people have become more reluctant to seek HIV-related services and have responded by increasingly rejecting and mistrusting the health care and social systems that, instead of supporting them, often discriminates against them" [90].

There is also evidence that immigrant women with little to no understanding of English or French report uncertainty in knowing which health services are available to them. Further, this group of women's inability to communicate in either official language prevents them from acquiring appropriate HIV/AIDS information [36;37;174]. While some community-based organizations offer translation services, many women from African and Caribbean communities do not use these services as they report concerns regarding the confidentiality of their HIV-positive status (especially if the translator belongs to their community) and concerns regarding translation inaccuracies (especially if the translator is their partner) [36]. If HIV-positive women rely on translators or partners for translation, they run the risk of being stigmatized by their community or partner. However, if they chose not to use translators or partners for translation, they may not receive adequate health information. More information on these issues can be found in both the *Population-Specific HIV/AIDS Status Report: Aboriginal Peoples* [41] and the *Population-Specific HIV/AIDS Status Report: People from Countries where HIV is endemic, Black people of African and Caribbean descent living in Canada* [45].

*How about raising awareness? So that when you walk into the doctor's office for the first time, you can say, 'Hi, I am trans', and they don't get this glazed, blank look that goes 'Oh yeah, I've never seen one of you before' – Trans person [68].*

A woman's sexual orientation may also affect her access to health services as healthcare providers may make false assumptions about risk activity. For example, research shows that some healthcare providers falsely assume that women who have sex with women (WSW) are not at risk of HIV infection. This assumption does not account for the fact that many WSW (women who self-identify as lesbian, bisexual or two-spirited) have had or continue to have sexual contact with men. It also demonstrates a general lack of knowledge about WSW and their health care needs [94;175]. One study concludes that lack of health research information on WSW and lack of WSW-specific HIV and other health surveillance data "have inadvertently contributed to the myth, held by both healthcare providers and women themselves, that lesbians are at no risk or low risk for HIV/AIDS and STDs (Sexually Transmitted Diseases)" [175].

The reality is that WSW may face increased vulnerability to HIV due to a number of factors related to their ability to cope and their comfort in accessing health services. For instance, WSW are reported to have higher rates of mental health issues and poorer coping strategies as compared to heterosexual women [94]. Further, WSW report experiencing barriers to adequate health care as a result of "a heterosexist, and, at worst, homophobic, health care environment" [94;175]. Additionally, fear of healthcare provider discrimination may prompt some WSW to avoid seeking care. In a study of 98 lesbian and bisexual women living in the Atlantic provinces, 38% of participants reported that they had gone without routine physical or mental health care at least once "to keep themselves from having to deal with any mental or physical harm from potentially homophobic [healthcare] providers" [175].

Research indicates that there is a need for accurate health information for WSW about risks related to STIs and HIV.

Academic HIV/AIDS literature explains that the manner in which health is delivered plays a role in the poor health outcomes experienced in certain groups of women [176]. Studies have shown that to reach particularly vulnerable female populations, such as street-involved women or women who are involved in survival sex, population-specific strategies, including outreach programs, are needed to increase access to services [177;178]. For example, a study in Vancouver's DTES found that 14% of 126 women attending a weekly women-only community health clinic had not accessed sexual health care services (e.g., Pap smear, STI or HIV testing) in the past year [177]. These findings were notable because the only two clients diagnosed with STIs were first-time program participants. This finding led the authors to conclude that "there is a need to bolster outreach screening programs, such as those offered through [the program's] Street Nurse program, to increase service utilization among these higher risk populations" [177].

Simple structural factors, such as the hours health services are available, may also create barriers to access for certain groups of women. For instance, in a study of 201 women involved in sex work in Québec, even though over 80% of women reported having consulted a health professional in the previous 12 months with relative ease, they also reported that limited hours of operation and long wait times for certain services, such as mental health services, created access challenges for them [179].

Women living with HIV may also experience barriers around access to health services related to healthcare providers' insensitivity or ignorance about HIV/AIDS. Insensitivity may manifest itself as stigma and discrimination towards women living with HIV. For example, women living with HIV have reported feeling hurt and demeaned by health professionals

every time they are faced with having to repeat their health history [69]. Evidence also shows that women involved in commercial sex work and in street-level sex work are significantly affected by stigma and discrimination in their interaction with healthcare providers [180;181]. For instance, a B.C. Vancouver Area Network of Drug Users (VANDU) study found that women involved in sex work and/or injection drug use reported that they had kept their high-risk activities from their healthcare providers as a result of feeling stigmatized. Consequently, the health care services they received did not necessarily meet their needs [148].

Women in Canadian prisons also face a number of barriers to health services and HIV information, including access to discreet, accessible and plain-language information on HIV/AIDS; insufficient pre- and post-test counselling in spite of high testing uptake; and inconsistent access to basic medical services, such as blood work or physicians [125].

#### a) Treatment Options

Methadone maintenance therapy (MMT) is one treatment option available in Canada for people who are addicted to heroin, morphine and other opioids. There is, however, conflicting data on women's access to and usage of MMT. VIDUS participants [182] identified that being female, HIV positive, and smoking crack cocaine were positively and significantly associated with being on MMT. Aboriginal ethnicity, recent incarceration, sex trade involvement, syringe lending, and heroin injection were significantly associated with not being on MMT. In a study conducted on the participants of a low-threshold MMT Program in Montreal [183], the probability of withdrawing from the program was twice as high for women as it was for men. Other literature has suggested that women are hesitant to use health services to address addiction issues because of the associated stigma. Children are also a factor in decision-making for women who use drugs. These women may not be able to find care while in treatment for addiction, and they may fear losing their



children to child welfare services if they admit to having an addiction problem [19;147;184].

For women who have been sexually assaulted, post-exposure prophylaxis (PEP), a short-term antiretroviral treatment, is available to Canadian women to reduce the likelihood of HIV infection after potential exposure. However, the side effects of the drugs can be severe and the course of treatment lasts for several weeks. In a study of HIV-related PEP following sexual assault (where 97.7% of the participants in the study were female), PEP was offered to 69 of the 71 high-risk participants and 729 of the 829 unknown-risk participants. Of those who were offered PEP, only 66.7% of high-risk participants accepted treatment and 41.3% of participants at unknown risk accepted treatment. Reasons for declining PEP included lack of concern about HIV (63.0%), anxiety about adverse side effects (44.6%), and an inability or unwillingness to follow the regimen or return for follow-up (16.4%) [185].

#### b) HIV Testing

Ensuring that people undergo HIV testing is a key component of reducing the spread of HIV and ensuring access to medical care for those who are HIV positive. At the end of 2008, an estimated 26% of the 65,000 individuals living with HIV in Canada were unaware of their infection [11].

Canadian literature indicates that women-specific barriers to HIV testing include the belief – of either the individual or the healthcare provider – that women are not at risk of HIV infection. Women-specific barriers to testing also include fear of HIV-related stigma and discrimination [186]; fear of losing one's children by revealing HIV-related risk behaviours, such as illegal drug use [135]; and fear of an HIV-positive test result [135]. Additional literature and studies have further identified that certain groups of women experience specific barriers to testing. For example, the *Blueprint for Action on Women and Girls and HIV/AIDS* explains that “Aboriginal women, women in many rural and remote locations, [and] visible minority women from a variety of communities have difficulty accessing

diagnosis and testing services in Canada because of concerns regarding confidentiality, a lack of knowledge of HIV or a need for testing, and healthcare provider bias” [187].

Young women also face specific barriers to testing. In a study of barriers to STI testing for youth living in a remote resource-extraction community, young women reported fear of being labelled as promiscuous as a barrier to testing. The study found that these young women's fears were well-founded. Young men who participated in the study group referred to women who they perceived to be sexually available in stereotypical and negative ways (such as ‘nasty’, ‘sluts’, ‘campies’, or ‘questionable’). They also based assumptions of sexual availability on women's dress or sexual reputation [188]. This study shows how social norms that stigmatize women's sexuality may prevent women, particularly young women, from accessing HIV testing.

*Maybe [Aboriginal people] don't want to tell [the tester] exactly why they want that [HIV] test.... [The tester] is full of judgements, and I think that's a real barrier. I know it's a barrier for me.... When [the tester] asked why [I wanted the test], immediately that makes me feel like I'm being judged. Puts me on the defensive. Makes me feel like I have to justify myself – Aboriginal woman [135].*

Women engaged in sex work face additional barriers to HIV testing. A qualitative study of 18 women who work in indoor sex establishments in Vancouver found that although the study participants perceived themselves to be at significant risk for HIV infection, they noted challenges in accessing HIV education and testing. Participants who also identified as migrant women reported having had a particularly difficult time accessing HIV education and testing [132].

*I go to my physician for my tests every three months, that's official. Even if I have a stable partner, I'm really afraid of it. I have friends with AIDS and I don't know what might happen. I always have my tests every three months – Woman, sex worker [179].*

*Obviously when I see the physician I don't tell him what I do. However, I do consult about diseases, which means I have no choice. But if I'm not asked, I don't say anything – Woman, sex worker [179].*

Some studies have also looked at broader issues associated with HIV testing. For example, one study looked at HIV testing experiences for women who immigrated to Canada. Participants in the study described the HIV testing they received as part of the immigration medical examination (IME) – a required part of the immigration process - as negative. Women in the study indicated that they felt they lacked knowledge and understanding of the test they were given, and they reported feeling rushed. Study participants attributed their negative experiences with the IME to a lack of positive women-centred counselling after the test, a lack of an appropriate referral mechanism, and what they perceived as breaches of confidentiality [189].

Another study found that women from countries where HIV is endemic going through the immigration process were reluctant to learn their HIV status for fear that their children would be taken as a result [36]. Fear that one's children could be taken away was also identified as a significant barrier to HIV testing in a study of HIV-positive mothers of Aboriginal ancestry [92] and a study of young HIV-positive mothers [190].

### c) HIV Testing for Pregnant Women

As discussed in Chapter 3, there are two different approaches to HIV testing in the prenatal context in Canada, called “opt-in” and “opt-out”. In both approaches, pregnant women are given a choice of whether to undergo HIV testing. The healthcare provider is required to discuss HIV testing with the client and seek consent before conducting the test [191]. The practice of ensuring that women give informed consent and receive adequate pre- and post-test counselling is an important one. Csete *et al* note that “while consensus apparently remains strong on the value, at least in theory, of informed consent and pre-test counselling [for prenatal HIV testing], it is another question to know the actual practice across

Canada of HIV counselling for pregnant women and the sharing of information associated with informed consent” [192].

A 2008 study of 299 pregnant women's experiences around informed consent for prenatal HIV testing in Toronto found that 74% of participants recalled a clinician discussing HIV testing with them, and 70% of these women felt that they were given the option to refuse having an HIV test performed [193]. The authors concluded that although “informed consent for prenatal HIV testing is generally being obtained in a manner consistent with provincial guidelines... a significant number of women are not offered testing or, in some cases, are tested without their consent” [193]. Another qualitative study of 44 African and Caribbean women living in Ontario who received prenatal HIV screening identified similar issues around prenatal testing. The majority of women interviewed as part of the study reported receiving inadequate pre- and post-test counselling which resulted in a lack of knowledge about HIV and the risks associated with vertical transmission; fear, panic and suicidal ideation as a result of an HIV-positive diagnosis without adequate professional guidance or social support; and a lack of knowledge about confidentiality policies related to HIV disclosure [194]. Women across Canada who receive prenatal HIV testing, regardless of the policy in their province or territory of residence, report a variety of testing experiences. Studies on prenatal HIV testing practices across Canada reveal that women receive both a lack of adequate pre-test counselling about the risks and benefits of testing and a lack of post-test counselling. Women also experience confusion about whether the test is mandatory [192;195;196].

*I was diagnosed in 1990. I already knew about HIV, and when I experienced classic seroconversion illness, I figured I better get tested. I just had this feeling about it. I didn't fit the stereotypes, so I had to convince a doctor to test me, and I wasn't surprised when it came back positive (the doctor was) – Woman living with HIV [67].*

Research suggests that a healthcare provider's decision to offer HIV testing to a pregnant patient is affected by several factors, including the personal characteristics of the client and their perception of the client's risk of having HIV. A 2002 study of 2,129 physicians who provided prenatal care found that "a physician's decision to offer screening for HIV in pregnancy is affected by many personal characteristics, including speciality, age, practice characteristics and knowledge about the risk and prevention of mother-to-child transmission" [197]. Obstetricians and female physicians were more likely than family physicians and male physicians to offer prenatal HIV testing to all or almost all of their pregnant patients. Physicians were also more likely to offer or recommend prenatal HIV screening if they practised in an area where there were provincial recommendations or a formal policy in place, or if they practised in regions where the reported HIV prevalence was greater than 5.0/10,000 (a prevalence rate established by the authors based on the distribution of HIV infections in Canada) [197].

#### 4.1.10 Culture and Race

*Some persons or groups may face additional health risks due to a socio-economic environment, which is largely determined by dominant cultural values that contribute to the perpetuation of conditions, such as marginalization, stigmatization, loss or devaluation of language and culture and lack of access to culturally appropriate health care and services [2].*

Epidemiological data indicate that Aboriginal women and women from countries where HIV is endemic experience higher rates of HIV infection than women belonging to other groups. There is evidence that factors linked to culture and race put women who belong to these ethnocultural groups at increased vulnerability to HIV infection.

Culture, for the purposes of this section, is defined as shared beliefs, values, customs, behaviours, common values and norms existing among specific ethnic

communities. For women belonging to specific ethnocultural communities, culture may be experienced through the customs, values, practices and beliefs within their community, and through the impact of dominant culture on their lives as women within their community [135]. Factors relating to culture may have the affect of limiting women's access to health care, information or services. However, factors relating to culture can also play a significant role in creating resilience to HIV/AIDS as women's strength and coping mechanisms may be rooted in their community values or linked to their culture and ethnicity.

During colonialism, Europeans displaced Aboriginal communities and imposed their notions about women's role in society on Aboriginal people. For Aboriginal peoples, the experience of colonialism resulted in the dispossession of Aboriginal women's rights and in the devaluation of their social roles within their communities [92]. The transformation from traditional systems (including, in some cases, matrilineal or matriarchal) to elected Band Chief and Council, assimilative education systems and policies, as well as the application of a governance system in which women had no legal status, all play a role in rendering Aboriginal women today more vulnerable to HIV infection [91;92;191].

The legacy of colonialism continues to have adverse effects on the socio-economic status of Aboriginal women as they are twice as likely as their non-Aboriginal counterparts to be poor and more likely to live in an environment where substance use and intimate male partner violence are widespread [91]. These socio-economic conditions are strongly associated with a positive HIV test result in Aboriginal women as they set the stage for high-risk behaviours, such as sex work, injection drug use, and alcohol abuse, to occur [91;92]. As Csete observes, "HIV/AIDS among Aboriginal women cannot be understood without reference to poverty, gender power relations, violence and discrimination, including systemic racism in the delivery of health services" [41]. Racist and sexist attitudes

within mainstream society also put Aboriginal women at greater risk of sexual violence and sexual assault, thereby intensifying their vulnerability to HIV infection [191].

One study revealed that the integration of Aboriginal cultures into HIV testing approaches is key to gaining Aboriginal women's trust. In the study, Aboriginal women explained that culturally appropriate approaches, such as "sensitivity to and knowledge of the issues that Aboriginal women may experience, inclusion of traditional teachings, practices and Aboriginal spirituality, an inviting physical environment and Aboriginal staff" were important to them [135]. This is an important recognition as culture can be a great source of strength and resilience for Aboriginal women. Another study found that Aboriginal women draw on their own spirituality as a coping mechanism when caring for someone living with HIV/AIDS [92]. In the words of the author, "[spirituality] is the glue that keeps [Aboriginal women] together" [92].

The Canadian Aboriginal AIDS Network (CAAN) has delivered a position statement calling for action to support Aboriginal women, children and families affected by HIV/AIDS. The statement recommends the revision of medical treatment formularies to reflect Aboriginal culture and calls for an increase in culturally-sensitive and gender-sensitive health care services (especially in the provision of HIV testing and counselling for Aboriginal women, which should include the integration of Aboriginal healing methods) [91]. There is some evidence that Aboriginal women do not use mainstream services because they fear discrimination. One study suggests that Aboriginal women associate mainstream HIV health care services with colonialism and racism, and, therefore, tend to avoid these services [92;135].

While the report recognizes that women who come from countries where HIV is endemic are diverse, there are studies which suggest that certain cultural practices within specific ethnocultural or immigrant communities can increase women's vulnerability to HIV and deter

prevention. Cultural practices that increase women's vulnerability to HIV include polygamy and culturally specific female genital tract practices. Cultural norms, which deter HIV prevention, include culturally specific beliefs and attitudes towards sexuality and HIV/AIDS.

Patriarchal attitudes supportive of male dominance and female submission are manifest in many African and Caribbean cultures. Because these attitudes serve to constrain women's ability to exert power and exercise choice, it may be difficult for women from these communities to negotiate condom use [35;36]. This is especially true within marriages [46]. One study found that women of Jamaican-descent identified marriage as a factor that increases their vulnerability to HIV infection. According to the study's participants, there is no way to practise safer sex in marriage [90]. In the same study, women of Caribbean-descent spoke about the vulnerability they experience and their lack of control over their own bodies. Another study of women of Kenyan-descent revealed similar findings as to how difficult it is for married women in their community to say no to sex without a condom.

*How we was brought up, if you're married, you don't use condoms, you don't practise safe sex. It's your husband (...). You can't do these things. You know, it's my husband, why should I? And like men, they will say, 'Oh, maybe you're sleeping around. Or maybe you're doing something you're not supposed to be doing*  
– Black woman [90].

*Within the African traditional family, even if a woman is aware of her husband's concubines, she cannot ask him to use a condom* – Black woman [46].

Polygamy – a patriarchal, cultural and religious practice that permits a man to have more than one wife – also increases women's HIV risk. The risk of transmitting an STI is greater among multiple partner marriages where condom usage may be limited [36;46;198]. While polygamy is illegal in Canada, polygamy has been documented within certain ethnocultural communities [36;38].

Two culturally specific female genital-tract practices, female genital mutilation (FGM)<sup>49</sup> and douching or vaginal drying, practised by some women of African and Caribbean descent put them at increased risk of HIV/AIDS [36]. Despite being internationally recognised as a violation of the human rights of girls and women [199], FGM continues to be practised among some African communities in Canada. FGM is when circumcisers narrow or seal the vaginal opening. This practice is linked to a cultural preference for premarital virginity and an emphasis on marital fidelity [200]. FGM is also motivated by beliefs about what is acceptable female sexual behaviour [199]. This practice scars women's genital tracts, making it easier for infections, including HIV, to proliferate. In addition, FGM and its emphasis on premarital virginity, combined with limitations in sexual education, may influence women's decision to engage in anal intercourse, as research suggests that women who wish to retain their virginity for marriage may practise anal intercourse as an alternative to vaginal intercourse [26], thereby increasing their risk for HIV infection.

The second female genital-tract practice, douching or vaginal drying, involves cleansing the vagina and is used by women to remove signs of sexual intercourse. Douching or vaginal drying, dries the vaginal wall and increases friction during intercourse. The practice is most commonly seen in African and Caribbean communities in Canada and is linked to strongly held ideas about cleanliness and purity [36]. Douching or vaginal drying results in increased friction during sex and may lead to tearing of the vaginal lining or condoms, subsequently increasing women's risk to HIV and other infections [36].

*The reason why she wouldn't practise safe sex is because God's seed should not be thrown to the ground...that goes against her religious beliefs – Black woman [46].*

49 FGM consists of "all procedures that involve partial or total removal of the external female genitalia, or other injury to the female organs for non-medical reasons" [199].

Within certain ethnocultural communities in Canada, HIV/AIDS is primarily seen as an issue of moral impropriety rather than a health concern [46]. Specifically, there is a tendency among African and Caribbean communities in Canada to associate HIV with extramarital sex and promiscuity. This impacts women's ability to protect themselves against HIV as many feel that they cannot ask their partner to use a condom for fear of being accused of sexual promiscuity [90]. Additionally, sexual matters are considered taboo among some African and Caribbean communities in Canada. The "code of silence" around sexual matters in these communities, where people generally avoid talking about these subjects, makes it difficult to discuss and acknowledge HIV/AIDS within or outside communities [35;36;90].

African and Caribbean norms and values may impede HIV prevention or intervention strategies within these communities in Canada, especially if they run contrary to public health. As one research participant in a study explained, "(I)t is very difficult to get a group of women who have undergone certain traditional rituals to agree or to understand that they need to change some of those rituals in order to avoid any risk" [46]. For instance, religious institutions hamper HIV prevention efforts when they dictate to women certain behaviours that run contrary to public health, including placing restrictions on condom usage [46]. As one study participant explains, "the churches instructed women to obey their husbands, and, therefore, confronting partners about sexual behaviour violated sacred cultural/religious norms and would not be supported by the community" [38]. Without the support of major cultural institutions, public health's ability to effect change and make headway in HIV prevention remains limited [35;46].

Homophobia among African and Caribbean communities also results in men who have sex with men (MSM) engaging in and maintaining sexual relationships with women. This, in turn, poses a risk of HIV to the female partner [46]. According to one study

[90], “among African and Caribbean communities, homosexuality is generally stigmatized as unhealthy, immoral, or contrary to traditional cultural norms and values.” The assumption that HIV/AIDS is a “gay disease” or that gay men are to blame for HIV/AIDS compounds the stigma felt by MSM in these communities. This stigma also thwarts HIV prevention efforts among both MSM and women involved with MSM in African and Caribbean communities.

*I know men who have sex with men within the community; they tend to stay in the closet. They tend to have girlfriends as a cover, so that people won't suspect that they have another different sexual orientation or that they are gay (...). And because of this hidden dimension, it becomes a risk for women; because you can never know when or if your partner or so has sex with another man – Black woman [46].*

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## CHAPTER 5 - Current HIV/AIDS Research

HIV/AIDS research in Canada extends to behavioural, biomedical, clinical, economic, epidemiological, legal and psychosocial fields of studies. This chapter provides an overview of current research projects on HIV/AIDS and women in Canada that were underway from 2006 to 2009. Each project is presented by geographic distribution, specific population and theme. A complete list of projects can be found in Appendix B.

### 5.1 Methodology

The information provided in this chapter was gathered from the following organizations: the Canadian Institutes of Health Research (CIHR), the Canadian Association for HIV Research (CAHR), the Canadian Foundation for AIDS Research (CANFAR), the Social Sciences and Humanities Council of Canada (SSHRC), the Michael Smith Foundation for Health Research, and the Ontario HIV Treatment Network (OHTN).

Research projects included in this chapter meet the following three criteria:

- a) HIV/AIDS specific,
- b) Canadian; and
- c) women-centred.

Projects include those completed in 2006 or later and those currently under development. It was assumed for the purposes of this report that research completed before 2006 had already been published, and, therefore, was likely already included in the academic and grey literature reviewed in earlier chapters of this report.

It should be noted that there are limitations to restricting criteria to women-specific research projects only. The selected research does not take into account projects that focus on the general population or any other populations of in which capture women incidentally. Consequently, the decision to focus on women-specific research projects has the effect of limiting the actual number of research projects

included in this chapter as only those projects specifically designed for women or those which target women directly are included.

This chapter also includes biological and clinical research on aspects of HIV transmission and infection for women. Studies conducted abroad by Canadian researchers include those studies which provide additional insight for and about Canadian women. Biological or clinical research focusing on the social context of a particular geographic region or country outside of Canada was not included for analysis.

The selection process for project inclusion was sometimes hampered by the absence of project abstracts or descriptors. To counter this limitation, projects were included only if the words “women”, “female”, “feminism”, “feminist studies”, “vertical transmission”, “gender”, “gender analysis or studies”, and “power” were used in the title or as project descriptor keywords. Some projects required further exploration and principal investigators were contacted or researched using Google Scholar to determine whether projects were specifically women-centred.

### 5.2 Research Analysis

Most of the research projects on HIV/AIDS and women listed below incorporate sex and gender based analysis (SGBA). For instance, some governmental and non-governmental organizations, including the Canadian Institutes of Health Research (CIHR) and the Women’s Health Contribution Program (Health Canada and various partners), have used SGBA to take a closer look at the factors affecting the health status of women and girls. This chapter also uses SGBA to identify gaps in research and determine future research needs.

Using the methodology described above, a total of 87 HIV/AIDS women-specific research projects were identified (Appendix B).

### 5.2.1 Geographic Distribution of Research Projects

Over half (46 or 52.9%) of all projects identified do not examine women in a specific geographical region. Of the 41 (47.1%) projects that do, most focus on women from Québec (especially Montreal), British Columbia (especially Vancouver) and Ontario (especially Toronto); a few additional studies focus on women from the Prairies. One quarter (10) of these geographically specific projects further target women from Vancouver's Downtown Eastside (DTES).

### 5.2.2 Prominent Themes: HIV Prevention, Intervention and/or Treatment

Among the 87 projects identified, more than one half (49 or 56.3%) focus on HIV prevention, interventions and/or treatment strategies and their effects (R1, R2, R3, R4, R6, R10, R11, R12, R13, R20, R21, R22, R24, R25, R27, R28, R29, R34, R35, R37, R38, R39, R40, R41, R42, R43, R45, R46, R47, R50, R52, R53, R54, R56, R57, R58, R65, R66, R68, R71, R72, R73, R76, R77, R78, R79, R80, R83, R84).

Several projects look at a specific intervention initiative (R22, R46, R61, R65), and other projects investigate HIV risks or barriers to prevention and/or treatment (R8, R13, R39, R45, R53, R65, R67, R71, R79). In addition, a number of studies identified are biomedical in nature, focusing on factors related to the physical transmission and susceptibility of women to HIV infection (R3, R8, R9, R11, R15, R17, R18, R19, R30, R31, R85).

Several of the projects that investigate these themes are further broken down by specific population, as described below.

### 5.2.3 Research Projects Addressing Specific Populations

Of the 87 projects identified in the research inventory, 69 projects (79.3%) target women from specific populations or groups living in Canada. Specific populations studied include women living with HIV, women from countries where HIV is endemic and immigrant or ethnocultural communities, women involved in sex work/survival sex work, female youth, Aboriginal women (First Nations, Inuit and Métis), lesbian/two-spirit/and women having sex with women, transgender persons, women who use injection drugs, and women in prisons.

#### a) Women Living with HIV

Of the 87 projects, 49 projects<sup>50</sup> (56.3%) target women living with HIV in Canada. Of these projects, nearly one half (24) look at reproductive health issues facing women living with HIV, including an examination of their fertility desires (R38, R75), issues around pregnancy (R74), perinatal drug treatment exposure (R6, R16, R18, R54, R59-R61), vertical transmission (R15, R18, R38), and motherhood experiences (R27, R36, R37, R56). Consequently, all of these projects focus exclusively on women living with HIV of reproductive age.

Five other projects target women living with HIV who come from countries where HIV is endemic or from immigrant or ethnocultural communities. These projects examine these women's experiences with HIV diagnosis, treatment and support. Specifically, these projects highlight ethnocultural interpretations of the disease associated with maternity, treatment and secondary prevention (R24, R26, R28, R36, and R53).

Another five projects target survival sex workers living with HIV, examining issues around accessibility to health services, and uptake and sustainability of treatment and care (R20, R40, R52, R58, and R76).

<sup>50</sup> Since some female populations overlap, the number of identified projects per category is greater than the (N) total.

Other projects address women living with HIV more generally. These projects examine the quality of life and well-being of women living with HIV (R12, R22, R25, R62) and their access to and impact of treatment (R4, R16, R45, R51, R53, R58, R61, R65, R71). These projects also look at the needs, supports and barriers for women living with HIV, such as systematic racism in health care delivery (in the case of African-Caribbean women), lack of health programs for mothers living with HIV, and barriers to treatment such as access and adherence (R12, R34, R37, R49, R62, R71, R75, R84). In addition to examining the well-being and needs of women living with HIV, research on women living with HIV examines the intersection between gender and other health determinants.

#### **b) Women Involved in Sex Work and/or Survival Sex Work**

Of the 87 projects reviewed, 14 projects (16.1%) target women involved in sex work (R8, R13, R20, R24, R35, R39, R40, R46, R50, R52, R58, R66, R76, R79).

Within this category, more than one half (8) of projects focus on women involved in survival sex work (R8, R20, R24, R35, R40, R52, R58, R66). Seven of these projects further target women who also use injection or non-injection drugs, while four projects focus on women living with HIV involved in survival sex (with one project specifically targeting HIV-positive Aboriginal women involved in survival sex). These projects look at barriers and facilitators to risk and/or prevention and/or treatment. Specifically, these projects target determinants that affect HIV risk, including social and cultural factors (e.g., sex and drug networks, Aboriginal culture, youth) and their impact on HIV treatment and prevention. These projects also examine environmental and structural issues such as men's violence and power relationship dynamics with pimps, dates and intimate partners. Other projects research women's coping skills and health care practices.

