POPULATION-SPECIFIC STATUS REPORT

HIV/AIDS AND OTHER SEXUALLY TRANSMITTED AND BLOOD BORNE INFECTIONS AMONG YOUTH IN CANADA

PROTECTING CANADIANS FROM ILLNESS

Public Health Agency of Canada
Agence de la santé publique du Canada

Canada

TO PROMOTE AND PROTECT THE HEALTH OF CANADIANS THROUGH LEADERSHIP, PARTNERSHIP, INNOVATION AND ACTION IN PUBLIC HEALTH.

—Public Health Agency of Canada

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Rapport d'étape sur les populations distinctes : VIH/sida et autres infections transmissibles sexuellement et par le sang parmi les jeunes au Canada

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FOREWORD

The Public Health Agency of Canada (the Agency), with the support of its many partners, is pleased to release this report as the sixth in a series intended to summarize current knowledge about the impact of HIV/AIDS among key populations in Canada.[i] This series of status reports was initiated to support the actions set out in *The Federal Initiative to Address HIV/AIDS in Canada (Federal Initiative)*,[ii] and to provide an 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 living with, and vulnerable to, HIV and AIDS. The populations identified in the *Federal Initiative* include: gay and other men who have sex with men; people who use injection drugs; people from countries where HIV is endemic; Aboriginal Peoples; people in prisons; youth at risk; women at risk; and people living with HIV/AIDS.

Although the *Federal Initiative* outlines a framework for addressing HIV/AIDS specifically, HIV and other sexually transmitted and blood borne infections (STBBIs) share common transmission routes (i.e. exposure to infected body fluids), common risk behaviours (i.e. unprotected sexual activity and sharing of drug use equipment) and common determinants (e.g. poverty, stigma and discrimination, untreated mental illness and addictions). In addition, the presence of one infection can increase the risk of infection with another. Therefore, while this status report is focused mainly on HIV, it also addresses STBBIs more broadly.

In particular, this report focuses on how HIV and other STBBIs affect youth in Canada. The transition from childhood to adulthood is marked by many changes including physical maturation, increased independence, completion of high school and entry into post-secondary education or the labour force. It is a time when attitudes and norms of behaviour are established which ultimately put youth on various pathways to health and wellbeing. While most youth navigate this transition successfully, others face challenges and obstacles. The research presented in this report is intended to inform the reader about the many factors that place youth on various pathways and contribute to the vulnerability to or resilience against HIV and other STBBIs.

Individual behaviours that may lead to HIV and other STBBIs, including unprotected sex and unsafe injection drug use, are directly or indirectly affected by many social factors. This report focuses on the broad determinants of health that can influence health outcomes among youth, including: education; income; employment; gender and gender norms; unstable housing or homelessness; access to health services; and social environments. In so doing, this report supports the Agency's efforts to identify and address health disparities among Canadians.

HIV and other STBBIs continue 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 and other STBBIs is key to understanding how

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[i] Other reports in this series include *Population-specific Status Report: People from Countries Where HIV is Endemic—Black People of African and Caribbean Descent Living in Canada; Population-specific Status Report: Aboriginal Peoples; Population-specific Status Report: Women; Population-specific Status Report: Gay, Bisexual, Two-spirit and Other Men who have Sex with Men; and Population-specific Status Report: People Living with HIV/AIDS.*

[ii] The *Federal Initiative to Address HIV/AIDS in Canada* is the Government of Canada's framework for federal investments in HIV/AIDS. More information on *The Federal Initiative to Address HIV/AIDS in Canada* is available at www.phac-aspc.gc.ca/aids-sida/fi-if/index-eng.php

to best structure an effective response. Communities, governments, public health practitioners, non-governmental organizations, researchers and others are encouraged to use this report to inform the future direction of policy, programming and research with the goal of positively affecting the health and wellbeing of Canadian youth vulnerable to or living with HIV or other STBBIs.

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ACYRN	Aboriginal Community Youth Resilience Network
AHS	Adolescent Health Survey
AIDS	Acquired Immunodeficiency Syndrome
APS	Aboriginal People's Survey
ARYS	At-Risk Youth Study
Black CAP	Black Coalition for AIDS Prevention
CAAN	Canadian Aboriginal AIDS Network
CAHR	Canadian Association for HIV Research
CANFAR	Canadian Foundation for AIDS Research
CAS	Canadian AIDS Society
CCDIC	Centre for Communicable Diseases and Infection Control
CCHS	Canadian Community Health Survey
CCSA	Canadian Centre on Substance Abuse
CEGEP	Collège d'enseignement général et professionnel
CIHR	Canadian Institutes of Health Research
CIS	Canadian Incidence Study of Reported Child Abuse and Neglect
CPHO	Chief Public Health Officer
CPS	Child Protective Services
E-SYS	Enhanced Street Youth Surveillance in Canada
FQRSC	Fonds de recherche du Québec – Société et culture
HBV	Hepatitis B Virus
HBSC	Health Behaviour in School-aged Children Study
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
IDU	Injection Drug Use
LGBTTQ	Lesbian, Gay, Bisexual, Transgender/Transsexual, Two-spirit, Queer/Questioning
MAP	Maltreatment and Adolescent Pathways Longitudinal Study
MSFHR	Michael Smith Foundation for Health Research
MSM	Men who have Sex with Men
NCCAH	National Collaborating Centre for Aboriginal Health
NLSCY	National Longitudinal Survey of Children and Youth
NPHS	National Population Health Survey
PHA	People Living With HIV and AIDS
PPT	Planned Parenthood of Toronto
OHTN	Ontario HIV Treatment Network
OSDUHS	Ontario Student Drug Use and Health Survey

RHS	First Nations Regional Longitudinal Health Survey
SSHRC	Social Sciences and Humanities Research Council of Canada
STBBI	Sexually Transmitted and Blood Borne Infections
TRUTH	Teens Resisting Urban Trans/Homophobia
TTS	Toronto Teen Survey
WHO	World Health Organization
YCCS	Youth Custody and Community Services
YCJA	Youth Criminal Justice Act
YITS	Youth in Transition Survey
YPP	Youth Pathways Project
YSS	Youth Smoking Survey

EXECUTIVE SUMMARY

This report is the sixth in a series of *Population-Specific Status Reports* and examines how HIV and other sexually transmitted and blood borne infections (STBBIs) impact youth in Canada. While the majority of youth in Canada make the transition to adulthood free from HIV and other STBBIs, some do not. Some youth are more vulnerable to infection than others due to a variety of challenges, obstacles and conditions within their social, cultural, economic and physical environments.

CURRENT DATA ON HIV AND OTHER STBBIs AMONG YOUTH IN CANADA

Chapter 2 presents a demographic profile of youth in Canada and examines data on the physical and mental health of this population in order to contextualize issues related to HIV and other STBBIs. Data related to young people's vulnerability to HIV and other STBBIs presented in this chapter include social demographics (e.g. gender, marital status, sexual orientation, ethnicity), education, employment, income, physical health status, mental health and risk behaviours.

Chapter 3 presents epidemiological data to depict trends in HIV, AIDS and other STBBIs among youth in Canada. In 2011, 2,208 HIV cases were reported to the Public Health Agency of Canada with information on age, of which 531 cases (24%) were among youth. The youth category was the third most frequently reported age group in 2011. Over the past 10 years, the proportion of positive HIV test reports attributed to youth in Canada has remained relatively stable. Since reporting began in 1985, males have accounted for the vast majority of annual positive HIV test reports among youth aged 15–29. Consistent with the distribution of HIV test reports across all ages in Canada, the men who have sex with men (MSM) exposure category accounts for the largest proportion of cumulative positive HIV test reports among youth. The second and third most common HIV transmission routes reported within this age group are heterosexual sexual contact and injection drug use.

Other STBBIs disproportionately affect youth in Canada. In 2010, reported rates of chlamydia were highest among youth aged 20–24. Reported rates of chlamydia among females in this age group were more than twice as high as those among males. Youth aged 15–24 also accounted for nearly half of all reported cases of gonorrhea in 2010; although the highest rates that year were reported among females aged 15–19.

FACTORS THAT IMPACT YOUTH'S RESILIENCY AND VULNERABILITY TO HIV/AIDS AND OTHER STBBI

Vulnerability to or resilience against HIV and other STBBIs is both directly and indirectly impacted by various determinants of health including: education; income; employment; gender and gender norms; culture; unstable housing or homelessness; access to health services; and social environments. Chapter 4 of this report examines how these various determinants interact in complex ways to both positively and negatively affect youths' vulnerability to or resilience against HIV and other STBBI. Consideration of these determinants of health can help in evaluating how and why particular groups of youth in Canada, such as street-involved youth, youth who use injection drugs, and Aboriginal youth are particularly vulnerable to infection.

CURRENT RESEARCH AND RESPONSE TO HIV/AIDS AMONG YOUTH

Chapter 5 of this report identifies 59 research projects underway between 2008 and 2011 focused on youth and HIV/AIDS in Canada. General areas of research included: social determinants of health and HIV (particularly social environments, health and social services, and personal health practices and coping skills); HIV prevention and interventions; the community-based response to HIV among youth; and knowledge transfer. The research addressed a number of different youth populations, including: Aboriginal youth; youth who use drugs; street-involved youth; newcomer, immigrant and racialized youth; youth living with HIV; and youth in general. The chapter also identifies areas where future research could be focused to address gaps in knowledge about youth and HIV/AIDS.

Canada's response to HIV/AIDS has grown in scope and complexity since the early days of the infection in the 1980s. Chapter 6 examines the response to HIV/AIDS among youth at the policy and programmatic levels between 2009 and 2011. Included among these are: population-specific strategies at the national, provincial and territorial levels; population-specific networks, coalitions and advisory bodies; and organizations and projects focused on the delivery of programs addressing HIV/AIDS among youth. In total, 105 time-limited initiatives were identified over this period. Strategies addressing youth and HIV (as well as other sexually transmitted and blood borne infections) were found to exist at the national level and in nine provinces and territories. Three youth-specific networks, coalitions and advisory bodies were identified at the national levels which address HIV, sexual health and related health issues among youth. However, only one such organization was identified at the provincial level, in Nova Scotia.

CHAPTER 1 – INTRODUCTION

The transition from childhood to adulthood is marked by many changes, including physical maturation, increased independence, completion of high school and entry into post-secondary education or the labour force. It is a time when youth[iii] begin to explore their sexuality and establish attitudes and patterns of sexual behaviour which set the stage for their future sexual health and wellbeing. While most youth make this transition smoothly, some face challenges and obstacles along the way.

Significant attention in public health has focused on the negative outcomes of this transition, including infection with HIV and other sexually transmitted and blood borne infections (STBBIs). These outcomes have typically been accounted for by individual behaviours or by being part of an "at-risk" group. Undoubtedly, individual behaviours such as inconsistent condom use or use of unsafe drug injection equipment increase risk of infection with HIV and other STBBIs. However, an emphasis on these behaviours in isolation of other factors assumes that all youth have equivalent knowledge, capacities and opportunities to make fully informed choices about their sexual health and behavior. This assumption ignores the different conditions and possibilities that youth experience in their everyday lives, which affect both directly and indirectly their vulnerability to infection. In addition, emphasizing "at-risk" youth stigmatizes specific groups and can contribute to the discrimination these youth face in their everyday lives.[1]

This report takes a different approach by exploring how health outcomes are affected by key determinants of health including education, income, employment, living conditions and social environments. It examines how HIV and other STBBIs affect youth in Canada while focusing on the social context and key determinants of their vulnerability to infection. It also looks at determinants of vulnerability to infection among youth, but highlights the positive impacts these determinants have on the resilience of youth against infection. The purpose of this report is to provide research evidence and information that supports communities, governments, researchers, public health practitioners, non-governmental organizations and others in helping *all* youth to maintain their health and transition to adulthood in healthy ways. It outlines existing policies, programs and initiatives that can be built upon and learned from in future responses to HIV and other STBBIs among this population.

1.1 METHODOLOGY

To support the development of this report, the Public Health Agency of Canada (the Agency) formed a working group made up of community representatives, academics, and youth living with HIV/AIDS, along with government officials with expertise in research, epidemiology, community development, public health policy and program development. This working group acted as an advisory body, providing guidance and feedback on the report's themes and drafts. Working group members were selected based on their expertise and represented diverse geographic, demographic and linguistic profiles.

[iii] Throughout this report, the term 'youth' is used to refer to those aged 10 to 24 years.

This report is a "scoping review" or literature review, developed and adapted to map out the literature and evidence on youth and HIV/AIDS in Canada. The methodology for each Chapter was designed to synthesize and present the most current and relevant evidence. Demographic data were extracted from various sources, including both census and national survey data collected by Statistics Canada. Epidemiological information and surveillance data were gathered from reports published by the Agency, in addition to data from other published sources.

Data and information on the vulnerability of youth to and resilience against HIV/AIDS were collected from peer-reviewed publications and grey literature. The information identified for inclusion in the report met the following criteria: focused on HIV/AIDS; published between 2003 and 2010; focused on youth 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 youth populations; and was written in English or French. Appendix A describes the key words and search terms, as well as the databases used in this search. Additional information and some studies published after 2010 were also included in the report to provide context and address gaps identified by the working group.

Information on current research (underway between 2008 and 2011) was gathered from the following national and provincial organizations: Alberta Innovates Health Solutions; British Columbia Centre for Excellence in HIV/AIDS (BC-CfE); Canadian Association for HIV Research (CAHR); Canadian Foundation for AIDS Research (CANFAR); Canadian Institutes of Health Research (CIHR); Fonds de recherche du Québec–Société et culture (FRQSC); Michael Smith Foundation for Health Research (MSFHR); Ontario HIV Treatment Network (OHTN); Prairie Community-Based HIV Research Program; and the Social Sciences and Humanities Research Council of Canada (SSHRC).

To gather information on the current response to HIV/AIDS among youth underway between 2009 and 2011 (including strategies, coalitions, networks, organizations and time-limited projects), governmental and non-governmental organizations were contacted through a number of mechanisms, such as: the Federal/Provincial/Territorial Advisory Committee on AIDS (F/P/T-AIDS); Health Canada's First Nations and Inuit Health Branch; the Federal/Provincial/Territorial Heads of Corrections Working Group on Health; and The Public Health Agency of Canada's national and regional HIV/AIDS program consultants. Projects funded by the Toronto Public Health AIDS Prevention Community Investment Program were included. The working group was also instrumental in identifying additional activities for the report. Private sector organizations were not included in the information-gathering process.

For ease of reading, information sources are collected in endnotes at the end of the report and are denoted in text with superscript Arabic numbers. Footnotes are used throughout the report to provide additional commentary and appear at the foot of the page, indicated in text with lower case roman numerals.

CHAPTER 2 – DEMOGRAPHIC PROFILE

2.1 INTRODUCTION

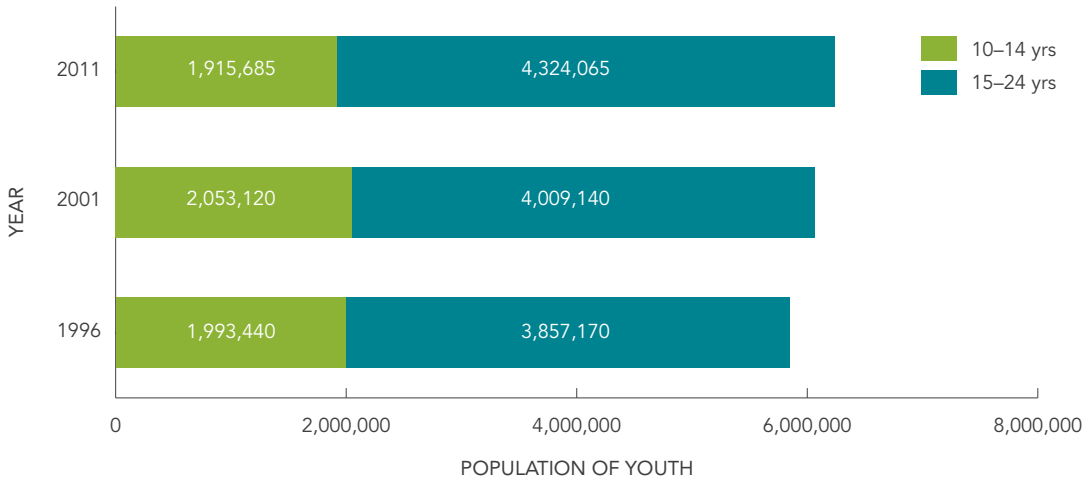
This chapter presents a demographic profile of youth in Canada and examines data on their physical and mental health to provide context on issues related to HIV and other sexually transmitted and blood borne infections (STBBIs). It considers various health issues associated with young people's vulnerability to HIV and other STBBIs, including substance use, mental illness, mental health, sexual risk behaviours, abuse, physical health and chronic physical conditions.

Health and illness are not evenly distributed among youth in Canada. As with other health issues, social, cultural, economic and physical contexts create conditions for vulnerability to HIV and other STBBIs that are experienced differently across the youth population. For this reason, where data permit, this chapter will compare data by gender, age and race/ethnicity. As much as possible, the chapter relies on nationally representative data on youth aged 10–24 years, although data sources cited frequently report data in different age ranges. Where applicable, these differences are noted in the text.

2.2 SOCIAL DEMOGRAPHICS OF YOUTH IN CANADA

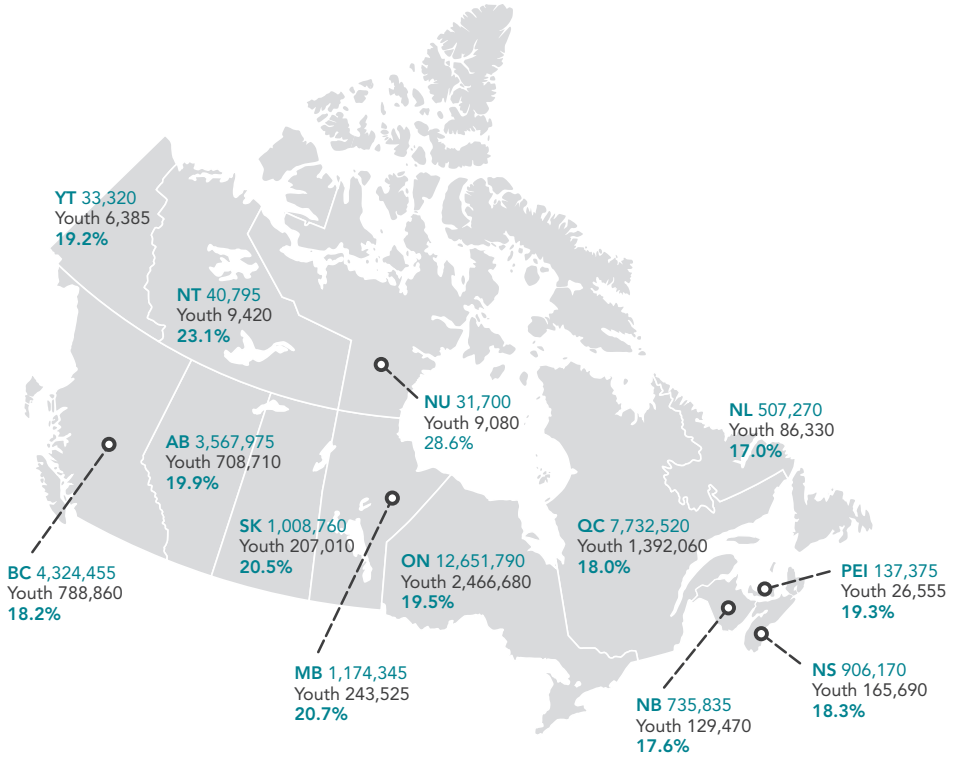
The proportion of youth in Canada aged 10 to 24 years has remained relatively stable since the mid-1990s. According to the 2011 National Household Survey, of the roughly 32.9 million people in Canada, 19% were youth aged 10–24 years, which is a slight decrease from 20.3% the decade prior. Between 1996 and 2011, the total number of youth in Canada aged 10 to 24 years increased 5.8%, from about 5.9 million to 6.24 million. The overall population of Canada increased 13.9% in the same time period.[2] The relative distribution of younger (10–14 years) and older youth (15–24 years) remained relatively stable between 1996 and 2001. Youth aged 10–14 years comprised 30.7% of the total youth population in 2011, compared to 34% the decade before (Figure 1).

FIGURE 1: Distribution of youth by age range by years in Canada in 1996, 2001, 2011



SOURCE: Public Health Agency of Canada using data from 2011 National Household Survey and 2006 Census of the Population, Statistics Canada.[3]

FIGURE 2: Geographical distribution of population counts and youth aged 10 to 24 years old in Canada in 2011



SOURCE: Public Health Agency of Canada using data from 2011 National Household Survey, Statistics Canada.[4]

2.2.1 GEOGRAPHICAL DISTRIBUTION

Distribution of the youth population across Canada varies significantly (Figure 2). In 2011, the region of the country with the youngest population was found in the North (Yukon, the Northwest Territories and Nunavut) where about one-quarter of the population was under 15 years of age and only 5.8% of the population was aged 65 years or older. In part, this can be explained by the high fertility rate in the North, particularly among the Inuit population, coupled with lower life expectancy than in the southern provinces.[5] In 2011, Nunavut had the highest proportion of youth aged 10–24 years in Canada, accounting for 28.6% of that territory's population. By comparison, the region of the country with the oldest population is found in the east where youth make up between 17% of the population of Newfoundland and Labrador and 19.3% of the population of PEI.

In 2006, the majority (80.1%) of youth aged 10–24 years lived in urban areas.[iv] Among this age group, there was an increase in the proportion living in urban areas with increasing age (Table 1). Just over three-quarters of youth aged 10–14 (77.8%) and 15–19 years (78.3%) lived in urban areas in 2006, compared to more than 84% of youth aged 20–24. This trend is not surprising since youth in their late teens and early twenties often leave their homes in rural areas to pursue post-secondary education or employment in urban areas.[6]

[iv] The terms 'metropolitan' and 'urban' are used here interchangeably to refer to regions representing census metropolitan areas (CMAs) and mid-sized urban centres or census agglomerations (CAs). The terms 'non-metropolitan' and 'rural' are used interchangeably to refer to all other areas that are not considered either CMAs or CAs.

The distribution of rural and urban residence differs among sub-groups of youth. For example, according to the 2006 Census, far fewer Aboriginal youth aged 10 to 24 lived in urban areas (52.6%) than among the total youth population. Urbanization among Aboriginal youth increases with age, much as it does for the total youth population. In 2006, about half of Aboriginal youth aged 10–14 (49.9%) and 15–19 years (51.3%) lived in urban areas, compared to about 58% of Aboriginal youth aged 20–24 years (Table 1). Despite urbanization, the proportion of Aboriginal youth living on reserve remains relatively stable as youth progress into young adulthood. In 2006, just over one-quarter of Aboriginal youth aged 10–14 (28.8%); 15–19 years (27.6%) and 20–24 years (26%) reported living on reserve.

TABLE 1: Population distribution of youth by age category and rural or urban area of residence

	RURAL n (%)	URBAN n (%)	TOTAL[b] n
Total Youth Population			
10–14 years	423,320 (20.4)	1,617,325 (77.8)	2,078,130
15–19 years	429,805 (20.1)	1,672,020 (78.3)	2,135,920
20–24 years	299,150 (14.4)	1,746,850 (84.3)	2,071,895
Total	**1,152,275 (18.3)**	**5,036,195 (80.1)**	**6,285,945**
Aboriginal Youth[a]			
10–14 years	26,560 (21.2)	62,500 (49.9)	125,230
15–19 years	24,820 (21.0)	60,640 (51.3)	118,105
20–24 years	15,350 (16.4)	54,150 (57.7)	93,900
Total	**66,730**	**177,290**	**337,235**

SOURCE: The Public Health Agency of Canada using data from Statistics Canada.[7]

[a] Youth living on reserve are not included in this table, but are reflected in the total age-specific population counts, resulting in percentages that do not sum to 100 among Aboriginal youth.

[b] Total population counts exclude data for one or more incompletely enumerated areas.

2.2.2 SEX AND GENDER

In 2006, there were slightly more young men than young women in the Canadian population. The proportions of young men aged 10–14 (51.2%) and 15–24 (50.8%) were slightly higher than those of young women in these age groups (48.8% and 49.2% respectively).[8] Among the general population in Canada, this trend is reversed; in 2006, there were slightly more women (51.1%) than men (49%).[9] While more boys than girls are born in Canada, men generally have a higher mortality rate than women. As a result, males outnumber females among youth in Canada, and females outnumber males among older populations.[10]

While the Canadian Census only acknowledges two genders (male and female), it is increasingly understood that some individuals experience a gender identity that does not match their biological sex at birth and others that experience a gender identity that is not "male" or "female". The term "transgender" refers to individuals whose gender identity does not match their biological sex at birth. The term "gender-variant" is used to describe other individuals whose gender expression and gender identity do not fit either the traditional male or female categories, either through their dress, behaviour (gender roles), biology (having reproductive organs or genitals that are neither totally male nor totally female), or their feelings and experiences of masculinity and femininity. There is no source of nationally representative data to indicate the size of the population in Canada that is

transgender or gender variant, but pan-Canadian or regional studies have attempted to fill this data gap. For example, a study of more than 3,700 high school students across Canada found that about 3% of the sample identified as transgender. A smaller survey of youth living in Toronto, Ontario found that 1% of youth surveyed identified as transgender. While these studies are not representative of the entire population of Canadian youth, they help us begin to understand what proportion does not identify as either male or female.

2.2.3 MARITAL STATUS

According to the 2006 Census, the majority of youth aged 15–19 (99.3%) and 20–24 years (93.6%) were single and had never been legally married. Among this group, about 13% of youth between the ages of 20 and 24 reported being in a common-law relationship.

2.2.4 SEXUAL ORIENTATION

There is little national data to describe the sexual orientations of youth in Canada. Gathering such data is difficult for a variety of reasons. One major difficulty is that national surveys rely on self-report data. Survey respondents may not feel comfortable disclosing their sexual orientation in a self-report survey for fear of stigma and discrimination, or fear of being 'outed' to their families or local authorities.[11] Youth in particular may be reluctant to disclose their sexual orientation or gender identity for fear of bullying from their peers in school.[12]

Analyses of data from a nationally representative sample in the Canadian Community Health Survey found that a large majority (96.2%) of youth aged 18–24 years identify as heterosexual, with the remainder identifying as homosexual (1.2%) or bisexual (2.6%). These proportions do not differ significantly from those among adults in the 25–59 age group.[13]

Data from smaller national or regional studies depict similar profiles. A 2008 study in British Columbia reports that, among a sample of 29,000 youth in grades 7 through 12, 86% identified as heterosexual, 7% as mostly heterosexual, 2% as bisexual, and less than 1% as either mostly homosexual or homosexual (gay or lesbian).[14] In a separate study of more than 3,700 high school students across Canada, 14% of students identified as non-heterosexual.[15]

2.2.5 ETHNIC DIVERSITY, IMMIGRATION AND LINGUISTIC DIVERSITY

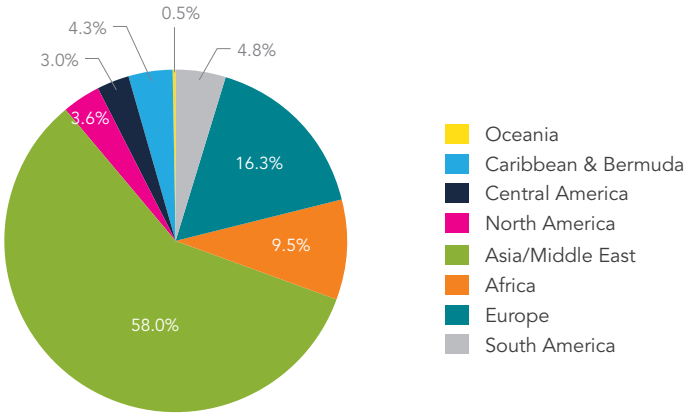
Canada is one of the world's most ethnically diverse countries. Its ethno-cultural composition has been shaped over time by immigration, as well as by Aboriginal Peoples. The term 'Aboriginal Peoples' refers to the original inhabitants of North America and their descendants. In 2011, more than 1.4 million people self-identified as Aboriginal, comprising 4.3% of the general Canadian population.[16] The proportions of youth aged 10–14 and 15–24 who self-identified as Aboriginal were higher than the general population (6.8% and 5.9% respectively). Among Aboriginal youth aged 10–24 years, the majority (62.7%) identified as First Nations; just under one-third (30.4%) identified as Métis; and 4.7% identified as Inuk (Inuit).[17] The proportion of the population that identifies as Aboriginal is growing rapidly, particularly among youth. Between 2001 and 2011, the proportion of youth aged 10–24 that identified as Aboriginal increased by 34.8%, compared to 30.7% in the general population.[18]

While Aboriginal Peoples were the first inhabitants of Canada, immigration has greatly increased the ethnic diversity of Canada with each wave of immigration adding to the ethnic diversity of the population. In fact, over 200 ethnic origins were reported among the population of Canada in the 2011 National Household Survey. In contrast, the 1901 Census enumerated 25 ethnic origins, the majority of which were Aboriginal, British or French origins.[19]

European origins (e.g. English, French, Scottish, Irish, German, Italian) were still among the most frequently cited ethnic origins in the 2011 National Household Survey, with over 20.2 million people reporting European origins. The remaining origins reflect changing patterns among immigrants from non-European countries.[20] According to the 2011 National Household Survey, 19.1% of Canada's general population was made up of visible minorities, compared to 16.2% in the 2006 Census. The visible minority population of Canada was younger in 2011 than the general population. According to the 2011 National Household Survey, the median age of visible minority populations was 33.4 compared with 40.1 among the population as a whole.[21] Among visible minority youth aged 15–24 years, South Asian (23.2%), Chinese (21.5%) and Black (16.4%) ethnic groups were cited most frequently.[22]

In 2011, 20.6% of the population was born outside of Canada, the highest proportion among the G8 countries.[23] The majority of those born outside of Canada were immigrants to Canada.[v] Youth between the ages of 15 and 24 comprised 8.4% of the total immigrant population.[24] Among immigrant youth in Canada, about 30% were 'newcomer' youth, or those that had immigrated within the last five years. Newcomer youth represented 14.5% of the total 1.16 million newcomers who came to Canada between 2006 and 2011.[25] The largest proportion of immigrant youth living in Canada in 2011 were born in Asia and the Middle East (58.0%), followed by Europe (16.3%), Africa (9.5%) and South America (4.8) (Figure 3).[26]

FIGURE 3: Distribution of place of birth for immigrant youth (aged 15–24 years) in Canada in 2011



SOURCE: Public Health Agency of Canada using data from 2011 National Household Survey, Statistics Canada.[27]

[v] Not all people born outside of Canada but currently living in Canada are classified as immigrants. 'Immigrants' are people who have been granted the right to live permanently in Canada by immigration authorities. Others born outside the country but who resided here at the time of data collection include individuals holding temporary Work or Study Visas, refugee claimants, as well as those who had family members living with them in Canada.

Canada's ethnic diversity is matched by its linguistic diversity. More than 200 languages were reported as either a language spoken in the home or a mother tongue[vi] in the 2011 Census of Population. In 2011, more than three-quarters (78.3%) of the population reported either of the two official languages as a single mother tongue (57% English, 21.3% French). The proportion of youth who reported a mother tongue of English only was significantly higher than the total population. About two-thirds of youth aged 10–14 (64.3%) and 15–24 years (62.2%) reported a mother tongue of English. The proportion of youth who reported a mother of tongue of French only was lower than the total population. Less than one in five youth in 2011 aged 10–14 years (18.8%) and aged 15 to 24 years (19.6%) reported a mother tongue of French.

Among the general Canadian population, only 6.2% report a single mother tongue other than English or French. However, among youth aged 10–24 years, the percentage is more than double that of the general population. In 2011, 14.3% of youth aged 10–14 and 16% of those 15–24 years old reported a mother tongue other than English or French.

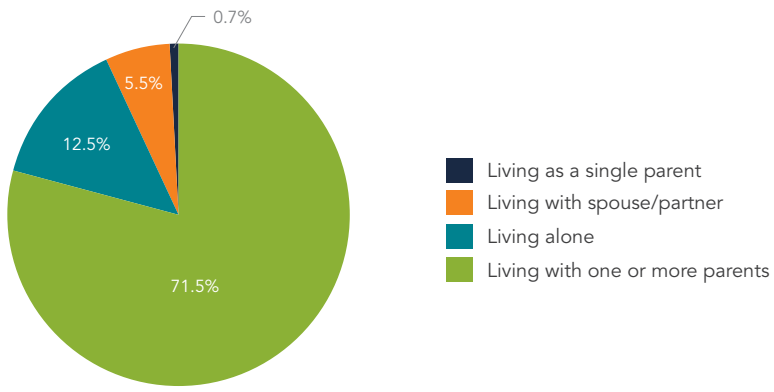
In the 2011 Census, more than 60 Aboriginal languages, grouped into 12 language families, were enumerated. In total, less than 1% of the Canadian population reported an Aboriginal mother tongue. The proportion of youth aged 10–24 years who reported an Aboriginal mother tongue was similar to that of the general population at less than 1%, despite the fact that about 5% of the youth population identify as Aboriginal. Among those who reported an Aboriginal mother tongue in 2011, Algonquin languages were the most frequently reported family of Aboriginal languages.

2.2.6 RESIDENCE

In the Canadian Community Health Survey in 2011, among a nationally representative sample, nearly three-quarters (71.5%) of youth aged 12–19 years were living with their parents. Of these, more than three-quarters (78.8%) were living with two parents, while 21.4% were living in single-parent households. The remaining youth were either living alone (12.5%), with a spouse or partner (5.5%) or as a single parent (0.7%).[28] According to the 2009–2010 *Health Behaviour in School-aged Children* (*HBSC*) study, the majority of young people in Canada reported having a happy home life, although this is true for a greater proportion of boys than girls. Reports of a happy home life decreased with increasing age among both males and females. Nevertheless, even among the oldest age group (Grade 10), 75% of boys and 66% of girls reported having a happy home life.[29]

[vi] 'Mother tongue' refers to the first language learned as a child that was still understood at the time of the Census.

FIGURE 4: Canadian youth (aged 12–19 years) living arrangements in 2011



SOURCE: Public Health Agency of Canada using data from Statistics Canada *Canadian Community Health Survey, 2011.*

While the number of youth living on the street in Canada is difficult to estimate because of the transient nature of street-involvement, some estimates suggest that there are roughly 150,000 homeless or street-involved youth in Canada, representing one-third of the country's homeless population.[30] Youth leave their homes and become street-involved for many reasons, but most leave homes or are thrown out of their homes due to family conflict, including abuse, homophobia and transphobia.[31]

These experiences may explain why sexually diverse and gender-variant youth are overrepresented among the street-involved population.[32] A 2003 report on Winnipeg street-involved youth estimated that as much as one-third identified as sexually diverse or gender variant.[33] In a study of 500 street-involved youth in Vancouver, 13% of participants considered themselves sexually diverse.[34] Aboriginal youth are also over-represented in street-involved and homeless populations.[35] Data from the *Enhanced Street Youth Surveillance Study* suggest that between 24.0% and 35% of street-involved youth self-identify as Aboriginal.[36]

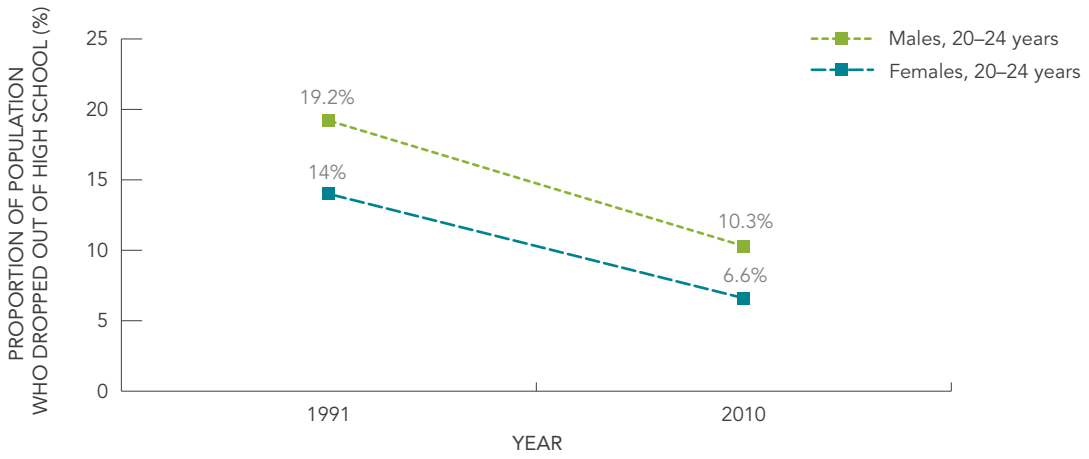
2.3 EDUCATION, EMPLOYMENT AND INCOME

2.3.1 EDUCATION

Various indicators of educational status and experiences are important to provide context for the vulnerability of youth in Canada to HIV and other STBBIs. These include: education levels of parents or guardians in the home; school achievement and school status of youth themselves; attachment to and experiences at school; drop-out rates; and participation in post-secondary education.

In 2006, over 86% of Canada's youth aged 20–24 had earned a high school diploma. A larger proportion of females (88.5%) than males (83.9%) reported having earned at least a high school diploma. High school drop-out rates among this age group have also declined over the past two decades.[37] In the 1990–1991 academic year, 16.6% of Canada's youth aged 20–24 years had not completed high school and were not currently enrolled in school. By the 2009–2010 academic year, this percentage had dropped to 8.5%.[38] High school drop-out rates have historically been higher among males than among females (Figure 5). In the 2009–2010 academic year, 10.3% of males had dropped out of high school, compared to 6.6% of females.[39]

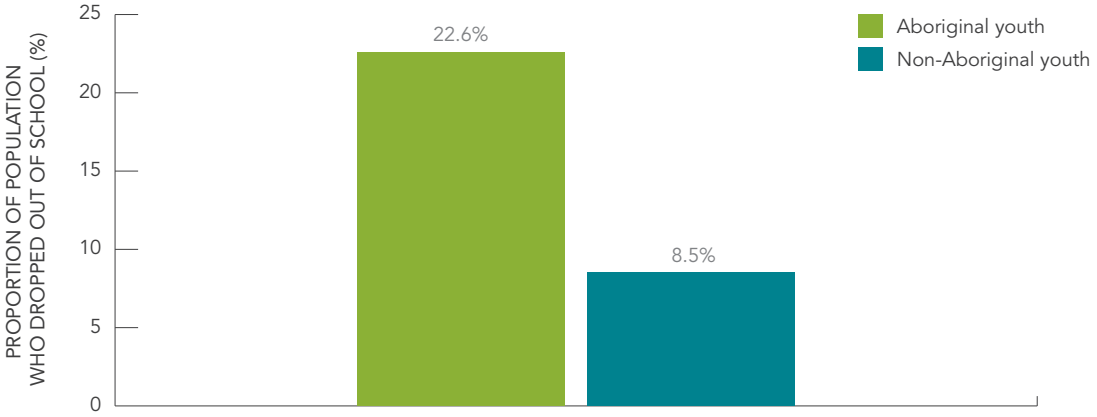
FIGURE 5: High school dropout rates among youth aged 20–24 years, by gender, in Canada



SOURCE: Public Health Agency of Canada using data from Labour Force Survey, Statistics Canada.[40]

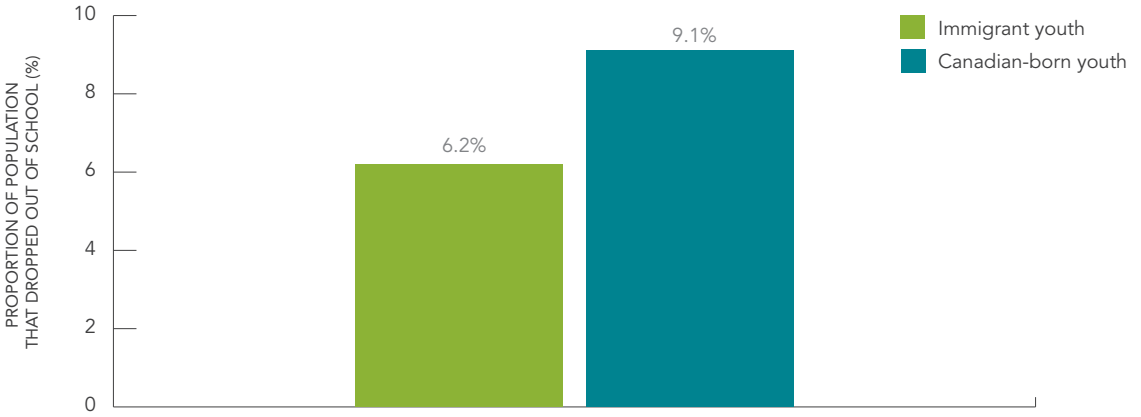
High school drop-out rates also differ between Aboriginal and non-Aboriginal, and immigrant and non-immigrant populations. Over the 2007–2008 and 2009–2010 academic years, about 23% of off-reserve First Nations, Métis, and Inuit populations aged 20–24 dropped out of high school, more than double the rate among the non-Aboriginal population over the same period (Figure 6).[41] High school drop-out rates are lowest among immigrant populations in Canada. In the 2009–2010 academic year, the high school drop-out rate was 6.2% among immigrant and newcomer youth aged 20–24, compared to 9.1% among the non-immigrant population (Figure 7).[42]