Research included in this report focuses almost exclusively on sex workers from Vancouver's DTES. More research is needed regarding women involved

in sex work and HIV in other geographic regions of Canada, such as Montreal and Toronto. Also, more research needs to be done to better understand the experiences of transgender persons involved in sex work, as this population is progressively understood to be at increased risk of infection.

#### **c) Women from Countries where HIV is Endemic or Immigrant or Ethnocultural Communities**

Of the eight projects targeting these populations, the majority (five projects) focus on women living with HIV (R26, R28, R34, R36 and R53). These projects focus on capacity building through increased emphasis on healthcare information and improved understanding of ethnocultural constructions of the disease, including cultural constructs related to maternity, treatment and secondary prevention. These projects also look at the ability of women living with HIV to access care, treatment and support.

The remaining projects focus on issues related to HIV prevention in ethnocultural communities. These three projects look at creating culturally appropriate prevention and care programs for immigrants and refugees from countries where HIV is endemic who are living in Ottawa (R34), investigating barriers and facilitators to accessing future HIV vaccines among Black women (R80), and examining the relationship between violence in intimate relationships and HIV among immigrant women in Toronto (R26).

Project analysis reveals that there is a lack of research on confounding determinants of health related to women from countries where HIV is endemic. More research is needed for this group of women to better understand the way intersecting determinants impact women's vulnerability to or resilience against HIV. For example, more research among these groups of women is needed to look at whether economic class and income and education levels confound or contribute to women's vulnerability to HIV. Further population comparisons from a cultural perspective are needed (i.e., there is a need to analyze differences and commonalities between African, Caribbean, and

Asian communities within the larger group). Also, generational analysis (i.e., determining whether distinctions exist between first generation immigrants, second generation immigrants, etc.) is another area that may warrant future study.

#### d) Female Youth

Of the 87 projects identified, five projects target female youth (R14, R33, R43, R72 and R73). One of these projects focuses on gender power relationships (R33), while the other four focus primarily on HIV risks, prevention and capacity-building. One of those four projects targets female street youth (R14), focusing on factors leading to pregnancy and HIV risk. Another project examines Inuit youth in the context of culture, health and gender empowerment (R72), highlighting the interplay between age, culture and gender determinants. The third project examines the effects of the human papilloma virus (HPV) vaccine on HIV-positive girls and women. This project concludes that HIV-positive females have higher rates of HPV infection than HIV-negative females and have a higher incidence of HPV-related cancer (R73). The fourth project looks at increasing HIV/AIDS prevention capacity in female youth.

Project analysis reveals that research on female youth is limited, which is notable because epidemiological data indicate that HIV prevalence is on the rise among female youth (Chapter 3, Figure 14). More specific research on female youth is needed and could include more research on female youth involved in the sex trade, female youth who use injection drugs or other substances, and female youth from other specific populations (e.g., female youth affected by crime, female youth from countries where HIV is endemic, female Aboriginal youth).

#### e) Aboriginal Women: First Nations, Inuit and Métis

Eight of the 87 projects identified target Aboriginal women (R1, R2, R37, R40, R53, R69, R72 and R83). One project examines Inuit female youth and focuses on HIV/AIDS education, screening and treatment (R72). Another project looks at sexual violence in the context

of HIV/AIDS service provision; more specifically, it looks at how gender, culture, violence and HIV/AIDS intersect for women in their experience accessing health services and in their attempts at managing their health (R69). Another project seeks to identify HIV prevention needs for Aboriginal women as compared to non-Aboriginal women and examines the implications of HIV prevention gaps for research, policy and practice/programming (R37).

Three projects look more closely at issues facing Aboriginal women living with HIV. One project explores the cultural importance of motherhood and maternity for Aboriginal women living with HIV (R53). Another project examines survival sex workers' HIV risk behaviours and barriers to prevention and treatment (R40). The last project looks at the experiences with homophobia of two-spirit<sup>51</sup> women living with HIV regarding service provision (R83). All of these projects explore the interrelationship between gender and culture, with a view to improving service provision from this population's perspective.

#### f) Lesbian, Two-spirited and Women Who Have Sex with Women

Three projects in the research inventory target either lesbian, bisexual women, women who have sex with women (WSW), or two-spirit women (R1, R55, R83). Two projects focus exclusively on Aboriginal women, with one project examining the migration patterns of Aboriginal people in relation to health (R1) and the other project examining homophobia in relation to health services (R83). The third project explores HIV risks, injection drug use and sexual risk behaviours among men who have sex with men and WSW (R55).

None of the projects that involve this group of women focuses exclusively on two-spirit women, lesbian or WSW living with HIV, nor do any of the projects focus on WSW youth or WSW in other ethnocultural communities.

51 Two-spirit is a term specific to Aboriginal communities which is defined as "women who also self-identify as lesbian, queer, bisexual and male-to-female transgender people"[1].

### g) Transgender Persons

Two projects on transgender persons were identified in the research inventory. One project targets female-to-male transgender persons (transwomen) and looks at the impact of social isolation and oppression on their health (R44). Another project examines HIV/AIDS-related vulnerabilities associated with transgender persons (R82).

### h) Women Who Use Injection Drugs

Of the 87 projects listed in the inventory, six projects target women who use injection drugs and are involved in sex work (R8, R23, R35, R46, R67 and R76). Moreover, one project looks at women who use injection drugs and their access to antiretroviral therapy via a drug treatment program (R42). All of the projects examine the lives of women who use drugs in relation to other factors, and a number of them look at the relationship between drugs and survival sex work. The majority of the projects targeting women who use injection drugs and are involved in sex work, including research reviewed in Chapter 4, focus on women from British Columbia. Consequently, there is a need for studies to look at women who use injection drugs who live in other geographic areas of Canada.

### i) Women in prison

One project in the research inventory targets women in prison (R21). The project on women in prison is intended to inform prevention efforts to reduce the transmission of STBBIs among this population. This project, involving men and women, is being conducted within the Manitoba provincial correctional system.

## 5.2.4 Empowerment: Building Leadership among Women Affected by and Infected with HIV/AIDS

Women's empowerment relates to women's sense of self-worth, and their ability to have and make choices, access opportunities and use resources, control their own lives, and influence social change. Empowerment embodies the spirit of self and draws on the support of others to bring about individual change, structural

change and gendered relations change. Women's overall state of health will not change unless women themselves are empowered to challenge and change the contexts in which they live [2].

Different approaches may be used to empower women to articulate their own aspirations, to develop their own strategies for change, and to develop their skills and ability to access the resources necessary to achieve their aspirations. All of the approaches used to empower women increase their capacity to examine and articulate their collective interests, increase their ability to organize their interests, and aid them in linking with other women's and men's organizations to achieve change. Generally speaking, approaches to empowerment are used to alter the underlying inequalities experienced in existing gender power relations [2]. Accordingly, many of the projects reviewed focus on empowering women so that they may gain the leadership and skills required to redress the power imbalances that make them vulnerable to HIV/AIDS.

Of these projects, several seek to improve women's coping skills or promote women's participation in society (R12, R13, R22, R23, R25, R33, R66, R76 and R84). For example, one study looks at whether case management and standard general health promotion programs have the effect of improving coping skills, increasing social support, and decreasing depression levels for women living with HIV (R25). Another study identifies barriers and factors that improve the ability of women living with HIV to participate in society (R84). The notion of empowerment is also explored in another study that looks at young women in heterosexual relationships (R33). This study found that the sexual empowerment of young women may translate to empowerment in other areas, resulting in a decreased risk of HIV infection. A study on women who use injection drugs and are involved in sex work concludes that programs for women should emphasize health promotion and highlight the various actions women can take to keep themselves safe rather than focusing exclusively on their risk behaviours (R76).

Several other projects give women from vulnerable populations the opportunity to join research projects as peer-intervention agents to create skills-building opportunities. Studies have shown that the active participation of women from vulnerable populations' participation in studies contributes to their well-being and is critical for the purposes of health promotion [3-5]. One study suggests that peer intervention helps improve the living conditions of women who are involved in sex work and who use injection drugs (R46). Peer intervention is also examined in another study as a means to reach vulnerable female populations (R40). The goal of these studies is to reduce HIV transmission within these female populations, improve their living conditions, and redefine their identity.

Many studies on sex workers also recruit, hire and train women from vulnerable populations as researchers (R13, R40, R41, R52 and R66) to act as interviewers or research assistants. Studies suggest that the active participation of female sex workers in studies "on this community for this community" builds community-based research capacity and promotes community leadership (R40, R52).

Other studies invite women from vulnerable populations to participate in specific decision-making processes, thereby tapping into their expertise to gain knowledge of the community and giving them a voice in decisions affecting them. For example, one project aimed at increasing the decision-making capacity of women living with HIV in research projects invites this group of women to help determine research questions (R49). Another project identifies the need to include women who use injection drugs and are involved in sex work in the decision-making process regarding health care services they require. The study maintains that their involvement will improve the design and implementation of harm reduction strategies among this population (R76). This approach was also adopted in another project that had the objective of fostering community ownership and leadership among female

Aboriginal survival sex workers (R40). This study suggests that a participatory approach is highly valuable for providing women who are sex workers with a true voice in HIV prevention and care.

### 5.2.5 Violence against Women and HIV/AIDS within Research Projects

Among the 87 research projects included in the inventory, 10 or 11.5% identify men's violence against women as a risk factor for HIV infection for women. Half of these projects examine men's violence against women among sex workers and survival sex workers (R24, R40, R52, R76, R79). Some projects examine the issue of men's violence against women among specific groups of women, including immigrant women (R26) transgender women (R82) and Aboriginal women (R69 and R40), or in particular settings, such as in sexual assault treatment centres (R45). One project conducted a systematic review of studies to uncover the relationship between sexual violence prevention interventions and HIV/AIDS (R77). These projects indicate that men's violence against women remains an obstacle in HIV/AIDS prevention, especially for certain groups of women, and should continue to be considered and explored in as part of the response to HIV/AIDS.

### 5.2.6 Capacity Building within the Spheres of Policy, Health Care, Knowledge Transfer

Research included in the inventory highlights the importance of capacity building in sectors related to policy development, prevention, health care practice and guideline development, and knowledge transfer.

Many projects examine the implications of health policy on affected and infected women populations (R15, R24, R39, R43, R45, R56, R57, R68, R72, R76, R77 and R83). Of these, one project examines the impact of policy and service delivery models on HIV/AIDS prevention in female adolescents (R43). One project looked at infant feeding policies to determine their impact on women



living with HIV (R56). One project looked at the interconnection between sexual violence, gender, culture and HIV/AIDS and its potential implications for policy and programming (R68). Another project tried to identify policy elements necessary to mitigate homophobia in service provision from the perspective of two-spirit women (R83).

Other research projects sought to use research findings to inform the development of HIV/AIDS intervention/prevention programs (R12, R13, R20, R21, R23, R24, R33, R39, R41, R45, R46, R50, R52, R57, R71, R74, R76, R79 and R84). Of the 87 projects identified, 19 (21.8%) expressed this goal. Almost half of these (8) involved studies on sex workers (including survival sex workers) in support of the development, implementation and/or evaluation of a program in HIV care and/or treatment.

In addition, some projects sought to enhance or inform health care and research practices, guidelines and policies on particular populations of women (R24, R45, R50, R52, R58, R59, R72, R76, R77, R79, R80, and R83). For example, one study intends to use its findings to encourage standardized health care practices for post-exposure prophylaxis (PEP) accessibility for sexually abused women in shelters (R45). Another project intends to use its findings to improve provincial and national antiretroviral therapy guidelines and pregnancy practices in Canada (R59).

Overall, most of the projects included in the inventory focus on capacity building -- both at individual and community levels -- for the purpose of identifying intervention, prevention and treatment strategies, and opportunities for various populations of women. The various projects listed demonstrate how complexities that result from the intersection of determinants serve to increase women's vulnerability to HIV/AIDS. These complexities are further evidenced by the study on Ontario women and HIV prevention (R57) in which 16 unique groups of women have been identified for the purpose of looking more closely at

their HIV prevention, treatment and policy needs. Consequently, there is value in examining the intersecting factors that contribute to women's marginalization to better understand how underlying inequities contribute to their vulnerability and resiliency to HIV/AIDS.

### 5.3 References

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## CHAPTER 6 - Response to HIV/AIDS

# 6

As a result of the need to limit the scope of this report, this chapter provides an overview of only those Canadian strategies, coalitions, networks, organizations and projects that focus on HIV/AIDS and women. Note that this chapter does not include an examination of the Canada-wide response to the various determinants of health and their impact on the vulnerability and resilience of the female population to HIV/AIDS.

### 6.1 Methodology

To obtain information on projects, coalitions, committees, plans and policy initiatives in place between 2006 and 2009 that address HIV/AIDS among women, information-gathering templates were circulated to federal, provincial and territorial officials through the following committees or consultants: Federal/Provincial/Territorial Advisory Committee on AIDS (F/P/T AIDS), PHAC's national and regional HIV/AIDS program consultants, the Federal/Provincial/Territorial Heads of Corrections Working Group on Health, and Health Canada's First Nations and Inuit Health Branch Regional HIV/AIDS Sub-Working Group. Responses were received from all provinces and territories. In addition, projects funded by the Toronto Public Health's AIDS Prevention Community Investment Program, the Québec *Programme de soutien aux organismes communautaires* (Support Program for Community Organizations) and some organizations from the private sector (identified through key-word searches using Google), were also included in the analysis.

It is important to note certain limitations of the methodology for this chapter. First, some projects, programs or initiatives, such as health care and social services delivered by provinces and territories, may not have been captured through the information-gathering methodology used in this report. Also, data from some of Québec's regional health authorities, which manage local community programs, were unavailable. We hope to address this gap in the future. Organizations are invited to contact PHAC's Centre for Communicable

Diseases and Infection Control if they wish to see their work reflected in future status reports.

Second, the number of responses included in this chapter is relatively low because only those projects, coalitions, networks, etc., specifically designed for women or those which target them directly as part of a broader group, are included. Responses that focus on the general population or any other specific population of which women may be part have been excluded from this analysis. The following subsections describe in more detail the reasoning behind the population-specific inclusion/exclusion criteria of certain projects/responses relating to HIV/AIDS among women.

#### 6.1.1 Women as Part of the General Response

As we have seen in previous chapters, women make up 51% of the total Canadian population, and they account for over one quarter of the estimated HIV infections in Canada in 2008 (Chapter 3). Consequently, women are captured as part of the audience for a wide-ranging number of general responses to HIV/AIDS across Canada; however, these responses are not included in the analysis of this chapter as they are not gender-specific.

#### 6.1.2 Women as Part of a Community or Group

Women are identified as a target audience within certain community or cultural group-based responses. Some of these responses focus on the whole community, but also support women-specific activities. For example, the Groupe d'Action pour la prévention de la transmission du VIH et de l'éradication du Sida (Action Group for the Prevention of the Transmission of HIV and the Elimination of AIDS) focuses on the broader Haitian community of Montreal and has developed a female-specific radio program. Because this group targets women specifically, its responses are included in the analysis.

### 6.1.3 Women as Stand-Alone Categories

Various organizations across Canada have responded to the needs of women by developing projects, coalitions, networks, etc., that are female-centred. This approach is consistent with Health Canada's Gender-based Analysis Policy, which seeks to identify and clarify the differences between men and women and to demonstrate how their different social realities, life expectations, and economic circumstances affect their health status relating to access to, and interaction with, the health care system. This report recognizes the need for a women-centred approach for looking at HIV/AIDS responses, given that the social and cultural realities of both sexes are distinct.

## 6.2 Overview

Canada's response to HIV/AIDS has grown in scope and in complexity since the early days of the infection. Governments, non-governmental and community-based organizations, researchers, health professionals and people living with, and vulnerable to, HIV/AIDS are engaged in addressing the disease and the conditions that sustain it.

Through *The Federal Initiative to Address HIV/AIDS in Canada*<sup>52</sup>, the Government of Canada monitors HIV cases through its national surveillance system; develops policies, guidelines and programs; and supports the voluntary sector (composed of national HIV/AIDS organizations, AIDS service organizations and community-based organizations) in the response to HIV/AIDS in communities across the country.

The provinces and territories are engaged in similar activities and, under Canada's Constitution, are primarily responsible for the provision of health and social services to people living with, or at risk for, HIV/AIDS.

52 The federal government is also responsible for the provision of health care services to designated groups, such as Aboriginal people residing on-reserve, the military and federally incarcerated people.

Organizations operate in all provinces and territories to reduce vulnerability to, and the impact of, HIV/AIDS and to provide diagnosis, prevention, care, treatment and support services to those most at risk. These organizations conduct these activities with government and private funding. Depending on the jurisdictions, community-based organizations work through pre-defined structures to determine priorities and allocate resources. Communities and local health authorities, governments, front-line organizations, volunteers and affected populations are uniquely positioned to determine the appropriateness of the response. In addition, the private sector, including corporations, pharmaceutical companies, and churches, is involved in the response to HIV/AIDS in Canada.

## 6.3 Population-Specific Strategies

This section provides an overview of existing women-specific strategies to address HIV/AIDS at national and provincial/territorial levels. Given that the proportion of incidence of HIV cases among women is increasing (Chapter 3), the provision of women-centred responses is a priority for many national and provincial/territorial governments and organizations across Canada.

*The Federal Initiative to Address HIV/AIDS in Canada* identifies women as one of eight key populations at risk of, or affected by, HIV/AIDS. This initiative was developed as the Government of Canada's response to *Leading Together: Canada Takes Action on HIV/AIDS*, a stakeholder-led document that outlines a coordinated nationwide approach to HIV/AIDS in Canada. *Leading Together* highlights the importance of community involvement in the response, as well as the need for culture, gender and age appropriate programs and services.

Most Canadian provinces and territories have adopted prenatal HIV testing strategies for pregnant women. Twelve out of the thirteen jurisdictions have formal policies for HIV testing of pregnant women. Seven jurisdictions follow the opt-out approach to HIV testing, while the other five follow the opt-in approach (Chapter 3).

Many provinces and territories have also developed women-specific health strategies. For example, British Columbia has the Women's and Girl's Health Strategy, which provides a gender-centred approach to priority conditions, including HIV/AIDS. Manitoba and Saskatchewan support an action plan for women's health, developed by the Prairie Centre of Excellence for Women's Health, which focuses on programs for women and includes sexual education relating to HIV/AIDS.

With the support of the Ontario Ministry of Health and Long-Term Care, the Women and HIV/AIDS Working Group, consisting of Ministry staff, researchers, community representatives and people infected, and affected by, HIV/AIDS, is developing a strategy to address the growing rates of HIV infection among women in Ontario. The Ontario Women's Study Research Group, which is associated with the Working Group, is developing a provincial research program that will take into consideration the varied life experiences of women vulnerable to HIV infection. In addition, the Ontario Aboriginal HIV/AIDS Strategy is undertaking Aboriginal women-specific interventions addressing prevention. Although not specific to women, the Ontario Aboriginal HIV/AIDS Strategy plans to prioritize women over the next five years.

In 2009-10, the Ontario Ministry of Health and Long-Term Care established new funding for the Women and HIV/AIDS Initiative, which allowed 15 ASOs to create women's HIV community development coordinator positions in key communities across Ontario. The Women and HIV/AIDS Initiative (WHA) adopts a community development approach and involves building the capacity of local community health and social service providers to address women and HIV/AIDS issues in Ontario.

In addition to these strategies, there are also joint culture- and gender-centred strategies. For example, in 2004, the National Aboriginal Health Organization (NAHO) hosted an Aboriginal Women's Health Roundtable Planning Meeting that attracted 21 representatives from NAHO, the Native Women's

Association of Canada (NWAC), Pauktuutit Inuit Women of Canada, the Métis National Council (MNC), and the Assembly of First Nations (AFN). At the meeting, participants identified the need to focus on various health issues, including HIV/AIDS. The next step was to build the framework for an Aboriginal Women's Health Action Plan. The following year, in 2005, NAHO hosted a national roundtable meeting on Aboriginal women's and girl's health, which drew 70 representatives from First Nations, Inuit and Métis organizations and Health Canada. The goal of the meeting was to discuss priority issues and policy recommendations to improve the health of Aboriginal women and girls. Although there was no specific reference to HIV/AIDS, members agreed that there is a gap in educating Aboriginal females on healthy sexuality.

In recent years, there has been progress toward developing the framework for an Aboriginal Women's Strategy Action Plan to address Aboriginal women's HIV/AIDS issues in Canada [1]. The framework, which is the result of several months of consultations with Aboriginal women across the country, will provide for an HIV/AIDS Aboriginal women-specific strategic action plan over the next five years. Two-tier expertise will be established for this framework, including an Aboriginal Women Living with HIV/AIDS Council (AWHA), which will be the primary guiding voice and the Canadian Aboriginal AIDS Network Voices of Women (CAAN VOW) Committee, consisting of key service providers and a core group of AWHA. The following goals will be established in concert with these experts: strengthening the network and support for Aboriginal women in every region; advocating for improving the availability and accessibility of, and care and treatment services for, HIV-positive Aboriginal women; increasing prevention education and awareness on HIV/AIDS for women; and conducting gender-based and women-specific community-based research. The Aboriginal Women's Strategic Action Plan on HIV/AIDS will serve as a useful resource and guide for Aboriginal AIDS service organizations to design and build their own resources with, and for, Aboriginal women within their respective regions.

## 6.4 Population-Specific Networks, Coalitions and Advisory Bodies

This section provides an overview of female-specific strategies to address HIV/AIDS on both the national and provincial/territorial levels. Networks, coalitions and advisory bodies undertake a variety of activities, such as providing advice, advocacy, and research. Some of the networks and coalitions listed below also deliver programs. The existence of these organizations and bodies indicates the importance of working in partnership across community, organizational, and government sectors to address HIV/AIDS among women.

In this report, a network or coalition is defined as an organization, which has member organizations and/or individual members formed to represent a group's interests, goals or objectives at provincial, national or international fora. An advisory body is defined as an organization that provides advice on the development and/or implementation of strategies, policies and programs.

### 6.4.1 National Networks, Coalitions and Advisory Bodies

The Blueprint for Action on Women and Girls and HIV/AIDS in Canada is a multi-sector coalition consisting of 77 Canadian and international HIV/AIDS organizations and a variety of women's and reproductive rights groups. This group advocates for improvements to HIV/AIDS prevention, services and supports for women and girls infected with, and affected by, HIV/AIDS in Canada. In addition to advocacy work in support of women's rights, the members of the coalition have also formed working groups to discuss specific issues that relate to women and HIV/AIDS, including groups related to law, ethics and human rights; research; stigma and discrimination; diagnosis, treatment, care and support; and prevention and education.

Networks on women's health are also responding to gender and HIV/AIDS in Canada. The Centres of Excellence for Women's Health<sup>53</sup>, a multi-disciplinary partnership network of academics, community-based organizations and policy makers, are putting women's issues high on the research agenda and are working to respond to the specific needs of women relating to HIV/AIDS. In addition to these Centres, the Canadian Women's Health Network and other working groups and initiatives also address specific policy issues regarding women and HIV/AIDS.

As a result of the high prevalence of STBBIs among women in federal penitentiaries, Correctional Service of Canada (CSC) has developed a social determinant-based strategy entitled, Infectious Disease Strategy for Women Offenders, which offers gender and culturally appropriate infectious disease prevention, care, treatment and support to women in prison. The strategy takes into consideration women's lived experiences to understand their vulnerability to infection, including decisions on risk behaviours, utilization of harm reduction measures, accessing health services and testing/treatment uptake.

In 2009, planners, decision-makers, service providers and policy analysts met to discuss issues, research, and programming relating to girl's and women's substance use in Canada [2]. The goal of the meeting was to further explore harm reduction from a 'determinants of health affecting women' perspective, which included a look at determinants such as poverty, sex work, motherhood. Both the British Columbia Centre of Excellence for Women's Health and the Coalescing on Women and Substance Use sponsored the meeting activities.

53 The Centres of Excellence for Women's Health is supported by the Women's Health Contribution Program, which is managed by the Women's Health and Gender Analysis Bureau (Health Canada).

### 6.4.2 Provincial Networks, Coalitions and Advisory Bodies

The Atlantic Centre of Excellence for Women's Health promotes a gender-based approach to HIV/AIDS policies, programs and research. The Centre, which is member of the Interagency Coalition on AIDS and Development (ICAD) and of the research sub-committee of Blueprint for Action on Women and Girls and HIV/AIDS, conducts policy-oriented research to improve the health status of Canadian women by making the health system more aware of, and responsive to, women's health needs.

Positive Women's Network (PWN), a partnership of women living with, and affected by, HIV/AIDS, provides access to support and education and prevention for women in communities throughout British Columbia so that they can make informed choices about HIV/AIDS and their health. In addition, the PWN provides leadership and advocacy around women's HIV/AIDS health and social issues in national and local health care communities. The PWN is open for membership to anyone living in British Columbia with proof from their healthcare provider of their HIV-positive status.

The Ontario Ministry of Health and Long-Term Care created a working group to address increased rates of HIV among women in that province. As part of this work, the Ministry supported research into best practices in HIV prevention among women to determine where this population is most likely to access health care and social services. The Prenatal Testing Initiative funds a communications campaign to promote awareness of the HIV prenatal testing program among pregnant women, HIV test providers and women considering pregnancy.

In Nova Scotia, the Advisory Council on the Status of Women advises the Minister responsible for the Status of Women and identifies women-specific concerns, including those related to health. In 2003, the Advisory Council produced a gender and HIV/AIDS background

which highlights the various gender-related vulnerabilities to HIV/AIDS.

In Newfoundland and Labrador, a gender/HIV partnership program was created by the AIDS Committee of Newfoundland and Labrador, Oxfam, the Interagency Coalition on AIDS and Development (ICAD), the Canadian International Development Agency and Zimbabwe/Lesotho to address and analyze the issue of men's violence against women and HIV/AIDS.

As previously discussed in Chapter 4, women involved in sex work and survival sex can experience a multitude of HIV vulnerabilities. In response to the need for sex worker empowerment, several sex worker coalitions have been formed across Canada to develop health education initiatives and promote better working conditions for sex workers. In the Maritimes, the Sex Trade Action Committee, which was initially formed by community police to address issues related to street-based sex work (survival sex) in Saint John, partnered with AIDS Saint John and others (including current and former sex workers) to develop harm reduction, education and rehabilitation projects for sex workers.

Stepping Stone, a sex worker organization based in Halifax, currently staffs many sex workers and has developed partnerships with healthcare providers, counsellors (legal and health), and other community workers (e.g., AIDS Coalition of Nova Scotia) to provide harm reduction and outreach to those involved in sex work, with a particular focus on survival sex.

Québec's STELLA, which was created in 1995 by sex workers, public health researchers and advocates, is an organization by, and for, sex workers aimed at improving their quality of life and working conditions. The organization aims to provide support and information to sex workers so that they may live in safety and with dignity, to reduce discrimination against sex workers by raising awareness and educating the public about sex work and the realities faced by sex workers, and to promote the decriminalization of sex work.

In Ontario, two sex work organizations have been created, one in Toronto (MAGGIE's- The Toronto Prostitutes' Community Project) and the other in Ottawa-Gatineau (POWER- Prostitutes of Ottawa-Gatineau Work, Educate and Resist). Both organizations are run by sex workers to provide health and legal services to this population.

There are several sex work organizations located in British Columbia, including Prostitutes Empowerment Education and Resources Society (PEERS), the Canadian National Coalition of Experiential Women (CNCEW), and the West Coast Cooperative of Sex Industry Professionals of Vancouver (WCCSIP).

PEERS offers programs and services for current and former sex workers, including education and employment transition programs for those wanting to exit the sex trade; access to affordable housing and access to justice (e.g., providing support to parents to help them gain custody of their children); outreach (e.g., offering needle exchange, condoms etc. at mobile drop-in centres); and access to an in-house female doctor.

The CNCEW aims to improve the living and working conditions of female sex workers and focuses on the following key issues: harm reduction (e.g., providing sex workers with appropriate services), law reform (e.g., promoting decriminalization of sex work), public awareness (e.g., fighting discrimination and stigma), social justice, children and youth protection (e.g., recognizing and addressing the issue of youth sex worker exploitation), violence, and human trafficking.