FIGURE 6: Proportions of Aboriginal youth and non-Aboriginal youth in Canada aged 20–24 years who dropped out of high school, between 2007 and 2010



SOURCE: Public Health Agency of Canada using data from Labour Force Survey, Statistics Canada. [43]

FIGURE 7: Proportions of immigrant youth and Canadian-born youth in Canada aged 20–24 years who dropped out of high school, 2009–2010

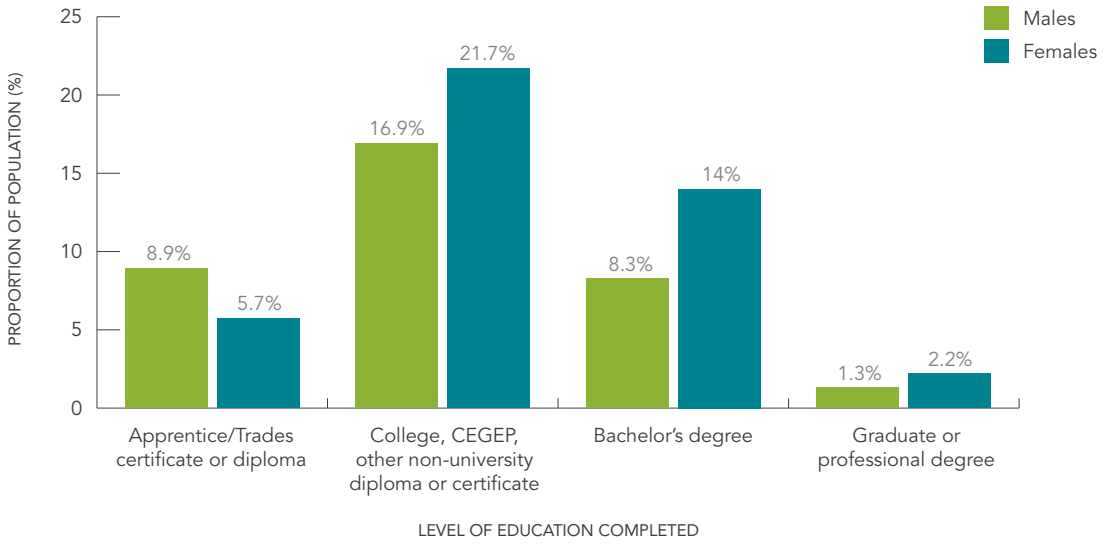


SOURCE: Public Health Agency of Canada using data from Labour Force Survey, Statistics Canada. [44]

Post-secondary education is becoming increasingly important for both personal growth opportunities and the competitiveness of Canada's economy. Since 1997, there has been a significant increase in enrolment in post-secondary education in Canada, including registered apprenticeships, colleges and universities. During the 2005–2006 and 2007–2008 academic years, nearly 360,000 registered apprentices, more than 530,000 full- and part-time college students, and nearly 980,000 university students enrolled in undergraduate and graduate programs.

By 2006, 7.4% of youth aged 20–24 years had completed apprentice or trades certificates or diploma; 19.3% had completed college or CEGEP; 11.1% had completed a Bachelor's degree; and 1.7% had completed a graduate or professional degree. Although more males had completed apprentice or trades programs (8.9%) than females (5.7%), females outnumbered males in all other education categories (Figure 8).

FIGURE 8: Proportions of males and females aged 20–24 years by highest level of education completed, 2006



SOURCE: Public Health Agency of Canada using data from 2006 Census, Statistics Canada. [45]

The *Youth in Transition Survey* (YIT) followed a cohort of more than 22,000 youth aged 18–20 years from 2000 to 2008.[46] Survey data showed that completion of post-secondary education varied by province and territory, as well as urban versus rural residency, ethnicity and immigration status. The Atlantic provinces and Ontario had the highest proportion of youth who completed university degrees. During the eight-year study period, more youth from urban areas completed some form of post-secondary education (66%) than youth from rural areas (57%). Less than 10% of off-reserve Aboriginal youth had obtained a university degree by 2008, compared to over 30% of non-Aboriginal youth in the sample. A higher proportion of visible minority youth born outside of Canada had obtained a university degree by 2008, compared to Canadian-born and non-visible minority youth.

In addition to school status, the quality of school experiences has a significant impact on the physical, emotional and mental wellbeing of youth. Besides offering young people the knowledge they need to succeed in life, gain employment and make good decisions about their health, schools also provide an opportunity for youth to develop self-esteem and acquire skills for healthy relationships. For this reason, the school environment, including the sense of belonging at school, and quality of relationships with teachers and peers, has been the focus of many studies on the health and wellbeing of youth over the past decade or so.

According to data from the *Health Behaviours in School Children* study, the majority of youth in grades 6 through 10 felt a sense of belonging and connection to their school. Nevertheless, as youth move from elementary to high school, their sense of school attachment declines. A larger proportion of males and females in grade 6 (71% and 74% respectively) reported a sense of belonging and attachment at school, compared to males and females in grade 10 (57% and 55% respectively).

Relationships with teachers and peers can also have a significant impact on the health behaviours, knowledge and attitudes of youth related to HIV and STBBI vulnerability. In the 2009–2010 academic year, the older the students, the less likely they were to believe their teachers cared about them as people. By grade 10, just over half of males (52%) and females (55%) believed their teachers cared about them personally, compared to about three-quarters of students in grade 6 (71% and 78% respectively). Similar downward trends across grade levels were observed for perceptions of teachers' encouragement of students' work.

By contrast, young people had much more stable perceptions of their relationships with school peers. More than two-thirds of youth in all grade levels felt that other students accepted them as they were. While these were positive findings, the fact remains that about one-third of students in all grades (about 33%) did not feel accepted.

The 2007–2009 *First National Climate Survey* focused on whether particular groups of youth were more likely to experience a negative school climate than others. In particular, the study examined school environments for sexually diverse and transgender youth compared to heterosexual youth.[47] Verbal harassment about gender expression was experienced by 74% of transgender students, 55% of sexually diverse students and 26% of heterosexual students.[48] The study also found that physical harassment due to sexual orientation, perceived sexual orientation and gender expression is prevalent in Canadian schools. Nearly one-quarter (21%) of sexually diverse youth reported being physically harassed or assaulted because of their sexual orientation, or perceived sexual orientation, compared to 10% of heterosexual youth.[49] More than one-third (37%) of transgender students experienced physical harassment or assault due to gender expression. In addition, transgender students were much more likely than either sexually diverse students or heterosexual students to have been physically harassed or assaulted.[50]

Chapter 4 explores how negative school experiences such as feeling isolated or being bullied affects the vulnerability of youth to poorer health outcomes such as HIV and other STBBIs.

2.3.2 EMPLOYMENT

According to the 2006 Census, almost half (43.5%) of youth aged 15–19 and nearly three-quarters (71.2%) of those aged 20–24 years were employed that year. Among the 15–19 age group, slightly more females (44.9%) than males (42.3%) were employed, but this trend was reversed among older youth. Among 20–24 year-olds, more males were employed in 2006 than females (72.3% and 70.2% respectively). Jobs in the sales and services industry were the most common employment, accounting for about 72% of jobs held by youth aged 15–19 years and about 41% of jobs held by those aged 20–24. While data on employment type was not available for 2006, figures from the 2011 Labour Force Survey suggest that youth aged 15–24 who were employed in that year comprised more than one-third of the total part-time labour force (35.4%) and about 9% of the full-time labour force.

In 2006, the unemployment rates[vii] for youth aged 15–19 and 20–24 years were 7.5% and 9.2% respectively. Rates of unemployment were highest that year for males aged 20–24 years (9.9%), followed by females in the same age group (8.6%). Visible minority youth had higher rates of unemployment than non-visible minority youth. Among youth aged 15–24 years, the unemployment rate among visible minorities was 15.7% compared to 12.3% among non-visible minorities.

[vii] Unemployment rates are defined as the proportion of youth in the age group who were available to work and who were looking for work, but who were not employed.

2.3.3 INCOME

Family income can influence various developmental, health and life transition outcomes among youth living with parents. In 2007, 11% of youth between 5 and 24 years of age lived in low-income circumstances, compared to 15% in 2003.[viii] Children living with one parent were three times more likely than youth living with both parents to be living in low-income circumstances.

In 2007, youth who did not live with their parents were at highest risk of living in low-income circumstances, compared with those who lived with one or more of their parents. In fact, one-third (33%) of youth not living with their parents lived in low-income circumstances that year. While more data are needed to explain this, it is reasonable to assume that young people who have left home and are trying to move into the work force are more likely to have low incomes.

In 2006, more than one-third of youth aged 15–19 years did not have personal income, compared with only 2.5% of youth aged 20–24. The average personal income for youth aged 20–24 was roughly three times higher than the personal income of youth aged 15 -19 years ($15,665 and $5,960 respectively).

2.4 YOUTH AND THE CRIMINAL JUSTICE SYSTEM

Although data reported by the Canadian police services suggests that youth crime increased 3% between 2005 and 2006, the overall youth crime rate has shown a downward trend since the early 1990s.[51] The youth crime rate in 2006 was 25% lower than in 1991.[52] This general downward trend can be attributed to decreases in youth crime rates in four provinces during that period: British Columbia (-49%), Alberta (-41%), Ontario (-34%), and Quebec (-25%).[53] Increases in youth crime were reported for Prince Edward Island (+38%), Newfoundland and Labrador (+22%), Nova Scotia (+17%), and Manitoba (+14%).[54]

Since implementation of the *Youth Criminal Justice Act*, the average number of youth aged 12 to 17 in federal-, provincial- or territorial sentenced custody and on probation has declined.[55] In 2008–2009, there were on average 1,898 youth in some form of custody each day, approximately half (47%) of whom were in sentenced custody.[56] Nevertheless, youth are in custody at much lower rates than the adult population. The rate of custody among youth aged 12–17 was 7 per 10,000 compared to 141 per 100,000 among the adult population.[57] Males make up a larger proportion of youth in custody than females. Among young males, the incarceration rate was seven times higher than that of young females (15 per 10,000 and 2 per 10,000 respectively).[58]

Not unlike the adult population, Aboriginal youth are disproportionately represented in correctional facilities in Canada. Although Aboriginal youth make up 5% of all youth in Canada, they represent 27% of youth admitted to remand, 36% of youth admitted to sentenced custody, and 24% of youth admitted to probation.[59]

[viii] The percentage of children in low-income circumstances was calculated based on Statistics Canada's low-income cutoffs (LICOs), using data on family income after government benefits are received and federal and provincial/territorial taxes are paid.

2.5 PHYSICAL HEALTH

2.5.1 MORTALITY

Deaths among youth in Canada are rare. In 2009, deaths among youth aged 10–24 accounted for approximately 1% of all deaths recorded that year. Male youth make up a larger proportion of deaths among all Canadian males than is the case for their female counterparts. In 2009, deaths among males aged 10–24 years accounted for about 1.4% of deaths among males in Canada. The corresponding proportion for female youth was 0.6%. In the same year, accidents (unintentional injuries) and suicide (intentional self-harm) were the two leading causes of death among youth aged 10–24, accounting for about two-thirds of deaths among those aged 15–19 (63%) and 20–24 (61.1%).

2.5.2 OBESITY AND PHYSICAL ILLNESS

Obesity in childhood and young adulthood has significant short- and long-term consequences for the physical, emotional and mental wellbeing of youth in Canada. Being overweight or obese can negatively impact self-esteem, relationships with others and self-confidence, and can increase the risk of negative coping mechanisms and health-compromising behaviours. The prevalence of obesity among youth in Canada has risen significantly over the past 25 years. According data presented in the *Canadian Health Measures Survey (CHMS)*, just over 30% of youth aged 12–17 years were overweight or obese between 2009 and 2011. Among this age group, slightly more males than females were classified as obese (10.7% and 9.6% respectively), while a slightly larger proportion of females than males were classified as overweight (20.9% and 18.9% respectively). Data from the 2009 CHMS suggest that fewer immigrant youth and more off-reserve Aboriginal youth are overweight and obese, compared to the total youth population.

A number of other health conditions have short-term and long-term effects on the health and wellbeing of young people. Certain chronic conditions can develop as a result of a sexually transmitted infection, while others can impact the progression of STBBIs, including HIV, among those already infected.

Cervical cancer is the second most common cancer in women worldwide. Virtually all cervical cancer is caused by human papillomavirus (HPV), which is a sexually transmitted infection. Incidence of and mortality from cervical cancer are declining in Canada. Incidence of cervical cancer has declined steadily by about 1.4% per year since 1998, and mortality from cervical cancer has fallen nearly 3% per year since that time. This is likely due to the introduction of vaccines against HPV in provincial and territorial publicly funded vaccine programs for school-aged children, as well as to widespread screening through Papanicolaou (PAP) tests.

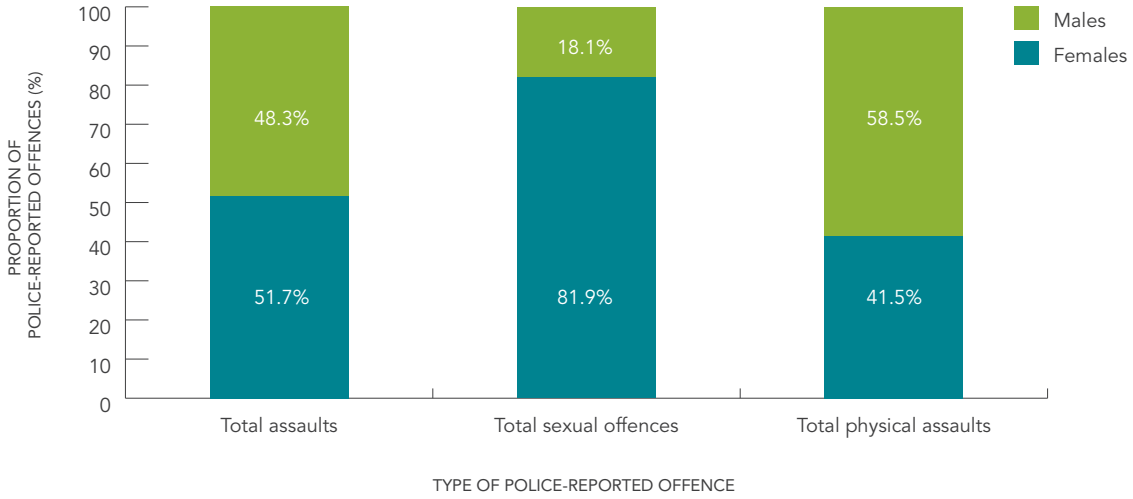
Tuberculosis (TB) is an infectious disease caused by bacteria that are spread through the air from person to person. Globally, TB is the most common cause of death in HIV-infected individuals. In Canada, co-infection is likely to become more important, particularly in immigrants and refugees from TB- and HIV-endemic countries and in Aboriginal peoples. In Canada, the rate of TB is generally very low. In 2011, there were 1,607 active and re-treatment TB cases reported in Canada for a reported incidence rate of 4.7 per 100,000 population. Together, British Columbia, Ontario and Quebec accounted for 70% of the total number of reported cases; however, Nunavut reported the highest incidence rate (222.1 per 100,000 population).

Although the overall rate in Canada is one of lowest in the world, the TB burden is not shared equally. Approximately 13% of cases in 2011 were reported among youth aged 15–24 years, a rate of 4.6 per 100,000 people. TB infections are disproportionately high among immigrants to Canada and Aboriginal populations. In 2011, 64.8% of tuberculosis cases among 15–24 year-olds in Canada were among immigrants and 27.7% were among Aboriginals. Together, these two sub-groups accounted for more than 90% of all reported cases of tuberculosis in 2011 among youth aged 15–24 years.

2.5.3 CHILD ABUSE, MALTREATMENT AND NEGLECT

Childhood sexual, physical and emotional abuse, maltreatment and neglect have direct and indirect impacts on vulnerability to HIV and other STBBIs. In 2009, the *Family Violence in Canada* report cites more than 54,000 police-reported cases of child and youth sexual offence and physical assault.[60] In the case of sexual offences, the majority of victims were young females (81.9%). This trend is reversed when we consider physical assault, of which young males are victims in more than half of all reported cases (58.5%) (Figure9).[61]

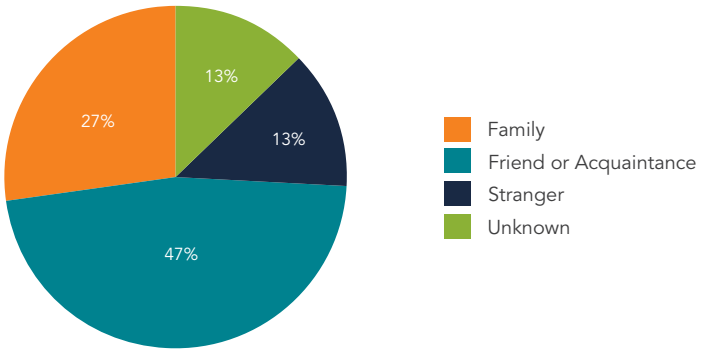
FIGURE 9: Proportion of police-reported offences by type and by sex among child and youth victims (aged 0–17 years) in Canada, 2009



SOURCE: Public Health Agency of Canada using data from Canadian Centre for Justice Statistics, Statistics Canada.[62]

Youth are more likely to be assaulted by someone they know. About 74% of youth were victimized by a family member (e.g. parents, siblings, and other blood, marriage, or adoptive relatives), friend or acquaintance. Of these cases, nearly two-thirds (60%) were perpetrated by parents or guardians (Figure 10).[63] Young females were victims of a greater proportion of family-related sexual offences than young males.[64]

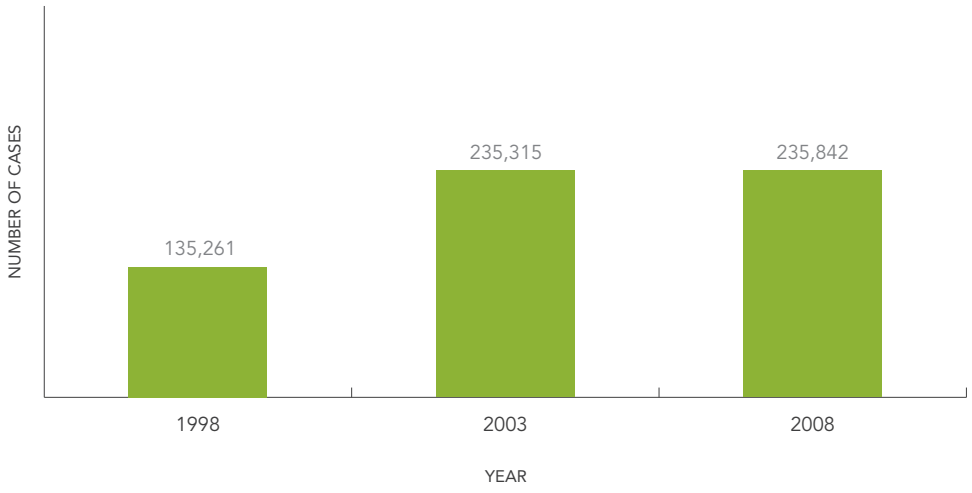
FIGURE 10: Distribution of accused-victim relationship in Canada in 2009



SOURCE: Public Health Agency of Canada using data from Canadian Centre for Justice Statistics, Statistics Canada. [65]

Youth are victims of other forms of maltreatment (e.g., neglect) that are not as easily recognized as physical or sexual assault.[66] The *Canadian Incidence Study of Reported Child Abuse and Neglect* (CIS) reported close to 16,000 child maltreatment investigations in 2008.[67] However, the number of reported cases represents only a fraction of all cases of maltreated youth in Canada. Based on the cases investigated, the total estimated cases of child maltreatment in 2008 was 235,842, a slight increase from 235,315 in 2003 and a significant increase from 135,261 in 1998 (Figure 11).[68]

FIGURE 11: Estimated numbers of child maltreatment investigation cases in Canada in 1998, 2003, 2008



SOURCE: Public Health Agency of Canada, 2010.[69]

Maltreatment investigations involving Aboriginal youth were five times more likely to be substantiated as neglect than investigations involving non-Aboriginal youth.[70] Aboriginal youth are also more likely to be removed from home and placed in the care of the child welfare system than non-Aboriginal youth.[71] Among Aboriginal youth, neglect was the main basis for the initiation of

the maltreatment investigation, including failure to provide basic necessities, adequate educational resources or adequate access to medical services. The ability to provide for the basic necessities of a child is often determined by structural factors, like poverty, that are beyond the control of the parents.[72] The complex interaction of structural factors may in part explain the overrepresentation of Aboriginal children in investigation cases.[73]

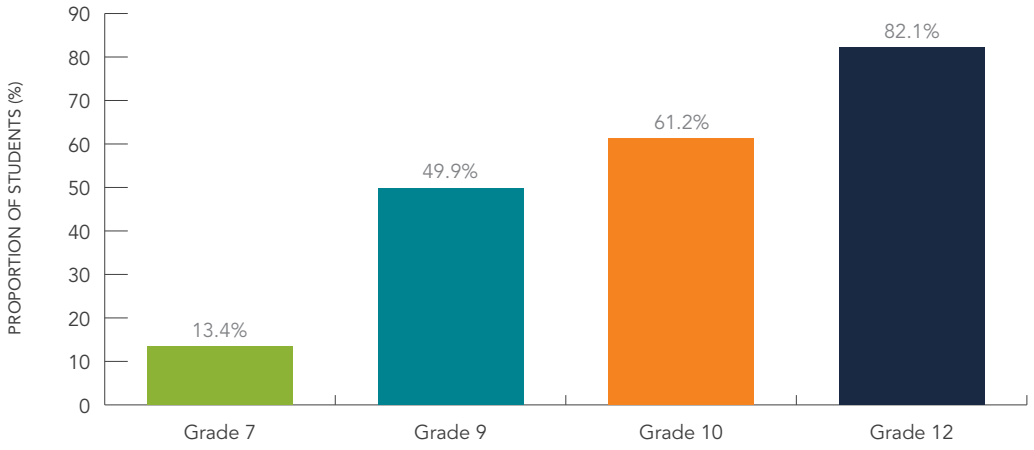
2.6 HEALTH BEHAVIOURS

2.6.1 SUBSTANCE USE

Adolescence is a life stage in which many health-supporting habits are formed. For some it is also a period of experimentation with health-compromising behaviours such as smoking, drinking, and drug use. In the 2009–2010 national *HBSC* study of young people in grades 6 through 10, about three-quarters of students in grades 9 and 10 reported having *never* smoked a cigarette. Among students who did report smoking, very few reported doing so daily. However, proportions of daily smokers increased with grade level, from 1% in grade 6 to 6–7% in grade 10.

National studies among youth in Canada suggest that alcohol is the most commonly used substance. In 2009–2010, about two-thirds (66%) of students in the *HBSC* study reported having tried alcohol at least once. In 2007–2008, more than half (52.6%) of students from the *Youth Smoking Survey* (YSS) aged 12 to 18 reported drinking alcohol at least once in the previous year. Reports were similar for males (54.1%) and females (51.1%).[74] While alcohol is the most commonly used substance among youth in Canada, rates of weekly drinking among youth are very low and have declined over the past two decades. According to longitudinal data from the *HBSC* study, the numbers of young people drinking beer and wine at least once per week have fallen since 1990 to less than 5% in each grade level.

FIGURE 12: Proportion of students in Canada reporting past-year alcohol use, by grade, 2007–2008

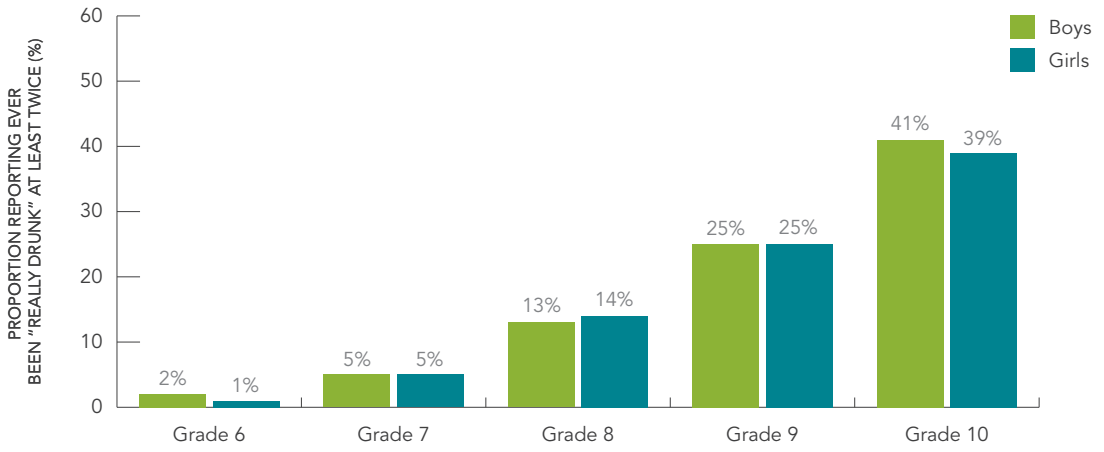


SOURCE: Public Health Agency of Canada using data from Young, et al. [75]

Episodes of "binge drinking" are particularly concerning for the health and wellbeing of youth. Binge drinking is typically defined as having five or more drinks on one occasion for males, and four or more drinks on one occasion for females.[76] Reports of binge drinking increased with age in the *HBSC* study, with 56% of boys and 54% of girls in grade 10 reporting binge drinking in the past year, compared to 41% and 38% respectively in grade 9.

Standard definitions of binge drinking have their limitations and do not necessarily reflect instances of alcohol misuse or cases in which an individual has been "drunk". In 2009–2010, the proportions of students in the *HBSC* study who reported having been "really drunk" on at least two occasions in their lives increased with age and were similar for both males and females in each grade level. The proportions of youth who reported having been "really drunk" at least twice in their lives ranged from 2% and 1% for males and females respectively in grade 6, to 41% and 39% respectively in grade 10. These trends are similar to those found in the *YSS* study in 2007–2008.[77]

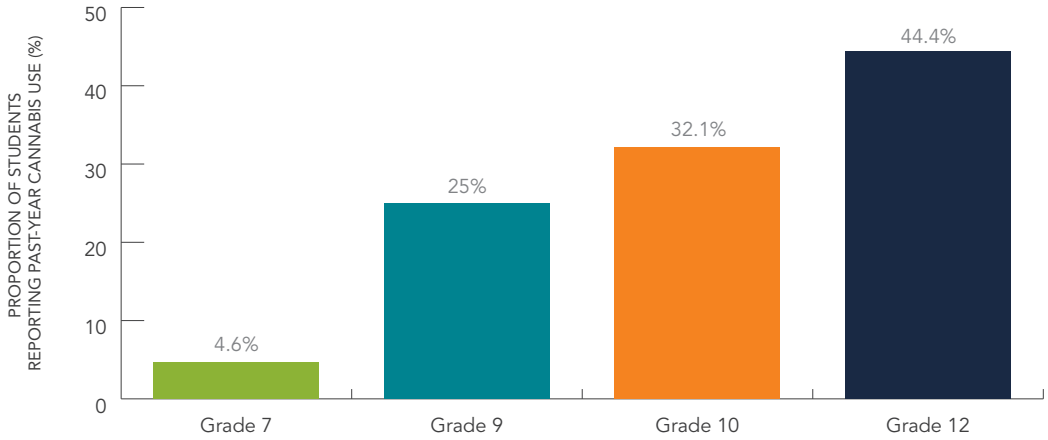
FIGURE 13: Proportion of students who report having ever been "really drunk" at least twice, by grade and gender (%)[78]



SOURCE: Currie, C., et al. eds. (2012). *Social determinants of health and wellbeing among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey.* Copenhagen, WHO Regional Office for Europe, (Health Policy for Children and Adolescents, No. 6).

Longitudinal data from the *HBSC* study suggest that while smoking and alcohol consumption declined among youth between 1990 and 2010, cannabis use increased over that period. In 2009–2010, 40% of boys and 37% of girls in grade 10 reported having tried cannabis, and one-quarter of both boys and girls reported cannabis use in the past 12 months. Similar trends in past year cannabis use were noted in the 2007–2008 *YSS* study, along with regional differences in cannabis use. The proportions of males and females reporting cannabis use in the past year were lowest in Alberta (16.7%) and highest in Nova Scotia (32.4%).[79]

FIGURE 14: Proportion of students reporting past-year cannabis use by grade in 2007–2008



SOURCE: Public Health Agency of Canada using data from Young, et al.[80]

Limited data are available on usage of drugs other than cannabis. The 2009–2010 *HBSC* findings suggest that the percentage of youth in grades 9 and 10 who report using illicit drugs or prescription medications to get high were lower than those for cannabis use. The most frequently reported substances among grade 9 and grade 10 students were pain relievers, ecstasy, LSD and other hallucinogens, and salvia. The least frequently reported substances were amphetamines, methamphetamines, opiates, glue or solvent sniffing and sedatives.

Illicit drug use may be more common among certain groups. For example, among a cross-sectional convenience sample of street-involved youth aged 15–24 from the *Enhanced Street Youth Surveillance (*E-SYS*)* system, 19.2% of females reported injecting drugs more than once in their lifetimes, compared to 17.5% of males. An additional 4.2% of females and 4.5% of males reported having injected drugs only once in their lifetimes.[81]

I-Track is the national enhanced (behavioural and biological) surveillance system that collects information on HIV and hepatitis C (HCV) risk behaviours among people who inject drugs in sentinel sites across Canada. Among I-Track youth participants, 41.4% reported initiation into drug injection at 16 years of age or younger, as well as a progression from "soft" drugs to "hard" drug use.[82] A 2006 study of more than 1,000 street-involved youth in Montreal reported that having consumed at least four different types of drugs was a strong predictor of injection drug initiation.[83]

Sharing needles and other drug injection equipment can also put youth at high risk for HIV and HCV, and is more likely to happen when injecting with others.[84] Among I-Track youth participants, more than 25% reported borrowing used needles or syringes in the previous six months, while nearly 50% reported borrowing used injection equipment, such as cookers, water, filters, tourniquets, swabs or acidifiers over the same period of time.[85] Among those who borrowed used needles or syringes, respondents reported borrowing most frequently from close friends (47.8%) and regular sex partners (44.6%), while fewer reported borrowing from people they did not know well (14.1%).[86] Males were more likely to borrow from close friends (69.4%) and people they did not know well (25.0%), compared to females (33.9% and 7.1%, respectively). Results from both the *Cedar Project* and *Enhanced Street Youth Surveillance* study showed that young females had higher rates of sharing injection drug equipment than their male counterparts, because there were often "second on the

needle" (second to inject with a same needle), relying on their male partners for drug acquisition, preparation and injection.[87] Females borrowed most frequently from regular sex partners (60.7%) and family (19.4%), compared to males (7.1% and 0%, respectively).[88] Subsequently, females also reported having higher rates of infection with HIV and HCV.[89]

2.6.2 SEXUAL BEHAVIOUR

Adolescence is a period during which the majority of people begin to explore their sexuality and initiate sexual relationships. The behaviours and sexual practices developed during this period have a significant impact on sexual relationships and health outcomes throughout life. Nationally representative data in Canada suggest that the average age at first sexual intercourse has been between 16 and 18 years for the past decade.[90] In addition, the proportion of youth aged 15–24 who report ever having engaged in sexual intercourse has remained stable at about 66% since 2003 (the earliest year for which comparable national data are available).[91]

Some sexual behaviour, including having multiple partners and inconsistent condom use, put youth at increased risk for HIV and other STBBIs. According to nationally representative data, the percentage of youth reporting multiple (more than one) partners in the past 12 months remained stable between 2003 and 2009–2010.[92] In 2009–2010, about one-third (30.9%) of youth aged 15–24 reported having had sexual intercourse with more than one partner in the past 12 months, with a larger proportion of males (39%) than females (25%) reporting this behaviour. Among youth who reported having sex in the past 12 months, those who reported using condoms the last time they had intercourse increased 6% between 2003 and 2009–2010, from 62% to 68%. In 2009–10, more males (73%) than females (63%) said they had used condoms the last time they had intercourse. Numbers were similar among those who reported having had only one partner (67%) or more than one partner in the past 12 months (69%).[93] While data is not comparable across studies, data from surveys among specific groups of youth suggest that there may be patterns of behaviour among them that differ from the general youth population. Data in the *E-SYS* enhanced surveillance system, collected among youth aged 15–24 in six urban centres (Vancouver, Edmonton, Saskatoon, Toronto, Ottawa and Halifax), showed that the vast majority (96.8%) reported having engaged in sexual activities with a male or female partner. Approximately one-third (29.7%) of participants reported having more than 10 female sexual partners while 18.2% reported having more than 10 male sexual partners in their lifetime. More than half (58.8%) of males and about one-quarter (22.6%) of females reported using some form of barrier protection, such as condoms, at their last intercourse with a female partner. A similar proportion of males (54.5%) and more than twice the proportion of females (46.6%) reported using barrier protection at their last intercourse with a male partner.[94]

M-Track is an enhanced surveillance system that tracks HIV, STBBIs and associated risk behaviours among men who have sex with men (MSM) in Canada by combining behavioural and biological surveillance. In a cross-sectional M-Track sample, the majority (64%) of youth aged 15–24 reported having two or more male sexual partners (oral or anal sex) in the six months preceding the survey. Among youth who had engaged in oral or anal sex in the past six months, more than half (55%) reported having had more than one sexual partner. More than three-quarters (77%) of the sample who had engaged in sex with a male partner reported having had sex with a casual[ix] male partner, while about half of those who had had anal sex with a casual male partner reported consistent (always) condom use during receptive or insertive anal sex.[95]

[ix] A casual male partner is defined in the study as a man with whom the respondent had sex only once. Casual partners do not include men with whom the respondent exchanged sex for money, drugs, or other goods or services.

In the I-Track study, more than half (57.4%) of youth reported having more than one sexual partner in the six months before the survey. More males than females reported having more than one sexual partner (62.2% and 52.9% respectively). About one-third of the total sample (35.3%) reported using a condom at last intercourse, with more males than females reporting it (50.4% and 23.1%, respectively).[96]

2.7 MENTAL HEALTH AND MENTAL ILLNESS

2.7.1 MENTAL HEALTH

Measures to describe the mental health of youth in Canada include "positive" measures such as: individuals' perception of their overall mental health; sense of satisfaction with life; frequency of feeling happy; frequency of feeling interested in life; and confidence in oneself. "Negative" measures include individuals' perception of general life stress.

According to the 2011 *CCHS*, approximately three-quarters (76.5%) of youth aged 12 to 24 reported their overall mental health to be very good or excellent. Males and females did not differ significantly in their perceptions. Compared to the overall youth population, more immigrant youth (82.1%) and fewer Aboriginal youth (66.5%) reported their overall mental health to be very good or excellent.[97] Findings were similar from the 2008–2010 *First Nations Regional Longitudinal Health Survey* (RHS) in which approximately 65% of on-reserve Aboriginal youth (aged 12–17) described their mental health as very good or excellent.[98]

In the 2011 *CCHS,* most (95.9%) youth aged 12 to 24 reported that they were either satisfied or very satisfied with life in general, compared to 92.8% of immigrant youth. While the majority said that they felt happy (85.8%) and interested in life almost every day or every day in the previous month (88.7%), proportions differed by age, Aboriginal identity and immigration status. For example, more Canadians aged 12 to 15 (90.4%) and fewer of those aged 20 to 24 (82.9%) and Aboriginal youth (83.5%) reported such feelings. Among immigrant youth, 79.7% reported feeling happy while 84.8% said they felt interested in life every day or almost every day in the previous month.

Compared to 18.4% of the total population aged 12 to 24 years, more females (22.5%) and immigrant youth (21.1%) reported most days as being "quite a bit" or "extremely" stressful. Stress levels also increased with age. More youth aged 16 to 19 (20.4%) and 20 to 24 years (21.9%) described most days as being "quite a bit" or "extremely" stressful in 2011. Of all youth, the smallest proportions reporting these stress levels were among males (14.4%) and youth aged 12 to 15 (11%).

In the 2009–2010 *Health Behaviours in School Children* study, less than 50% of boys and girls in grades 6 through 10 reported having confidence in themselves. While self-confidence decreased across grade levels, more boys than girls in each grade reported feeling self-confidence. About half of boys in grade 6 reported feeling self-confident, compared to 26% by grade 10. Among girls, 40% in grade 6 reported feeling self-confident compared to 18% in grade 10.

2.7.2 MENTAL ILLNESS

Mental illness can develop in adolescence and young adulthood and continue to affect the development, health and wellbeing of individuals throughout their lives. Depression among youth can lead to high blood pressure, increase the burden of chronic health conditions, hinder productivity and academic success, and make it harder to get or maintain a job, and damage social relationships. Depression is also very closely associated with suicide, the second leading cause of death for youth in Canada.

While most people have occasional periods of feeling sad or distressed, these feelings are usually short-lived. Depression is defined as persistent feelings of sadness or distress that interfere with normal day-to-day life. People with depression may have feelings of anxiety, emptiness, pessimism, guilt, hopelessness, helplessness, worthlessness and irritability. They may also experience lack of energy, disturbed sleep, changes in appetite and thoughts of suicide.

According to the 2011 *Canadian Community Health Survey*, 7.1% of those aged 12 or older reported being diagnosed with a mood disorder such as depression or bipolar disease, a percentage that increased with age. Youth aged 12 to 15 had the lowest proportion (1.8%) of diagnosed mood disorders, but this rose to 4.4% among youth aged 16 to 19. Over 6% (6.1%) of youth aged 20 to 24 years reported ever having been diagnosed with a mood disorder such as depression.

Given the persistent stigma around mental illness and the reluctance to seek care that may result, it should be noted that reports of diagnoses do not reflect the true burden of mental illness in Canada. In a 2011 Canadian study of students in grades 5 through 10, a significant proportion reported emotional problems over the previous six months, including feeling low (depressed), sad, helpless, lonely, left out or wishing they were someone else. The numbers of males reporting such problems was relatively stable across grade levels, ranging from 25% in grade 8 to 29% in grade 9. A significantly larger proportion of girls reported emotional problems, with the levels increasing by grade. About 35% of girls in grade 5 reported emotional problems, compared to 27% of boys. By grade 10, the proportion of girls reporting emotional problems rose to 44%.

CHAPTER 3 – THE EPIDEMIOLOGY OF HIV AND OTHER SEXUALLY TRANSMITTED AND BLOOD BORNE INFECTIONS AMONG YOUTH IN CANADA

3.1 INTRODUCTION AND CONTEXT

This chapter summarizes data on the epidemiology of human immunodeficiency virus (HIV),[x] acquired immune deficiency syndrome (AIDS) and other sexually transmitted and blood borne infections (STBBIs) among youth in Canada.

The Public Health Agency of Canada (the Agency) gathers data from multiple sources to provide a picture of HIV, AIDS and other STBBIs among people living in Canada, and to describe trends in infection among specific sub-groups of the population. The data help inform efforts to prevent, test and treat these illnesses.

Routine HIV surveillance data describe the number of positive HIV tests reported to provincial and territorial health authorities. In fact, every positive HIV test result obtained by a laboratory or health care provider must be reported to the appropriate health authority in that jurisdiction. These authorities provide the data to the Agency twice a year on a voluntary basis. The routine surveillance data only represent individuals who are tested for and diagnosed with HIV for the first time; follow-up tests among individuals who have previously tested positive are not reported in subsequent surveillance data. The case reports provided to the Agency do not identify individuals; instead, a core set of data accompanies each positive HIV test report, such as age, sex and diagnosis date. Additional information, such as race/ethnicity, country of birth, or modes of HIV transmission known as "exposure categories" may also be included in the case report, but the completeness of such data varies by province and territory.