The WCCSIP is a cooperative of current and former sex workers who pay for membership which allows for voting direction or input on profit spending. The following issues are targeted by the WCCSIP: creating labour standards for sex workers; empowering and unifying sex work communities to increase economic security of adult sex workers; developing capacity building to develop policies for the sex industry; engaging allies in addressing the organization's goals;

keeping harm reduction frameworks at the forefront; and working toward social justice and increasing labour conditions and sex workers' safety.

## 6.5 Program Analysis

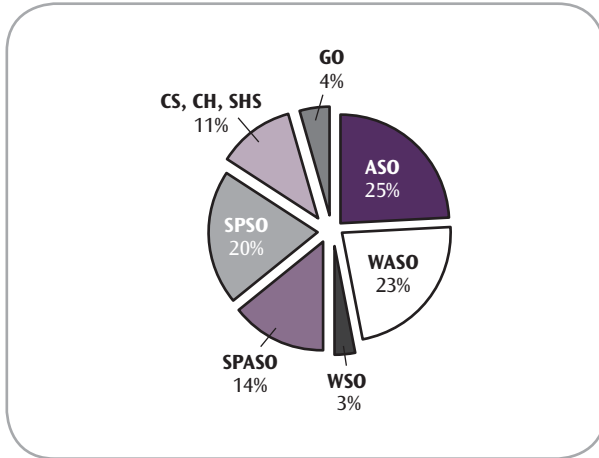
This section provides an analysis of the types of programs and projects identified as part of the data-gathering process to determine whether and how they reflect the realities and needs of women relating to HIV/AIDS. The main objective of the data-gathering process was to identify time-limited projects (active between 2006 and 2009) addressing HIV/AIDS among women in Canada. Projects and the responsible organizations are listed in Appendix C. It is important to note that this analysis does not include those HIV/AIDS programs that have been integrated into regular provincial or territorial health care and social services delivery activities (except for women's program initiatives implemented by CSC and some provincial prisons which have been integrated into the delivery of health services for women in prisons). Funded projects that are directed at women, have a large women's component (either in the title or descriptor), or target women directly within a broader group are included for discussion. It should be noted that due to the projects time-limited nature and the time lapse between writing and printing this report, some of the projects may no longer be active.

### 6.5.1 Projects Addressing Women

Of the 101 projects reviewed, 11 (11%) address women as part of a larger project while 89 target women exclusively (Appendix C). Figure 19 shows that one quarter (25%) of organizations involved in the female HIV/AIDS response are AIDS Service Organizations, followed by Women AIDS Service Organizations (23%), and Specific Populations Service Organizations (20%). The latter two types of organizations target Aboriginals, youth at risk, people from countries where HIV is endemic, sex workers, women who use injection drugs and transgender persons, all of whom are identified at increased risk for HIV.



**Figure 19: Distribution of Organizations Involved in the Response of HIV/AIDS among Women in Canada (N = 71)**



ASO: AIDS Service Organization (open to all populations)  
 WASO: Women-specific AIDS Service Organization  
 WSO: Women-specific Service Organization  
 SPASO: Specific Population AIDS Service Organization  
 SPSO: Specific Population Service Organization  
 CS, CH, or SHS: Community services, community health, or sexual health services  
 GO: Governmental organizations

The charting of organizations reveals the diversity of organizations responding to the need of women relating to HIV/AIDS. This diversity speaks to the complexities in addressing women’s specific HIV/AIDS needs, particularly given the array of various cross-populations.

### 6.5.2 Geographic Distribution of Projects and Distribution by Category

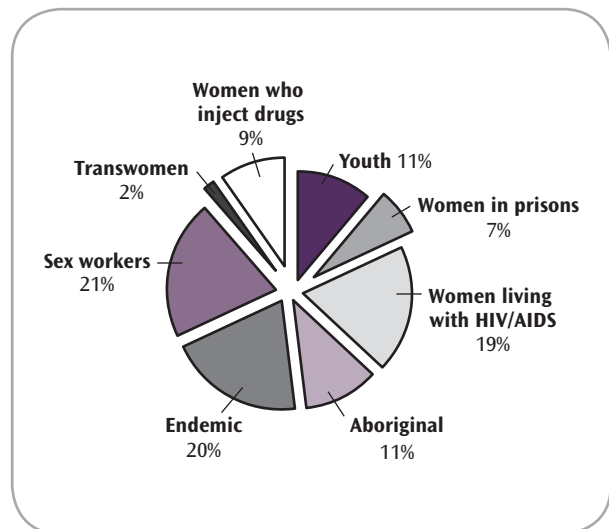
Of the 101 projects reviewed, 36% were located in British Columbia, 5% in Alberta, 4% in Saskatchewan and Manitoba, 21% in Ontario, 23% in Québec, and 4% in the Atlantic Provinces. In the Northern Region, no women-specific projects were identified. This could partly be due to the fact that funding is more likely to be allocated to the general Aboriginal populations (i.e., First Nations, Inuit and Métis), of which women are a

part. In addition, eight projects that were national in scope were identified. When considering the proportion of projects in relation to the percentage of the female population within each area, data show that the most populated provinces (i.e., Ontario, Québec and British Columbia) have the largest distribution of women-specific projects.

### 6.5.3 Different Programmatic Responses for Different Health Needs of Women

As discussed in previous chapters, there are groups of women who, because of social and economic circumstances, are at higher risk of acquiring or transmitting HIV infection. These groups include women from countries where HIV is endemic, women living with HIV, female sex workers, female youth, Aboriginal women, women who use injection drugs, transwomen and women in prisons. These female populations require individual strategies as their health needs and socio-economic realities are distinct.

**Figure 20: Distribution of Women-Centred Projects on HIV/AIDS by Category (N = 114)**



The (N) total is higher than the actual number of reviewed projects as many projects target more than one population (e.g., HIV-positive Aboriginal youth)

### 6.5.4 Female Sex Workers

Female sex workers constitute the most commonly targeted populations among the 101 projects reviewed, representing 25 projects [W11, W18, W22, W23, W24, W27, W33, W48, W54, W57, W61, W63, W75, W76, W77, W78, W86, W91-W96, W98, W101]. Women who engage in survival sex are at high risk of acquiring or transmitting HIV; therefore, a comprehensive response to HIV/AIDS must address this cohort of women. Of these projects, one third (36% or 9) has a target audience of survival sex workers or street-involved females who use injection drugs [W18, W22, W23, W24, W28, W33, W61, W63, W78]. For example, the project *femmes de la rue* [W78] focuses on ensuring that sex workers have access to appropriate resources, by, for instance, accompanying them to appointments and ensuring the availability of safe injection equipment. In another project called The Rainier Hotel [W18], former sex workers recovering in detox programs are provided access to a range of support with the aim of encouraging them to regain control of their health. In Québec, the project Cat Woman, which is available in Lac St-Jean/Saguenay [W75], Estrie [W76] and Maurice [W91], aims to increase safer sex behaviours and develop sex workers' ability to respond to factors that limit their capacity to protect themselves.

In British Columbia, the project HIV/AIDS and Survival Sex Workers [W22] focuses on developing and distributing culturally relevant, user-friendly HIV/AIDS information. As a result of this project, peers are trained in outreach, meeting and workshop facilitation and coordination skills. Peer support workers are partnered with community health workers when doing outreach. Similar to this project, two other women-specific sex worker projects are culture-specific. The first project targets Aboriginal sex workers [W57] and focuses on increasing their knowledge of HIV prevention, reducing risky behaviour, and improving women's access to appropriate services (such as AIDS service organizations across Ontario). The second

project is developed for Asian<sup>54</sup> women and aims to increase participants' knowledge of HIV/AIDS [W11].

### 6.5.5 Women from Countries Where HIV is Endemic

Leading Together and the HIV/AIDS Population-Specific Status Report: People from Countries where HIV is endemic, Black People of African and Caribbean descent living in Canada emphasizes the need for projects that target women from these countries, as this group of women is more likely to experience gender inequality, violence, and isolation. Therefore, projects designed for these women need to address their specific needs. In addition, programs need to reflect the fact that the majority of women from countries where HIV is endemic live in large urban centres (i.e., Toronto, Montreal or Vancouver).

Over one fifth (23 or 21%) of the total projects reviewed identify women from countries where HIV is endemic as a target audience [W10, W11, W17, W30-W32, W39-W44, W50-W52, W55, W62, W64, W71, W72, W73, W74, W83]. These projects were found in four provinces, namely British Columbia, Alberta, Ontario and Québec, which reflects the geographical distribution of this population group.

Over one quarter (6 or 27%) of these projects target HIV-positive females, and most focus on providing support. For example, the project Sahwanya Community Kitchen [W10], developed by, and for, HIV-positive African women from downtown Vancouver, is geared toward easing social isolation by offering an environment conducive to the sharing of experiences. Another project, the Living Room Program [W64] has been created for

<sup>54</sup> The project description available in the ACAP database does not allow for a determination from which Asian communities the women belong. In the review completed on Women from Asian and South Asian communities in Ontario, McWilliam et al. (2007) recommend that the label "women from Asian countries" should be broken down to reflect the fact that there are over 40 different nationalities and over 100 languages and dialects represented in Canada's "Asian" community" [3].

African and Caribbean women living with HIV in Ottawa so that they can share their life experiences in a confidential space, thereby providing support and breaking the isolation of living with HIV/AIDS.

There are also culturally specific responses, including those for the Somali [W62], Ethiopian [W55], Asian [W11, W50, W51], African and/or Caribbean [W10, W39, W40, W42, W43, W44, W64, W71, W73, W74] and African Muslim communities [W41], representing 16 (72.7%) of the total responses targeting women from countries where HIV is endemic. In two cases, projects target both adult and young women from each community. In fact, both the Somali Immigrant AID Organization [W62] and the Ethiopian Association in the Greater Toronto Area [W55] have provided age-specific workshops to their respective female populations aimed at increasing participants' knowledge of HIV/AIDS.

Regarding projects targeting Asian populations, one project named The ORCHID project: Outreach and Research in Community Health Initiatives and Development [W11] targets female Asian sex workers employed in massage parlours and escort agencies throughout Vancouver and the British Columbia Lower Mainland. The main objective is to increase the women's knowledge about HIV transmission and prevention. Two other Asian-specific projects [W50, W51] provide workshops on HIV/AIDS, either with the assistance of South-East and/or East-Asian female volunteers or by reaching women through various cultural venues (e.g., churches, settlement houses, English as a Second Language (ESL) classes, ethnocultural events, etc.). Both of these projects promote HIV testing among South-Eastern and Eastern female populations, using the media or by translating an HIV testing resource-document into Japanese and distributing it citywide (Toronto). Finally, another project [W40] aims to reach young women from African Caribbean and Continental communities through cultural venues, engaging them in discussing healthy sexual education within a culture-sensitive context.

The other projects that target women from countries where HIV is endemic generally focus on peer-based outreach [W17] and HIV/AIDS prevention [W30, W31, W32, W52, W83].

### 6.5.6 Women Living with HIV/AIDS

Projects targeting women living with HIV represented 19% (or 21) of all projects reviewed [W10, W13, W19, W28, W35, W37, W42, W44-W47, W49, W52, W64, W65-W68, W74, W86, W89]. In addition to the six projects targeting women living with HIV from countries where HIV is endemic [W10, W42, W44, W52, W64, W74], three focus on HIV seropositive new mothers [W65, W66, and W67]. These latter projects aim to reduce the risk of vertical transmission of HIV, either by offering free infant formula for a period of one year or by providing support, financial and counselling services.

Some of the other projects focus on peer-support [W19, W35, W47, and W68], increasing outreach capacity and access to programs for women living with HIV [W13, W46], and prevention workshops or education [W64]. A project for HIV-positive female youth aims to increase their life and employment skills [W28]. Finally, two other projects aim to empower women to disclose their HIV status to their partners and service providers [W74, W89].

### 6.5.7 Female Youth

Of the 101 individual projects reviewed, 12 identify female youth as a target audience [W9, W15, W20, W28, W29, W40, W41, W45, W56, W62, W79 and W97]. Of these projects, three are specific to people from countries where HIV is endemic. These provide a gender, culture and age-specific response to HIV/AIDS. One of the projects, Ethiopian Association HIV/AIDS Prevention Project [W55], aims to increase the knowledge among youth on topics such as HIV and the impact of alcohol and drugs on sexual behaviour. Using peer-driven workshops, the target audience is provided information on HIV prevention. In another

project, the Somali AID Organization provides workshops to female Somali teens on HIV/AIDS [W62] and diffuses culturally sensitive prevention education through Somali media (e.g., radio, newspaper).

Four youth projects (30.8%) aim to empower young women and girls regarding their sexuality. For example, in British Columbia, the project Girl Power [W9] looks at the association between women's low self-esteem and risky activity and their connection to HIV. The project focuses on female body image and its portrayal in the media. Another B.C. project, Rights of Passage [W15], aims to educate Aboriginal girls on healthy definitions of themselves and on HIV/AIDS. Similarly, the Sexual Self-Esteem as a HIV Prevention Tool Project [W29], in Alberta, aims to build the self-esteem of girls by helping them feel good about themselves, their bodies and their strengths and abilities to make positive, healthy choices. Education on the risks of HIV is also provided. Finally, a project named "*Hey filles, mets tes culottes*" [W97] ("Hey girl, stand up for yourself") is dedicated to prevention and sex education for young women.

### 6.5.8 Aboriginal Women

Aboriginal women make up nearly half of all new HIV infections among Aboriginal peoples [4] contrasting sharply with non-Aboriginal Canadian women who represent only 20.6% of positive test reports (Chapter 3). Of the 101 projects identified, 14 target Aboriginal females [W1, W2, W3, W6-W8, W14, W15, W26, W36, W57-W59 and W88].

Projects targeting Aboriginal women include those focused on youth [W15], sex workers [W57] and women involved in injection drug use and/or harm reduction [W1, W2, W8, W58, W59]. This latter group consists of the most commonly identified population among the female Aboriginal projects identified, representing 35.7% (5) of these projects. The prevailing focus on female Aboriginals who use injection drugs is congruent with their distribution in the IDU exposure

category, which shows that the main exposure category for HIV in Aboriginal women is IDU, representing 66.3% of total positive HIV test reports between 1998 and 2009 (Chapter 3, Figure 18). Some of the response focuses on a culture-specific approach to harm reduction. For example, the project named *Awakening the Spirit* [W59] provides healthcare providers with Aboriginal history and perspectives, as well as harm reduction relating to Aboriginal women at risk. Another culture-specific response, *Culturally Appropriate Harm Reduction Program Development* [2], aims at reducing harm associated with injection drug use (and other substances) within Aboriginal communities.

In view of the prevalence of violence against Aboriginal women, two projects specifically target this issue [W26, W88] within the context of sexual health. For example, the project named *Positive Women, Positive Spaces* [W26] aims at addressing the linkages between violence and the risk of HIV infection among Aboriginal women living in Vancouver's DTES by creating and evaluating a women-only night clinic. The other project [W88] aims at providing sexual health workshops for abused Aboriginal women residing in shelters and training on sexuality for social workers employed by these facilities.

Additionally, the project named *Around the Kitchen Table* aims at empowering women, especially those living in remote communities, by reinstating their traditional roles and providing them with community network of support and education [W14].

### 6.5.9 Women Who Use Injection Drugs, Harm Reduction and/or Substance Use

Of the responses reviewed, 10 target females who use injection drugs, harm reduction and/or substance use [W1, W2, W12, W18, W25, W27, W58, W59, W61, and W99]. One project [W12] supports women in Vancouver's DTES who are affected by HIV/AIDS to access harm reduction, medical services and community resources. Help is provided to women most

vulnerable and not connected to services because of discrimination, exclusion and isolation. Another B.C. project Women Care [W27], supports the health, well-being and leadership of vulnerable women, especially street-involved sex workers who use drugs. The project Women's Harm Reduction in Toronto also addresses women who use illicit drugs and/or who are working in the sex trade [W63]. The program acknowledges challenges and develops responsive, supportive programming. Additionally, the project WIN located in New Brunswick increases women's use of a needle exchange program, with the goal of decreasing HIV transmission [W99]. It also provides a safe means for needle disposal. Finally, Coverdale Centre for Women Inc., also located in New Brunswick, offers a substance abuse program for women in prisons [W100].

### 6.5.10 Women in Prisons

Leading Together has called for the implementation of programs for women in prisons designed to reduce the risk of HIV transmission in all correctional facilities in Canada and to give prisoners access to age, gender, and culture-appropriate prevention, harm reduction and treatment tools and services. Eight of the projects reviewed target women in prisons.

The Prisoners with HIV/AIDS Support Action Network (PASAN) women's program, which is the largest community-based HIV prison program for women in Canada, provides HIV prevention education, support services, release planning and case management specific to the needs of women in prison and recently released women [W60].

The project Wings for Our Future [W92] targets women in prisons, as well as workers in the field of parole eligibility and labour force reintegration. Various workshops, information kiosks and training sessions are planned to enhance HIV and HCV awareness, information, prevention and support both inside and outside of detention centres. Through these activities, it is expected that women in prisons will gain a greater

understanding of modes of infection and prevention techniques, while social workers will become more familiar with available resources and be in a better position to provide appropriate referrals. The project's target clientele consists of about 250 women in prisons (from both provincial and federal Québec prisons) and 90 social workers.

Another project, Prisoners at Federal Prison for Women run HIV/AIDS Education and Support Group [W5], started in 2006 at the Edmonton Institution for Women (CSC Initiative), provided support regarding HIV/AIDS, hepatitis C and harm reduction.

Additionally, the project University Partners with Provincial Prison for Women -- Participatory Action Research Empowers Prisoners [W16], which is peer-driven, contributes to women's empowerment and ownership of the project. The prisoners guided the research by asking questions, gathering and analyzing the data, presenting new knowledge and designing new policies for change.

The Coverdale Centre for Women Inc. offers many programs, one of which is for women transitioning to the community from the correctional system and for women committed to making a significant life change [W100]. For example, it provides a substance abuse program for women in prisons and a halfway house for women transitioning to the community from prisons.

Finally, the project Sex Worker and HIV-prevention Organization Engages Women Prisoners Through Creative Writing and Art engaged women at Joliette Institution (CSC prison for women in Québec) and Tanguay Correctional Centre (Québec provincial women's prison) in creative writing workshops [W95]. The goal was to produce a special issue of ConStellation Magazine specifically written, illustrated and designed by sex workers (special edition for women in prisons or affected by law, Vol.10, No.1, 2005).

### 6.5.11 Other Women-specific Categories

Some of the projects reviewed targeted women from other specific categories, such as women who experience violence, mothers-to-be and current mothers, older women, and transwomen.

#### a) Violence against Women

Four projects target violence against women in the context of HIV/AIDS: three reside in Québec [W81, W84, and W88] and two specifically target Aboriginal women [W26, W88]. One project named *Les femmes et leur santé sexuelle...vers une prise en charge* [W81], is intended to increase women's knowledge and capacity to better manage their sexual well-being and to adopt safer sex practices. Another project, named *Positivement femmes* [W84], targets women who have experienced abuse, provides them with sexual health prevention skills and aims to increase their knowledge about the risks associated with STBIs. It also helps them to communicate about sexuality so that they can negotiate safer sex.

#### b) Mothers-to-be/Mothers

Of the projects reviewed, four focus on mothers-to-be and mothers who are either affected by, or infected with, HIV/AIDS [W25, W65, W66, and W67]. For example, the project named Sheway [W25], located in Vancouver's DTES, provides health and social service supports to pregnant women and women with infants who are dealing with drug and alcohol issues. Another project, which falls under the Motherisk Program [W67], offers women with free, confidential counselling about the risks of HIV infection and HIV treatment during pregnancy. Finally, The Infant Formula Program [W66] supports new mothers who are HIV positive by offering them free formula for their infants.

#### c) Older Females

One project named Positive Players: Sexual Health for Women in Their Middle Years [W21] targets women over the age of 40. This British Columbia project also

addresses issues unique to post-menopausal women. As the project descriptor states, women over 40 may feel uncomfortable discussing sex practices or drug usage with their health professionals and may associate condom use with birth control only. To address this, HIV prevention resources and information are made available to women through a website. Workshops are also provided.

#### d) Transwomen

The review of projects identified two projects for transwomen. The first project, named Asian Women At-risk Education and Outreach Project [W51], aims to increase access to HIV/STI prevention and sexual health messages and services, and includes transwomen among its target audience. The second project named Trans-Positive: Trans HIV/AIDS Community Health Project [W80] addresses HIV prevention and HCV among transsexual and transgender men and women principally from the Montreal area.

## 6.6 Strategies and Thematic Response

Many of the projects reviewed for this chapter focus on providing targeted HIV prevention messages. Messages are geared to increase women's awareness or knowledge of HIV/AIDS, but the ways in which this is accomplished varies from project to project. For example, education and information may be provided through media, Internet and awareness campaigns, peer-to-peer workshops, other cultural venues like English as a Second Language courses (ESL) or cultural organizations and through the distribution of HIV/AIDS resource material.

Other projects focus on capacity building objectives by providing training, building knowledge and skills, and forging partnerships through information sharing. In addition, some projects focus on providing support to women most at risk of, or living with, HIV/AIDS, mainly through peer-support or counselling.

Many of the projects discuss a woman's right to negotiate safer sex and harm reduction associated with injection drug use to reduce the risk of HIV. According to various individuals and organizations, women's ability to negotiate safer sex is fundamental to HIV/AIDS prevention and acquisition [3;5].

Many of the projects identified in this chapter strive to empower women about their sexual well-being. For example, some of the projects target specific female populations with the following objectives: to increase girls' self-esteem; promote the sexual well-being of women who experience violence; increase the well-being of women who use injection drugs; increase safer sex behaviours; and develop sex workers' ability to respond to the factors that limit their capacity to protect their health and well-being. Another program is designed to help women take more effective control of their lives and to feel better about themselves and their families. Empowerment is also fundamental to culturally specific projects. All these projects have the same objective – they seek to empower women with the goal of translating that empowerment into an ability to negotiate safer sex or to reduce the risk of harm. However, it is unclear from the project descriptors of many of these projects whether women are, in fact, more willing or able to negotiate safer sex or reduce harm actually as a result.

Regarding the determinants of health, a number of projects reviewed examine intersecting vulnerabilities among certain groups of women. The effects of intersecting vulnerabilities in women's lives are addressed to some extent in the Canadian response to HIV/AIDS among those projects that relate to culture (Aboriginal, African and Caribbean communities), age (youth and older women), physical environments (e.g., DTES), social support networks (e.g., violence), personal health practices and coping skills (e.g., substance use, sexual health).

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## CHAPTER 7 - Conclusion

This is the first time PHAC has attempted to present evidence from a variety of sources in one document to better understand the impact of HIV/AIDS on women in Canada. This status report does not include an exhaustive list of program, policy and research gaps, nor does it prescribe solutions to address existing gaps. However, it is hoped that the evidence provided in the report will be useful to governments, non-governmental organizations, public health officials, researchers, communities and others in informing the development of programs and policies addressing HIV/AIDS and issues related to the determinants of health among women in Canada.

Canadian surveillance data presented in this report indicate that the proportion of women living with HIV/AIDS has increased over the last decade. Surveillance data show that the two most common exposure categories for women are heterosexual transmission and injection drug use. In the heterosexual exposure category, women are mainly infected through sexual contact with a person at risk. However, surveillance data do not explain why some women are more likely than others to engage in unprotected sex or share injection drug equipment. Complementary research is needed to better understand the complex interactions between the factors that make some women more likely to engage in risk behaviours. Research on these factors is conducted on the premise that if the root causes of the problem are better understood, the problem can be better addressed.

Research synthesized for this report shows that biology, gender, education, social status, employment and income, social environments and social support networks, physical environments, personal health practices and coping skills, healthy child development, health services, and culture and race, are all factors that influence women's health and their vulnerability to HIV infection. For some of these factors, or determinants of health, the link between the determinant and women's vulnerability to HIV infection is heavily supported by the evidence. For instance, research shows that poverty, housing insecurity, sexual violence and physical violence, sex work, and substance use are strongly

associated with an increased risk of HIV infection in women. For other determinants, the link between the determinant and women's vulnerability to HIV infection is less direct. However, less evidence does not necessarily reflect an absence of correlation, rather it highlights gaps where further research may be warranted.

### a) Gender as a Key Determinant

While biology alone influences women's risk of HIV transmission, treatment outcomes, disease progression and comorbidities, gender is recognized as a key determinant affecting women's vulnerability to HIV/AIDS because of the way it interacts with and influences the other determinants. Research indicates that gendered roles of masculinity and femininity ultimately manifest as gender power imbalance, and it is this imbalance that lies at the heart of gender-based inequities and disparities. Gender power imbalance can directly affect risk behaviours as it translates into sexual interaction power imbalance, thereby limiting women's ability to negotiate safer sex to protect against HIV infection.

Heterosexual women's ability to negotiate safer sex (or to say no) with their partners may be compromised by gender power imbalance in a number of ways. For instance, condom use is predominantly male-controlled, placing women at a disadvantage for negotiating safer sex. This is especially true for sexual relationships involving casual partners or for women involved in sex work as condom negotiation in these situations can be difficult, especially if the security of the individual is jeopardized.

Gender power imbalance is also manifest in relationships in which male partners use physical violence or emotional abuse to obtain sex. Violence and abuse within heterosexual relationships are both causes and consequences of HIV infection in women. Injection drug use's strong association with street-based sex work and among female youth at risk is also grounded in gender power imbalance, as evidenced by research which indicates that women's injection-dependent relationships with men increase their vulnerability to HIV infection.

Culturally based attitudes about gender roles and sexual behaviour may also hinder women's ability to negotiate safer sex. For example, social norms in some ethnocultural communities may have the effect of precluding condom usage between women and their regular partners, even in cases where a woman may be aware that her husband lives with HIV or has other sexual partners.

#### **b) The Effects of Intersecting Discrimination**

In addition to gender, determinants of race and culture, sexual orientation, and stigmatizing attitudes about HIV/AIDS play a significant role in influencing women's vulnerability to HIV. This is especially true for women who are subject to multiple, compounding and intersecting forms of discrimination, such as women who live in poverty or women who are involved in sex work. For some women, several grounds of discrimination are piled one upon the other thereby increasing their vulnerability to HIV infection.

Intersecting discrimination is a contributing factor that helps explain why higher rates of HIV infection are seen among certain groups of women, including women from countries where HIV is endemic, Aboriginal women, and women who use injection drugs. As one example, research shows that the effects of intersecting discrimination are rampant in the lived experiences of Aboriginal women. For Aboriginal women, the historical trauma of colonialism and racism continue to adversely impact their socio-economic status, thereby increasing their likelihood of taking on risk behaviours, such as street-based sex work and injection drug use that increase their risk of HIV infection. Intersecting and stigmatizing attitudes about HIV/AIDS in the Aboriginal community further add to the challenges faced by Aboriginal women.

Because women's lived experiences are so diverse, it is important that women-centred HIV/AIDS prevention projects continue to consider the underlying inequalities present in many women's lives. Projects should also continue to emphasize the uniqueness and diversity of women's HIV prevention experiences and needs.

#### **c) The Importance of Empowering Women**

Research and responses to HIV/AIDS and women in Canada presented herein highlight the importance of empowering women to redress gender power imbalances and discrimination. Research and evidence-based interventions show that women's participation in the design and delivery of interventions is effective as it gives women a sense of ownership and direction to their lives. Research shows that including women as decision-makers and active participants in interventions enhances their ability to control their lives, increases their leadership skills, and provides them with the tools to negotiate safer sex.

#### **d) Gaps in Research**

Gaps in research on women and HIV/AIDS in Canada remain. While there is a significant body of research looking at HIV/AIDS among certain groups of women, such as Aboriginal women and women from countries where HIV is endemic, there remains a lack of research on certain cross-populations within these broader groups. For example, although Canadian research has examined HIV/AIDS among female youth at risk, no research has been undertaken to explore the disease among female youth from countries where HIV is endemic. Consequently, targeted interventions to address the needs of this cross-population proceed despite a lack of evidence about what works.

Other cross-populations that have not been studied include First Nations, Inuit and Métis female youth as populations independent from one another, and female youth who use injection drugs. The inventory of projects herein also failed to turn up any projects tailored to address HIV/AIDS among First Nations, Inuit and Métis women in prisons, in spite of demographic data showing that Aboriginal women are overrepresented in prison. Other groups of women overlooked by researchers include older women, who are increasingly being diagnosed with HIV, and women who are involved in sex work living and working in other areas of Canada outside of Vancouver's DTES.