AIDS refers to the most advanced stage of HIV infection. It is marked by the deterioration of the body's immune system and inability to fight off infections. Since there is no specific laboratory test for AIDS, cases reported to the Agency as part of routine AIDS surveillance are identified by a positive HIV test report and an AIDS-defining illness such as recurrent bacterial pneumonia or Kaposi's sarcoma. Unlike HIV, AIDS is only a reportable condition in certain provinces and territories, although physicians are required to report the occurrence of AIDS-defining illnesses. The Agency uses these data on HIV and AIDS to produce annual surveillance reports.

Since routine HIV/AIDS surveillance data are limited to people who have been tested and diagnosed, the Agency also produces national estimates of the total new number of HIV infections in Canada in a given year (known as incidence estimates) and the total number of people living with HIV in Canada (known as prevalence estimates). The estimates are produced using mathematical models based on data from a number of sources. Incidence and prevalence estimates offer a more accurate understanding of trends in HIV infection, since they account for individuals who have been diagnosed

[x] This chapter refers to surveillance data on positive HIV tests in Canada from 2009. While aggregate data from 2010 was available at the time of this report, the 2009 data allowed for a more complete analysis of the epidemiology of HIV among youth. All other STBBIs in this chapter refer to the most recent available surveillance data.

as well as those who have not and are therefore unaware of their infection. However, while estimates include information on all Canadians aged 15 and over, no specific analysis of incidence and prevalence among youth is available. Therefore, no estimates are presented in this chapter.

The Agency also collects routine surveillance data on other STBBIs in Canada. Chlamydia, gonorrhea, hepatitis B (HBV), hepatitis C (HCV), and all forms of syphilis are reportable STBBIs, meaning that every positive test result for these infections obtained by a laboratory or health care provider must be reported to the provincial or territorial health authority. With each positive test report, the provincial and territorial health authorities provide the Agency with a set of core data elements (e.g. age, sex) which it uses to develop annual national surveillance reports. These data only reflect the number of people who have been tested and diagnosed with these infections; there is no mathematical model to indicate the true burden of these infections, as there is with HIV.

Enhanced surveillance data provide more detailed information on factors associated with HIV and other STBBIs. They use surveys to collect behavioural data from vulnerable populations, along with tests for HIV and other STBBIs. Types of behavioural data collected include sexual practices (such as number of partners and condom use), HIV testing behaviours, previous diagnosis with HIV and other STBBIs, substance use (such as injection drug use, sharing of needles, etc.), knowledge about how HIV is transmitted and other determinants of health. The Agency currently conducts enhanced surveillance surveys on street-involved youth through the *Enhanced Street Youth Surveillance* system (E-SYS); gay, bisexual and other men who have sex with men through the M-Track surveillance system; and people who inject drugs through the I-Track surveillance system. Two other enhanced surveillance systems have been pilot-tested and are undergoing further development. The concept for the *E-Track* system, which focuses on people originating from countries where HIV is endemic, was piloted in Quebec in 2008 in collaboration with local researchers. The *A-Track* surveillance system focuses on Aboriginal (First Nations, Inuit and Métis) people in Canada, and was piloted in Regina, Saskatchewan in 2011–2012.

3.1.1 DATA LIMITATIONS

While information from routine and enhanced surveillance provides crucial insights into HIV, AIDS and other STBBIs, as well as an understanding of risk factors in key populations, it does have limitations which must be kept in mind when interpreting the data. For example, HIV and STBBIs are under-reported in routine surveillance data because they only represent people who have been tested and diagnosed at the time of reporting. In addition, some STBBIs can be asymptomatic (e.g. chlamydia) and others have symptoms that may not develop immediately (e.g. hepatitis C), with the result that many people do not get tested and remain undiagnosed. Other limitations can include reporting delays, duplicate reporting and missing information.

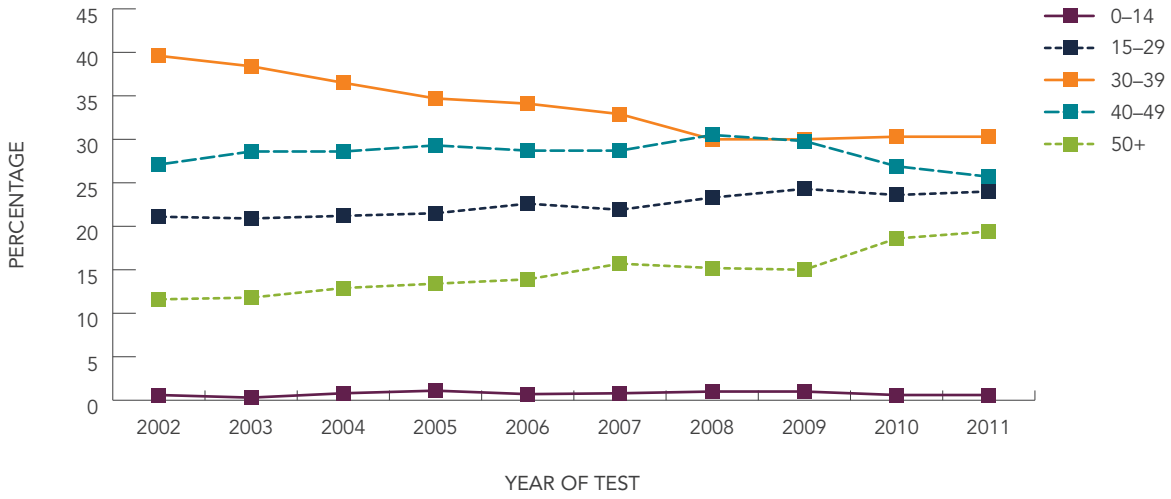
Data from enhanced surveillance systems must also be interpreted with caution. The information is gathered through cross-sectional surveys at one specific point in time. While this method is useful for exploring risk factors associated with infection, it does not allow for analyses of cause and effect or changes in individual risk factors over time. In addition, cross-sectional surveys use primarily venue-based sampling. For example, in the M-Track surveillance system participants are recruited through venues such as bars, clubs, festivals or social organizations. While this method of recruitment makes it easier to access hard-to-reach populations, it results in data that may not be representative of the entire target population (e.g. in the case of M-Track, it may not be representative of all gay, bisexual or other men who have sex with men in Canada). Finally, the use of self-report surveys in enhanced surveillance systems may result in the underreporting of some risk behaviours because of social desirability bias (i.e. the desire to "say the right thing" to the person administering the survey).

Despite their limitations, both routine and enhanced surveillance data offer a valuable source of information on HIV and other STBBIs and of risk factors associated with infection. Understanding and identifying trends and risk factors is essential to developing effective strategies to prevent, treat and care for these illnesses.

3.2 NATIONAL DATA: REPORTED NUMBER OF POSITIVE HIV TEST REPORTS

Between 1985, when HIV reporting began, and December 31, 2011, there have been 74,162 positive HIV test reports in Canada. The number of yearly positive reports has remained fairly stable over the decade. Of the 2,208 HIV cases reported to the Public Health Agency of Canada in 2011, 531 cases (24%) were among youth.[xi] The youth category was the third most frequently reported age group in 2011, following adults 30–39 (with 668 cases) and 40–49 years old (with 567 cases). In total, 26.8% of all cumulative positive HIV test reports have been attributed to youth aged 15–29 years, ranging from a high of 38.6% in 1985 to a low of 20.9% in 2003. Over the past 10 years, the figures have stabilized (Figure 15).

FIGURE 15: Proportion (%) of positive HIV test reports* by age group and year of test (n=24,264)[99]



SOURCE: Public Health Agency of Canada, 2012[a].

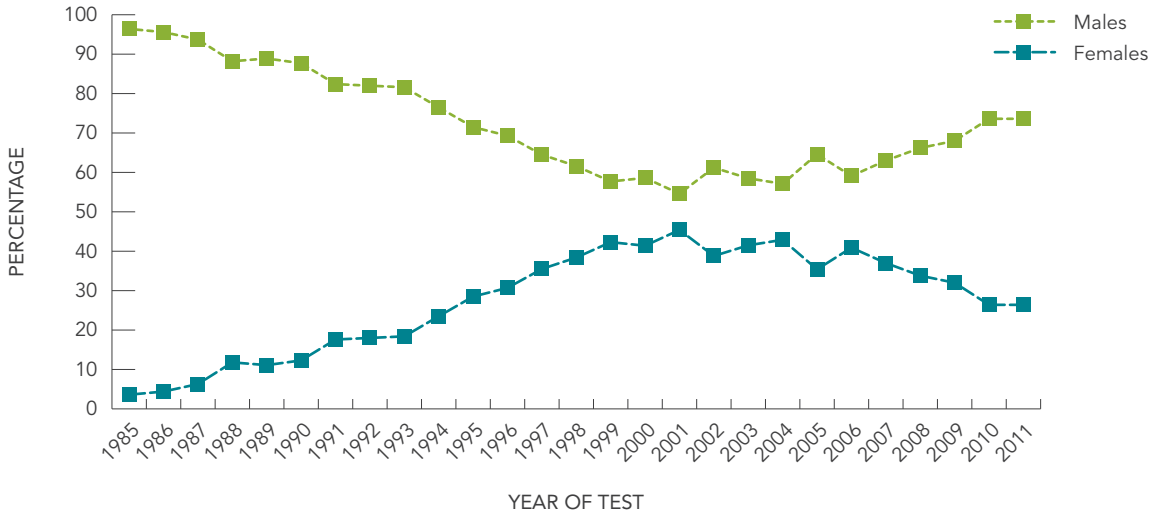
* Among HIV test reports where age was reported.

[xi] While this report defines youth as those between the ages of 10 and 24, routine surveillance data on positive HIV tests is based on age categories, with the youth category ranging from 15 to 29 years. Since the data is reported this way, it was not possible to match it with the upper limit of 24 years. However, elsewhere in this chapter, routine and enhanced surveillance data are reported for ages 15–24.

3.2.1 SEX AND GENDER

Since 1985, males have accounted for the vast majority of annual positive HIV test reports among youth aged 15 to 29, although the cases among females rose steadily through the 1990s (Figure 16). Given this trend, it is not surprising that the cumulative number of positive HIV test reports for males 15–29 years old has been consistently higher than it has for females in the same age group. By 2011, a cumulative total of 13,895 positive HIV test reports, where sex and age were reported, were among male youth, accounting for 75.7% of the total number of cases in the youth category. In comparison, by 2011, a cumulative total of 4,461 (24.3%) of positive HIV test reports were among female youth.

FIGURE 16: Proportion (%) of positive HIV test reports* among youth aged 15–29, by sex, 1985–2011 (n=18,356)[100]

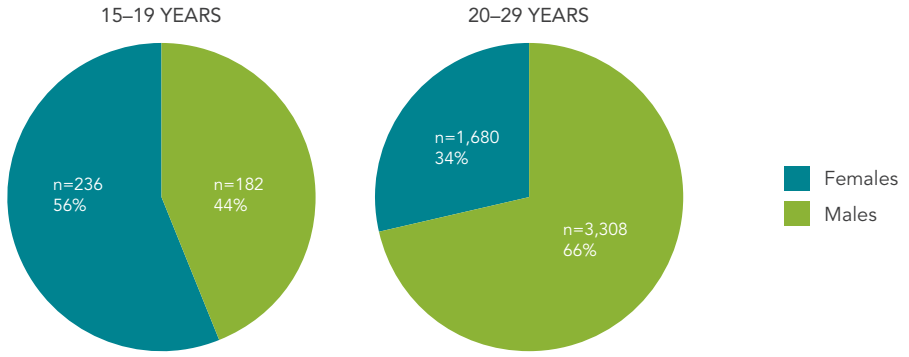


SOURCE: Public Health Agency of Canada, 2012[a].

* Among HIV test reports where age and sex were reported.

Positive HIV tests among males and females are not evenly distributed across the youth category. From 2002 to 2011, the male-to-female ratio differed between younger and older youth. During this period, females were overrepresented in the younger (15–19) age group, accounting for 56.5% of the total positive HIV tests reported in that category. By comparison, males were overrepresented (66.3%) in the 20–29 year age group (Figure 17).

FIGURE 17: Proportion (%) of positive HIV test reports* by sex and age sub-group, 2002–2011 (n= 5,406)[101]

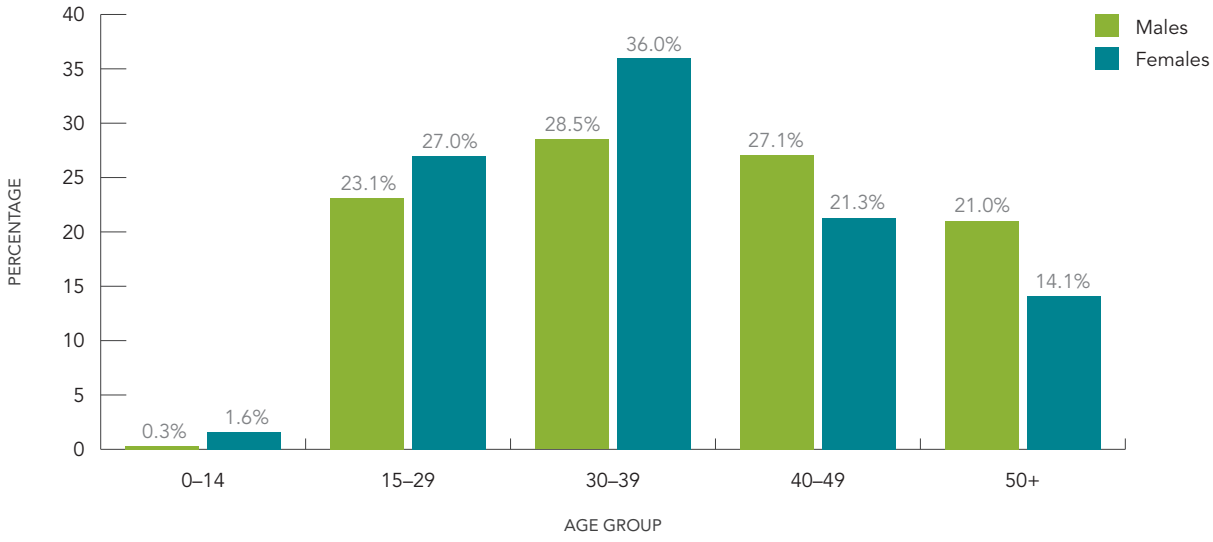


SOURCE: Public Health Agency of Canada, 2012a.

* Among HIV test reports where age and sex were reported.

These data indicate that in general, females tend to be diagnosed with HIV at a younger age than males. For example, in 2011 alone, more positive HIV tests among females were attributed to the 15–29 year age group (27.0%), than among males (23.1%). In contrast, a larger proportion of positive HIV tests among males were attributed to the 40–49 year (27.1%) and 50 and older (21.0%) age groups, than among females (21.3% and 14.1% respectively) (Figure 18).

FIGURE 18: Proportion (%) of positive HIV test reports by sex and age group*, 2011 (n=2,170)[102]

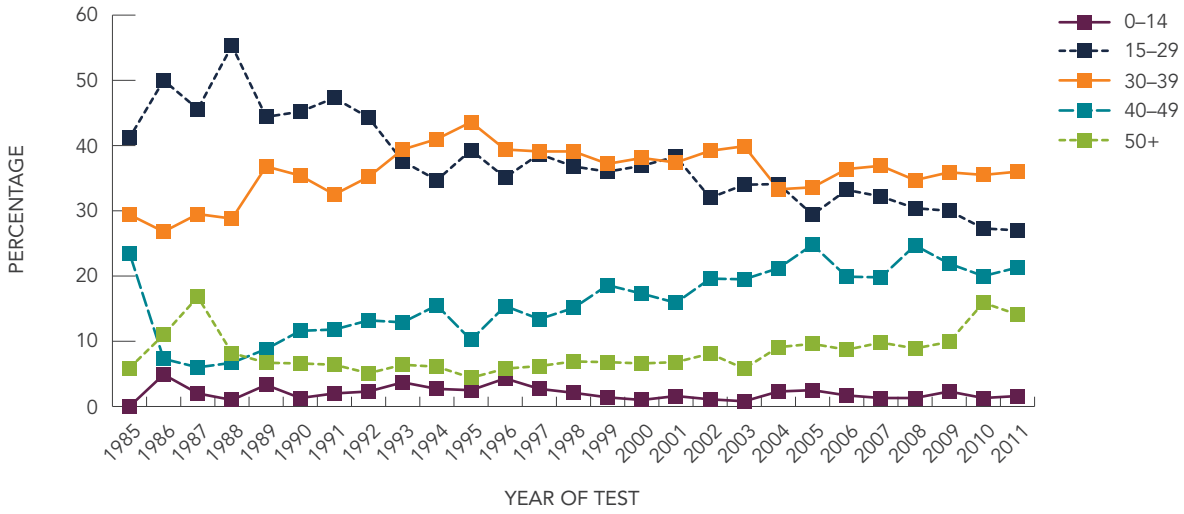


SOURCE: Public Health Agency of Canada, 2012a.

* Among HIV test reports where age and sex were reported.

The earlier age of diagnosis among females is also apparent in historical data from 1985 onward. Until the early 1990s, the youth category was the most frequently reported age group among females for all positive HIV test reports. Since then, it has remained fairly stable as the second most reported age category (Figure 19).

FIGURE 19: Proportion (%) of positive HIV test reports among females by age*, 1985–2011 (n=12,533)[103]

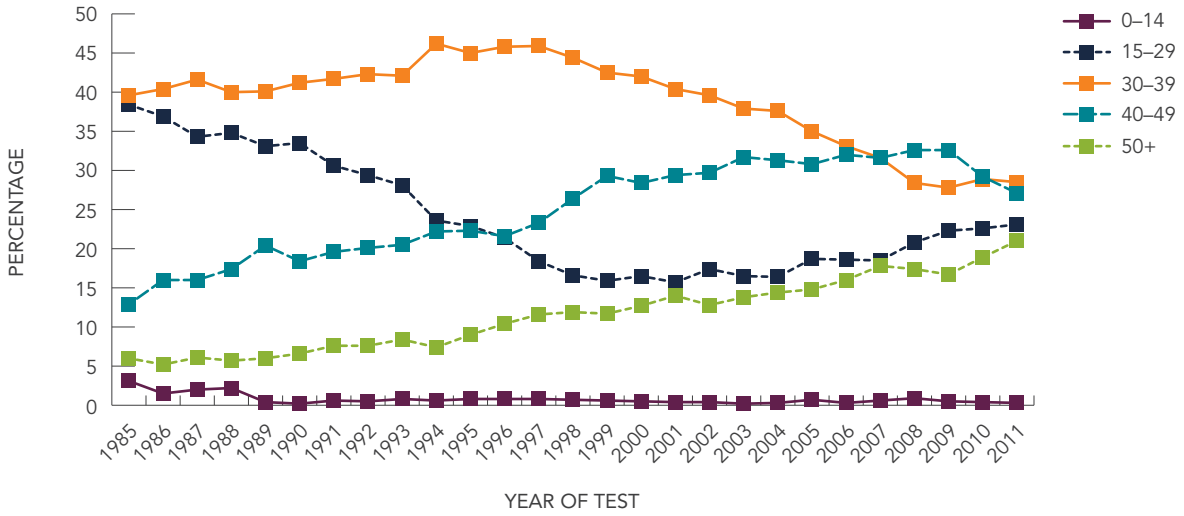


SOURCE: Public Health Agency of Canada, 2012a.

* Among HIV test reports where age and sex were reported.

By contrast, for males the youth category was the second most frequently reported age category between 1985 and the mid-1990s, when it ranked third. In recent years, the proportion of cases among males in the 15–29 year age group has risen slightly (Figure 20).

FIGURE 20: Proportion (%) of positive HIV test reports* among males by age, 1985–2011 (n=55,774)[104]



SOURCE: Public Health Agency of Canada, 2012a.