Research also shows that women continue to have problems accessing appropriate information and gender-sensitive health services. HIV/AIDS-related stigma and discrimination, including sexism, transphobia, classism, historical colonialism and racism, may limit women's access to health services, including HIV testing, care and treatment. These factors may also complicate and limit the ability of women living with HIV/AIDS to access social and family support. Consequently, more research is needed to identify and analyze gender and culturally appropriate approaches to HIV/AIDS prevention, care, treatment and support, specific to the needs of certain groups of women, including female at-risk youth, women from countries where HIV is endemic, women who are involved in sex work, lesbian, bisexual, transwomen, two-spirited women, Aboriginal women, women in prisons, women who use injection drugs and older women.

#### **e) The Canadian Response**

In reviewing the Canadian response to HIV/AIDS among women, the report found that many organizations provide distinct prevention strategies aimed at specific female populations. For example, some activities target women involved in sex work and focus on increasing their knowledge of HIV/AIDS, enhancing their capacity to empower themselves, and improving their access to health services. Several initiatives for women from countries where HIV is endemic provide support to women living with HIV/AIDS and endeavour to offer culturally specific services, including sexual health education workshops specifically designed to meet their cultural needs relating to health care. However, there is a continued need to evaluate these interventions to establish an evidence-based compendium of effective HIV prevention interventions for different groups of women. Further, more systemic evaluation is needed to identify what is working to improve the lives of women at risk and women living with HIV/AIDS.

Other initiatives delivered to women as part of the Canadian response to HIV/AIDS aim to address the root causes of HIV/AIDS among women. For instance,

community-based organizations have worked to address key health needs of distinct female populations by offering culturally relevant services, peer support and counselling for women from countries where HIV is endemic and for Aboriginal women. Several of the projects have tried to address issues faced by women in prison and women living in disadvantaged urban environments and remote communities by supporting peer-led activities tailored for their particular environments. Other projects have also tried to tackle issues rooted in gender inequality, such as men's violence against women (especially among Aboriginal women) and issues surrounding disclosure of HIV status, with interventions designed to empower women in heterosexual relationships.

However, there remain gaps<sup>55</sup> in the Canadian response to HIV/AIDS in women. For example, most projects treat Aboriginal women as a homogenous population, failing to recognize the differences between First Nations, Inuit and Métis women. Many projects overlook the effects of intersectional discrimination and its marginalization of certain groups of women. In addition, while several projects are designed to empower women in the hopes that empowerment will improve their ability to negotiate safer sex, it is not always clear whether these projects elicit the outcome desired.

#### **f) The Importance of Partnership**

Many of the projects reviewed as part of this report highlight the importance of partnerships among different sectors of society to affect change. The current Canadian response to HIV/AIDS in women involves a wide array of organizations and communities, which have built networks across the country to encourage knowledge exchange for gender-relevant approaches to HIV/AIDS. It is important to continue strengthening organizations' capacity for evaluation and their capacity to collaborate with researchers to engage in community-

<sup>55</sup> It should be noted that the gaps outlined herein may be the result of the methodological limitations of the report as certain projects may have been missed as a result of limited descriptors which prevent a thorough understanding of response activities.

based research to determine whether current programs, interventions and activities adequately meet the prevention, care, treatment, and support needs of this population. Consequently, cross-sectoral and cross-jurisdictional activities to share best practices, to increase partnerships among a wider range of stakeholders, and to better use evidence in the development of strategies and interventions should be fostered and encouraged.

#### **g) Future Developments**

In recent years, women's health advocates have asked scientists to intensify their research on female-controlled barrier method contraceptives. Barrier methods offer the advantage of protection against pregnancy and some types of sexually transmitted infections. Currently, the female condom remains the only available effective woman-controlled barrier against HIV infection, but it presents certain challenges for use. Ultimately, women need more affordable, more accessible, more reliable, more user-friendly and more easily hidden from a male partner (to protect women against abuse or violence) woman-controlled contraceptive barrier methods. There are several microbicides currently in the research pipeline which could one day improve women's ability to protect themselves against the sexual transmission of HIV.

Canadian stakeholders involved in addressing HIV/AIDS among women have demonstrated a strong collective will to affect change. Their unwavering dedication to increase HIV/AIDS awareness and to reduce stigma and discrimination has contributed to a growing recognition that HIV/AIDS in women cannot be ignored. This report acknowledges the important role that stakeholders play in HIV/AIDS leadership, research, treatment and prevention. Stakeholders must continue to build on their successes and their ongoing quest to get ahead of, and reverse the impact of, HIV/AIDS among women in Canada.

# APPENDIX A

## 1) Search terms

Note that words with an asterisk (\*) are search terms with several possible endings.

Women	Canad*	HIV
Mother	Newfoundland	HIV+
Girl	Nfld	AIDS
Matern*	Labrador	Human immunodeficiency
Pregnan*	Prince Edward Island	Human immune deficiency
Femme	Nova Scotia	Acquired immunodeficiency
Fille	PEI	Acquired immune deficiency
Mère	New Brunswick	Acquired-immunodeficiency-
Fémin*	Québec	syndrome
Enceinte	Ontari*	VIH
Grossesse	Manitoba	VIH+
Lesbi*	Saskatchewan	D'immunodéficience
	Alberta	L'immunodéficience
	British Columbia	Immunodéficience humaine
	Yukon	HIV-seropositivity
	Northwest Territor*	AIDS-serodiagnosis
	NWT	HIV-seroprevalence
	Nuvavut	
	Halifax	
	Haligonian	
	Montreal	
	Toronto	
	Ottawa	
	Winnipeg	
	Regina	
	Saskatchewan	
	Edmonton	
	Calgary	
	Vancouver	
	Terre-neuve	
	Nouvelle-Écosse	
	Île-du-Prince-Édouard	
	Nouveau-Brunswick	
	Colombie-Britannique	
	Territoires du Nord-Ouest	

## 2) Databases Searched

- CIHAHL 2002-2009
- Current Contents 2002-2009
- Global Health 2002-2009
- Psych Info 2002-2009
- Social Policy and Practice 2002-2009
- Medline 2002-2009
- Embase 2002-2009
- Scopus 2002-2008
- Social Services Abstracts 2002-2009
- Sociological Abstracts 2002-2009

## APPENDIX B

**Current HIV/AIDS Research  
on Women in Canada****Project R1**

*Aboriginal two-spirit and LGBTQT migration,  
mobility and health*

**Principal investigator:** Janice Ristock,  
Department of Women Studies, University of Manitoba

**Abstract:** This project is part of a larger research team grant: Sexuality and Gender: Vulnerability and Resilience (PI: Danielle Julien, UQAM) (see website <http://www.svr.uqam.ca/index.asp>). This pilot project will explore trajectories of migration and mobility of Aboriginal people who identify as two-spirit, lesbian, gay, bisexual, queer and/or transgender and the impact on health and wellness. This may include migrating from reserves to urban centres or rural communities (and back and forth) as well as staying or moving within one place. We are interested in the intersection between sexual and gender identities with cultural/ Nation and other identities within the historical and present context of colonization in Canada. This purpose will be met through the following objectives: 1-to explore the migration paths and experiences of LGBTQT Aboriginal peoples, their experiences of health/wellness in that context, and their interactions with health and social services (including mainstream, Aboriginal and LGBTQT services); 2-to generate new knowledge that may lead to future research that will be of direct benefit to LGBTQT and Aboriginal communities, Aboriginal service providers and health/social service agencies.

**Dates:** 2006-2011

**Funder:** CIHR

**Reference:** HIV Research in the Prairies:  
A Compendium

**Topic:** Aboriginal two-spirit and LGBTQT

**Project R2**

*Advancing HIV services research: Expanding Andersen's  
health service utilization framework*

**Principal investigator:** Catherine A. Worthington

**Abstract:** HIV services research and evaluation have shown that in order to be effective, HIV services need to be tailored to the specific contexts, cultures and locales of infected populations and at risk for infection to HIV through collaborative research endeavours, particularly since many of these populations are vulnerable or marginalized. The goal of this five-year program of research, supported by a CIHR New Investigator Award, is to conduct a series of collaborative and interdisciplinary research projects to improve HIV health services for specific groups. Two projects focus on services for those living with HIV, and two projects focus on services for vulnerable populations. The first project (funded by CIHR for 2003-2005) will provide rehabilitation and HIV professionals with information on the ways in which rehabilitation services could improve health care for those living with HIV. The second project (funded by SSHRC for 2003-2006) will provide HIV clinicians with information on ways to improve clinical research practices for HIV patients. The third research project (submitted to CIHR) will provide information to Aboriginal and HIV service providers on the knowledge, attitudes, experiences, and beliefs of Ontario Aboriginal women about HIV and HIV risks to assist in services development for this vulnerable population. The fourth research project (to be prioritized for funding by Health Canada for 2004) will provide a team of HIV and street youth agencies with information on the spectrum of street youth in Calgary, their HIV and health risks, strengths, coping mechanisms, and service needs. All of these projects are collaborative in nature with direct participation of service providers and/or members of the populations under study to ensure knowledge exchange and timely uptake of research result.

**Dates:** July 2005 – June 2010

**Funder:** Canadian Institutes of Health Research (CIHR) – Clinical Research Initiative/Institute of Health Services and Policy Research New Investigator Award

**Reference:** CIHR database

**Topic:** Aboriginal women

**Project R3**

*Antiretroviral therapy as an additional HIV prevention tool for serodiscordant couples in Uganda*

**Principal investigator:** David M. Moore, University of British Columbia

**Abstract:** Despite widespread prevention efforts over the last 20 years, HIV continues to spread around the globe. Uganda is one of the few countries where the number of people with HIV has fallen in recent years. Some surveys have shown reductions in HIV risk behaviour, presumably as a result of HIV prevention campaigns. However, these changes in sexual behaviour have not resulted in reductions in the estimated numbers of new HIV infections occurring each year. It is clear that other prevention measures are needed in addition to providing counselling and condoms for individuals who may be at risk of becoming infected with HIV. Much prevention research has been focussed on developing new technologies, such as vaccines and microbicides. Antiretroviral therapy (ART) has been in use for the last decade in North America and Europe and has been shown to dramatically improve survival in HIV-infected individuals. However, because ART reduces the level of HIV in the blood, it may also have a significant role to play in preventing HIV infections. Several studies, including one from the British Columbia Centre for Excellence in HIV/AIDS have concluded that ART may have been responsible for preventing large numbers of new HIV infections in North America, East Asia and Europe, where access to ART has widely been available since 1996. However, it is not known how effective ART may be in protecting individuals from HIV infection above the protection offered by condoms and counselling. HIV-uninfected individuals who live with their HIV-infected sexual partners are amongst the most at-risk populations for acquiring HIV in Uganda. Transmission within such couples is thought to account for large numbers of new HIV infections. We, therefore, wish to study the effectiveness of ART in preventing HIV transmission among such individuals, where the HIV-infected partner is already accessing HIV basic care and/ or ART.

**Dates:** October 2008 – September 2011

**Funder:** Canadian Institutes of Health Research (CIHR) – Operating Grant

**Reference:** CIHR database

**Topic:** HIV/AIDS biomedical research (insight for Canada)

**Project R4**

*Building capacity to reinforce adherence to antiretroviral therapy and sexual prevention for patients in or from resource-limited settings*

**Principal investigator:** Vinh-Kim Nguyen, Lady Davis Institute, Jewish General Hospital (Montreal)

**Abstract:** This project aims to respond to the challenges raised by expanding access to antiretroviral therapy (ART) in Africa and the growing epidemic in women from endemic countries in Canada. Specifically, we are concerned with providing knowledge to more effectively sustain treatment effectiveness and improve prevention measures in patients on treatment, particularly for women in or from endemic countries. Our study will be a prospective multicentre cohort study in 6 sites prescribing ART in Burkina Faso and Mali. We will enrol 800 patients starting ART. In this cohort, we will (1) describe treatment effectiveness using immunologic and clinical outcome measures (CD4 response, AIDS defining illness and death); (2) describe adherence to HAART, using questionnaires we have previously validated in this population, by calculating time to non-adherence; and (3) describe adherence to sexual behaviours that reduce HIV transmission risk by calculating time to consistent condom use for people with regular sexual partners and time to notification of sexual partners for those patients who have not yet notified partners of their HIV+ status. Gender-specific models will be developed to identify factors that influence adherence and preventive behaviour for women and men separately.

**Dates:** July 2006 – March 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – Capacity Building through Enhanced Operating Grants in HIV/AIDS

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=1838>

**Topic:** Women from countries where HIV is endemic



**Project R5***Cellular immune control of HIV-1 in the female genital tract***Principal investigator:** Dr. Anuradha Rebbapragada, University of Toronto**Abstract:** not available**Dates:** September 2004 – August 2006**Funder:** Ontario HIV Treatment Network (OHTN)**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=1162>**Topic:** HIV/AIDS biomedical research (insight for Canada)**Project R6***CIHR team in HIV therapy and aging***Principal investigator:** H el ene Cote, University of British Columbia**Abstract:** Globally, there are ~18 million women living with HIV. The vast majority of these women are of child-bearing age and ~3 million give birth annually. Treatment of HIV-infected pregnant women with antiretrovirals (ARV) reduces the rate of perinatal transmission from ~25% to <1% and is critical for the health of women who are at risk for serious opportunistic infections and/or death. Current treatment guidelines recommend combination ARV therapy for all pregnant women infected with HIV. The international community is rapidly scaling up the accessibility of ARVs in the developing world and million of infants will be soon born having had in utero ARV exposure. While it is clear that ARVs are very effective at preventing HIV transmission, very little is known about the potential adverse effects of exposing developing fetuses and infants to these drugs. HIV ARVs may have an adverse effect on the developing embryo, fetus or infant. Any potential effects of the drugs are expected to be greatest when exposure occurs during rapid development and growth. Consequently, it is of particular importance to investigate the impacts of ARV on these children. In humans, we already know that HIV ARV can cause DNA molecular changes that are strikingly similar to those occurring with aging, and that are associated with genetic diseases or conditions

whose prevalence increases with age, such as degenerative illnesses and heart diseases. The goal of this Emerging Team proposal is to develop a research program focussed on the potential effect of HIV ARVs in modulating aging-related biological phenomena in the paediatric population, namely HIV-uninfected infants exposed to HIV drugs perinatally (before and after birth) and of HIV-infected children receiving ARV therapy. To our knowledge, ours is the only group in Canada working on issues related to the toxicity of perinatal and paediatric HIV ARV exposure and is uniquely positioned to undertake the research program supported by this Team grant

**Dates:** October 2007 – September 2012**Funder:** Canadian Institutes of Health Research (CIHR) – Emerging Team Grant Program – HIV/AIDS**Reference:** CIHR database**Topic:** Vertical transmission**Project R7***Comparative analysis of the visibility of infected men and women in HIV/AIDS discourse and media messages***Principal investigator:** Maria N. Mensah, Universit e du Qu ebec  a Montr eal**Abstract:** Not available**Dates:** January 2005 – January 2008**Funder:** Social Sciences and Humanities Research Council of Canada (SSHRC)**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=1541>**Topic:** Gender analysis (feminist studies; comparative study; Women and men living with HIV)**Project R8***Constructing HIV risk: Sexual and drug use networks and increased vulnerabilities among survival sex workers***Principal investigator:** Kate Shannon, University of British Columbia**Co-investigators:** Dr. Mark Tyndall, Dr. Thomas Kerr**Abstract:** not available**Dates:** January 2006 – December 2006**Funder:** Michael Smith Foundation for Health Research Student award

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=1379>

**Topic:** Survival sex workers; injection drug users; women

### Project R9

*Correlates and control of HIV shedding and transmission in semen*

**Principal investigator:** Rupert Kaul, University of Toronto

**Abstract:** The HIV-1 pandemic has claimed over 20 million lives, and 43 million people are currently infected. Sexual contact with HIV-infected semen is the major driving force behind the global pandemic, but many aspects of HIV transmission through semen are completely misunderstood. Much work is needed to lay the groundwork for the development of rational public health policy and novel therapeutic strategies. Our research group has a long-standing interest in the virology, immunology and clinical correlates of HIV shedding and transmission in the genital tract, and we propose to expand our studies of HIV semen shedding to define the correlates of virus transmission within an established cohort of HIV-infected men from Toronto, as follows: 1) to understand the clinical and biological correlates of disproportionately high and low semen HIV shedding in HIV-infected men, both on and off antiretroviral therapy; 2) to study the transmission of HIV in semen across the epithelium of the female genital tract, and to study the impact of specific host and viral factors; and 3) to prospectively examine differences in the characteristics of HIV in the semen and blood of HIV-infected men. These studies will help us to understand why HIV levels in semen are so variable, how levels are affected by host and viral factors, and to develop better public health and therapeutic tools to prevent HIV semen transmission.

**Dates:** October 2006 – September 2011

**Funder:** Canadian Institutes of Health Research (CIHR) – Operating Grant

**Reference:** CIHR database

**Topic:** HIV/AIDS biomedical research (insight for Canada)

### Project R10

*Defining effective anti-viral combinations in order to decrease the sexual transmission of HIV*

**Principal investigator:** Susan M. Schader, Jewish General Hospital (Montreal)

**Abstract:** The HIV epidemic continues to spread at a rapid rate in underdeveloped countries. Women represent a growing percentage of new HIV infections and currently encompass nearly half of all infected adults. In the regions worst affected by the epidemic, almost 60% of all adults living with HIV are women, with those of age 15-24 years being 3 to 4 times more likely to be infected than men of the same age. The lack of widespread, affordable anti-retroviral therapy means that many of these women will have little chance for long-term survival. Thus, there is an urgent need for effective, low cost preventives against new HIV infection. The effort to develop a low-cost topical gel or cream to prevent the sexual transmission of HIV is gaining momentum. Termed ‘microbicides’, this type of preventative represents a potential means by which women in underdeveloped countries can effectively protect themselves from HIV infection without the use of a condom or other cooperative measures by the male or his knowledge or consent. The success in treating systemic HIV-1 infection in North America and Europe may be largely attributed to the design of treatment regimens. By including a variety of anti-viral drugs in treatment regimens, the patient is provided with an arsenal against HIV replication. A combination of drugs works better than any single drug because it prevents multiple steps in the virus life cycle, rather than targeting just one. This makes it more difficult for HIV to adapt or ‘learn’ how to retaliate or, in other words, develop ‘resistance’. Likewise, microbicides may be more effective if a combination of drugs is included in formulations, especially since the transmission of drug resistant HIV is increasing. Furthermore, combinations of drugs can lower toxic side effects

and have the potential for synergy. Therefore, this study will seek to define the most effective combinations of microbicide compounds to prevent the sexual transmission of HIV.

**Dates:** May 2008 – April 2011

**Funder:** Canadian Institutes of Health Research (CIHR) – Frederick Banting and Charles Best Canada Graduate Scholarships – Doctoral Award

**Reference:** CIHR database

**Topic:** HIV/AIDS biomedical research (insight for Canada)

### Project R11

*Determining the effectiveness of antiretroviral therapy in preventing heterosexual transmission of HIV among HIV serodiscordant couples in Eastern Uganda*

**Principal investigator:** David M. Moore, University of British Columbia

**Abstract:** While HIV prevalence in Uganda has fallen dramatically since the early 1990s, it remains unacceptably high with 7.3% of adult women and 6.3% of adult men infected in 2005. There is concern that HIV incidence has remained largely unchanged in Uganda over the last decade and indeed may be on the increase. In this setting, antiretroviral therapy (ART) has become increasingly available in Uganda, beginning in 2003. Uganda is still only treating about 8% of the total HIV-infected population in the country. Recently, the largely unrecognized value of ART in preventing new HIV infections in industrialized countries has been highlighted with population-based studies. However, the estimates of the added preventive value of ART in sub-Saharan are limited by the lack of data on the effectiveness of ART in reducing HIV transmission through heterosexual contact. In theory, HAART should be highly effective in reducing heterosexual transmission as the risk of HIV transmission is very dependent on the level of HIV in an infected individual's blood. However, only two studies have derived estimates for the effectiveness on reducing ART. We propose to conduct an observational study of two groups of HIV serodiscordant, co-habiting heterosexual couples; one group where the HIV-positive partner is

on ART because of meeting clinical or laboratory eligibility requirements and the second group will be composed of individuals where the infected partner is not ART eligible. We propose to conduct this study among clients of The AIDS Support Organization in Mbale and Soroti districts in Eastern Uganda.

**Dates:** July 2008 – June 2013

**Funder:** Canadian Institutes of Health Research (CIHR) – New Investigator Award in Area of HIV/AIDS Services/Population Health Research

**Reference:** CIHR database

**Topic:** HIV/AIDS biomedical research (insight for Canada)

### Project R12

*Development and validation of interventions targeted to women living with HIV: Being in control of your personal, interpersonal, sexual and social life*

**Principal investigator:** Joanne Otis, Université du Québec à Montréal

**Abstract:** For women living with HIV, quality of life is greatly impacted by the lack of control they experience in their day-to-day lives. In light of the extensive knowledge acquired from a study on the experiences of Montreal-area women living with HIV (Trottier et al., 2005), as well as the low number of interventions that appear to respond to the specific needs emerging from this study, this pilot project seeks to develop, implement and conduct a formative evaluation of an intervention (Intervention Mapping, Bartholomew et al., 2000) targeted to women living with HIV, with a view to giving them greater control of their personal, interpersonal, sexual and social lives. The pilot project will be launched in collaboration with representatives of 14 community collaborator groups. Next, the feasibility of a potential summative evaluation research project for documenting the direct and indirect effects of this intervention will be explored. The targeted intervention will be offered to four different groups of women living with HIV (n=32), who will participate in workshops focussing on various aspects of life (personal, interpersonal, sexual and social). A variety of data collection methods (trainer's log, direct

observation of workshops, a plenary with all the women following each workshop, and self-administered questionnaires beforehand and afterward) will help us adjust the intervention along the way, document the intervention's implementation and the conditions influencing it, and ascertain the women's assessment of the intervention in terms of structure, process and meeting objectives. Consistent with The Federal Initiative to Address HIV/AIDS in Canada, the pilot project will help women living with HIV develop their potential and improve their quality of life.

**Dates:** March 2006 – February 2007

**Funder:** Canadian Institutes of Health Research (CIHR) – Pilot Project in HIV/AIDS

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=734>

**Topic:** Women living with HIV

### Project R13a

*Development of an HIV/AIDS prevention intervention for indoor sex workers and their partners*

**Principal investigator:** David Michael Patrick, BC Centre for Disease Control

**Abstract:** Women who work as commercial sex workers (CSW) in indoor sex venues (e.g. massage parlours and escort agencies) represent a large, hidden population at risk for HIV/AIDS in Canada. We will conduct a community-based research project with the goal of developing a culturally- and gender-appropriate, feasible HIV/AIDS prevention intervention for indoor CSW and men who purchase sex (clients) in the Vancouver area. Peer researchers (ex-CSW) will help conduct a survey of 300 indoor CSW and clients. We will also conduct in-depth interviews to explore the nature of how indoor CSW and clients make decisions related to HIV/AIDS risk behaviour (e.g. condom use). Using the research results, we will work with community members to develop the HIV/AIDS prevention program. The population of indoor CSW and their clients is large, but they comprise only a part of a much larger network of sexual contacts that includes members of the general population (wives, girlfriends, husbands, boyfriends, and other non-commercial sex contacts). Therefore, the

findings from this research have enormous potential to reduce the overall HIV/AIDS risk to the greater population of CSW, men who purchase sex, and all of their other, non-commercial sex partners.

**Dates:** January 2006 – March 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – General – Operating Grant

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=744>

**Topic:** Sex workers (Vancouver)

### Project R13b

*Development of an HIV/AIDS prevention intervention for indoor sex workers and their partners*

**Principal investigator:** Caitlin Johnston

**Abstract:** As we begin to prepare for Phase 3 of the ORCHID project, investigator activities will include a series of face-to-face community consultations (workshops and meetings) with peers (women with sex work experience), community leaders, service providers, sex establishment owners and managers, and male sex buyers. The purpose of the series of meetings will be to reflect on the findings of Phase 2, and discuss how they might best be put to use for development of an HIV/STI prevention initiative for CSW and male sex buyers. In collaboration with project investigators, community consultations will produce a first draft of an intervention strategy. Although the content of this draft will depend on the direction taken through community consultation, it may include documentation outlining steps required to gain access to indoor CSW and men who purchase sex; prototype educational tools (for example, posters, comic strips, pamphlets, or videos); HIV and STI training manuals for peers; and basic communication strategies that appreciate and reflect the language and culture of the population. As part of our ongoing KT activities, we will work to ensure that the ORCHID model is available to CBOs in other national or international contexts. We will continue to consult with researchers at the Center for AIDS Prevention Studies, University of San Francisco, and their community partners at the Asia and Pacific

Islanders Wellness Center. Furthermore, we will expand our current network of CBO contacts by seeking out connections through postings on the Internet, presentations at national and international conferences, and the preparation and submission of manuscripts for publication in peer-reviewed journals. We will continue to develop and maintain a 'methods manual,' which is to include detailed descriptions of study methodologies, resource and education materials, and peer training modules used throughout the ORCHID project.

**Dates:** January 2009 – December 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – Meetings, Planning and Dissemination Grant: Knowledge Translation Supplement

**Reference:** CIHR database

**Topic:** Sex Workers (Vancouver)

### Project R14

*A developmental CBR study to investigate factors leading to pregnancy and HIV risk among female street youth in Toronto*

**Principal investigator:** Dr. Allison Scott, St. Michael's Hospital

**Abstract:** not available

**Dates:** February 2007 – January 2009

**Funder:** Ontario HIV Treatment Network (OHTN)

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=2287>

**Topic:** Female Youth (Toronto)

### Project R15

*Economic and equity dimensions of preventing mother-to-child transmission of HIV/AIDS in Guatemala: A pilot study with methodological insights for Canada*

**Principal investigator:** Mira Johri, Université de Montréal

**Abstract:** Guatemala recently received a large disbursement of funds from the Global Fund for HIV/AIDS, TB and Malaria (GFATM) for its HIV/AIDS strategy. An urgent national priority is to conduct operational research designed to identify best practices for the newly proposed program to prevent mother-to-child

transmission in Guatemala and to inform policy design as the programme is scaled up at the national level. Based on analysis of comprehensive health, behavioural and socio-economic data from 3,400 mother-child pairs, we propose to work with policy makers to identify options for enhancing programme cost-effectiveness. In so doing, we will extend and test methodological tools for economic evaluation using the net benefit regression framework, so as to address both cost-effectiveness and equity concerns. Results of the policy analysis will prove useful for Guatemala and other resource-constrained low prevalence settings. Methodological developments will be of benefit nationally for Canada as well as elsewhere.

**Dates:** April 2006 – March 2007

**Funder:** Canadian Institutes of Health Research (CIHR) – Pilot Project in HIV/AIDS

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=1814>

**Topic:** Vertical transmission (insight for Canada)

### Project R16

*Effect of antiretroviral therapy on maternal blood cell mitochondrial DNA levels during pregnancy in HIV-infected women and mitochondrial DNA damage in infants exposed to HIV antiretroviral drugs in utero*

**Principal investigator:** Dr Deborah Money, Children and Women's Health Centre of British Columbia

**Abstract:** The great benefit of HAART in pregnancy must be tempered by an understanding of the risks these potential toxic medications entail for the mother, the foetus, and ultimately the HIV uninfected but in utero drug-exposed child. This study will utilize a novel assay for the determination of mitochondrial DNA (mtDNA) levels to evaluate a cohort of HIV-infected pregnant women receiving HAART, and their infants, for evidence of previously unrecognized mitochondrial toxicity.

**Dates:** December 2004 – July 2007

**Funder:** Canadian Foundation for AIDS Research (CANFAR)

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=1435>

**Topic:** Vertical transmission (women living with HIV)

**Project R17**

*The effect of common genital co-infections and their therapy on HIV transmission and susceptibility*

**Principal investigator:** Lucy Yun Young Shin, University of Toronto

**Abstract:** not available

**Dates:** September 2007 – August 2010

**Funder:** Canadian Institutes of Health Research (CIHR) – Doctoral Research Award in the Area of Biomedical/Clinical HIV/AIDS Research

**Reference:** CIHR database

**Topic:** HIV/AIDS biomedical research (insight for Canada)

**Project R18**

*Effect of maternal inflammation on drug efflux transporters: Impact on fetal drug exposure*

**Principal investigator:** Vanja Petrovic, University of Toronto

**Abstract:** Treating HIV infection in pregnant women requires the use of potent antiretroviral therapy to prevent both disease progression in the mother and vertical transmission to the newborn. While drug therapy is essential, there is insufficient information on the disposition of antiretroviral drugs in pregnant women and their fetuses. This information is critical as effective drug concentrations are required for the mother's health yet could pose harm to the fetus. The placenta serves as a protective barrier against xenobiotics and blood-borne toxins between the mother and the fetus. Several ATP-binding cassette (ABC) transport proteins are highly expressed in the placenta and have been found to limit the passage of many antiretroviral agents into the fetus; thereby altering fetal drug exposure. Studies in our laboratory have revealed that inflammatory responses, generated in many disease conditions, decrease the expression and activity of these ABC transporters in numerous tissues, such as liver, intestine and brain. Maternal infection is a prevalent obstetric complication associated with an inflammatory response. To date, virtually nothing is known about the impact of infection on the regulation and activity of the

placental drug transporters. Therefore, the primary objective of this study is to explore the influence of bacterial and viral infections on the ABC drug efflux transporters and predict how these changes may affect the placental transfer and fetal exposure of antiretroviral drugs used in pregnant women. The results of this project will provide critical information for prediction of potential drug-disease interactions, drug selection and dosing in pregnancy and may eventually be used to minimize fetal drug exposure.