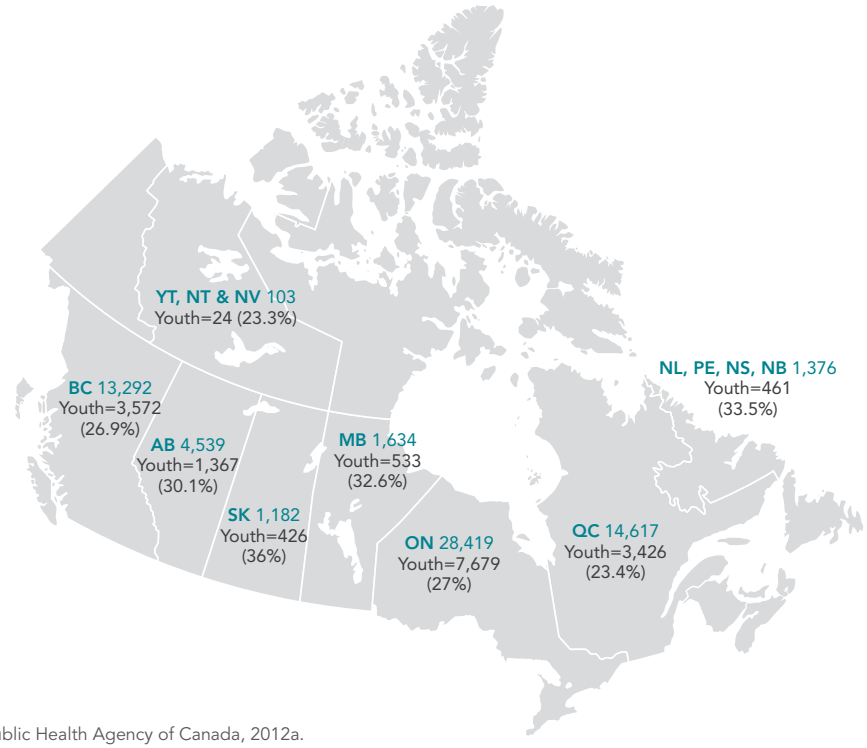
* Among HIV test reports where age and sex were reported.

At the national level, identifying sex and gender on an HIV test report is the responsibility of the health care professional providing the testing. Unfortunately, the case report forms do not include a gender category for individuals who do not identify as male or female. In particular, there is no means to capture data on people who identify as 'transgender' (individuals whose gender identity does not match their biological sex at birth) or "gender variant". These and other issues can lead to a misclassification of sex or gender and to the underrepresentation of transgender individuals in HIV surveillance reports. International research findings suggest that transgender individuals may be disproportionately affected by HIV and other STBBIs but there are no national data in Canada to support this.

3.2.2 GEOGRAPHY

Between 1985 and 2011, more than 91% of positive HIV test reports in the youth category were reported by the four most populous provinces combined, namely Ontario, Quebec, British Columbia and Alberta. This is not surprising given that these four provinces also make up the largest proportion of the Canadian population. However, when we examine the distribution of positive HIV tests by age in each province in Canada, a different picture emerges. The highest proportion of cases attributed to youth are found in Saskatchewan (36%) and the Atlantic provinces (33.5%), followed closely by Manitoba (32.6%) and Alberta (30.1%) (Figure 21). This suggests that youth are over-represented in the number of positive HIV test reports in these provinces compared to their representation in the overall provincial populations. For example, between 2002 and 2011, although youth aged 15 to 29 represented 34.2% of positive HIV test reports in Saskatchewan, they comprised an average of only 21.5% of the province's general population.[105]

FIGURE 21: Distribution of positive HIV test reports among youth aged 15–29 by province or territory, against provincial or territorial totals 1985–2011 (n=74,174)[106]



SOURCE: Public Health Agency of Canada, 2012a.

3.2.3 EXPOSURE CATEGORIES—OVERVIEW

HIV and AIDS cases are assigned an exposure category based on a hierarchy of risk factors associated with the risk of HIV transmission through a given route. These exposure categories include: men who have sex with men (MSM); injection drug use (IDU); heterosexual contact; and having received blood or blood products. Categories ranked highest in this hierarchy represent a greater risk of HIV transmission through that route. If a case is assigned more than one risk factor, it is classified according to the highest exposure category in the hierarchy. For example, people who inject drugs may also be at risk of HIV infection through heterosexual contact; however IDU is classified as higher risk with greater likelihood of HIV transmission. The only exception to this classification approach is for MSM who have also injected drugs, since Canadian evidence suggests that there is a fairly equivalent transmission risk through both routes. Such cases are classified in the combined exposure category "MSM/IDU".

Classifying cases in a single category according to the hierarchy has inherent limitations. First, it reduces the complex structural, social, cultural and economic determinants of an individual's vulnerability to HIV to a single source—individual behaviour.[xii] Second, the exposure category is determined by the answers the individual chooses to provide to questions from a health care provider. Finally, the exposure category approach is limited by missing information. For example, in 2011, nearly half (49.7%) of all positive HIV test reports sent to the Public Health Agency of Canada did not include exposure category data. Despite these limitations, understanding Canadian population-level patterns in HIV exposure can serve to highlight the risks faced by specific sub-populations, and inform prevention and care programs and policies.

3.2.4 HIV EXPOSURE CATEGORIES IN YOUTH

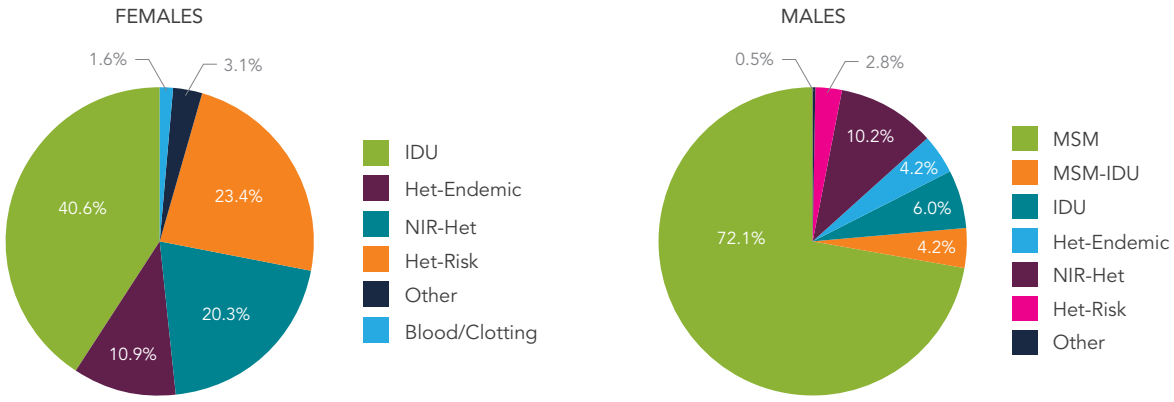
Although fewer HIV positive test reports among youth are missing exposure category data (42.5%) than is the case for all age groups (49.7%), the data described in this section should be interpreted with caution.

The MSM exposure category accounts for the largest proportion of cumulative positive HIV test reports among youth in Canada. Between 1985 and 2011, MSM accounted for more than one-third (35.9%) of positive reports in the 15–19 year age group and more than half (58.8%) in the 20–29 year age group. Over the same period, heterosexual contact and IDU were the second and third most common exposure categories, respectively, reported among these age groups.

Reported patterns of exposure to HIV differ among male and female youth. In 2011, among male youth the MSM exposure category accounted for more than two-thirds (72.1%) of positive HIV test reports while the heterosexual contact category accounted for 17.2%. In contrast, that same year, heterosexual contact was the most frequently reported exposure category among female youth, comprising 54.6% of all reported cases. This category is further sub-divided among individuals who: were born in a country where HIV is endemic (Het-Endemic); had heterosexual sexual contact with a person who was either HIV-infected or at increased risk of HIV infection (Het-Risk); and for whom nothing is known about their partner's risk factors (no identified risk, or NIR-Het). Among female youth in 2011, the Het-Risk category accounted for the most cases in the broader heterosexual exposure category (23.4%), while less than half (40.6%) of positive HIV tests were attributed to the IDU exposure category (Figure 22).

[xii] For consistency, data are presented in terms of the HIV exposure categories used in surveillance.

FIGURE 22: Proportion (%) of positive HIV test reports* among male and female youth aged 15–29 with reported exposure category, 2011 (n=279)[107]



MSM = men who have sex with men
MSM-IDU = men who have sex with men and injection drug use
IDU = injection drug use
HET-ENDEMIC = origin from an HIV-endemic country
HET-RISK = heterosexual contact with a person at risk
NIR-HET = heterosexual sex with no identified risk
OTHER = other known route of transmission
NIR = no identified risk
SOURCE: Public Health Agency of Canada, 2012[a].
* Where sex, age and exposure category were reported.

The distribution of exposure categories among males and females has varied over time. For example, data from 2002–2011 suggest an overall increase in positive HIV test reports in the MSM category among male youth (Figure 23). Between 2003 and 2007, the proportion of female cases attributed to IDU rose steadily, to a peak of 50% in 2007 (Figure 24). The proportion of cases among female youth attributed to heterosexual sexual contact peaked in 2003 and it has been the most frequently reported exposure category for much of the last decade.

FIGURE 23: Proportion (%) of positive HIV test reports* among male youth aged 15–29 with reported exposure category, 2002–2011 (n=2,112)[108]

SOURCE: Public Health Agency of Canada, 2012[a].

* Where sex, age and exposure category were reported.

FIGURE 24: Proportion (%) of positive HIV test reports* among female youth aged 15–29 with reported exposure category, 2002–2011 (n=1,050)[109]

SOURCE: Public Health Agency of Canada, 2012[a].

* Where sex, age and exposure category were reported.

3.2.4.1 PERINATAL EXPOSURE[xiii]

The data presented in this section are based on information collected by the Canadian Pediatric AIDS Research Group (CPARG) on all children known to have been exposed to HIV during the perinatal period, from conception through to birth and breastfeeding. Perinatal transmission is also known as vertical, or mother-to-child, transmission. The data is delineated according to: confirmed infected; confirmed not infected; not confirmed; and those lost to follow-up. However, it should be interpreted with caution. It does not present a complete picture of vertical transmission in Canada at any given point, since not all pregnant women are tested or aware of their HIV status. In addition, not all HIV positive children receive a diagnosis as infants, resulting in data reporting delays (e.g. children born to women whose own diagnosis is delayed would not be tested as infants; children born outside Canada may not receive a diagnosis until they're older, etc.).

The overall number of infants perinatally exposed to HIV has increased in Canada since the start of the HIV epidemic, but the proportion of infants exposed and confirmed to be infected declined from over 20% before 1996, to 1.6% in 2011.[110] Advances in antiretroviral treatment since the mid-1990s have greatly reduced the incidence of vertical transmission, from 20.2% prior to 1996 to 2.9% between 1997 and 2010.[111] Without treatment, it is estimated that 25.0% of pregnant women living with HIV would transmit the virus to their infant during pregnancy or at birth. If a seropositive mother breastfeeds her baby, this risk increases to an estimated 35.0%.[112]

According to CPARG, of the 3,567 infants known to have been perinatally exposed to HIV between 1984 and 2011 in Canada, there were 584 confirmed cases of HIV infection. In 2011 alone, there were only three confirmed cases of infection. Of the 110 infants confirmed infected since 2001, none have died of AIDS-related causes, nine died of causes other than AIDS and 10 were lost to follow-up.[113]

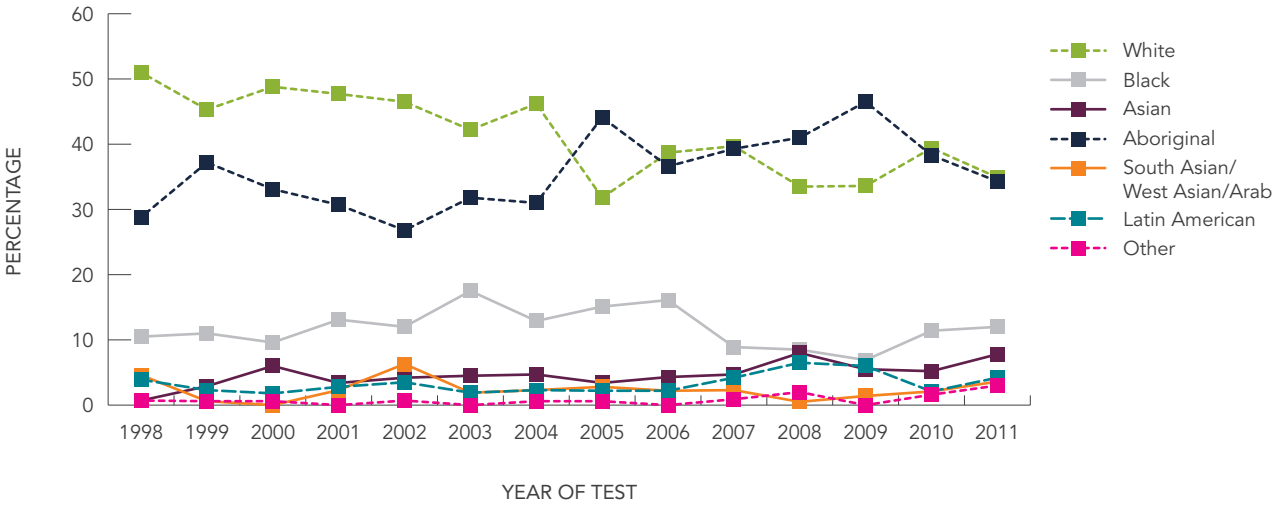
3.2.5 RACE/ETHNICITY AND HIV AMONG YOUTH

Information on race and ethnicity for HIV surveillance has been available for some provinces and territories since 1998. This data is not available for Ontario and Quebec, which together comprise approximately 66.4% of all positive HIV test reports in Canada reported through 2011. As the completeness of race/ethnicity information provided to the Public Health Agency of Canada varies by province and territory, these data should be interpreted with caution.

Among jurisdictions that provide such data, there has been an overall decrease in the proportion of positive HIV test reports among youth who identify as white, from 51.0% in 1998 to 34.9% in 2011. Recent years have seen an overall increase in the proportion of positive HIV test reports among youth who identify as Aboriginal, with a peak of 46.5% in 2009. In 2011, the proportion was 34.3% (Figure 25). This is particularly significant given that Aboriginal people as a whole make up only 3.5% of the Canadian population.[114] Together, the White and Aboriginal racial/ethnic categories account for the majority of positive HIV test reports among youth for which there is data on race/ethnicity.

[xiii] This information has been included in the youth status report because the perinatal exposure category includes positive HIV cases reported among children aged 0 to 14 years. As a result, there is some overlap between the Agency's perinatal age group and the status report's youth category of 10–24 years of age. In addition, those infected early in life will require care and support throughout their lifespan so perinatal exposure data provide important context to supporting youth living with HIV.

FIGURE 25: Proportion (%) of positive HIV test reports* among youth by race/ethnicity, 1998–2011 (n=2,489)[115]



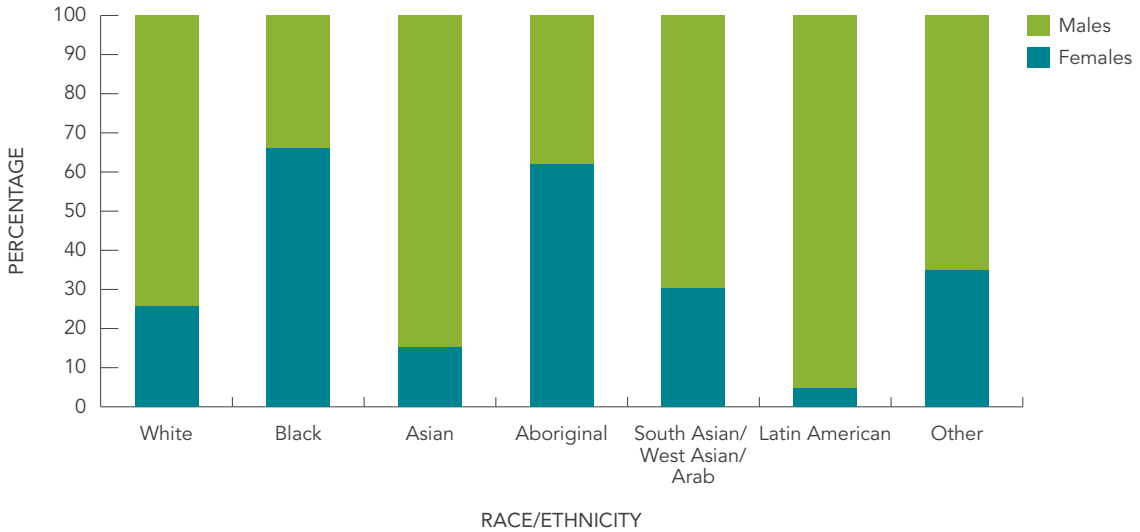
SOURCE: Public Health Agency of Canada, 2012a.

* Where sex, age and race/ethnicity were reported.

3.2.6 SEX AND RACE/ETHNICITY

Within different racial/ethnic categories, male and female youth are not equally affected by HIV. From 1998–2011, the majority of cases among Latin American, Asian, South Asian/West Asian/Arab and White youth were male. In contrast, the majority of cases among Black and Aboriginal youth were female (Figure 26).

FIGURE 26: Proportion (%) of positive HIV test reports* in youth aged 15–29 by sex and race/ethnicity (n=2,487) 1998–2011[116]



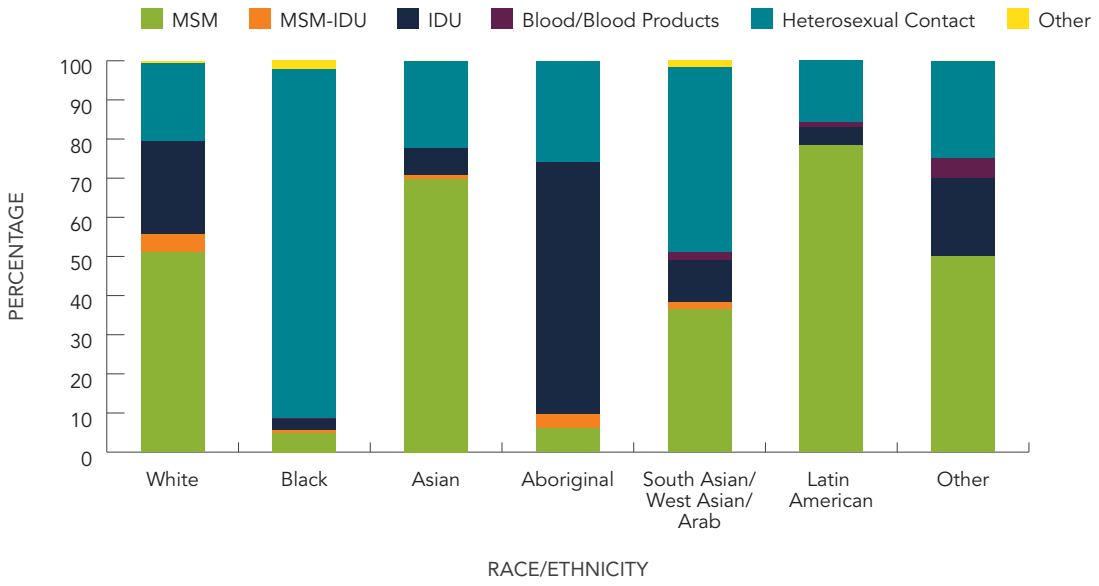
SOURCE: Public Health Agency of Canada, 2012a.

* Where sex, age and race/ethnicity were reported.

3.2.7 EXPOSURE CATEGORY AND RACE/ETHNICITY

In addition to differences in sex among the racial/ethnic categories reported with positive HIV tests, different patterns in exposure category are also observed. From 1998 to 2009, MSM was the most reported exposure category among youth in the Latin American (78.3%), Asian (69.8%) and White (51.0%) racial/ethnic groups. IDU was the most reported exposure category among youth who identified as Aboriginal, accounting for 64.4% of cases. Heterosexual risk was the most reported exposure category among youth who identified as Black, accounting for 89.2 % of cases within this group (Figure 27).

FIGURE 27: Proportion (%) of positive HIV test reports*, among youth aged 15–29 by race/ethnicity and exposure category, 1998–2011 (n=2,429)[117]



SOURCE: Public Health Agency of Canada, 2012a.

* Where sex, age, exposure category and race/ethnicity were reported.