**Dates:** September 2008 – August 2010

**Funder:** Canadian Institutes of Health Research (CIHR) Doctoral Research Award

**Reference:** CIHR database

**Topic:** Vertical transmission (insight for Canada)

**Project R19**

*Effect of toll-like receptor activation on susceptibility to HIV in human female genital tissue*

**Principal investigator:** Kenneth L. Rosenthal, McMaster University

**Abstract:** Forty-five million individuals worldwide are now infected with HIV. Most have been infected following sexual transmission with this lethal virus, and almost half of those infected are women. Since HIV is sexually transmitted, the first cells to come in contact with the virus are those that line the genital tract, so-called genital epithelial cells. Recent advances in our understanding of how our innate immune system recognizes and protects us against infection are leading to a new era of disease prevention. Recently, we showed that delivery of molecules that activate our innate immune system to the genital tract of female mice completely protected them against sexual transmission of a virus. Here, we propose to study whether activating innate immune defence in human genital epithelial cells can protect against HIV infection. These studies may lead to the development of substances that women can apply vaginally to protect against HIV and other sexually transmitted infections through activation of natural innate immune defences in the female genital tract.

**Dates:** October 2004 – September 2007

**Funder:** Canadian Institutes of Health Research (CIHR)  
Operating Grant – Priority Announcement: HIV/AIDS  
Research Initiative – Biomedical / Clinical Stream  
**Reference:** CIHR database  
**Topic:** HIV/AIDS biomedical research  
(insight for Canada)

### Project R20

*Enhancing uptake and sustainability of HIV care and antiretroviral therapy among survival sex workers*

**Principal investigator:** Dr. Mark W. Tyndall,  
University of British Columbia

**Abstract:** The introduction of highly active antiretroviral therapy (HAART) has dramatically changed the clinical course of HIV infection for many thousands of Canadians. It has been nearly a decade since effective medications have been available, and current treatment is highly effective, well tolerated, and has manageable toxicities. The benefits of these impressive treatment gains, however, have not been shown among marginalized populations, including sex workers and illicit drug users, who increasingly are feeling the impact of HIV. The uneven distribution of antiretroviral therapy to eligible HIV-positive people represents one of the largest disparities in Canadian health care. Although this situation presents a major challenge for health care providers and policy makers, it also provides an opportunity to develop, implement and evaluate a comprehensive program in HIV care and treatment that can greatly improve the health of this population and decrease HIV transmission. The lessons learned from this project have the potential to go beyond Vancouver's Downtown Eastside community, to become a model for other urban communities where HIV treatment is under-utilized.

**Dates:** July 2005 – March 2009

**Funder:** Canadian Institutes of Health Research (CIHR)  
– Reducing Health Disparities and Promoting Equity for  
Vulnerable Populations

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=865>

**Topic:** Survival sex workers (on women; publication-  
2009, AIDS Patient Care STDS, Aug (23) 8: 603-9) (DTES)

### Project R21

*The epidemiology of sexually transmitted infections and blood-borne pathogens in an inmate population*

**Principal investigator:** Dr. Carole Beaudoin,  
University of Manitoba

**Co-principal:** Dr. John Wylie

**Co-investigators:** Dr. Magdy Dawood, Dr. Trina Larsen,  
Dr. Marilyn Sloane, Dr. Paul Van Caesele,  
Dr. Michelyn Wood

**Abstract:** The aim of this study is to inform effective and innovative prevention efforts in reducing the transmission of sexually transmitted infections (STI) and blood-borne pathogens (BBP) among an inmate population. The need to identify and quantify STI and BBP prevalence and related risk behaviours among individuals incarcerated in correctional facilities is necessary to inform prevention and harm reduction activities. As such, this study will engage in a collaborative research project between the University of Manitoba, the provincial health and justice ministries in Manitoba (Manitoba Health and Manitoba Justice, respectively), and the Public Health Agency of Canada to assess within an inmate population: (a) the seroprevalence of HIV, Hepatitis C, gonorrhoea, chlamydia, and syphilis; (b) the behaviours engaged in by inmates which may put them at risk for transmission of an STI/BBP; (c) the knowledge (or lack thereof) of disease risk behaviours; and (d) the social and environmental barriers to disease prevention that exist within a correctional setting. To this end, seroprevalence screening for gonorrhoea, chlamydia, syphilis, Hepatitis C, and HIV, in addition to in-depth interviews, will be conducted with 400 incarcerated study participants over a six-month period. In addition to conference presentations and peer-reviewed publications, knowledge translation of the behavioural risks and the social and environmental influences on those risks will be conducted with local community organizations that support prevention, harm reduction and health services, and with both federal and provincial Health and Corrections Departments to support the development of evidence-based policy and programs.

**Dates:** November 2007 – October 2009

**Funder:** Canadian Institutes of Health Research (CIHR)

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=2134>

**Topic:** People in prison  
(both male and female specified) (Manitoba)

### Project R22

*Evaluation of Pouvoir partager/Pouvoirs partagés, a program run by and for women living with HIV that tackles the issue of disclosure*

**Principal investigator:** Joanne Otis,  
Université du Québec à Montréal

**Abstract:** *Pouvoir Partager/Pouvoirs Partagés* (PP/PP) is an empowerment program that aims to give women living with HIV the resources to disclose their HIV-positive status in a variety of contexts. The program was developed as a pilot project in 2006-2007 with the active participation of 26 women living with HIV and four workers in the Montreal area. The validation study demonstrated the relevance and usefulness of PP/PP, but it also highlighted the importance of 1) consolidating the process whereby the workers and the women living with HIV take ownership of the program; 2) conducting a more convincing evaluation of the project's effects; and 3) providing written statements of the women's experiences with PP/PP. The purpose of this three-year study is to mobilize women living with HIV and the people working with them and to describe their trajectory of empowerment in the context of the PP/PP evaluation. The evaluation involves the following: a) designing, implementing and evaluating provincial training for trainer/co-facilitator pairings; b) introducing and evaluating PP/PP, which the pairs will have facilitated for 11 groups of 8 to 10 participants each; and c) organizing and carrying out knowledge-sharing activities (community forum and producing a collective work). The principles of Empowerment Evaluation are an inspiration for this study, which rests on the use of multiple qualitative (coordinator's log, shared assessment groups, Web discussions, etc.) and quantitative (self-administered questionnaires) data collection methods. The purpose of this project is to help achieve the objectives of the fight against HIV that

pertain to improving the quality of life of women living with HIV, as indicated in The Federal Initiative to Address HIV/AIDS in Canada.

**Dates:** April 2008 – March 2011

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – General – Operating Grant

**Reference:** CIHR database

**Topic:** Women living with HIV (Montreal)

### Project R23

*Evaluation of the implementation of a community program aimed at improving the quality of life of Montreal-area women living with HIV*

**Principal investigator:** Sarine L. Hovsepian,  
Université de Montréal

**Abstract:** With regard to the HIV epidemic, while antiretroviral treatments increase life expectancy, quality of life remains a concern. The proposed project will evaluate the implementation of a community program in six organizations and communities that is aimed at helping women living with HIV feel more in control of their lives. We will first evaluate the degree to which each intervention has been implemented by comparing the activities that are actually implemented to those that have merely been proposed. Next, we will outline the contextual factors influencing the implementation of the program by observing community interest and involvement, the level of project appropriation by the community, and the dynamics between actors. This will be done by observing participants and workers, interviewing key contacts and consulting activity reports. We will then evaluate how variations in implementation impact effectiveness by comparing the degrees of implementation to the outcomes of each program. This will be measured by administering questionnaires to participants before and after intervention. Finally, we will conduct quantitative and qualitative analyses to evaluate how the contextual and implementation-related factors jointly influence the program's effectiveness. By evaluating the implementation of a community program aimed at helping women



living with HIV feel more in control of their lives, we will be able to evaluate how effectively this program improves their quality of life and to gain a greater understanding of the conditions that yield positive results. This information is essential for directing the choice of environments and contexts in which similar community programs can be effectively implemented.

**Dates:** May 2006- April 2009

**Funder:** Canadian Institutes of Health Research (CIHR)  
– HIV/AIDS Community Based Research Program  
– General – Doctoral Research Award

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=1811>

**Topic:** Women living with HIV (Montreal)

### Project R24

*Examining the complex role of social, environmental and structural factors as barriers and facilitators for HIV risk and prevention among substance-using women in survival sex work*

**Principal investigator:** Kate Shannon,  
University of British Columbia

**Abstract:** Women engaged in survival sex work in Vancouver's Downtown Eastside (DTES) face multiple vulnerabilities that directly enhance their risk of HIV transmission, including entrenched poverty, homelessness, repeated episodes of violence and assault, substance abuse, and social marginalization. In addition, the illegal, clandestine and largely unregulated nature of sex trade work in Canadian cities increasingly pushes street-entrenched women to the outskirts of society, limiting their means to protect themselves and access to supportive health services. Despite increasing evidence of gender differentials in new HIV infections facing women – particularly youth and women of Aboriginal ancestry – and extensive harm reduction and public health efforts focussing on illicit drug use in this community, little information exists about the complex social, environmental and structural factors that facilitate prevention, harm reduction practices, and access to care. Kate Shannon's research will use participatory-action research methodologies to explore the social and environmental

barriers and facilitators to HIV prevention among survival sex workers. While several individual factors have been shown to elevate HIV and STI (sexually transmitted infection) risk among female substance users in this setting, far less attention has been paid to the role of social and structural violence and power relations in facilitating HIV risk through both sexual and drug use pathways. Using social mapping, focus group discussions and interview-questionnaires, research will aim to demonstrate the social and environmental factors that mitigate the HIV risk environment of survival sex workers, and, in particular, the role of violence and power relations in the negotiation of HIV prevention behaviours among drug-addicted women and their intimate and working partners. This research will provide valuable information about a population that has remained largely on the periphery of public health and about harm reduction strategies and services. It is anticipated that the research will also foster capacity building among survival sex workers and help inform evidence-based policy and be practice tailored to this population.

**Dates:** January 2006 – December 2006

**Funder:** Michael Smith Foundation for Health Research

**Reference:** <http://www.msfr.org>

**Topic:** Survival sex workers, IDUs (Vancouver- DTES)

### Project R25

*Examining the effectiveness of a case management intervention for improving the well-being of women with HIV/AIDS: A community-based research approach*

**Principal investigator:** Dr. Adriana Carvalhal,  
Voices of Positive Women (Toronto)

**Abstract:** Women represent one of the fastest growing groups of people infected with HIV in Canada. Women living with HIV/AIDS face not only a chronic illness and complex medical demands, but also extensive social challenges. Research on evidenced-based behavioural interventions designed specifically for women has been neglected so far in the literature. Objectives: (1) to determine whether 6 months of proactive strength-based case management is effective in increasing

physical and mental health-related quality of life, compared to a 'usual care' general health promotion program, in women living with HIV; and (2) to evaluate whether the case management intervention decreases depression levels, improves coping skills, and increases social support. The proposed study will employ a mixed methods approach that combines quantitative and qualitative methods. Quantitative methods will be used to test the effectiveness of a proactive case management community-based intervention. The hundred and sixty participants will be randomized to one of two groups: (1) A proactive case management intervention ("wHEALTH") that will include bi-weekly one-hour individual sessions; and (2) A 'usual care' health promotion program that consists of bi-weekly one-hour group sessions. Measurement times include baseline, 1, 3, and 6 months; durability of the intervention will be assessed at 9 months. The primary outcome will be overall physical and mental health-related quality of life. The secondary outcomes include depression, social support, coping skills, and satisfaction with services. Qualitative methods consist of in-depth interviews, conducted with a subset of 40 participants, to probe the contextual factors related to the quantitative outcomes. This CBR study is a partnership between Voices of Positive Women, Women's Health in Women's Hands, and McMaster University. Our dissemination plan will ensure that outcomes of the study will be made available to CBAOs, policy makers, and women living with HIV/AIDS.

**Dates:** April 2007 – March 2010

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – General – Operating Grant

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=2143>

**Topic:** Women living with HIV

### Project R26

*Examining the relationship between intimate partner violence and human immunodeficiency virus among immigrant women in Toronto*

**Principal investigator:** Ajitha V. Cyriac, University of Toronto

**Abstract:** The emergence of the AIDS global pandemic has necessitated an increased understanding of the sexual networks of core transmitter populations (e.g. female sex workers (FSWs) and their sexual partners) in order to make informed predictions about the spread of HIV. A specific limitation is the availability of information on sexual networks not involving paid sex, such as male regular partners of FSWs. My study will attempt to determine whether the harder-to-reach, male regular sexual partners of FSWs may be equally critical targets for preventative interventions. This study will be focussed in three states in India with a high burden of HIV infection (Maharashtra, Andhra Pradesh, and Karnataka). Our collaborators in India will administer questionnaires to 300-400 FSWs and collect biological samples. The FSWs in our study will direct us to interview 150-200 of their male regular partners regarding their numbers of sexual partners and other sexual behaviour patterns. With the collected data, I will help define and describe correlates of HIV infection and possibly its transmission dynamics in the three states of India hardest hit by HIV.

**Dates:** September 2006 – April 2010

**Funder:** Canadian Institutes of Health Research (CIHR) – Doctoral Research Award Area of Health Services/ Population Health HIV/AIDS Research

**Reference:** CIHR database

**Topic:** Immigrant, sex workers, partner violence

### Project R27

*The experiences of HIV seropositive mothers living in rural Alberta*

**Principal investigator:** Jean Groft, Faculty of Nursing, University of Alberta

**Abstract:** The goal of this study is to learn about the health of mothers in rural Alberta who have HIV. HIV infection rates have been increasing among Canadian women for the last 10 years. Little is known about the impact of HIV on women's roles as mothers. Women infected by HIV face challenges as they attempt to care for themselves and their children in a society that may

question their ability to be mothers. The thoughts and concerns of rural women on health issues in general are often invisible to authorities. The health of rural Canadians is poorer than that of urban Canadians. Many factors such as poverty, lack of access to resources and lack of power affect rural women and increase their risk of infection with HIV and other illnesses. Through the process of interviewing HIV-infected mothers, we will develop a better understanding of their health concerns and their ideas for addressing these issues.

Approximately 20 mothers will be asked to participate in in-depth interviews. The interviews will be carefully reviewed for important themes. The findings will be shared with the women themselves and with rural communities, health care workers and volunteers, service agencies and government workers. This process will allow greater understanding of women's experiences and the development of better ways to improve the health of women and their children.

**Dates:** 2005-2008

**Funder:** CIHR

**Reference:** HIV Research in the Prairies:  
A Compendium

**Topic:** Women living with HIV, mothers, rural

### Project R28

*Exploring the impact of cultural constructions of disease on community and health care support for immigrant women living with HIV/AIDS in Toronto*

**Principal Investigator:** Françoise Guigné,  
McMaster University (Hamilton)

**Abstract:** not available

**Dates:** January 2006 – January 2007

**Funder:** Social Sciences and Humanities Research Council of Canada (SSHRC)

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=1601>

**Topic:** Immigrant, Endemic (Toronto)

### Project R29

*The female condom: A global ethnography*

**Principal investigator:** Amy Kaler, University of Alberta

**Abstract:** not available

**Dates:** January 2002 – January 2005,  
January 2006 – December 2006

**Funder:** Social Sciences and Humanities Research Council of Canada (SSHRC), Michael Smith Foundation for Health Research

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=1532>

**Topic:** Prevention

### Project R30

*Functional correlate of mucosal antibody response to HIV infection in blood*

**Principal investigator:** Denis P. Snider,  
McMaster University

**Abstract:** Most infections with HIV worldwide are sexually transmitted and women are the most frequently infected. In order to protect against HIV infection and AIDS, vaccines must be effective at blocking entry of the virus. In sexual transmission, HIV enters through the mucosal surfaces of the body. These surfaces can respond with a specific type of antibody, the IgA type. Thus, when developing new HIV vaccines, we must be able to measure the amount and quality of mucosal IgA antibody against HIV. Studies have shown that women who are able to resist HIV infection have IgA antibodies against HIV, while those that become infected have little or no IgA. Unfortunately, many such studies have conflicting results or are hampered by the difficulty in sampling and testing for these IgA antibodies, using fluid samples from the mucosal surfaces. A blood test would be much more simple, reliable, and useful. We propose to use the circulating immune cells in blood responsible for IgA antibody production, as a reliable means to measure the amount and quality of mucosal IgA antibody against HIV. In our proposal, we will be able to determine if the IgA antibody was produced, how much response is evident, and how well the IgA antibody can inhibit the virus. We will look at HIV-resistant and HIV-infected people to see if any differences exist in mucosal IgA antibodies, obtained from the blood cells. These studies will provide valuable data and will prove the feasibility of measuring mucosal IgA responses, using blood samples.

**Dates:** March 2009 – February 2010

**Funder:** Canadian Institutes of Health Research (CIHR)  
– Catalyst Grant: HIV/AIDS Vaccine Discovery Research  
(Canadian HIV Vaccine Initiative)

**Reference:** CIHR database

**Topic:** HIV/AIDS biomedical research  
(insight for Canada)

### Project R31

*Galactosylceramide and sulfogalactosylceramide as receptors for HIV-1 on the vaginal epithelia*

**Principal investigator:** Nongnuj Tanphaichitr,  
Ottawa Hospital Research Institute

**Abstract:** Despite an ever-growing understanding about HIV-1 infection and the development of very effective therapies, the spread of this virus continues at alarming rates. This highlights the need for new preventive strategies that will efficiently block HIV-1 infection. The vaginal mucosa is the site in the female body where the HIV-host cell interaction first takes place. HIV-1 is first captured onto the mucosal surface followed by its entry through the vaginal epithelial cells to reach and infect T cells and derived dendritic cells that intersperse within the mucosa. Some of these infected cells migrate to the lymph nodes, allowing further spread of HIV-1 to lymphocytes at these sites. Rapid propagation of HIV-1 then leads to its presence in the blood stream.

Therefore, blocking of the initial interaction of HIV-1 with the vaginal epithelial cells would be a logical strategy to prevent viral infection at initial contact.

However, information on the mechanisms of HIV-1-vaginal epithelial cell interaction is still limited.

Recently, we have shown that the glycolipid, galactosylceramide (GC) and its sulfated form, sulfogalactosylceramide (SGC), both known for their ability to bind HIV-1 proteins, gp120 and gp41, are present on the vaginal epithelial cell surface. Therefore, GC and SGC may be involved in the initial HIV-1 binding to the vaginal mucosa. Antibodies that specifically block GC and SGC, as well as synthetic analogs of GC and SGC, will be used as tools to determine if blocking the interaction between HIV-1 and the vaginal epithelium can prevent HIV-1 infection of local CD4+

T cells. If capable of blocking HIV-1 binding to vaginal epithelium in the laboratory, this approach may lead to the development of compounds that can be administered into the vagina for the prevention of HIV-1 infection.

**Dates:** November 2007 – October 2010

**Funder:** Canadian Institutes of Health Research (CIHR)  
– Operating Grant: HIV Prevention

**Reference:** CIHR database

**Topic:** HIV/AIDS biomedical research  
(insight for Canada)

### Project R32

*Gender inequality and young, heterosexual women's sexual agency*

**Principal Investigator:** Jennifer Whitten,  
Brock University

**Abstract:** not available

**Dates:** January 2007 – January 2008

**Funder:** Social Sciences and Humanities Research Council (SSHRC); Canada Graduate Scholarships Program - Masters Scholarships

**Reference:** <http://www.outil.ost.uqam.ca/CRSH/Detail.aspx?Cle=53985&Langue=2>

**Topic:** Gender; gender not specified; power; sexual negotiation; Youth

### Project R33

*Girl power? Studying Canadian female adolescents' sexual health, relationships and practices*

**Principal investigator:** Marion J. Doull,  
University of Ottawa

**Abstract:** There is a clear lack of research and data on adolescent sexual health, relationships and practices in Canada. The consequences of our current narrow understanding are real; rates of sexually transmitted infections and HIV amongst youth in Canada continue to rise, with young women increasingly at risk. The proposed project will examine the sexual health, relationships, and practices of young female Canadians and will question their ideas about power and “traditional” gender roles within these relationships. Some important questions include: How do young

people conceptualize power in the context of their sexual relationships? Do young women identified as sexually aggressive feel empowered? Does this supposed power translate into other areas outside the sexual realm? If power dynamics are shifting, what are the effects on young men? How are health risks (i.e. HIV, sexually transmitted infections) understood in this context? Improved understanding of sexual health, relationships and practices will allow for the creation of responsive programs that address adolescent realities with the aim of decreasing risk-taking behaviours and improving adolescent health as a whole. Adolescence is a time of great transition and the development of healthy sexual relationships creates a solid foundation for future health and well-being.

**Dates:** July 2005 – June 2008

**Funder:** Canadian Institutes of Health Research (CIHR) Institute of Gender and Health Doctoral Research Awards

**Reference:** CIHR

**Topic:** Female youth

### Project R34

*Global Ottawa AIDS Link (GOAL): Facilitating a learning community for innovative practice in HIV/AIDS prevention education in local ethnocultural and ethnoracial communities*

**Principal investigator:** Carol A. Amaratunga, University of Ottawa

**Abstract:** Health Canada reports that the rates of HIV/AIDS among immigrants and refugees from endemic countries are among the highest in Canada, and are increasing rapidly. Yet in Ottawa, as in many communities across Canada, many people from specific cultural and racial communities do not seek treatment or support for HIV/AIDS because local programs are not sensitive to their values, beliefs, and customs. Prevention programs for these groups often fail for the same reasons, often a combined result of powerful socio-cultural taboos and systemic racism. In Ottawa, a research partnership of community members, service providers and academics called GOAL (Global Ottawa AIDS Link) has been created to build the capacity of the

local community to respond to the needs of ethnoracial and ethnocultural communities regarding HIV/AIDS prevention and intervention. The group proposes to examine how race, culture and gender influence population health in relation to HIV/AIDS, and how communities develop and share knowledge around these issues. First, however, the GOAL group proposes to conduct extensive community consultation to develop a more specific research plan and mechanisms for community participation.

**Dates:** April 2005 – March 2006

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – General – Catalyst Grant

**Reference:** CIHR database

**Topic:** Gender

### Project R35

*Health and social characteristics among female crack cocaine users in Victoria*

**Principal investigator:** Michelle A. Coghlan, University of Victoria (British Columbia)

**Abstract:** In the context of illicit drug use in urban communities in Canada, the use of crack cocaine is a neglected yet increasingly relevant public health problem. Crack use has dramatically increased in cities across Canada, with Victoria reporting peak prevalence rates compared to other cities. One key aspect of the problem is user's involvement in high-risk sexual behaviours (e.g. sex work) which increase the risk for infectious diseases, including the Hepatitis C Virus (HCV) and HIV. One population where these health risks are amplified by dynamics of gender marginalization are female crack users. Women who use crack and who are involved in sex work are at risk for poor health outcomes not only because of substance use and physical, sexual and reproductive health factors, but also due to women's vulnerability to assault, marginalization, criminalization and exclusion from mainstream health and social institutions. Very little is known about the dynamics and harm consequences of crack use and sex work among women in Canada. Such knowledge is important for the development of

targeted interventions. Using quantitative and qualitative research strategies, the aim of this research is to identify key characteristics of and dynamics related to substance use, health, social, and sexual risk behaviours among female crack users in Victoria. The research will help to widen the knowledge base on risk behaviours and risk-taking contexts by focussing on women, including protective behaviours and contexts in addition to risks. Such knowledge is essential for needs- based intervention planning and for improving the health of this high-risk population.

**Dates:** September 2006 – August 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – Doctoral Research Award in the Area of Addictions and Substance Abuse

**Reference:** CIHR database

**Topic:** HIV risk factors

### Project R36

*HIV/AIDS Experience of Alberta women who are from countries where HIV is endemic*

**Principal investigator:** Aniel M. Dela Cruz, University of Alberta

**Abstract:** The purpose of this study is to explore and understand the experiences of HIV-positive Alberta women who are from Sub-Saharan African countries where HIV is endemic. The objectives of this study are to understand how women experience their HIV diagnosis, treatment and support in their community; and to understand how women's HIV illness impacts their social and familial relationships. There are a number of women from Sub-Saharan African countries living and working in Alberta who may be infected with, or affected by, HIV. The literature shows relatively few studies which explore HIV/AIDS among immigrants to Canada from Sub-Saharan Africa. With evidence showing increased number of positive HIV tests and AIDS diagnoses in Sub-Saharan African Canadians, there is still little known of the contextual factors that contribute to this problem, or the experiences of women who are HIV positive and who are living outside of large metropolitan communities. In 2005, there were 15 documented studies or reports completed in Canada

which are specific to HIV and AIDS among people from African and Caribbean countries; all have been completed in Eastern Canada and in larger metropolitan centres, such as Toronto or Montreal. Further, there are no completed studies or studies in progress that explore or document the experiences of Alberta women from Sub-Saharan African countries who are infected with, or affected by, HIV.

**Dates:** May 2007 – April 2010

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – General – Doctoral Research Award

**Reference:** CIHR

**Topic:** Endemic (Alberta)

### Project R37

*HIV/AIDS, maternal health and motherhood: Health-related behaviours, programming implications and narrative constructions*

**Principal investigator:** Pamela J. Downe, University of Saskatchewan

**Abstract:** This three-year, community-based research will identify and analyze the interrelationship between women's experiences with motherhood and Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS). In 2006, AIDS Saskatoon identified mothers as a significant and growing constituency among those who access their services but for whom no programs were specifically designed. Twenty-one months of community-based collaboration with 17 organizations and university researchers led to the development of three research objectives: (1) to identify the interrelationship between motherhood and HIV/AIDS; (2) to assess how motherhood affects health-related behaviours of women accessing the services of AIDS Saskatoon; and (3) to determine and build capacity to enhance the HIV/AIDS-related services that are identified positively by research participants. Adopting a narrative-based approach, this research is participatory in design and will be guided by AIDS Saskatoon and a 14-member Community Advisory Committee. This project will involve the participation of Aboriginal and non-Aboriginal women who identify

as mothers in two sets of interviews, a photovoice project, a two-phase programming analysis, and focus groups. Given that the increasing rates of HIV/AIDS among women are occurring primarily in those of childbearing age and that fewer than 4% of the organizations registered with the Canadian AIDS Society offer maternal health programs, this research will have far-reaching significance to the health and well-being of Aboriginal and non-Aboriginal women who have children and who are living with, affected by, and/or vulnerable to, HIV/AIDS.

**Dates:** April 2008 – March 2011

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – General – Operating Grant

**Reference:** CIHR database

**Topic:** Women living with HIV; maternal child health

### Project R38

*HIV-positive women's reproductive decisions: social and psychological contributors and their implications for health care delivery*

**Principal investigator:** Anne Wagner, Ryerson University

**Abstract:** not available

**Dates:** September 2008 – August 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – Frederick Banting and Charles Best Canada Graduate Scholarships – Master's Award

**Reference:** CIHR database

**Topic:** Women living with HIV

### Project R39

*HIV prevention in Canada: A meta-ethnographic synthesis of current knowledge*

**Principal investigator:** Dr. Jacqueline Gahagan, Dalhousie University (Halifax)

**Co-principal:** Dr. Randy Jackson

**Co-investigators:** Dr. Barry Adam, Dr. Margaret Dykeman, Dr. Judith Mill, Dr. Tracey Prentice

**Abstract:** Over the last 25 years Canadian researchers, policy makers, and non-governmental organizations

have made significant strides developing our understanding of and response to the impact of HIV/AIDS, particularly through qualitative research efforts. Yet, there has been a lack of attention to integrating findings into a cohesive synthesis. This has important implications for future knowledge and development needs and for the utilization of qualitative research in HIV prevention practices and policy development. This research synthesis grant proposal was developed with a goal to systematically review the published qualitative evidence focussed on HIV prevention health systems and to compare experiences across select populations. To support evidence-informed decision-making in three broad areas, the objectives of this proposal are: 1) to comparatively assess qualitative understanding of (a) HIV prevention for specified groups affected by HIV/AIDS in Canada; and (b) where specific knowledge of prevention needs may be lacking; 2) to provide useful information and recommendations where research findings may not be well integrated into work undertaken at a federal/provincial policy level or at the local practice implementation level by providing information related to the effectiveness of prevention initiatives; and 3) to improve effectiveness and efficiency of the research response regarding research areas and researcher roles. To accomplish the goal and objectives, research team members are proposing a participatory meta-ethnographic method to guide a structured systematic review of findings that will include an initial scoping exercise to select appropriate literature, conducting a quality appraisal of relevant studies for inclusion in a synthesis of HIV prevention research, and a main interpretive review guided by a meta-ethnographic approach informed by both a gender-based and Indigenous research perspectives.