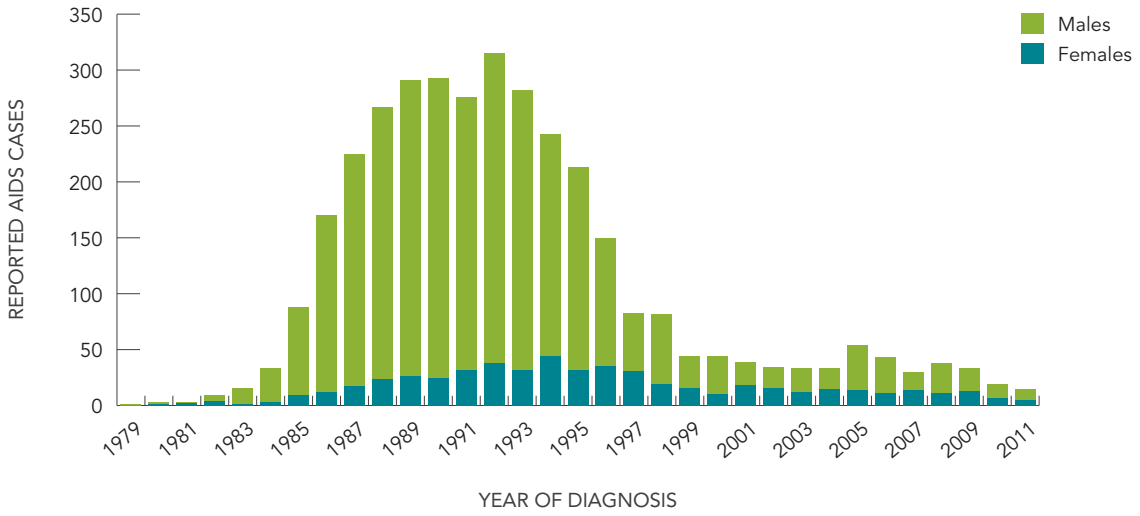
3.3 NATIONAL DATA: REPORTED NUMBER OF AIDS CASES

Between 1979 and 2011, a total of 3,500 AIDS cases among youth aged 15–29 were reported to the Public Health Agency of Canada, representing 15.6% of the total reported AIDS cases in Canada that included information on age. However, since the introduction of highly active antiretroviral treatment (HAART) in 1996, there has been a dramatic decrease in the annual number of reported AIDS cases (Figure 28). HAART has led to a reduction in the number of cases that progress from HIV to AIDS and to fewer AIDS cases resulting in death. As a result, more people living with HIV are managing it as a complex, chronic condition with increased life expectancy.

3.3.1 SEX AND GENDER

From 1983 to 1993, males accounted for over 85% of annual AIDS cases among youth. Nevertheless, the difference in the numbers of cases among male and female youth has narrowed significantly over the past two decades, largely due to declining numbers of AIDS cases among males, and has remained relatively stable since 1999 (Figure 28).

FIGURE 28: Number of AIDS cases* among youth aged 15–29 by year and sex, 1979–2011 (n=3,500)[118]



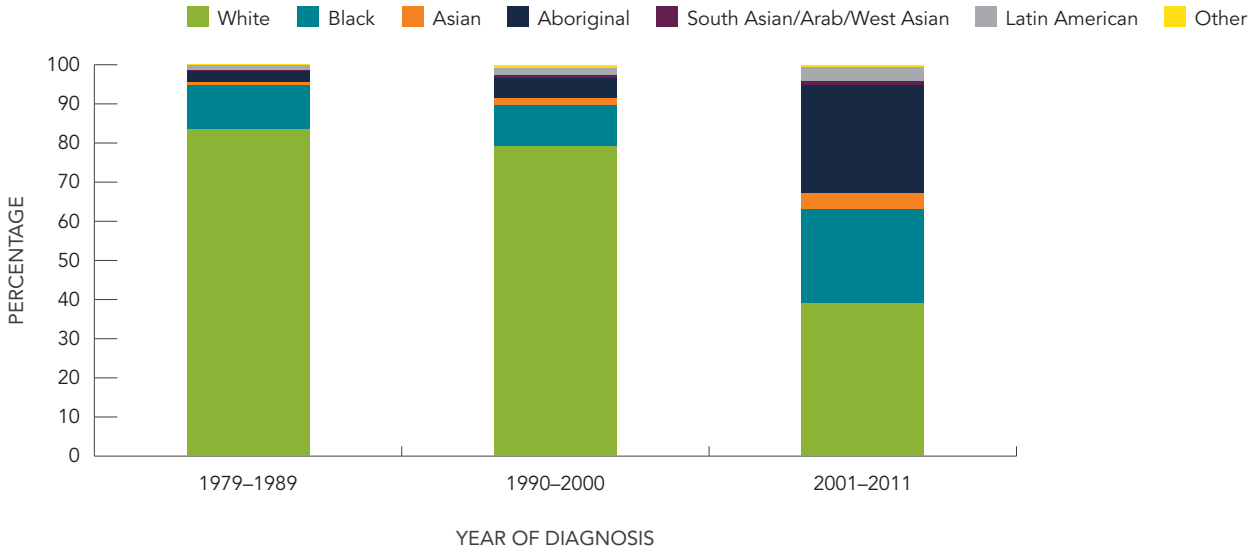
SOURCE: Public Health Agency of Canada, 2012[a].

* Where sex and age were reported.

3.3.2 YOUTH AND RACE/ETHNICITY

As noted for HIV surveillance, data on race/ethnicity among AIDS cases is not available for all jurisdictions, so findings should be interpreted with caution. Based on the data available, some important trends are worth noting. The proportion of AIDS cases among youth who identify as White, while still higher than other groups, has decreased significantly, from 83.5% between 1979 and 1989 to 38.9% between 2001 and 2011 (Figure 29). The proportion of AIDS cases increased most dramatically among youth who identify as Aboriginal, from 2.7% between 1979 and 1989 to 27.8% between 2001 and 2011. The proportion of AIDS cases has also increased among youth who identify as Black, from 11.2% between 1979 and 1989, to 24.2% between 2001 and 2011.

FIGURE 29: Proportion of AIDS cases* among youth aged 15–29 by race/ethnicity, 1979–2011 (n=2,583)[119]



SOURCE: Public Health Agency of Canada, 2012a.

* Where age and race/ethnicity were reported.

3.4 NATIONAL DATA: REPORTED NUMBER OF POSITIVE TEST REPORTS FOR SELECT STBBIs

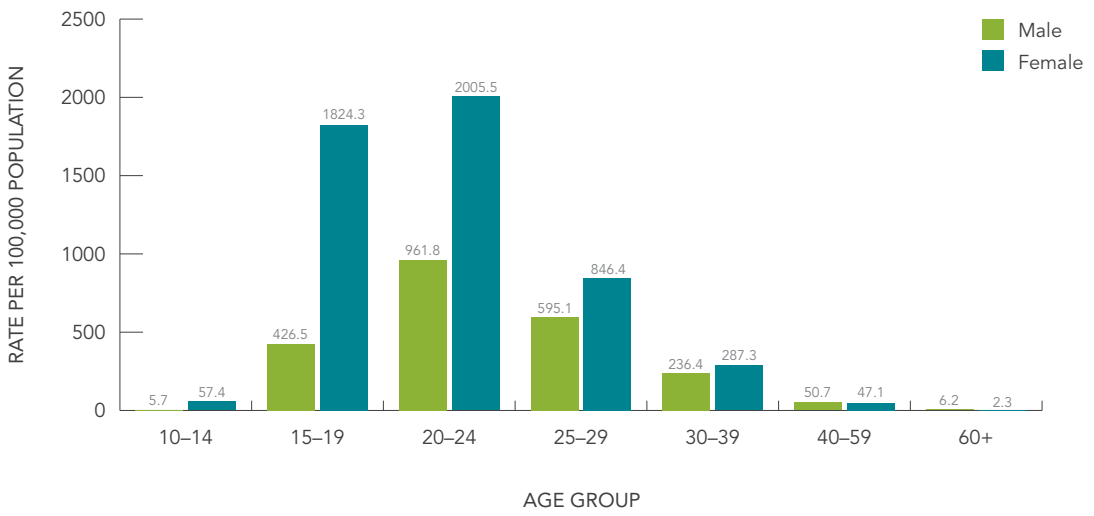
In addition to HIV, other STBBIs among youth continue to be a growing public health concern in Canada. HIV and other STBBIs share routes of transmission (e.g. blood, semen and other bodily fluids), behavioural risk factors (e.g. unprotected sex, sharing contaminated needles and other drug paraphernalia, unsafe tattooing), and social structural risk factors (e.g. poverty, homelessness, mental health). Certain STBBIs also facilitate HIV transmission. HIV and STBBI co-infection can complicate the progression, treatment and management of both. For these reasons, it is important to consider rates of HIV among youth in the context of other STBBIs.

3.4.1 CHLAMYDIA

Chlamydia continues to be the most commonly reported bacterial sexually transmitted infection (STI) in Canada. Since 1997, reported rates of chlamydia have risen steadily in males and females and across all age groups, although young females continue to be disproportionately represented.

In 2010, 94,690 cases of chlamydia were reported to the Public Health Agency of Canada. While the largest proportion of these (62.8%) were among youth aged 15–24, the highest rates of chlamydia relative to the general population were actually among youth aged 20 to 24, (1,470.7 per 100,000 people). In this age group, the rate of chlamydia among females (2,005.5 per 100,000) was more than twice as high as that among males (961.8 per 100,000) (Figure 30). The highest rates of chlamydia were reported in Nunavut, the Northwest Territories and Yukon.[120]

FIGURE 30: Reported rates (per 100,000 population) of chlamydia by sex and age group, 2010[121]



SOURCE: Public Health Agency of Canada, 2012[a].

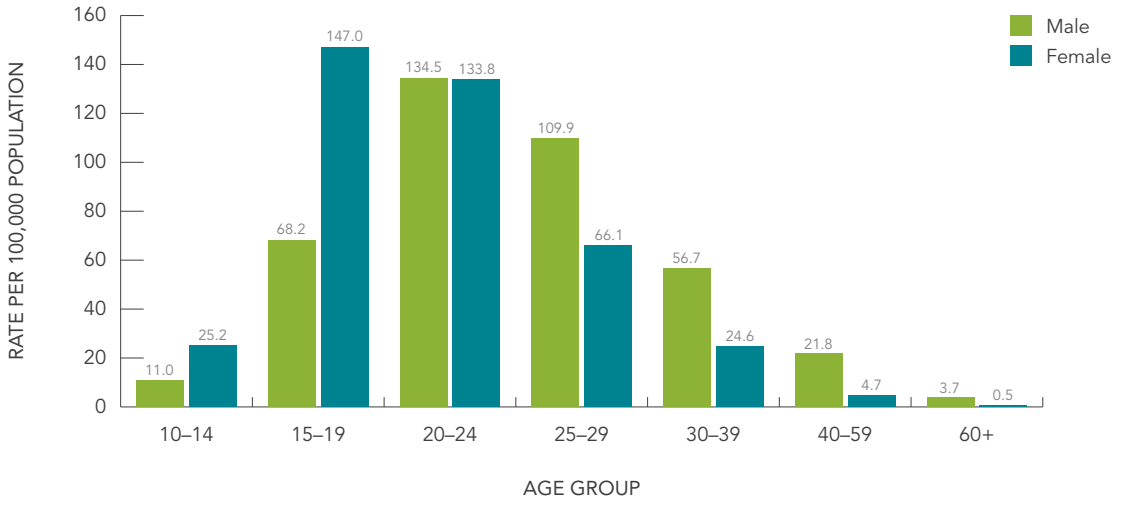
3.4.2 GONORRHEA

Gonorrhea remains the second most commonly reported bacterial STI in Canada. Since 1997, the overall number of reported cases has increased, although this has levelled off in recent years.

In 2010, 11,397 cases of gonorrhea were reported in Canada, of which approximately half (48.7%) occurred among youth aged 15–24. Rates were higher among females than males at younger ages, and higher among males in older age groups. The highest reported rates of gonorrhea infection in females were among those aged 15–19 (147.0 per 100,000 people) and 20–24 years (133.8 per 100,000) (Figure 31). For males, the highest reported rates were among those aged 20–24 (134.5 per 100,000), followed by those aged 25–29 years (109.9 per 100,000 people) (Figure 31).[122]

According to the 2010 data, rates of gonorrhea were not evenly distributed across Canada. The highest rates were reported in the three territories, followed by Manitoba and Saskatchewan.[123]

FIGURE 31: Reported rates (per 100,000 population) of gonorrhea by sex and age group, 2010[124]



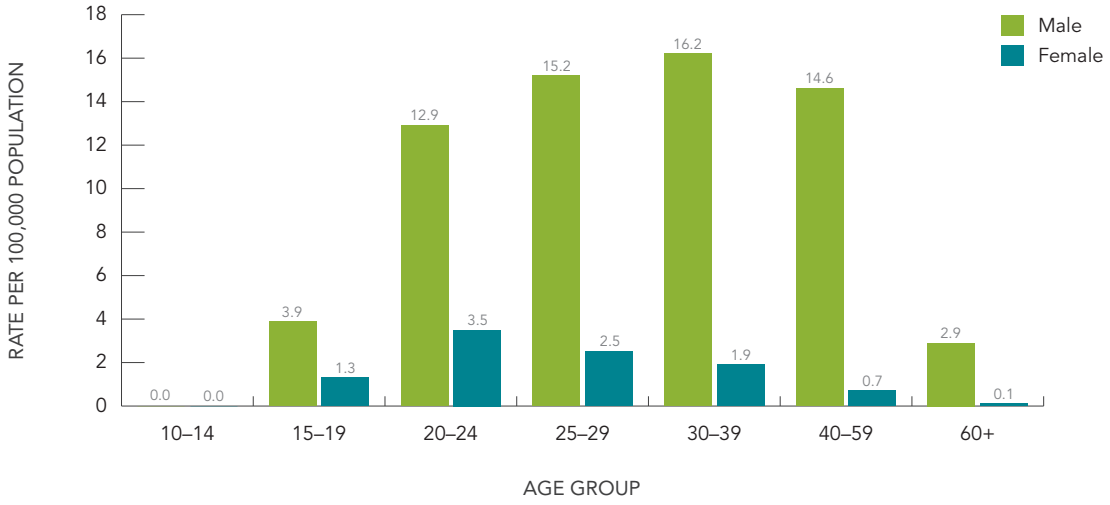
SOURCE: Public Health Agency of Canada, 2012a.

3.4.3 INFECTIOUS SYPHILIS

In 2010, 1,757 cases of infectious syphilis (including primary, secondary and early latent stages) were reported, equivalent to 5.2 people per 100,000. People aged 25–29 and 30–39 years carried the greatest burden (8.9 per 100,000 and 9.1 per 100,000, respectively). Historically, more cases have been reported among males than females; in 2010, males accounted for 90.5% of all reported cases.

Youth aged 15–24 represent only 14.6% of infectious syphilis cases in Canada, but rates differ between younger and older youth. For those aged 15–19, there were 2.6 infections per 100,000 compared to 8.4 per 100,000 among 20–24 year-olds. Among youth, males continue to be disproportionately affected (Figure 32).

FIGURE 32: Reported rates (per 100,000 population) of infectious syphilis by sex and age group, 2010[125]



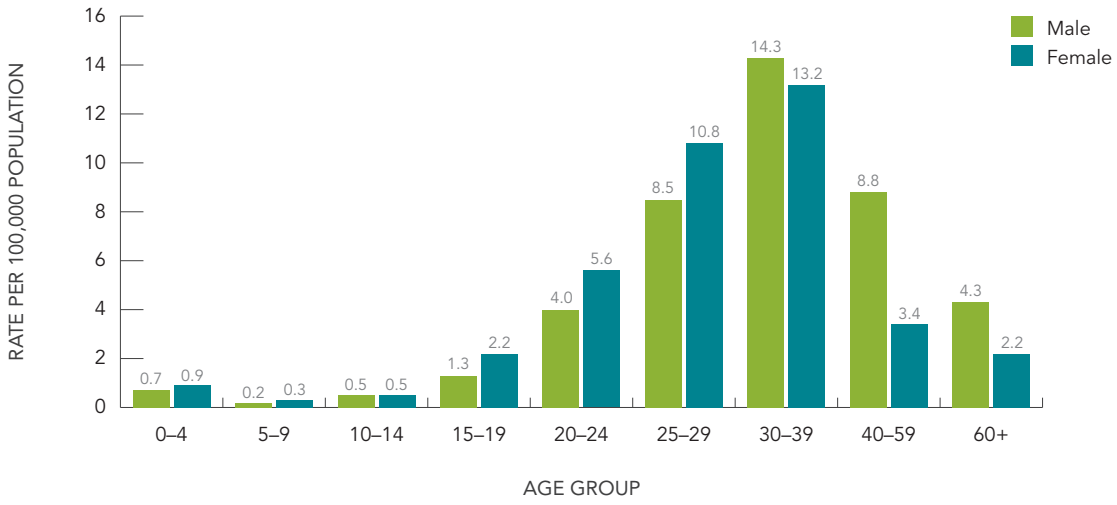
SOURCE: Public Health Agency of Canada, 2012a.

3.4.4 HEPATITIS B

In the mid-1990s, the vaccine for hepatitis B (HBV) was approved in Canada for distribution through routine, publicly funded provincial and territorial immunization programs. Since its inclusion in these programs, rates of acute HBV have declined among Canadians in the targeted age groups.

In 2010, 1,884 cases of HBV were reported to the Public Health Agency of Canada, for an overall infection rate of 5.5 per 100,000 people. Youth aged 15–24 made up 8.1% of the total number but rates of infection differed between younger and older youth. Among those aged 15–19, the rate of HBV was 1.8 per 100,000, compared to 4.7 per 100,000 among youth aged 20–24 years (Figure 33).

FIGURE 33: Reported rates (per 100,000 population) of HBV by sex and age group, 2010

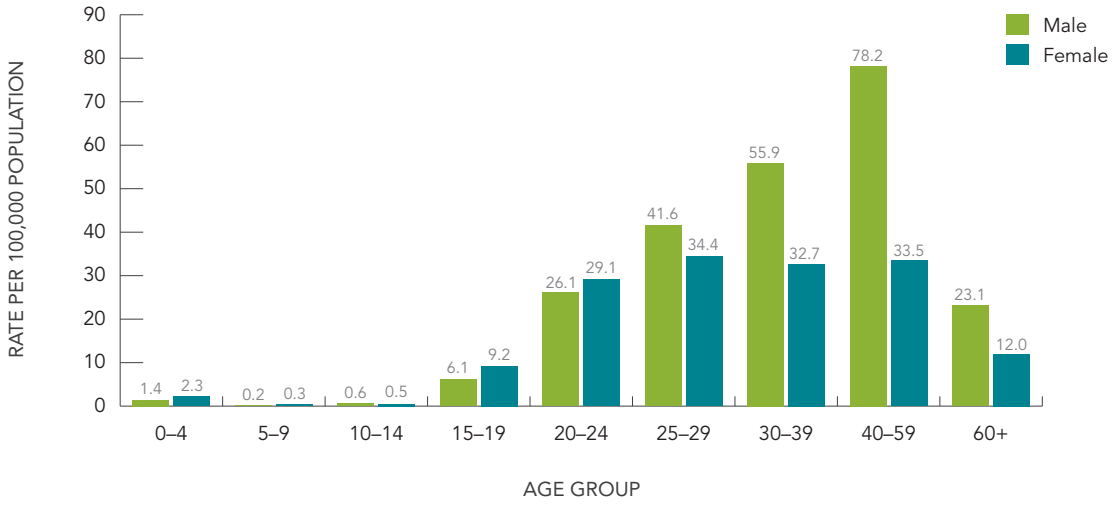


3.4.5 HEPATITIS C

Reported cases of hepatitis C (HCV) have declined in Canada in recent years. In 2010, there were 10,741 cases of HCV reported to the Public Health Agency of Canada, or a rate of 31.5 per 100,000 people, down from 40.5 per 100,000 in 2005. This represents a decline of 22% during that five-year period. The highest reported infection rate occurred among males 40 to 59 years old (78.2 per 100,000) and among females 25 to 29 years old (34.4 per 100,000).

Youth aged 15–24 accounted for only 7.7% of the total number of HCV infections in Canada in 2010. Rates of HCV were lower for males and females aged 15 to 19 than for those aged 20–24. However, in both age groups, infection rates were slightly higher for females, at 9.2 and 29.1 per 100,000 for the 15–19 year and 20–24 year age categories respectively, compared to 6.1 and 26.1 per 100,000, respectively, among males in these age groups (Figure 34).