**Dates:** February 2008 – January 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – Knowledge Synthesis Grant

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=2168>

**Topic:** Gender-based perspectives; Aboriginal women and non-Aboriginal women

**Project R40**

*HIV risk behaviours and barriers to prevention and treatment among Aboriginal women engaged in survival sex work*

**Principal investigator:** Kate Shannon,  
University of British Columbia

**Abstract:** Women engaged in survival sex work in Vancouver's Downtown Eastside (DTES) are particularly marginalized and face multiple vulnerabilities including violence, predation, and increased likelihood of engaging in high-risk sexual and drug-related harms. In addition, the illegal and clandestine nature of sex trade work in Canadian cities increasingly renders street-entrenched women to the outskirts of society, limiting their access and uptake of supportive health services. While Aboriginal peoples represent only 2.8% of the general population in Canada, and approximately 4-5% of the total population of British Columbia, women of Aboriginal ancestry account for over 50% of survival sex workers in the DTES. The proposed research, through a cyclical process of community consultation and active peer participation, will explore the dynamics of HIV risk behaviours among women sex workers; and barriers to HIV prevention and treatment unique to Aboriginal women; and inform the development of an HIV prevention and care model. Given the historically oppressive nature of research in this population, a collaborative and participatory research approach through an urban drop-in centre will be highly valuable in providing women sex workers a true voice in HIV prevention and care. The social context of these women's lives present multiple barriers that place them at high risk for HIV transmission, including power dynamics of pimps, dates, and intimate partners in safe sex negotiation, the cycle of addiction and survival sex, ongoing violence and sexual assault, entrenched poverty and high levels of mobility between rural reserves and the DTES. Using social mapping, focus group discussions, and structured interviews, this study will explore HIV risk behaviours and obstacles through the key themes of mobility, violence and addiction. The participatory approach engaging peers at all levels will provide

capacity building, as well as foster community ownership and leadership in this research.

**Dates:** September 2005 – August 2008

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – Aboriginal – Doctoral Research Award

**Reference:** CIHR

**Topic:** Aboriginal survival sex workers (DTES)

**Project R41**

*HIV, sexually transmitted infections, and massage parlour workers: Application of social network analysis and mathematical modeling to assess the potential for disease propagation*

**Principal investigator:** Valencia Remple,  
University of British Columbia

**Abstract:** Women who work in massage parlours participate in paid sex work and may be at risk for HIV infection and sexually transmitted infections (STI). The purpose of this study is to apply two new research methods, social network analysis (SNA) and mathematical modeling to the evaluation of HIV and STI risk in this vulnerable, hard-to-reach group. SNA and mathematical modeling can also be used to identify central, at-risk groups or individuals and can help in the planning and evaluation of prevention and treatment programs. The study will be conducted in partnership with community groups that provide outreach services to sex trade workers. Women with past experience working in massage parlours will be hired and trained as "peer research assistants." In-depth interviews will collect information on demographics, sexual behaviour, STI history, sexual partners, and sexual networks from women working in massage parlours in the BC Lower Mainland area. Blood will be tested for HIV and urine will be tested for chlamydia. This is the first study to examine the sexual health status and risks of this population, and will help health care providers develop targeted, socioculturally sensitive HIV and STI prevention and intervention programs.

**Dates:** January 2004 – December 2004,  
March 2005 – February 2007



**Funder:** Michael Smith Foundation for Health Research, Canadian Institutes of Health Research (CIHR) – CIHR Doctoral Research Award (HIV/AIDS) – Health Services/Population Health

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=784>

**Topic:** Sex workers (BC)

### Project R42

*The impact of antiretroviral care on the health and well being of persons infected with HIV/AIDS*

**Principal investigator:** Dr. Robert S. Hogg, BC Centre for Excellence in HIV/AIDS

**Co-investigators:** Dr. Thomas Kerr, Dr. Julio Montaner, Dr. Evan Wood

**Abstract:** The primary objective is to establish a new population-based cohort of 500 HIV- infected men and women accessing antiretroviral therapy via the BC HIV/AIDS Drug Treatment Program. Investigators will evaluate the impact of supportive health service (like methadone treatment, MAT/DOT, physician care, pharmacy supervision, and addiction services) and ancillary services (quarterly CD4 and viral load test, and drug resistance testing as required) on adherence and response to antiretroviral therapy.

**Dates:** July 2006 – March 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – Capacity Building through Enhanced Operating Grants in HIV/AIDS

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=1810>

**Topic:** People living with HIV (both male and female specified)

### Project R43

*Impact of policy decisions and service delivery models on HIV/AIDS prevention: ensuring comprehensiveness and accessibility for female adolescents*

**Principal investigator:** Charlene Cook, University of Toronto

**Abstract:** not available

**Dates:** January 2006 – January 2009

**Funder:** Social Sciences and Humanities Research Council of Canada (SSHRC)

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=1560>

**Topic:** Female youth (women health policy)

### Project R44

*Impacts of social isolation and oppressions on the health of female-to-male transsexuals (FTM)*

**Principal investigator:** Marcus S. Greatheart, University of British Columbia

**Abstract:** not available

**Dates:** September 2008 – August 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – Frederick Banting and Charles Best Canada Graduate Scholarships – Master's Award

**Reference:** CIHR database

**Topic:** Trans issues

### Project R45

*Improving access to an HIV post-exposure prophylaxis (HIV PEP) program in a sexual assault setting: Translating evidence-based findings to promote standardized health care practices*

**Principal investigator:** Dr Sheila Macdonald, Ontario Network of Sexual Assault/Domestic Violence Centres

**Co-principal:** Dr. Mona Rafik Loufty (article published in 2008)

**Abstract:** Victims of sexual assault in Ontario receive care and treatment from a network of 34 specialized Sexual Assault and Domestic Violence Care and Treatment Centres (SATCs) based in hospitals across the province. A study, evaluating a program, which offers counselling and HIV post-exposure prophylaxis (HIV PEP) to sexual assault victims was implemented in 24 of Ontario's 34 SATCs, 2003 – 2005. For various reasons, 10 SATCs did not implement an HIV PEP Program. In November 2005, recommendations regarding the optimal HIV PEP program for Ontario SATCs will be presented to the Ontario Women's Health Council. It is anticipated that the release of study recommendations will prompt sustained funding from the Ministry of Health and Long-Term Care for the SATCs' HIV PEP

Program. To ensure that HIV PEP is equally accessible across Ontario, we propose a Knowledge Translation initiative to: 1) exchange experiences of the HIV PEP Program with SATCs that implemented and those that did not; 2) develop strategies for resolving implementation and maintenance barriers. Integrating evidence-based findings into Ontario's sexual assault health care, this research will improve Ontario's health delivery system by increasing access to a program of HIV prevention after sexual assault.

**Dates:** February 2006 – January 2007

**Funder:** Canadian Institutes of Health Research (CIHR) – Knowledge to Action (KTA), Phase 1: Development Grants for Local Researcher User Interaction

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=666>

**Topic:** Sexual assault (male and female specified; although, 97.1% women population) (Ontario)

### Project R46

*Intervenir AVEC les filles, pour la VIE*

**Principal investigator:** Françoise Côté, Laval University

**Abstract:** The community resource *Point de Repères* (PdR) promotes optimal access to HIV prevention methods by distributing free condoms and sterile syringes. However, the service is unable to reach some of its clientele effectively. Workers consider this situation less than ideal, because the people whom PdR cannot reach directly are cutting themselves off from PdR's other services. At present, it is difficult for PdR to penetrate these subgroups (which include female injection drug users and street prostitutes). Nevertheless, one natural avenue could be explored - peer intervention. The results of discussion groups with these women have shown that they would be interested in getting involved in their community. The goal of this project is to strengthen the capacities of peers involved in an intervention, help them carry out preventive actions, and evaluate the process and the effects. In an egalitarian atmosphere, women, community workers and a research team will join forces to develop an intervention continuum. In this way, this community will also be able to join the effort

to prevent the spread of HIV, improve living conditions and redefine its identity.

**Dates:** March 2007 – March 2010

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – General – Operating Grant

**Reference:** *CIHR*

**Topic:** Sex workers and IDUs

### Project R47

*The intracellular itinerary of HIV-1 in human trophoblasts*

**Principal investigator:** Sonia Gauthier, Laval University Hospital Centre

**Abstract:** The mother-to-child transmission of human immunodeficiency virus is the primary cause of infant HIV infection. Because of HIV testing on pregnant women and the use of antiretroviral drugs, mother-to-child transmission has dramatically dropped in the last 10 years. However, worldwide statistics are more dramatic: 2.4 million pregnant women are infected and 1,600 infants acquire HIV infection every day. Mother-to-child transmission can occur at three stages: transplacental passage, exposure of the infant's skin and mucous membrane to maternal blood, vaginal secretion and breast milk. The mechanism of in utero transmission is poorly understood but the placenta seems to be implicated. The trophoblastic cells, which form the placenta, normally serve as a barrier between the mother and the foetus. However, HIV is able to infect these cells by various endocytic mechanisms. Thus, the central aim of my doctoral project will be to characterize the exact mode(s) of HIV endocytosis (macropinocytosis, clathrin-dependent endocytosis and/or clathrin/caveolae-independent endocytosis), dissect the post-entry pathway(s), and identify the mechanism(s) used by HIV to escape the endocytic compartments in polarized trophoblast cells. In order to do so, I will use virions harboring eGFP-Vpr or mRFP1-Vpr to infect trophoblast cells and then characterize those events in these cells. The proposed project will yield more detailed information on the intracellular trafficking and fate of HIV in polarized

trophoblasts. This information should not be underestimated considering that the human polarized trophoblast barrier is seen as a primary target for maternal blood-borne HIV infections. The understanding of these mechanisms may help to find less expensive drugs that will prevent trophoblast infections by HIV and may be used in developing countries.

**Dates:** April 2005 – March 2008

**Funder:** Canadian Institutes of Health Research (CIHR) – Doctoral Research Award in the Area of Biomedical/Clinical HIV/AIDS Research

**Reference:** CIHR

**Topic:** Vertical transmission (insight for Canada)

### Project R48

*Involvement of DC-SIGN and DC-SIGNR in mother-to-child transmission of HIV-1*

**Principal investigator:** Geneviève Boily-Larouche

**Abstract:** Two million children in sub-Saharan Africa are living with HIV. The majority of these infections occur as a result of mother-to-child transmission, and the rate of infection in the absence of treatment ranges from 15% to 45%. DC-SIGN, a C-type lectin expressed on the surface of dendritic cells (DC), and its homologue, DC-SIGNR, have been named as a possible means of *in utero* HIV infection. These molecules' ability to bind to HIV has revealed their involvement in both *cis* (macrophages or DC) and *trans* (T-cells) virus transmission. However, their function as antigen receptors may also play a role in eliminating the virus. Since DC-SIGN/R are present at the mother-child interface and since they interact with HIV, the gene polymorphisms affecting the structure and expression of these receptors could affect the risk of vertical HIV transmission. The objectives are: 1) to determine the extent of DC-SIGN/R polymorphism in the population of Zimbabwe; 2) to determine the relationship between the polymorphisms and the risk of vertical HIV transmission; 3) to determine the impact of these polymorphisms on the structure and expression of DC-SIGN/R receptors; and 4) to study the impact of these modifications on DC-SIGN/R's ability to cause *cis*

and *trans* HIV infection and their effect on immune response. We have studied the extent of DC-SIGN/R polymorphism and identified new variants that are significantly associated with a risk of vertical HIV transmission. The variants' influence on protein expression and structure will be studied. Our preliminary results lead us to believe that the new variants have a major impact on the function and regulation of the DC-SIGN/R receptors and promote virus transmission. This study will provide a greater understanding of the mechanisms involved in HIV transmission and may lead to the development of innovative prevention strategies.

**Dates:** May 2008 – April 2011

**Funder:** Canadian Institutes of Health Research (CIHR) – Frederick Banting and Charles Best Canada Graduate Scholarships – Doctoral Award

**Reference:** CIHR database

**Topic:** Vertical transmission (insight for Canada)

### Project R49

*Involving Ontario HIV-positive women and their providers in determining their research needs and priorities*

**Principal investigator:** Dr. Mona Loutfy, Maple Leaf Medical Clinic

**Co-principal:** Dr. Wangari Tharao

**Co-investigators:** Dr. Louise Binder, Dr. Trevor Hart, Dr. Danielle Layman-Pleet, Dr. Lynne Leonard, Dr. Janet Raboud

**Abstract:** Historically, there has been a deficiency in collaboration and lack of trust between academic researchers and community groups. Accordingly, there is a need for better communication and for increased input from community members and affected individuals into what research questions should be addressed. This is particularly important in the field of women and HIV/AIDS as women are continuously underrepresented in many decision-making and study design processes and the majority of research done to date has focussed on male populations. This project aims to determine what research topics interest Ontario women living with HIV/AIDS and to strengthen

community-academic research, knowledge transfer and exchange partnerships. A Community Advisory Board will be formed and HIV-positive women and their service providers will be asked to participate in interviews, focus groups and surveys to generate qualitative and quantitative data.

**Dates:** March 2007 – September 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – General – Operating Grant

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=2204>

**Topic:** Women living with HIV (Ontario)

### Project R50

*Life at the margins: An interdisciplinary analysis of the social determinants of HIV/AIDS and women's health*

**Principal investigator:** Susan G. Berkhout, University of British Columbia/BC Centre for Excellence in HIV/AIDS

**Abstract:** Vancouver's Downtown Eastside community has the highest rates of HIV infection and the poorest health outcomes in Canada. Female sex workers in the community are among those at highest risk of infection. The limited success of public health programs and harm reduction interventions in this population reflect the multiple barriers that compromise their access to care. This includes socio-economic factors such as poverty and unstable housing, the stigma associated with sex work, multiple addictions, and limited autonomy and personal choice. Disease control and harm reduction measures typically focus on individual responsibility, and often do not accommodate the influences that can increase HIV risk and diminish autonomy among women in the Downtown Eastside. Susan Berkhout is utilizing an alternative framework developed from contemporary feminist and bioethics literature on "relational autonomy" to more accurately characterize HIV risk, and to produce more effective prevention and treatment strategies aimed at reducing HIV risk behaviour among female sex workers. This model considers the socioeconomic and cultural influences,

and relationships involved in sex work and injection drug use. The findings should contribute to new harm reduction strategies tailored for this population, provide ethical guidance for researchers working with members of vulnerable populations, and help health care providers enhance autonomy in female sex workers.

**Dates:** March 2005 – February 2011, January 2006 – December 2006

**Funder:** Canadian Institutes of Health Research (CIHR) – MD/PhD Program Studentship; Michael Smith Foundation for Health Research

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=404>, <http://www.hivresearch.ca/index.asp?navid=18&csid1=1377>

**Topic:** Sex workers, including IDUs

### Project R51

*Lipodystrophy, stigmatization and identity: A study of the identity transformation process in women living with HIV/AIDS*

**Principal investigator:** Marilou Gagnon, University of Ottawa

**Abstract:** The introduction of Highly Active Antiretroviral Therapy (HAART) in 1996 transformed the prognostic of people living with HIV/AIDS. This therapeutic innovation led to a dramatic decrease in morbidity and mortality rates in the HIV population. However, we are now confronted with the new face of the HIV epidemic regarding the daily management of a disease that contains a strong social, psychological, emotional and physical burden. What is emerging from the literature and the clinical settings is that HIV-positive individuals experience the oppressiveness of a new reality, one that captures the chronicity of HIV and the concurrent re-emergence of bodily manifestations of the disease. Recent data demonstrate that people living with HIV/AIDS are willing to forego up to 15 years of life expectancy to avoid HAART-related body shape changes. This Canadian study reports the consequences of an insidious process that thrives from the physical manifestations of lipodystrophy. A number of cross-sectional studies report a high prevalence rate of lipodystrophy in people living with HIV/AIDS, reaching

80% in some populations. However, few studies have examined the biophysical, psychological, emotional, sexual and social burden of this metabolic complication. Qualitative studies report that lipodystrophy contains a strong social component. Morphological manifestations of this syndrome become the source of a multidimensional stigmatization process. This social dynamic suggests that lipodystrophy not only transforms the body, but also the identity of people living with HIV/AIDS. The present grounded theory aims at exploring this phenomenon in women living with HIV/AIDS. The main research goals will be to understand the experience of HIV-positive women who live with a disfigured body and to describe the identity transformation process that is indirectly induced by HAART.

**Dates:** May 2007 – April 2010

**Funder:** Canadian Institutes of Health Research (CIHR) – Doctoral Research Award Area of Health Services/ Population Health HIV/AIDS Research

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=2167>

**Topic:** People living with HIV (male and female specified; description targets women)

### Project R52

*MAKA initiative: HIV prevention and care among women survival sex workers*

**Principal investigator:** Mark W. Tyndall, B.C. Centre for Excellence in HIV/AIDS

**Abstract:** Women survival sex workers living in Vancouver are highly vulnerable to a wide range of acute and long-term health problems, including HIV/AIDS. Many women live in poverty, and with homelessness, drug dependency, and violence. Standard health interventions have been largely ineffective. It is conservatively estimated that there are over 1,000 sex trade workers and 25% are HIV-infected in the Downtown Eastside (DTES) neighbourhood alone. In order to improve quality of life, to extend life expectancy, and to reduce the transmission of HIV in this community, it is imperative to find novel methods of community-based prevention and treatment specific

to women. This project will use a cyclical process of ongoing community consultation and active participation. It will build community-based research (CBR) capacity by training and supporting a team of Peer Researchers. The project will use social mapping, focus groups, and the MAKA Women's Health survey to develop a framework for HIV prevention and care for women sex workers.

**Dates:** April 2005 – March 2008

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – General – Operating Grant

**Reference:** CIHR

**Topic:** Survival sex workers (DTES)

### Project R53

*Maternity experiences and antiretroviral treatments among Aboriginal, Haitian and African Quebec women living with AIDS*

**Principal investigator:** Isabelle Toupin, University of Montréal

**Abstract:** Few studies in Canada and Quebec, in particular, have focussed on HIV-infected women's perceptions of antiretroviral treatments and their impact on their day-to-day lives. Even fewer studies have been done on African, Haitian and Aboriginal women in a migratory context (Gallant, 2000; Lévy et al., 2000; Rogers et al., 2000; Sendi et al., 1999). The experience of maternity, which few studies have considered, seems key to constructing the relationship to HIV infection, adherence to treatment plans and secondary prevention. Since there are few studies aimed at understanding the experiences of women living with HIV/AIDS who are on antiretroviral treatment, including their relationship to children (desire to have children, pregnancy, birth, maternity, vertical transmission), this study will help improve our currently limited knowledge. Once the study is completed, we will be able to launch secondary HIV/AIDS prevention strategies and better understand the issues related to adherence to antiretroviral treatments within the ethnocultural communities studied in this project.

**Dates:** September 2006 – August 2009

**Funder:** Canadian Institutes of Health Research (CIHR)  
– Doctoral Research Award Area of Health Services/  
Population Health HIV/AIDS Research

**Reference:** CIHR

**Topic:** Women living with HIV  
(Aboriginal, Endemic, Maternity, Treatment)

### Project R54

*Mitochondrial DNA damage in infants exposed to HIV antiretroviral drugs in utero*

**Principal investigator:** H  l  ne C  t  ,  
University of British Columbia

**Abstract:** HIV therapy with antiretrovirals has been very successful at reducing mother-to-child transmission of HIV. If possible, HIV-infected pregnant women start HIV therapy in their second or third trimester to avoid exposing their developing baby to the drugs during early development to minimize toxicity. As women in Africa are about to receive large-scale HIV treatment, many will conceive babies while on therapy. We know that antiretroviral drugs can damage DNA, especially mitochondrial DNA (mtDNA) which is necessary for the body's energy production. This project will study the effect of HIV drug exposure at the time of conception on the mitochondrial DNA of infants born to HIV-infected mothers who were on therapy at the time they became pregnant, and compare it with that of infants exposed only later during the pregnancy, as well as unexposed HIV-negative controls. We hypothesize that infants exposed early during their development will have more mtDNA damage than those exposed later. We currently do not know what the long-term effect of exposing embryos to HIV drugs is. This research will provide crucial information that may influence how HIV-infected women of child-bearing age, as well as pregnant ones, are treated worldwide, both in terms of what drugs are used, and the timing of the therapy.

**Dates:** April 2006 – March 2009

**Funder:** Canadian Institutes of Health Research (CIHR)  
– Operating Grant

**Reference:** CIHR

**Topic:** vertical transmission; treatment

### Project R55

*MSM and WSW in sexual networks in Winnipeg, Manitoba: Exploring changes in network dynamics and HIV risk*

**Principal investigator:** Dr Stephanie S. Harvard,  
University of Manitoba

**Abstract:** not available

**Dates:** September 2006 – August 2008

**Funder:** Canadian Institutes of Health Research (CIHR)  
– HIV/AIDS Community Based Research Program –  
General – Master's

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=1809>

**Topic:** WSW (comparative with MSM)  
(Manitoba, Winnipeg)

### Project R56

*Negotiating international health policy on a local level: HIV-positive women and their experiences with infant feeding in Vancouver, Canada*

**Principal investigator:** Fran  oise Guign  ,  
Simon Fraser University (Vancouver)

**Abstract:** Medical research currently debates what infant feeding method should be recommended to HIV-positive mothers. Studies indicate that antiretroviral treatment effectively reduces transmission of HIV through breast milk by approximately at least two thirds by lowering the amount of HIV in the blood. However, Canadian health policy strongly discourages breastfeeding regardless of a woman's HIV viral status after giving birth, and encourages formula feeding as the alternative. Avoiding breastfeeding may eliminate the risk of HIV transmission, but is "replacement feeding" with formula the safest most viable option?

**Dates:** January 2007 – December 2007

**Funder:** Michael Smith Foundation for Health Research

**Reference:** <http://www.msfr.org>

**Topic:** HIV-positive mothers and infant feeding  
(Vancouver)

### Project R57

*The Ontario Women's Study: What women have to say about HIV prevention: Implications for policy and program development*

**Principal investigator:** Dr. Lynne Leonard,  
University of Ottawa

**Abstract:** Thematic analysis of four community consultations with distinct groups of women yielded a number of barriers to effective HIV prevention. Common themes included: lack of accessible HIV prevention information and misinformation, stigma and discrimination, social pressures, inadequate health and social services, abuse, concerns about HIV testing and difficulties in negotiating safer sex. Many of the reported experiences varied according to particular social and demographic situations. For example, inadequate health care was expressed by women from Northern areas, for Aboriginal women, physicians having limited knowledge of traditional medicines, and for Spanish-speaking women, a lack of Spanish-speaking physicians and/or the use of interpreters. These findings point to the need to consider different experiences of women in the design of prevention programming rather than considering women as one discrete homogenous vulnerable community. This project will explore how to improve targeted HIV prevention programs for women living in Ontario. In 2004, interested Ontario-based service providers and researchers started talking about the need for a community-based research project asking women to describe their HIV prevention needs. There was concern over the 'big gap' on women and HIV prevention research in Canada, as well as the tendency to group 'women' into a discrete group, with little appreciation of the diversity of their lived experiences and subsequent HIV prevention needs. The HIV Prevention Research Team at University of Ottawa was invited to help develop this study and secured a development grant from CIHR that enabled the research team to speak to service providers from around the province. Our team identified 16 unique groups of women with specific HIV prevention needs. We were also able to identify and engage key service providers and researchers working with each of the identified groups of women at risk. We are now ready to move forward with the next step of the project, which will involve conducting focus groups with our target populations.

The main objectives of this study are to document among different populations of women in Ontario their understanding of HIV acquisition and the social, structural, racial, gender-based and economic factors that influence women's individual HIV-related risk behaviours; and to determine, from the perspectives of the different populations of women, best practices for reducing HIV and to transfer this knowledge to decision makers at all levels of government to drive enhanced HIV prevention policies and programming for women in Ontario and Canada.

**Dates:** April 2008 – March 2010; 2009-2011

**Funder:** Ontario HIV Treatment Network (OHTN)

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=2322>

**Topic:** Gender; women's study (Ontario)

### Project R58

*Optimizing effective treatment strategies for antiretroviral therapy in vulnerable groups in Vancouver's Downtown Eastside: A mathematical modelling study*

**Principal investigator:** Kathleen N. Deering,  
University of British Columbia

**Abstract:** Study objectives: Within a cohort of female sex workers (FSWs) in Vancouver's Downtown Eastside (DTES), we aim to: 1) understand transmission dynamics of human immunodeficiency virus (HIV) through both sexual and drug injection routes; and 2) determine optimal treatment strategies for effective delivery of highly active antiretroviral treatment (HAART). We will answer the following research questions: 1) which characteristics of FSWS contribute to sustaining the HIV epidemic; and 2) what are the optimal treatment strategies for HAART on a population level in Vancouver's DTES? Results from this project will help direct scarce public health resources to have the greatest impact on reducing the severity of the HIV epidemic in the DTES, and help direct HIV/AIDS policy in Vancouver and similar areas. Methods: Transmission dynamics models, which account for infection biology, behavioural and demographic characteristics of the population and describe the spread of infection over

time, will be used to compare treatment strategies for HAART under different assumptions for transmission reduction, HIV risk behaviour change and uptake and adherence to HAART. A series of ongoing cohort studies (BC Centre for Excellence in HIV/AIDS) will provide strong data to parameterize and build models. Multivariate statistical methods will be used to understand which parameters are the most important and explain heterogeneity in model results. Outcome of project: The following data will be collected from modelling simulations to evaluate treatment strategies under different treatment strategy assumptions (i.e. potential impact 5, 10, 15 years after HAART is introduced, versus no HAART): incidence of HAART-resistant HIV; numbers of new infections averted (acquired and transmitted); changes in HIV prevalence. Results from this analysis will provide valuable HIV treatment and care recommendations that will help maximize the use of HAART among the most marginalized groups in the DTES and Canada.

**Dates:** May 2008 – April 2011

**Funder:** Canadian Institutes of Health Research (CIHR) – Doctoral Research Award Area of Health Services / Population Health HIV/AIDS Research

**Reference:** CIHR database

**Topic:** treatment; sex workers

### Project R59

*Pathophysiological determinants of drug disposition: Effect of obstetric complications on placental drug transporters and its impact on foetal drug exposure*

**Principal investigator:** Micheline R. Piquette-Miller, University of Toronto

**Abstract:** Treating HIV infection in pregnant women requires the use of potent antiretroviral therapy to prevent both disease progression in the mother and vertical transmission to the newborn. While drug therapy is essential, there is a scarcity of information on the disposition of antiretroviral drugs in pregnant women and their foetus. This information is critical as effective drug concentrations are required for the mother's health yet could pose harm to the foetus. The placenta serves as a protective barrier for the

foetus. Several ATP-binding cassette (ABC) transport proteins are highly expressed in the placenta and are believed to limit the passage of many antiretroviral agents into the foetus; thereby altering foetal drug exposure. Studies in our laboratory have revealed that inflammatory responses, generated in many disease conditions, decrease the expression and activity of these ABC transporters in numerous tissues including the placenta. Infections, as well as many prevalent obstetric complications (i.e. gestational diabetes), generate an inflammatory response. To date, virtually nothing is known about the impact of maternal disease on the regulation and activity of these drug transporters. Therefore, the primary objective of this study is to explore the influence of highly prevalent maternal complications on the ABC- drug transporters and determine how these changes may affect the placental transfer and foetal exposure of antiretroviral drugs used in pregnant women. This will be done by studying the expression of these transporters in placental tissues collected from women and from studying animal models of these obstetric complications. Animal models will be used to determine the disposition of these drugs in the mother and her foetus. The information generated from these studies will assist in the rational selection of drugs and dosing in pregnant women and could eventually be exploited to prevent drug exposure risks to the foetus.

**Dates:** October 2005 – September 2010

**Funder:** Canadian Institutes of Health Research (CIHR) – Operating Grant

**Reference:** CIHR

**Topic:** HIV-positive pregnant women; HIV/AIDS biomedical research (insight for Canada)

### Project R60

*Perinatal exposure to antiretroviral therapy in infants born to HIV seropositive mothers: Evaluation of toxicity using mitochondrial DNA and lactate levels*

**Principal Investigator:** Dr Susan King, Hospital for Sick Children (Toronto)

**Abstract:** While the use of HAART in pregnancy has significantly decreased rates of mother-to-child



transmission of HIV, many questions remain regarding the safety of these therapies, and their potential impact on the uninfected infant. To investigate the impact of combination ART exposure in the perinatal period on infants born to HIV-infected mothers, a novel quantitative assay for mitochondrial DNA (mtDNA) will be used in comparison to venous lactate levels and clinical signs. We hypothesize that this exposure during the perinatal period constitutes a potential risk of mitochondrial toxicity for the infant.

**Dates:** June 2003 – October 2006

**Funder:** Ontario HIV Treatment Network (OHTN)

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=1066>

**Topic:** Vertical transmission (treatment); exposure to treatment

### Project R61

*Perinatal outcomes in a provincial-based cohort of HIV-positive mother-infant pairs*

**Principal investigator:** Tessa Chaworth-Musters

**Abstract:** Every year, 2.4 million HIV-positive women worldwide deliver infants. In Canada, increasingly complex highly active antiretroviral therapy (HAART) regimens are widely used by pregnant women to improve maternal health and reduce transmission to fetuses. However, there are concerns about maternal and fetal complications with HAART. Oak Tree Clinic, British Columbia's provincial referral centre for maternal-infant care of HIV-positive women and their families, maintains a longstanding comprehensive perinatal database. Tessa Chaworth-Musters is investigating, updating and expanding this database to determine complication rates in HAART-exposed pregnancies. Chaworth-Musters is adding new data fields to reflect questions in the current literature and, where available, she is making comparisons to a provincial data set from the BC Reproductive Care Program and using statistical models to determine if specific variables impact outcomes. The findings will guide Oak Tree physicians in their treatment of pregnant HIV-positive women and contribute to

improvement of provincial and national antiretroviral therapy guidelines and pregnancy practices. Chaworth-Musters also aims to clarify inconsistencies in already published data. Her overall goal is for the research to facilitate understanding of optimal, safe, effective and non-toxic treatment during pregnancy of HIV-positive women.

**Dates:** January 2007 – December 2007

**Funder:** Michael Smith Foundation for Health Research

**Reference:** <http://www.msfr.org>

**Topic:** HIV positive pregnant women (treatment impact) (B.C.)

### Project R62

*Phase II – Support for service development for HIV-positive women living in Scarborough, East York, York, North York and Etobicoke*

**Principal investigator:** Dr. Kathryn van der Horden, Casey House

**Abstract:** not available

**Dates:** September 2007 – July 2008

**Funder:** Ontario HIV Treatment Network (OHTN)

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=2308>

**Topic:** Support for women living with HIV (GTA)

### Project R63

*Planning and evaluation of provincial training for workers implementing Pouvoir partager, a program for women with HIV*

**Principal investigator:** Caroline Racicot, University of Québec in Montréal

**Abstract:** Not available

**Dates:** September 2008 – August 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – General – Master's Award

**Reference:** CIHR database

**Topic:** Women living with HIV (Montreal)

**Project R64**

*The post-card project: Arts-based approaches to HIV/AIDS discourse, theory and secret shaming*

**Principal investigator:** Sarah Switzer,  
University of Toronto

**Abstract:** not available

**Dates:** January 2007-January 2008

**Funder:** Social Sciences and Humanities Research Council (SSHRC)

**Reference:** <http://www.outil.ost.uqam.ca/CRSH/Detail.aspx?Cle=54784&Langue=2>

**Topic:** Gender; women's studies

**Project R65**

*Predictors of antiretroviral pharmacokinetics in HIV-infected women with virologic suppression on combination antiretroviral therapy*

**Principal investigator:** Mona Loutfy,  
Women's College Hospital (Toronto)

**Abstract:** Women constitute the fastest rising population group at risk for infection with HIV and AIDS in Canada. Women now constitute approximately 20% of cases in Canada. This alarming statistic is compounded by the fact that women have been routinely underrepresented in both clinical trials assessing antiretroviral (ARV) therapy and clinical HIV studies in general. There are few particular areas of HIV research on women, which are crucial to their care and quality of life that have been under-evaluated. Two of the most important areas are: 1. How ARV therapy requirements and responses differ in women from men and 2. ARV adverse events (AEs) and how they differ in women from men. Many small studies have suggested that HIV-infected women taking ARV treatment have more adverse events (AEs) than men. The occurrence and management of AEs is currently the most important issue in the treatment of HIV. Understanding the differences of AEs in HIV-infected women is critical and has yet to be evaluated within a large cohort. Some studies have found that ARV drug levels are higher in women and that these higher drug levels are associated with the increased toxicity. The objective of this study is to assess ARV pharmacokinetics (C<sub>min</sub> and C<sub>max</sub>) in

HIV-infected women and to determine if they are higher as compared to the mean drug levels in the historical general population (which is primarily men); as well as to assess if ARV drug levels, particularly C<sub>min</sub>, are associated with body weight in women; and if higher ARV drug levels, particularly C<sub>max</sub>, are associated with higher frequency and severity of adverse events. If funded, this study will be the largest study done assessing ARV pharmacokinetics in HIV-infected women.

**Dates:** April 2006 – March 2008

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Bridge Funding – Biomedical/Clinical Stream

**Reference:** CIHR

**Topic:** Women living with HIV; treatment

**Project R66**

*Responding to gaps in HIV prevention and access to care among women in survival sex work*

**Principal investigator:** Kate Shannon,  
University of British Columbia

**Abstract:** Our current request for additional support around knowledge translation (KT) for the Maka Project partnership will focus on responding to gaps in HIV prevention and access to care among women in street-level sex work. Our primary activity will be the facilitation of working groups that will provide a rarely existing interface for sex workers, community organizations, policy makers and researchers to exchange knowledge through a "two-way bridge". The working groups will play a lead role in identifying and drafting actionable messages specific to key target audiences (program and policy decision-makers) and planning research dissemination. Key KT strategies and outcomes of the working groups will be the creation of accessible resources based on actionable messages (both print resources and interactive website development) and a community forum launch, supported by a Health Night at the WISH Drop-In Centre. Additionally, peer workshops on KT will help to support active involvement of women in survival sex work in the working groups. Our proposed KT strategy will primarily target two key audiences: managerial

decision makers (both community organizations and health authorities), and policy decision makers (both at local and federal levels), in addition to facilitating ongoing dialogue with sex workers both as active participants and recipients of program and policy changes. Although our messages will not be explicitly targeted at the general public, it is anticipated that by influencing federal decision makers through contributing to policy discussions and debate, we will be disseminating our research to a wider public audience.

**Dates:** January 2008 – December 2008

**Funder:** Canadian Institutes of Health Research (CIHR) – Meetings, Planning and Dissemination Grant: Knowledge Translation Supplement

**Reference:** CIHR database

**Topic:** sex workers (Vancouver); access to care

### Project R67

*The roots of risk: How sex, drug use, and gender structure HIV risk among female sex workers in Vancouver, British Columbia*

**Principal investigator:** Dr. Treena Orchard, BC Centre for Excellence in HIV/AIDS

**Abstract:** not available

**Dates:** January 2006 – January 2008

**Funder:** Social Sciences and Humanities Research Council of Canada (SSHRC)

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=1566>

**Topic:** sex workers (Vancouver)

### Project R68

*The separation of HIV from sexual and reproductive health: Social constructions of sexual citizenship*

**Principal investigator:** Erin Connell, Carleton University

**Abstract:** not available

**Dates:** 2005-2006; 2006-2007 (fiscal year)

**Funder:** Social Sciences and Humanities Research Council of Canada (SSHRC)

**References:** <http://www.outil.ost.uqam.ca/CRSH/Detail.aspx?Cle=51230&Langue=2>

**Topic:** gender (gender not specified; keyword-gender)

### Project R69

*Our search for safe spaces: A qualitative study of the role of sexual violence in the lives of Aboriginal women living with HIV/AIDS*

**Principal investigator:** J.K. Barlow, Canadian Aboriginal AIDS Network (CAAN) (Ottawa)

**Abstract:** Using a combined visual/in-depth interview methodology, the Canadian Aboriginal AIDS Network will focus attention on the issue of sexual violence in the context of HIV/AIDS service provision. This exploration will ask the following research questions: (1) How do women represent and then interpret the impact of sexual violence on their lives in the context of HIV/AIDS through visual means? Visual methodology is a unique approach to research often used to explore difficult concepts that people may be unable to verbalize. (2) How does gender, culture and HIV/AIDS status manifest itself for Aboriginal women when accessing services? (3) What cultural tools or methods are being utilized by Aboriginal women living with HIV/AIDS to manage their health? (4) What policy/program implications arise when considering issues of sexual violence, gender, culture and HIV/AIDS?

**Dates:** April 2006 – March 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – Aboriginal – Operating Grant

**Reference:** CIHR

**Topic:** Aboriginal women; sexual violence

### Project R70

*Sexuality, public health and citizenship*

**Principal investigator:** Dr Robert R. Lorway, McGill University (Montreal)

**Abstract:** not available

**Dates:** January 2005 – January 2007

**Funder:** Social Sciences and Humanities Research Council of Canada (SSHRC)

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=1565>

**Topic:** lesbian identity; women's reproductive health

**Project R71**

*Social, structural and environmental factors mediating access and adherence to ART among HIV-positive women in low-, middle-, and high-income countries*

**Principal investigator:** Kate Shannon,  
University of British Columbia

**Abstract:** Despite extensive efforts globally to curb the HIV epidemic, the number of new HIV infections continues to rise, particularly among women, and only 30-40% of medically eligible HIV-infected individuals are currently accessing life-saving antiretroviral therapy (ART) drugs. With women accounting for over half of the 33 million people living with HIV worldwide, and now unequivocal evidence documenting the 'feminization' of the HIV pandemic due to both increased social and biological susceptibility to HIV infection, ensuring access and adherence to ART for HIV-positive women has become a public health imperative. Unfortunately even in settings where ART is distributed free of charge, increasing evidence suggests the hidden costs of treatment (travel costs, childcare) are highly gendered. Furthermore, while growing research has identified individual clinical and behavioural predictors of access and adherence to ART, there is now some evidence to suggest that social (partner dynamics), environmental, and structural (gender, cultural and economic inequities) factors known to drive increased HIV infection risk among women in low-resource settings and marginalized populations may also reduce access and adherence to ART. In the proposed research project, I will use social epidemiology and GIS mapping, supported by qualitative methods to examine the social, structural and environmental factors that mediate access and adherence to ART programs among HIV-positive women. Drawing on data from three HIV-positive cohorts housed within the BCCfE, this research will provide a comparative analysis of the prevalence and types of barriers to ART access and adherence among women in settings with both low prevalence/ concentrated (Canada, Argentina) and generalized epidemics (South Africa). It is anticipated that this research will be highly valuable in informing gender-

specific community and structural level interventions that ensure improved health and survival of HIV-infected women.

**Dates:** August 2008 – July 2011

**Funder:** Canadian Institutes of Health Research (CIHR) – CIHR Bisby Fellowship

**Reference:** CIHR database

**Topic:** Women living with HIV (insight for Canada); access to care

**Project R72**

*Strengthening community-based approaches to HIV/AIDS education, screening, and treatment among Canadian Inuit youth*

**Principal investigator:** Dr. Jeanette Doucet,  
Pauktuutit Inuit Women of Canada

**Co-principals:** Dr. Jacqueline Gahagan,  
Dr. Aideen Reynolds, Dr. Audrey Steenbeek

**Co-investigators:** Dr. Chris Archibald, Dr. Pitsulala Lyta

**Abstract:** This project will begin to explore the complex interplay between culture, youth health, and gender empowerment regarding HIV/AIDS risk within Inuit communities, and determine research priorities for a multi-year study. There is an urgent need for a clearer picture of the dynamics and epidemiology of HIV risk among Inuit in Canada. Current Inuit HIV data tend to get lost among Aboriginal or broader Canadian statistics and under-represents the true situation for Inuit in Canada. This research seeks to contribute to this understanding and hopes to guide the development of sustainable community-based participatory options for HIV/AIDS interventions that are sensitive to the challenges of health promotion and health care provision in Northern communities. The project employs a community-based research methodology involving direct participation of Inuit organizations and community members. Moreover, on account of the barriers related to testing in small remote communities (lack of anonymity, stigma and discrimination, lack of access to care upon receipt of a positive test, lack of AIDS Service Organizations in the North), this community-based research methodology provides an important opportunity to build capacity

for health care providers and to improve access to education, testing (anonymous testing with pre- and post-test counselling), diagnosis, care, treatment and support.

**Dates:** April 2007 – March 2008

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – Aboriginal – Catalyst Grant

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=2161>

**Topic:** interplay between culture, youth health, and gender empowerment regarding HIV/AIDS; both male and female specified

### Project R73

*A study of an HPV VLP vaccine in a cohort of HIV-positive girls and women*

**Principal investigator:** Deborah M. Money, University of British Columbia

**Abstract:** In 2006, the first vaccine to protect against Human Papillomavirus (HPV) was approved in Canada. This vaccine protects against HPV which is the known cause of cervical cancer and genital warts. HIV-positive women have higher rates of HPV infection which progresses faster in them to cervical cancer. While HPV vaccine has been well studied in healthy young women, it is not known how well it will work in girls or women with HIV infection. This study will evaluate the HPV vaccine response in HIV-positive females from across Canada providing important data on immune responses, side effects and long-term protection against HPV in this group of women. These data are necessary to inform appropriate vaccination programs in Canada for this vulnerable group. In turn, the information from this study will also be valuable towards implementing HPV vaccine programs in the developing world where HIV infection is widespread. Although, most cases of cervical cancer in Canada are prevented by early detection via Pap smear screening, this is not the case in the developing world where access to Pap screening is limited. This vaccine has great promise to prevent both HPV infection and its serious consequences in Canada and can be life-saving on a much larger scale

in the developing world where cervical cancer is a leading cause of death among women.

**Dates:** April 2008 – March 2013

**Funder:** Canadian Institutes of Health Research (CIHR) – Operating Grant

**Reference:** CIHR database

**Topic:** Women living with HIV

### Project R74

*Studies of host factors and HIV-1 determinants during pregnancy*

**Principal investigator:** Dr. Hugo Soudeyns, Sainte-Justine Hospital (Montréal)

**Abstract:** Women living with HIV face unique challenges related to their gender. As HIV evolves into a chronic, cyclical illness, there is a need for understanding factors which enable their full participation in society. This research uses qualitative methods to identify promoters and barriers to participating in Canadian society experienced by women living with HIV. Thirty women with HIV will be recruited from the community to participate in in-depth interviews. As part of the interpretation process, the results of the interviews will be discussed with six key informants to determine how the findings might inform future action agendas for reform. The identification of women's unique promoters and barriers to participation will assist in the development of gender-specific social and health services to optimize participation.

**Dates:** April 2005 – March 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – Operating Grant – Priority Announcement: HIV/AIDS Research Initiative – Biomedical/Clinical Stream

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=834>

**Topic:** Women living with HIV (pregnancy)

### Project R75

*Survey to access the fertility desires and needs of Ontario HIV-positive women of reproductive age*

**Principal investigator:** Dr Mona Loutfy, Maple Leaf Medical Clinic (Toronto)

**Co-investigator:** Dr. Gina Ogilvie

**Abstract:** not available

**Dates:** March 2006 – March 2008

**Funder:** Canadian Foundation for AIDS Research (CANFAR)

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&csid1=1764>

**Topic:** Women living with HIV (fertility; reproductive age) (Ontario)

### Project R76

*The survival capacities and perceived health care needs of women involved in the sex trade who use injection drugs*

**Principal investigator:** Victoria A. Bungay, University of British Columbia

**Abstract:** This study will investigate health behaviours and survival capacities of women who use injection drugs and work in the sex trade in Vancouver's Downtown Eastside. These women are at significant risk for HIV, AIDS, violence, death due to drug overdose and a series of other health-related problems. Programs designed to minimize their risk for health problems, such as increased law enforcement and needle exchange facilities have been met with little success. Factors that may contribute to these failures are: 1) these women have not been included in the decision making about what health care services they require; and 2) the emphasis of programs has been on their risk behaviours as opposed to the actions they take to keep themselves safe and promote their own health. This qualitative study uses an ecological approach to investigate personal, organizational and social systemic factors that influence women's health behaviours who are involved in the sex trade and injection drug use. In-depth face-to-face interviews will be conducted with 40 women who work in the sex trade in Vancouver's Downtown Eastside. Twenty interviews will be conducted with street nurses who provide services to this population. These two sets of population data will allow for an understanding of women's health care behaviours, the resources they perceive they need to promote their health and a comparison of these factors

with the actual health and social services provided.

Understanding the health behaviours of women who work in the sex trade and use injection drugs and the current resources available will allow for better harm reduction strategies to be designed and implemented thereby potentially reducing the morbidity and mortality among the study population.

**Dates:** August 2004 – July 2007

**Funder:** Canadian Institutes of Health Research (CIHR) – Frederick Banting and Charles Best Canada Graduate Scholarships – Doctoral Award

**Reference:** CIHR

**Topic:** IDU; sex workers (Vancouver)

### Project R77

*A systematic review of evidence linking sexual violence and HIV/AIDS*

**Principal investigator:** Beverley J. Shea, CIET Canada (Ottawa)

**Abstract:** Despite the growing knowledge of evidence on HIV/AIDS very little is known about the relationship between interventions for the prevention of sexual violence and HIV/AIDS. Individuals who are HIV+ report experiencing violence directly attributable to their being seropositive. To date, there is no published high-quality systematic review summarizing this body of knowledge. This project will 1) systematically review and meta-analyze all studies conducted on interventions for the prevention of sexual violence and HIV/AIDS; 2) translate the findings and develop recommendations for their use by integrating decision makers into the review process; and 3) develop materials based on the findings for policy making and for front-line HIV/AIDS and sexual violence prevention. Research Plan: The title for this review is registered with the Cochrane Review Group on HIV/AIDS of the Cochrane Collaboration. We will follow the methods established by the Cochrane Collaborative Review Group on HIV Infection and provided by the Cochrane Collaboration Handbook for Systematic Reviews of Interventions. A protocol for the review will be submitted defining a priori the search strategy and data sources, the selection criteria, and the methods

of analysis. Integrated throughout the research, beginning with formulating the research problem, are decision makers from the Public Health Agency of Canada and the Canadian Aboriginal AIDS Network who will help shape the review by providing guidance on the policy relevance, political context of the review, the inclusion criteria, and prioritizing outcomes for analysis; assist with interpreting the findings for use by addressing the strength and the applicability of the evidence, considerations, such as costs and current practice, and clarification of any trade-offs between the expected benefits, harm and cost of intervention; and develop and implement an end-of-grant translation plan to ensure the findings are accessible and useful.

**Dates:** October 2008 – September 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – Knowledge Synthesis Grant

**Reference:** CIHR database

**Topic:** sexual violence (insight for Canada)

### Project R78

*The theory of planned behaviour: the effect of gender-related sociocultural factors on condom use intervention*

**Principal investigator:** Jeffrey Eng, McMaster University

**Abstract:** not available

**Dates:** 2005-06 (Fiscal Year)

**Funder:** Social Sciences and Humanities Research Council of Canada (SSHRC)

**Reference:** <http://www.outil.ost.uqam.ca/CRSH/Detail.aspx?Cle=39315&Langue=2>

**Topic:** gender-related (gender not specified)

### Project R79

*To each her own: sex work typologies, intimate relationships, and their impact on HIV risk for female sex workers in Vancouver's Downtown Eastside*

**Principal investigator:** Dr. Treena Orchard, University of Manitoba

**Abstract:** The estimated 1,000 female sex workers in Vancouver's Downtown Eastside (DTES) live in Canada's poorest neighbourhood, characterized by deplorable housing conditions and high rates of hepatitis C and

HIV infections. HIV prevalence is an alarming 26 per cent, according to a recent study of 198 female sex workers in the DTES. Although violence, poverty and social marginalization have been identified as putting these women at risk, we know very little about two of the defining issues that characterize sex work and make these women vulnerable to HIV: types of sex workers, and the intimate relationships women form with boyfriends and regular clients. Treena Orchard is exploring whether there is a link between a particular type of sex worker and relationship structure that places certain groups of women at greater risk for HIV infection. Her hypothesis is that women with an established sex work status are more likely to form lasting relationships and avoid high-risk sexual practices. Treena's research is examining how different types of sex workers are identified and organized, and how these women construct and attach meaning to their intimate relationships, especially in relation to the issues of sexuality, health and trust. This study will use individual interviews, focus groups and social mapping to determine the broader social processes and health determinants that structure the HIV risk of these female sex workers. Examining the social organization of sex work and relationships in this context is critical to improving the women's health status and developing HIV prevention programs that are population and gender-specific. As one of the few qualitative studies to address these issues among Canadian sex workers, this research will be relevant to other researchers, health authorities and – through their participation – the women themselves.

**Dates:** January 2006 – December 2006

**Funder:** Michael Smith Foundation for Health Research

**Reference:** <http://www.hivresearch.ca/index.asp?navid=17&cscid=1380>

**Topic:** sex workers (Vancouver)

### Project R80

*The Toronto Black women's HIV prevention and vaccine research forum*

**Principal investigator:** Charmaine C. Williams, University of Toronto

**Abstract:** The Toronto Black Women's HIV Prevention and Vaccine Research Forum will bring together researchers, service providers, community advocates and service users to network, share information and develop strategies. The starting point for this discussion is the release of findings from the Sisters, Mothers, Daughters and Aunties (SMDA) project that investigated barriers and facilitators to the future dissemination of HIV vaccines. As successful vaccine dissemination depends on effective use of existing HIV prevention strategies including education, testing for the virus and safer sex practices, preparing Black women requires consolidation of benefits from existing prevention technologies and action to reduce barriers to existing services. This proposed initiative can contribute to these goals by disseminating knowledge from the SMDA project and research projects conducted by our collaborators that address HIV stigma and access to HIV/health care services for Black women. First, we will update the SMDA website to disseminate study findings, publicize the forum and maintain links to resources, relevant service information and related community and research projects by our collaborators. Next, we will develop fact sheets for distribution at the forum and through stakeholder groups' networks address the following topics: research findings re: barriers and facilitators to HIV prevention and HIV vaccines; education against HIV stigma and HIV misinformation; community-based HIV research - how and why to participate, how and why to reach out to communities. Finally, the forum will bring together stakeholders to strategize responses to issues identified in the SMDA project and others, develop priorities for future research and community intervention, and develop relationships that can facilitate successful execution of an education and research agenda to address HIV prevention with Black women. A summary of outcomes from this process will be distributed from the SMDA website.

**Dates:** September 2008 – August 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – Meetings, Planning and Dissemination Grant: Knowledge Translation Supplement

**Reference:** CIHR database

**Topic:** prevention

### Project R81

*Touching knowledge, touching feeling: the question of implication and the difficult pedagogy of AIDS*

**Principal investigator:** Alyson Hoy, University of British Columbia

**Abstract:** not available

**Dates:** 2006-2007, 2007-2008 (Fiscal year)

**Funder:** Social Sciences and Humanities Research Council (SSHRC)

**Reference:** <http://www.outil.ost.uqam.ca/CRSH/Detail.aspx?Cle=60626&Langue=2>

**Topic:** gender; feminism

### Project R82

*Trans PULSE project: exploring HIV vulnerability in Ontario's trans communities*

**Principal investigator:** Greta R. Bauer

**Abstract:** HIV does not affect all groups equally. Studies from across North America strongly suggest that trans communities have higher than expected rates of HIV. This is perhaps not surprising considering evidence that many trans people experience violence and discrimination, and are having difficulty accessing the most basic of services. These include employment, health care, and housing. It is critical to consider these broader factors when trying to understand HIV in marginalized groups such as Ontario's trans communities. To address this, members of these communities - with partners from the Ontario HIV Treatment Network, Sherbourne Health Centre, the 519 Community Centre, the University of Western Ontario, and TGStation.com - have formed a community-based research project - The Trans PULSE Project. Trans PULSE will use a mix of qualitative and quantitative methods to provide the richest possible understanding of the ways that social marginalization may produce HIV vulnerability within trans communities and how social factors, such as health care access, as well as the source and stability of one's income, can affect quality of life for trans people who live with HIV. This project addresses a significant lack of relevant information, and reflects a desire by community members to see HIV within a broader context of trans lives and experiences.



The project is made up of an eight-person Investigators Committee, five of whom are trans, who have worked together in identifying research goals, designing the study, and increasing community involvement to ensure that this research is relevant to the needs of trans communities. Community soundings, wherein trans community members in three different Ontario communities discussed their experiences around health, health care, and HIV risk, have been important in shaping the research.

**Dates:** April 2007 – March 2010

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – General – Operating Grant

**Reference:** CIHR database

**Topic:** Trans issues

### Project R83

*Two-spirit women's experience of homophobia in the context of HIV/AIDS service provision*

**Principal investigators:** J. Kevin Barlow, Randy Jackson, Canadian Aboriginal AIDS Network (CAAN) (Ottawa)

**Abstract:** Adopting a community-based research design, the Canadian Aboriginal AIDS Network (CAAN) is pursuing a qualitative study of two-spirit women's experience of homophobia in the context of HIV/AIDS service provision. This study builds on a recent CAAN survey where trends are highlighted to asking more in-depth research questions: (1) When two-spirit women access care and homophobic discrimination is encountered, how do they subjectively experience such situations? How do they understand the intersection between their identities as two-spirit, HIV/AIDS and as women? (2) What is the impact of homophobia and heterosexism in terms of access to HIV/AIDS services? In other words, how do two-spirit women respond and what are the reasons they provide that guide their decision-making process? (3) What are the best practice and policy features necessary to mitigate homophobia in service provision from this population's perspective? Underpinning the study, respecting principles of OCAP is essential to maximizing any potential benefit.

**Dates:** April 2006 – March 2009

**Funder:** Canadian Institutes of Health Research (CIHR) – HIV/AIDS Community Based Research Program – Aboriginal – Operating Grants

**Reference:** CIHR

**Topic:** WSW

### Project R84

*Understanding factors that promote and hinder participation of women living with HIV*

**Principal investigator:** Dr. Patricia Ellen Solomon, McMaster University (Hamilton)

**Abstract:** Women living with HIV face unique challenges related to their gender. As HIV evolves into a chronic, cyclical illness, there is a need for understanding factors, which enable participation in society. This research uses qualitative methods to identify promoters and barriers to participating in Canadian society experienced by women living with HIV. Thirty women with HIV will be recruited from the community to participate in in-depth interviews. As part of the interpretation process, the results of the interviews will be discussed with six key informants to determine how the findings might inform future action agendas for reform. The identification of women's unique promoters and barriers to participation will assist in the development of gender-specific social and health services to optimize participation.

**Dates:** October 2004 – September 2006

**Funder:** Canadian Institutes of Health Research (CIHR) – Operating Grant

**Reference:** <http://www.hivresearch.ca/index.asp?navid=18&csid1=833>

**Topic:** Women living with HIV

### Project R85

*Understanding the interactions of sexually transmitted viruses in the female genital tract*

**Principal investigator:** Charu Kaushic, McMaster University

**Abstract:** Sexually transmitted infections (STIs) are one of the leading causes of morbidity worldwide and a substantial burden on the health systems of both

developing and developed countries. Clinical and epidemiological evidence shows that women are more susceptible to sexually transmitted pathogens compared to men. Vaccines against STIs are the only cost-effective way to control and attempt eradication of these diseases. However, extensive efforts in the last two decades to develop effective vaccines against STIs, such as Herpes simplex virus, type-2 (HSV-2), Human immunodeficiency virus, type-1 (HIV-1) and *Chlamydia trachomatis* have been unsuccessful. WHO figures at the end of 2004 showed that for the first time globally 50% of HIV-1 infected individuals are women. Very little is currently understood about the initial interaction of these pathogens with the genital tract in women, where they first come in contact following heterosexual transmission. Various factors in the female genital tract determine the outcome of local infection and the quality of the body's protective responses against these pathogens. Our research efforts will focus on understanding the microenvironment of the female genital tract and its interaction with sexually transmitted viruses and the immune system. These studies have important implications in women's reproductive health and will impact both STI vaccine strategies, as well as women who are currently on hormonal therapies.

**Dates:** September 2007 – August 2012

**Funder:** Canadian Institutes of Health Research (CIHR) – New Investigator Award in the Area of HIV/AIDS Biomedical/Clinical Research

**Reference:** CIHR database

**Topic:** HIV/AIDS biomedical research (insight for Canada)

### Project R86

*Vertical transmission of HIV-1:*

*Tracking virus transport in trophoblasts*

**Principal investigator:** Michel J. Tremblay

**Abstract:** Viruses exploit various cellular processes to infect and replicate in target cells. Although it was previously thought that, in order to lead to productive

infection, entry of HIV-1 must occur after fusion with the plasma membrane, recent findings suggest that authentic cell infection can occur in some instances following entry by endocytosis. In support of this concept we recently reported that, in human polarized trophoblasts, HIV-1 is predominantly found in intracellular vesicles upon cell entry. This suggests that virus internalization is taking place mainly through an endocytic pathway in such cells. The proposed research project is aimed at gaining more information on the mechanism(s) through which HIV-1 is gaining access to human polarized trophoblasts. More specifically, we intend to define the mode(s) of HIV-1 endocytosis and dissect the post-entry pathway(s) taken by HIV-1 in this cell type. The proposed series of investigations will provide useful information on the biology of HIV-1 in trophoblast, a cellular constituent of the placenta considered as a key element in mother-to-infant transmission of HIV-1.

**Dates:** March 2007 – March 2010

**Funder:** Canadian Institutes of Health Research (CIHR) – Operating Grant – Priority Announcement: HIV/AIDS Research Initiative – Biomedical/Clinical Stream

**Reference:** CIHR database

**Topic:** HIV/AIDS biomedical research (insight for Canada)

### Project R87

*Women and HIV in Canada*

**Principal Investigator:** Janelle Hippe, Queen's University

**Abstract:** not available

**Dates:** 2007-2008; 2008-2009 (Fiscal Year)

**Funder:** Social Sciences and Humanities Research Council (SSHRC)

**Reference:** <http://www.outil.ost.uqam.ca/CRSH/Detail.aspx?Cle=54495&Langue=2>

**Topic:** women

## APPENDIX C

# C

### 1) Population-specific Networks, Coalitions and Advisory Bodies

#### National

- Blueprint for Action on Women & Girls and HIV and AIDS in Canada
- Canadian Aboriginal AIDS Network Voices of Women Committee (CAAN VOW Committee)
- Canadian Women's Health Network
- Centres of Excellence for Women's Health
- Correctional Service of Canada's Infectious Disease Strategy for Women Offenders
- Women-Centred Harm Reduction: Gendering the National Framework (BC Centre of Excellence for Women's Health and Coalescing on Women and Substance Use)

#### British Columbia

- Canadian National Coalition of Experiential Women
- Prostitutes Empowerment Education and Resources Society
- Positive Women's Network
- West Coast Cooperative of Sex Industry Professionals of Vancouver

#### Québec

- Stella- l'amie de Maimie

#### Ontario

- Development Coordinator positions in key communities across Ontario
- Maggie's- The Toronto's Prostitutes' Community Project
- Ontario HIV Pregnancy Planning Initiative
- Ontario Aboriginal HIV/AIDS Strategy
- Prostitutes of Ottawa-Gatineau Work Educate and Resist (POWER)
- Prenatal HIV Testing Program

- Women and HIV/AIDS Working Group
- Women and HIV/AIDS Initiative, including the establishment of Women and HIV/AIDS Community

#### Atlantic

- AIDS Committee of Newfoundland Labrador, Oxfam, Interagency Coalition on AIDS and Development (ICAD), Canadian International Development Agency (CIDA), and Zimbabwe/Lesotho
- Advisory Council on the Status of Women
- Sex Trade Action Committee
- Stepping Stones

### 2) Organizations Involved in the Delivery of Programs and Time-Limited Projects (2006-2009) Addressing HIV/AIDS among Women in Canada

**Note:** Project number followed by an asterisk (\*) include women projects that are part of a larger response; all other projects target women specifically.

#### National

##### Battlefords Family Health Centre

- **Project W1 (\*)**: Circle of Change: Reducing Harm — Part of the project entails high-risk Aboriginal Women's drop-in support group focusing on reducing harm in sexual health and intravenous drug use (IDU).

##### Canadian Aboriginal AIDS Network

[<http://www.caan.ca>]

- **Project W2 (\*)**: Culturally Appropriate Harm Reduction Program Development: Four Best Practice Approaches to Reducing Harm Associated with Injection Drug Use (and Other Substances) in Aboriginal Communities — Part of the project targets Aboriginal women and harm reduction. Its goal is to implement best practices approaches to reducing harm associated with injection drug use within Aboriginal Communities.

**Correctional Service of Canada**[\[http://www.csc-scc.gc.ca\]](http://www.csc-scc.gc.ca)

- **Project W3:** Women Offender Substance Abuse Programming — A holistic program that targets other areas of women's lives, including issues linked to sexuality, past experiences of abuse, relationship issues linked to intimate partners, etc.
- **Project W4:** Programs for Survivors of Abuse and Trauma — Project focusses on women who are in prisons and are survivors of family abuse and trauma or intimate partner violence.
- **Project W5:** Prisoners at federal prison for women run HIV/AIDS education and support group — Support group created at the Edmonton Institution for Women, offers support to women in prison on HIV/AIDS, Hep-C and harm reduction.

**Healing Our Nations, Non-reserve Fund**[\[http://www.hon93.ca\]](http://www.hon93.ca)

- **Project W6 (\*):** Finding Our Voices — Part of the project aims at planning and delivering educational HIV/AIDS sessions focusing on women's issues.

**Ka Ni Kanichihk (Those Who Lead)**[\[http://www.kanikanichihk.ca\]](http://www.kanikanichihk.ca)

- **Project W7:** Aboriginal Women Responding to AIDS Crisis (AWRAC) — Project focusing on Aboriginal women.

**Native Women's Shelter of Montreal**[\[http://www.nwsm.info\]](http://www.nwsm.info)

- **Project W8:** Harm Reduction — Project focusing on Aboriginal women.

**British Columbia****AIDS Network Kootenay Outreach and Support Society (ANKORS)** [\[http://www.ankors.bc.ca\]](http://www.ankors.bc.ca)

- **Project W9:** Girl Power — Workshop that looks at linkages between low female self-esteem/risky activity and their connection to HIV. Focus is put on female body image and its media portrayal. Strategies for girls valuing themselves are explored.

**AIDS Vancouver, Positive Women's Network**[\[http://www.pwn.bc.ca\]](http://www.pwn.bc.ca) and **Oak Tree Clinic**

- **Project W10:** Sahwanya Community Kitchen — Project focuses on African women living with HIV.

**Asian Society for the Intervention of AIDS Project**[\[http://www.asia.bc.ca\]](http://www.asia.bc.ca)

- **Project W11:** The ORCHID project: Outreach and Research in Community Health Initiatives and Development — Project targets Asian female sex workers employed in massage parlours and escort agencies throughout Vancouver and BC Lower Mainland.

**Downtown Eastside Women's Centre**[\[http://www.dewc.ca\]](http://www.dewc.ca)

- **Project W12:** HIV and Harm Reduction — Project's goal is to support women who are affected by HIV and AIDS to access harm reduction, medical services and community resources.

**Dr. Peter AIDS Foundation**[\[http://www.drpeter.org/home\]](http://www.drpeter.org/home)

- **Project W13:** Project's goal is to build and expand the agency's outreach and access programs for female PHAs living in the B.C. Lower Mainland.



**Healing Our Spirit** [<http://www.healingourspirit.org>]

- **Project W14:** Around the kitchen table — Project that empowers Aboriginal women, with an emphasis on those living in remote communities, to fight the spread of HIV/AIDS by reinstating their traditional roles, and joining them in a community network of support and education.

**Interior Indian Friendship Society**

- **Project W15:** Rights of Passage — Project targets Aboriginal female youth.

**Ministry of Public Safety and Solicitor General, Corrections Branch** [<http://www.pssg.gov.bc.ca/corrections/index.htm>]

- **Project W16:** University partners with provincial prison for women- participatory action research empowers prisoners — Peer-driven project that identified pressing health issues within the prison system, including access to health care in prison, and also issues affecting the ins and outs of women in prison.

**National Congress of Black Women Foundation**

- **Project W17:** Peer-based outreach — Project distributes prevention material to Black Women and offers support group for Black women affected by HIV/AIDS (local scope).

**PHS Community Services Society (with British Columbia, Health Canada, Vancouver Coastal Health** [[http://www2.news.gov.bc.ca/news\\_releases\\_2005-2009/2009HSD0016-000153.htm](http://www2.news.gov.bc.ca/news_releases_2005-2009/2009HSD0016-000153.htm)]

- **Project W18:** The Rainier Hotel — Project provides alcohol- and drug-free housing for women in transition of detox. Twenty beds will be for former sex-trade workers who are self-referred or referred through their detox program.

**Positive Women’s Network and YouthCo**

[<http://www.pwn.bc.ca/>]

- **Project W19:** Support Program for HIV-Positive Women (PWN).
- **Project W20:** Women’s Initiatives for Support and Education (WISE) Project (PWN and YouthCo).
- **Project W21:** Positive Players: Sexual Health for Women in their Middle Years (PWN).

**Women’s Information Safe House (WISH) Drop-In Centre Society** [<http://www.wish-vancouver.net>]

- **Project W22:** HIV/AIDS and Survival Sex Worker Project (Sex workers).
- **Project W23:** A Mobile and Peer-Driven HIV Prevention Model with Street-based Sex workers (pending approval).
- **Project W24:** MAKKA Project.

**Vancouver Coastal Health** [<http://www.vch.ca>]

- **Project W25:** Sheway: A community project for women and children — Project located in Vancouver DTES providing health and social service supports to pregnant women and women with infants who are dealing with drug and alcohol issues; the focus is to help women have healthy pregnancies and positive early parenting experiences.

**Vancouver Native Health Society**

[<http://www.vnhs.net>]

- **Project W26:** Positive Women, Positive Spaces: A Community-Based Initiative to Address HIV/AIDS for Urban Aboriginal Women — Project goal is to launch a pilot project addressing the links between violence and risk for HIV infection amongst Aboriginal women living in Vancouver’s DTES by creating and evaluating a women’s-only clinic night.

**VANDU (Vancouver Area Network of Drug Users)****Women's Group** [<http://www.vandu.org>]

- **Project W27:** Women Care — Project focuses on vulnerable women (i.e. street-involved sex workers who use injection drugs).

**YouthCo** [<http://www.youthco.org>]

- **Project W28:** WISER Project — Project focuses on increasing life and employment skills of young women living with HIV.

(In B.C., the Provincial Health Services Authorities created an agency, the B.C. Women's Hospital and Health Centre, which is devoted primarily for women, their children and families. Some programs are dedicated exclusively to women living with HIV/AIDS).

**Northern**

(No women-specific project was found).

**Alberta****Calgary Birth Control Association**

- **Project W29:** Sexual Self-Esteem as a HIV Prevention Tool Project — Project focused on empowering young women to make positive choices to reduce the risk of HIV transmission.

**Calgary Immigrant Women's Association**

[<http://www.ciwa-online.com>]

- **Project W30:** I CARE- Immigrant Community AIDS Resources and Education.

**Central Alberta Immigrant Women's Association**

[<http://www.caiwa.ca>]

- **Project W31:** HIV Prevention Programs for Immigrants and Refugees in Red Deer.

**Multicultural Health Brokers Co-operative Ltd.**

[<http://www.mchb.org/OldWebsite2008/default.htm>]

- **Project W32:** Prevention Messages for Immigrants and Refugees - Edmonton.

**Shift Calgary** [<http://www.shiftcalgary.org>]

- **Project W33:** Shift provides support, outreach, education, advocacy, referrals and counselling to individuals involved in, or those who have been involved in, the sex trade, using a harm reduction-based approach.

**Saskatchewan/ Manitoba****AIDS Programs South Saskatchewan**

[<http://www.aidsprogramssouthsask.com/home.html>]

- **Project W34:** Ribbons of Hope Program — Program designed to help women take more effective control of their lives; feel better about themselves and their families. Empowering individuals to make successful transitions and help build coping skills, as well as building a positive attitude.
- **Project W35:** Sisters Connect — Weekly support/ coffee group for women living with HIV/ AIDS (or those at risk).

**All Nations Hope AIDS Network (ANHAN)**

[<http://www.allnationshope.ca>]

- **Project W36:** Voices of Women (VOW) — Project focuses on HIV/AIDS-related issues affecting Aboriginal women.

**Kali-Shiva Society, Inc.**

- **Project W37:** Positive Women Communicating for Change — Project focuses on women living with HIV/AIDS.

**Ontario****Access AIDS Network (formerly known as ACCESS - The AIDS Committee of Sudbury)**

- **Project W38 (\*):** Community Education and Prevention Program — Part of this project aims to increase the knowledge of HIV/AIDS among women.

### Africans in Partnership against AIDS

[<http://www.apaa.ca>]

- **Project W39:** African Women Discussion Network (African Women Skills Building) — Support service available to all women living with HIV/AIDS who self-identify as persons of colour (may originate from diverse communities). It provides clients with an opportunity to receive skills building training related to living with HIV/AIDS, and personal support; to share information and experiences; and to receive counselling (project in collaboration with Voices of Positive Women, Black-CAP and Women's Health in Women's Hands).
- **Project W40:** African, Caribbean and Continental African Youth and Family Support — Project provides girls/women 16-18 years and up healthy sexual education in a culturally appropriate context, as well as in a supportive environment to PHAs, their partners, family and friends.
- **Project W41:** The Muslim Girls Project — Project engages Muslim community in Toronto in addressing gender-specific issues surrounding HIV/AIDS.
- **Project W42:** The Health Promotion and Skills Development Project for African and Caribbean Women living with HIV/AIDS. — Project seeks to promote the health and well-being of African and Caribbean women living with HIV/AIDS and to foster skills through increased access to information and services.
- **Project W43:** Community Kitchen — Project brings women together once a month to share food, chat, tell stories, and educate them on issues related to HIV/AIDS and sexual and reproductive health. This is a partnership program offered jointly through APAA, ACT, Black CAP and Voices of Positive Women.

### AIDS Committee of Durham Region

[<http://www.aidsdurham.com>]

- **Project W44:** Positive Living: Long-Term Survivor Health Promotion Resource Development & Training Project — Through community kitchens and peer support, this project provides opportunities for HIV+ African women to empower one another, access HIV/AIDS information in a supportive setting, and build knowledge and skills to meet their health care needs.

### AIDS Committee of Toronto (ACT)

[<http://www.actoronto.org>]

- **Project W45 (\*):** Positive Youth Outreach: Health Promotion and Outreach to HIV-Positive Youth — Part of this project offers monthly women-specific support/drop-in groups.
- **Project W46 (\*):** Health Promotion for People Living with HIV/AIDS — Part of the work involves increasing the capacity of WHAs to enhance their health and well-being.
- **Project W47:** Treatment Options and Wellness Retreat — In partnership with Voices of Positive Women, the project aims to implement a Treatment Options and Wellness Retreat in 2007 for HIV+ women from across Ontario.

### AIDS Support Chatham-Kent

[<http://www.aidswindsor.org/cms>]

- **Project W48 (\*):** Prevention Education and Outreach — Part of the project seeks to provide outreach to women involved in sex work.

### AIDS Thunder Bay [<http://www.gsk.ca/english/html/community/2008-program-recipients.html>]

- **Project W49:** Women HIV/AIDS: Safety, Sex and STIs — Project aims to train female PHAs to deliver HIV/AIDS and STI prevention, risk and treatment information to at-risk women in Thunder Bay who are not currently connected to these services.

**Alliance for South Asian AIDS Prevention**[\[http://www.asaap.ca\]](http://www.asaap.ca)

- **Project W50:** Desi Women HIV/AIDS Prevention Project — Project focuses on HIV prevention education for South Asian women aged 25-55 years.

**Asian Community AIDS Services** [\[http://www.acas.org\]](http://www.acas.org)

- **Project W51:** Asian Women-at-Risk Education and Outreach Project — Project aims to increase Asian Canadian women's and transwomen's access to HIV/STI prevention and sexual health messages and services.

**Black Coalition for AIDS Prevention**[\[http://www.black-cap.com\]](http://www.black-cap.com)

- **Project W52 (\*):** AIDS Prevention — Part of the project aims to design and print a resource for newly diagnosed women.
- **East York and East Toronto Family Resources Organization** [\[http://www.eyetfrp.ca\]](http://www.eyetfrp.ca)
- **Project W53:** AWARE: Assisting Women in AIDS-Related Education.

**Elizabeth Fry Society of Toronto**[\[http://www.efrytoronto.org\]](http://www.efrytoronto.org)

- **Project W54:** Work Safe: Sex Worker's HIV/AIDS, Hepatitis C and STI Prevention and Support Project — Project addresses barriers to accessing appropriate and relevant health services, including information about HIV/AIDS, faced by female sex trade workers.

**Ethiopian Association in the GTA and the Surrounding Regions** [\[http://www.ethiocommun.org/health/index.html\]](http://www.ethiocommun.org/health/index.html)

- **Project W55 (\*):** Ethiopian Association HIV/AIDS Prevention Project — Part of this project is to proceed with a second awareness campaign that specifically targets women.

**EVA's Satellite, EVA's Initiatives** [\[http://www.evasinitiatives.com/PDF/Evas\\_AR\\_2008.pdf\]](http://www.evasinitiatives.com/PDF/Evas_AR_2008.pdf)

- **Project W56:** Young Women's Health Sexuality Project — Project aims to provide workshops and discussion groups for a minimum of 50 young women.

**MAGGIE's- The Toronto Prostitute Community Service Project** [\[http://maggiestoronto.ca/services\]](http://maggiestoronto.ca/services)

- **Project W57:** Aboriginal Sex Worker Outreach and Education Project — Project aims at providing female Aboriginal sex workers with specific prevention and support programs.

**Ontario Aboriginal HIV/AIDS Strategy**[\[http://www.oahas.org\]](http://www.oahas.org)

- **Project W58:** The Strategy has developed a pamphlet on harm reduction for Aboriginal women.

**Ontario Federation of Indian Friendship Centres**[\[http://www.ofifc.org\]](http://www.ofifc.org)

- **Project W59:** Awakening the Spirit — Project provides physician and healthcare providers with an understanding of Aboriginal colonial history, Aboriginal perspectives on health, wellness and spirituality, and Aboriginal harm reduction in relation to Aboriginal women at risk of, and living with, HIV/AIDS and/or hepatitis C and other STIs.

**Prisoners' HIV/AIDS Support Action Network**[\[http://www.pasan.org\]](http://www.pasan.org)

- **Project W60:** Women's Program — This program provides HIV prevention education, support services, release planning and case management specific to the needs of women in prison and recently released women.

**Sandy Hill Community Health Centre**[\[http://www.sandyhillchc.on.ca\]](http://www.sandyhillchc.on.ca)

- **Project W61:** Oasis Women's Drop-In — Medical and social support for women with, or at risk of, HIV and hepatitis C (only for women who use drugs or work in sex trade).





### Somali Immigrant AIDS Organization

[<http://www.webhome.idirect.com/~siao>]

- **Project W62** (\*): AIDS Prevention: Community Voice — Part of this project aims at providing 4 HIV/AIDS workshops; 2 specific to Somali teenage females 15 to 24 years of age; and 2 that are specific to Somali women 25 years of age and older.

### South Riverdale Community Health Centre

[<http://www.srchc.ca/node/170>]

- **Project W63:** Women's Harm Reduction — This project is for women who use illicit drugs and/or are working in the sex trade. This program works to acknowledge those challenges and develop responsive, supportive programming.

### AIDS Committee of Ottawa, African-Caribbean

**Women's Group** [[http://www.aco-cso.ca/AfricanCaribbean\\_Brochure.pdf](http://www.aco-cso.ca/AfricanCaribbean_Brochure.pdf)]

- **Project W64:** The Living Room Program — The African and Caribbean women living with HIV/AIDS in Ottawa need their own confidential space where they can come together to share their experiences about living with HIV/AIDS, support each other and share information and resources. African and Caribbean women living with HIV/AIDS have access to the living room once a week.

### The Teresa Group

[<http://www.teresagroup.ca>]

- **Project W65:** Support, financial and counselling services — Project seeks to provide support, financial and counselling services.
- **Project W66:** The infant formula program — Project offers free formula to new mothers who are HIV+.

### Toronto Hospital for Sick Children

[<http://www.sickkids.ca>]

- **Project W67:** Motherisk Program — Within this larger program, Motherisk provides women with free, confidential counselling about the risk of HIV infection and HIV treatment during pregnancy.

### Voices of Positive Women

[<http://www.vopw.org>]

- **Project W68:** Peer Network Community Collaboration Program — Project provides capacity-building workshops for service providers and HIV+ women; peer support and information to HIV+ women through the peer mentorship and networking. It also offers joint programs with community partners and regional training sessions for peer mentors; develops HIV+ women-specific print and web-based resources.
- **Project W69:** Community-Based AIDS Education and Support Program.
- **Project W70:** Community Connections Project — Project provides one-on-one confidential information on HIV/AIDS for women who reside in the East Scarborough area.

### Women's Health in Women's Hands

[<http://www.whiwh.com/index.php>]

- **Project W71:** HIV Education, Prevention for African and Caribbean Women.
- **Project W72:** Women's Health in Women's Hands HIV/AIDS Education Program: Sharing our Model of Care.
- **Project W73:** African and Caribbean HIV Community Capacity-Building Project (national scope).
- **Project W74:** Negotiating Disclosure: an HIV Serostatus Disclosure Model for African and Caribbean Women — Project addresses the funding priority of reducing systemic barriers to improve access to health services for at-risk women and women living with HIV/AIDS from the African and Caribbean communities.

## Québec

**Catwoman Project** (aims to inform sex workers of modes of HIV and STI transmission, and promotes safer sex behaviour; and offers medical accompaniments; vaccination clinics, clinical testing-pregnancy and STIs).

- **Project W75:** St-Jérôme (Centre SIDA Amitié).
- **Project W76:** Iris-Estrie (Sherbrooke).
- **Project W77:** Valleyfield (PACT de rue).

### Agence de la santé et des services sociaux de l'Outaouais; Local Health Agency

[<http://www.santeoutaouais.qc.ca>]

- **Project W78:** Femmes de la rue — Project that ensures sex workers have access to appropriate resources, for example, by accompanying sex workers to appointments and ensuring the availability of safe injection equipment.

### Bureau local d'intervention traitant du Sida

[<http://www.blits.ca>]

- **Project W79:** Les femmes face au VIH-Sida — Project aims to educate women and teenagers on sexual health and the adoption of safer sex behaviour and train women's organization workers to enhance intervention among this clientele regarding sexual health.

### CACTUS Montreal [<http://www.cactusmontreal.org>]

- **Project W80:** Trans-Positive : Trans HIV/AIDS Community Health Project — Project aims to prevent HIV and hepatitis C infection among transsexual and transgender men and women principally from the Montreal region, as well as other regions of Québec. Educational workshops on these infections will be given to this group. Workshops pertaining to the reality experienced by this population will be given to health professionals to improve accessibility to their services. A brochure will be developed and distributed to those targeted by the project.

### Centre femmes aux trois A [<http://www.cf3a.ca>]

- **Project W81:** Les femmes et leur santé sexuelle, vers une prise en charge — Project for women who are victims of any and all forms of violence, or are at risk thereof (i.e. shelters). Via a series of workshops, the project provides these women with knowledge and skills to better manage their sexual well-being and be in a position to adopt safer sex practices.
- **Project W82:** Joue pas avec ma vie — Prevention information and awareness project on STBBIs. It does not propose sexual or drug abstinence to women, rather, it encourages them to empower themselves by adopting safer practices for healthier living.

### Centre for AIDS Services Montreal (Women)

[[http://www.phac-aspc.gc.ca/aids-sida/about/reg\\_quebec-eng.php#n7](http://www.phac-aspc.gc.ca/aids-sida/about/reg_quebec-eng.php#n7)]

- **Project W83:** Projet d'accompagnement et de soutien des personnes réfugiées séropositives — Project to provide support to HIV-positive persons who have either obtained refugee status or are awaiting refugee status, in order to facilitate their integration and prevent social isolation, which can affect their health.
- **Project W84:** Positivement femmes — This project, conducted in Montreal shelters for abused women, provides sexual health prevention. The goal is to make abused women aware of the risks associated with STBBIs, help them to develop communication skills to deal with sexuality, and enable them to negotiate safe sex.
- **Project W85:** Femmes + — Salaries of Executive Director and Prevention Officer in order to give services to women living with HIV/AIDS, mostly in a multicultural environment.

**Emiss-ère (Équipe multidisciplinaire d'intervention en santé sexuelle)** [[www.emiss-ere.ca](http://www.emiss-ere.ca)]

- **Project W86:** Support, entraide et promotion de la santé sexuelle auprès des travailleuses du sexe — Project aims to equip sex trade workers to adopt safe behaviour regarding HIV and other blood-borne and sexually transmitted diseases. The project provides support, care and referral services. The project also addresses the creation of supportive environments through the de-stigmatization of prejudices within the community settings and work places of these women.
- **Project W87:** Les femmes et leur santé sexuelle — Project aims to enhance women's attitudes, knowledge and skills to take charge of their sexual health.
- **Femmes autochtones du Québec** [[http://www.phac-aspc.gc.ca/aids-sida/about/reg\\_quebec-eng.php#n46](http://www.phac-aspc.gc.ca/aids-sida/about/reg_quebec-eng.php#n46)]
- **Project W88:** Les femmes autochtones victimes de violence et leur santé sexuelle...vers une prise en charge — Project providing six sexual health workshops for abused Aboriginal women. The goal is to provide training on sexuality for social workers from native women's shelters and to hold workshops for Aboriginal women residing at the shelters. The shelters are located across Quebec.

**Groupe d'action pour la prévention de la transmission du VIH et l'éradication du Sida**[<http://www.gapvies.ca>]

- **Project W89:** Par elles, pour elles, pour la vie/ By Her, for Her, for Life — Project in partnership involving: 1- adapting and implementing an intervention program that empowers Montreal Anglophone WHAs in situations involving disclosure of their HIV-positive status; 2- training social workers and beneficiaries of partner community groups in the use of the « Femmes d'abord » program (both English and French versions); and 3- organizing a regional forum on the experience of women living with HIV.

**Refuge Juan Moreno**

- **Project W90:** Femmes en santé- Healthy Women.

**Sidaction Trois-Rivières**[<http://www.sidaction-troisrivieres.ca>]

- **Project W91:** Catwoman Mauricie (Aboriginal women targeted).

**Sida vie Laval**

- **Project W92:** Sphère de Venus — Project aims to educate and offer support and services to sex workers with HIV/AIDS. An outreach worker is hired to go to erotic bars, providing women with condoms and information on hepatitis vaccination, HIV testing and STIs. The goal of the project is to support and provide intervention for sex workers.

**STELLA, l'amie de Maimie**[<http://www.chezstella.org/stella/?q=en/contact>]

- **Project W93:** Des ailes pour notre avenir (Wings for our Future).
- **Project W94:** Prévenir le VIH et autres ITS par la consolidation et le développement du travail de rue/HIV and STI Prevention.
- **Project W95:** Plusieurs projets sur les travailleuses du sexe/Several projects designed for sex trade workers; Agence de la santé et des services sociaux de Montréal/Montreal Health and Social Services.
- **Project W96:** Sex worker and HIV-prevention organization engages women prisoners through creative writing and art.
- Creation of the Magazine *Constellation* by women in prisons for women in prisons.

**Unité d'intervention mobile l'Anonyme**[<http://www.anonyme.ca>]

- **Project W97:** Hey fille! Mets tes culottes/Hey Girl! Stand up for yourself! — Project dedicated to empowering young women (14-30 years old) on prevention and sex education.

## Atlantic

### **AIDS Coalition of Nova Scotia** [<http://www.acns.ns.ca>]

- **Project W98:** Community HIV/AIDS Sex Worker Leadership Program.
- **AIDS New Brunswick** [<http://www.aidsnb.com>]
- **Project W99:** WIN Project — The goal of the project is to increase the use of the Needle Exchange Program by women. Therefore, decreasing the spread of HIV and hepatitis C and also providing a safe means for needle disposal. This project will survey women who use intravenous drugs to determine how the Needle Exchange Program could be improved. The funding will also be used to upgrade the appearance of the Needle Exchange facility.

### **Coverdale Centre for Women Inc. (New Brunswick)**

- **Project W100:** Substance Abuse Program for women in prisons and halfway house for women transitioning to the community from prisons.

### **Stepping Stones** [<http://www.steppingstonens.ca>]

- **Project W101:** Sex workers.