FIGURE 34: Reported rates (per 100,000 population) of HCV infection by sex and age group, 2010



3.5 RESULTS FROM NATIONAL ENHANCED SURVEILLANCE AMONG KEY POPULATIONS

The Public Health Agency of Canada conducts enhanced STBBI surveillance on specific key populations at-risk: the *Enhanced Street Youth Surveillance in Canada* (E-SYS), the *Enhanced Surveillance of HIV Risk Behaviours among People who Inject Drugs in Canada* (I-Track), and the *Enhanced Surveillance of HIV and Other Sexually Transmitted and Blood Borne Infection and associated risk behaviours among Men who have Sex with Men in Canada* (M-Track). Data specific to youth has been extracted from these surveillance systems to describe trends in STBBIs, and risk factors associated with them, among specific sub-groups of youth in Canada.

3.5.1 ENHANCED STREET YOUTH SURVEILLANCE (E-SYS)

A total of 1,325 street-involved youth, aged 15–24, participated in the E-SYS Cycle 5 cohort. Females made up just over one-third of participants (37.8%) and males nearly two-thirds (62.2%) of participants surveyed in Vancouver, Edmonton, Saskatoon, Toronto, Ottawa, and Halifax.[126] Participants were asked to complete a questionnaire (administered by a nurse) and provide urine and blood samples to test for specific STBBIs. About 96% of participants provided urine samples and 88% provided blood samples.

Among survey participants, 25.4% of those tested had one or more STBBIs (Table 2). The most prevalent were genital herpes (14.9%), chlamydia (10.0%) and hepatitis C (5.2%). Thirteen participants, or 1.2%, tested positive for HIV.[127]

Overall, a larger proportion of females (34.6%) than males (19.9%) tested positive for STBBIs. In particular, 2.2% of females tested positive for gonorrhea and 24.5% for genital herpes compared to males (0.8% and 9.2% respectively). Rates of other STBBIs did not differ between males and females.[128]

In the survey, 34.2% of participants identified as Aboriginal (i.e. First Nations, Métis or Inuit), 52.5% as Caucasian and 13.3% as other ethnicities. A significantly higher proportion of street-involved youth who self-identified as Aboriginal (33.8%) tested positive for an STBBI, compared to 19.7% among Caucasian street-involved youth and 27.2% of participants who identified as other ethnicities.[129]

In particular, the prevalence of chlamydia (14.5%), hepatitis C (8.6%) and genital herpes (19%) was significantly higher among Aboriginal street-involved youth than among youth who identified as Caucasian (7.1%, 4.0% and 12.0% respectively) or an 'other' ethnicity (9.5%, 0.7% and 14.7% respectively).

TABLE 2: Prevalence of STBBIs among street-involved youth in Canada, by sex and race/ethnicity, 2005–2006[130]

	OVERALL	MALES (62.2%)	FEMALES (37.8%)	ABORIGINAL (34.2%)	CAUCASIAN (52.5%)	OTHER (13.3%)
STBBI	331 (25.4)	19.9	**34.6**	**33.8**	19.7	27.2
Chlamydia	124 (10.0)	9.1	11.5	**14.5**	7.1	9.5
Gonorrhea	16 (1.3)	0.8	**2.2**	–	–	–
Syphilis	4 (.17)	–	–	–	–	–
HBV Infection Ever	35 (3.5)	3.0	4.5	3.2	2.3	**8.4**
HCV Infection Ever	57 (5.2)	4.4	6.7	**8.6**	4.0	0.7
HIV	13 (1.2)	1.2	1.2	–	–	–
HSV-2	163 (14.9)	9.2	**24.5**	**19.0**	12.0	14.7

SOURCE: Public Health Agency of Canada, 2011.

3.5.2 M-TRACK

As mentioned earlier in this status report, M-Track is an enhanced surveillance system that tracks HIV, STBBIs and associated risk behaviours among MSM through periodic, cross-sectional surveys at selected centres across Canada. Participants are primarily recruited using venue-based sampling methods; participation is voluntary, anonymous and requires informed consent. Information on demographics, sexual behaviours, drug use, HIV and other STBBI testing behaviour, and knowledge of how HIV is transmitted are collected via self-administered questionnaire. A blood specimen is collected from a finger-prick sample to test for HIV, HCV and syphilis.[131]

Between 2005 and 2007, five sentinel sites participated in Phase 1 of M-Track: Montreal, Toronto, Ottawa, Winnipeg and Victoria. Of the 4,838 men who participated in the study, 4,793 completed a questionnaire. The Phase 1 sample comprised 589 youth aged 15–24, representing 13.3% of all participants who provided their age. The majority of youth participants were between 20 and 24 (87%), and the average age was 22.[132]

A substantial proportion of youth self-reported their sexual orientation as gay (71%) and approximately 21% as bisexual. Others identified themselves as straight or "Other" (9%). When asked about their national or cultural ancestry, approximately 7% of youth respondents reported Aboriginal ancestry.[133]

Among youth who provided a biological sample of sufficient quantity for testing and completed a questionnaire, approximately 2% (n=9) tested positive for HIV. Of these, three of the nine youth did not know they were HIV positive.[134] The lifetime prevalence of HCV was approximately 3% compared to less than 1% for syphilis.

3.5.3 I-TRACK

I-Track is the national enhanced (behavioural and biological) surveillance system that collects information on HIV and HCV risk behaviours among people in 10 sentinel sites across Canada who injects drugs. Using an interviewer-administered questionnaire, information is collected on selected demographic variables, drug use, injecting and sexual behaviours, and testing history for HIV and HCV and knowledge of how HIV is transmitted. A biological sample (finger prick blood sample or oral fluid) is collected for testing.[135]

Of the 3,089 respondents, 343 youth aged 15–24 years old participated in I-Track Phase 2 (2005–2008) in Victoria, Central and North Vancouver Island, Prince George, Edmonton, Regina, Thunder Bay, Sudbury, Toronto, Kingston and the SurvUDI network (Ottawa and eight sites in the province of Quebec). Just over half of the Phase 2 sample were female (51.3%) and one-third self-identified as Aboriginal (First Nations, Métis or Inuit) (31.7%). A higher proportion of female participants self-identified as Aboriginal than male participants (37.5% vs. 25.3%, respectively).[136]

TABLE 3: HIV prevalence, awareness of HIV positive status, and HCV prevalence among youth aged 15–24 years participating in I-Track (Phase 2: 2005–2008), (n=343)[137]

	OVERALL	MALES (48.7%)	FEMALES (51.3%)
HIV seropositive	103 (3.0%)	5 (3.1%)	5 (3.0%)
Awareness of HIV positive status			
Aware	42.9%	33.3%	50.0%
Unaware	57.1%	66.7%	50.0%
Lifetime HCV prevalence	127 (37.0%)	54 (32.5%)	73 (41.3%)

SOURCE: Public Health Agency of Canada, 2010.

Among youth participants who provided a biological sample of sufficient quantity for testing, the prevalence of HIV was 3.0% and the lifetime prevalence of HCV was 37.0%. HIV prevalence was similar between male and female youth (3.1% vs. 3.0%, respectively). Lifetime prevalence of HCV was higher for females than males (41.3% vs. 32.5%, respectively) (Table 3). Among HIV positive youth, 57.1% did not know their positive HIV status. This was true for a higher proportion of males (66.7%) than females (50.0).[138]

3.6 SUMMARY

While the majority of Canadians lead healthy lives free from HIV and other STBBIs, the rates of many STBBIs are increasing. Among people who do get these infections, youth often make up a disproportionate number of cases. In many instances, certain sub-groups of youth are more vulnerable to infection than others.

Annual rates of HIV diagnoses in Canada have remained relatively stable over the past few years, as have the proportion of youth among those diagnosed. In 2011, youth aged 15–29 years made up approximately one-quarter of the number of positive HIV test reports in Canada. Males accounted for the majority of youth cases. In particular, the MSM exposure category accounted for the largest proportion of positive test reports among all youth (even though this category only includes male youth). Other sub-groups may also be more vulnerable to HIV infection, particularly Aboriginal youth.

With the introduction of biomedical interventions such as antiretroviral therapy in 1994 and highly active antiretroviral therapy in 1996, Canadians infected with HIV are living longer lives and managing HIV as a complex, chronic condition. As a result, there has been a decrease in the number of new AIDS diagnoses reported in Canada each year. Youth generally make up a small proportion of these diagnoses, accounting for approximately 16% of the cumulative total number of AIDS cases over the past three decades.

Rates of other STBBIs among youth are particularly worrying. For example, in 2010, youth comprised about two-thirds of cases of chlamydia and about half the cases of gonorrhea. Females made up a majority of people with these infections. Left untreated, chlamydia and gonorrhea can have significant consequences for the reproductive health of youth in their adulthood, including infertility and greater risk of ectopic pregnancy.

The risk behaviours that ultimately lead to infection with HIV and other STBBIs are influenced by social, cultural, economic and structural factors that shape an individual's vulnerability to infection. Chapter 4 discusses how these varied determinants of health affect the vulnerability of youth in particular, and how these may be addressed to create the conditions necessary to support the health and wellbeing of young people.

CHAPTER 4 – DETERMINANTS OF VULNERABILITY TO AND RESILIENCE AGAINST HIV AND OTHER STBBIs AMONG YOUTH

While most youth in Canada make the transition to adulthood free from HIV and other sexually transmitted and blood borne infections (STBBIs), some do not. Some youth are more vulnerable to infection than others due to a variety of challenges, obstacles and conditions within their social, cultural, economic and physical environments. Existing literature has tended to focus on particular groups of youth as "at risk" of infection based on individual characteristics or behaviours, and/or because of their membership in a particular social group. These characterizations ignore the social, cultural, economic and structural conditions that affect the lives of youth and their opportunities for making health-related decisions. This chapter explores these conditions to help provide a more holistic understanding of how they influence the pathways youth take to adulthood. To reduce rates of HIV and other STBBIs among youth in Canada, it will be critical to address the complex factors that affect their vulnerability to infection and create conditions that promote healthy decision making.

4.1 SOCIO-ECONOMIC STATUS: EDUCATION, 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.[139]

Socio-economic status (SES) is a measure of individuals' or families' position relative to others within a hierarchical social structure, and is commonly based on education, employment and income. SES is one of the strongest predictors of individual health. In general, those with lower SES tend to have poorer health outcomes than those with higher SES. On average, the more advantaged people are with respect to education, employment and income, the better their health. Chapter 2 provided data on education, employment and income among youth in Canada. Here, we describe how these factors create opportunities and challenges for youth with respect to their health.

4.1.1 EDUCATION

Education contributes to better health by providing individuals with knowledge, and personal and social skills that better equip them to access, understand and use health information or services. Youth who drop out of school and those with lower levels of education may be missing key opportunities to acquire these important tools.

Education also leads to increased opportunities for employment and higher income.[140] Post-secondary education is becoming increasingly important for entry and progression in the labour market in Canada. Young people who have not completed their high school education face limited choices for employment and may struggle for basic necessities. To meet basic needs, some may engage in activities such as sex work that increase their vulnerability to HIV and other STBBIs.

Truncated or lower levels of education can also have an indirect impact on health by limiting access to adequate housing, food and health services. Data drawn from the *Enhanced Street Youth Surveillance in Canada* (E-SYS) found that high school completion was relatively low among street-involved youth in Canada. Less than one-third of street-involved youth aged 18 years or older had graduated from high school, a level three times lower than the general population. Street-involved youth were 10 times more likely to report poorer physical and mental health than their peers.[141] Over half of street-involved youth experienced barriers to accessing health services. Among these, half cited structural barriers such as lack of personal identification (owing to unstable residence) and financial constraints.

Parental education also plays a key role in the health and wellbeing of youth. A study of more than 2,000 Nova Scotia high school students examined the association between sexual activity, sexual risk taking and household socio-economic status.[142] Early age of first sexual intercourse among both females and males was associated with lower parental education and not living with both parents.[143] For males, having an unemployed father was an additional factor for early age of first sexual intercourse. By comparison, factors that tend to protect against early age of first sexual intercourse, non-condom use and unplanned intercourse included living with both parents and having parents with higher levels of education and employment.[144] Knowledge and skills are often passed on to youth from parents or caregivers. In addition, the education parents receive affects their own employment and income and the resources to which the family has access.

4.1.2 EMPLOYMENT

Employment can impact the health of young people in a variety of ways.[145] First and foremost, it provides access to financial and material resources (e.g. prescription drug benefits) necessary to protect one's health. The psychological stress of financial insecurity compounds the negative health effects by disrupting daily routines, lowering self-esteem and increasing overall anxiety. Unemployment also increases the likelihood of individuals turning to drinking, smoking and drug use as coping mechanisms.

4.1.3 HOUSEHOLD AND PERSONAL INCOME

Access to personal and family income is another factor that influences youth health and development. As discussed, personal income makes it easier to purchase prescription drugs, condoms and other health care materials. It can also provide individuals with a sense of independence, self-esteem and self-worth, all of which contribute to their resilience in the face of poor health outcomes. For youth living with parents or caregivers, family income is a more important indicator of the resources to which they have access to support their health, than their personal income. Data from youth aged 10 to 19 years in the 2002–2003 *Canadian Community Health Survey* demonstrated higher rates of condom use at last sexual intercourse among youth living in higher income families.[146] Lower income household (<$50,000/year) also predicted earlier age of first sexual intercourse, multiple sexual partners, previous history of STIs and unprotected sexual intercourse.[147] Similarly, data from the *National Population Health Survey* showed that youth from families with higher incomes (>$50,000/year) were less likely to report smoking or binge drinking or to have had more than one sexual partner in the past year. Over the same period, they were more likely to have "always" used a condom.[148]

Inadequate personal or family income may also lead to health-compromising behaviours to provide the basic necessities of life. These behaviours may put individuals at increased risk of poor health outcomes, including infection with HIV or other STBBIs. For example, street-involved youth who cannot access social assistance find alternative ways to make money and to meet their basic needs. Common sources of income for street-involved youth reported in the *Enhanced Street-youth Surveillance Study* included survival sex work and selling drugs.[149] Street-involved youth have identified sex work and selling drugs as more lucrative sources of income, despite the risks of being arrested, experiencing violence, or becoming infected with HIV or other STBBIs.[150]

4.2 GENDER[xiv]

> *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.*[151]

Sex and gender are two distinct concepts. While there is no single agreed-upon definition, sex typically refers to biological characteristics including anatomy (e.g. body size, reproductive organs) and physiology (e.g. hormonal activity) that distinguish males and females.[152] Gender refers to socially and culturally determined expectations and norms regarding appropriate behaviour, characteristics and roles.[153] For example, the concept of gender is responsible for the widely held belief in Canada that newborn girls be dressed in pink and boys in blue. Gender affects the health of individuals in a variety of ways including norms of acceptable behaviour, expectations within sexual relationships and access to health services.

4.2.1 GENDER NORMS

The norms and expectations grounded in concepts of gender influence the ways sexuality is perceived and experienced. Gender norms influence sexual partners, types of sexual behaviours engaged in, and the context in which sexual behaviour takes place. Gender norms around sexuality often differ for males and females. For example, in some societies it may be acceptable for males to have sexual experiences before marriage, whereas expectations about female behaviour may be more restrictive. These gendered norms are established through socialization at a young age. Youth learn specific gender norms and expectations, which influence their health outcomes throughout life.[154]

Gendered roles of masculinity and femininity affect sexuality, sexual behaviour and sexual relationships in ways that create power imbalances in sexual relationships and disparities in health outcomes. For example, youth may be taught gendered norms of sexual behaviour in which males are viewed as dominant and in control in a sexual relationship. This places women at risk of being unable to negotiate condom use if her male partner does not want to and to experience sexual violence or coercion by her male partner.

In the *Cedar Project* cohort, young Aboriginal women were found to have higher HIV infection rates than their male counterparts.[155] Over 80% of the young female participants reported unprotected heterosexual intercourse, in addition to 70% who reported experiences of forced sex.[156] Study results showed that safer sex methods including condom use were compromised

[xiv] For further information on gender, consult the *Population-Specific HIV/AIDS Status Report: Women*.

because of power imbalances between males and females, including young women's fear of violence and/or abandonment by their male partners.[157] Interviews conducted with 30 self-identified Aboriginal youth aged 15 to 19 in Vancouver's Downtown Eastside and on two reserves on Vancouver Island revealed a different perspective on how genders interact and negotiate safer sex.[158] Results from this study showed that young women played an active role in sexuality and safer sex while young men were sometimes coerced by their female partners to not use condoms.[159] Specifically, young women sometimes pressured their male partners to avoid condom use.[160] Among this population, pregnancy and parenting are highly valued, which may explain the pressure by females not to use condoms.

Gender norms around masculinity may also impact males' willingness to use condoms. For example, gender norms of masculinity may support the belief that condoms are a sign of weakness. Studies have shown less condom use and higher sexual risk behaviours among youth in communities where stereotypical male and female gender norms were dominant.[161]

Gender norms can also influence perceptions towards and access to health services. Studies of young heterosexual men suggest that social constructions of masculinity affect sexual health service access and HIV testing behaviours.[162] In a cohort of 50 sexually active self-identified heterosexual men (aged 15–23) in Nova Scotia, participants reported that they did not want to seek out conventional sexual health and HIV education and prevention services, despite the fact that Youth Health Centres were available throughout the province.[163] Young men reported concern about being seen as sexually inexperienced, unknowledgeable or "gay", if they sought out information about sexual health and HIV education and prevention services.[164]

Gendered norms and attitudes held by health professionals can also impact access to health services differently for people of different genders. For example, in one study, young male participants reported not feeling welcome in sexual health clinics due to a perceived female-centered physical atmosphere.[165] This included clinic décor and displays of posters and pamphlets on women's sexual health issues.[166] In another study by Planned Parenthood Toronto, participants expressed that sexual health services were primarily targeted to women and their reproductive health issues.[167] Young male participants identified the need for gender-neutral and youth-friendly settings as a way to increase access to sexual health services for males.[168] The perception that these services are targeted to females leads males to believe that they are not important to their health and reduces the likelihood that they will access them. Results from the *Toronto Teen Survey* (TTS) found that young men access sexual health services less often, and are less likely to ask for sexual health information; yet, they want to know about sexuality.[169]

Transgender youth face unique challenges with respect to gender norms and expectations. For example, lack of knowledge or awareness about this population among health professionals can affect the access transgender people have to quality health services. The TTS interviewed a small number of transgender youth who reported fear of being judged and discriminated against by health professionals because of transphobia.[170] Results also showed that clinics often do not recognize transgender youth identities or meet their sexual health needs.[171] Among participants, half had accessed sexual health services but reported that they were unhappy with them. The study identified the importance of using gender-neutral language, creating a space for youth to self-identify, and training professional and medical staff on gender identity to better meet the needs of the transgender youth.[172]

4.3 SEXUAL ORIENTATION

A key component of everyone's identity, sexual orientation is made up of an individual's self-identification, physical and emotional attraction towards another person and behaviours. These elements interact in multiple, complex and sometimes inconsistent ways. For example, an individual may self-identify as heterosexual and may be mostly physically and emotionally attracted to members of the opposite sex. However, they may feel slight emotional or physical attraction to some members of the same sex and may act on these attractions. As a result, sexual orientations exist along a continuum, from exclusively homosexual to exclusively heterosexual, with various sexual identities in between.[173] Sexual orientation begins to develop in early childhood and continues over an individual's lifetime.

Sexual orientation is another important determinant of health that can influence vulnerability to HIV and other STBBIs. Non-heterosexual youth including lesbian, gay, bisexual and queer or questioning youth experience poorer physical, mental, emotional and sexual health than heterosexual youth. Sexual orientation affects health outcomes in a variety of ways. First, given the nature of certain STBBIs, the risk of transmission varies significantly, depending on the type of exposure. Though transmission occurs most often through sexual activity or drug use practices, the probability of being infected or infecting someone else depends on the type of act in which youth engage. [174] For example, a recent analysis of the literature provides evidence that vaginal intercourse has a lower per act probability of transmitting HIV than anal intercourse.[175] Therefore, sexual orientation affects health outcomes like HIV and other STBBI directly because of the types of behaviours in which youth engage.

It also affects health indirectly as a result of social, psychological and cultural conditions. In particular, non-heterosexuals experience greater levels of stress due to social and cultural attitudes towards sexual minorities, rejection and social isolation, and the pressures of having to manage their identity according to the environment. Stressors such as these, sometimes called "minority stress", lead to high blood pressure, anxiety and other physiological responses that result in poorer physical and mental health. They can also result in health-compromising coping mechanisms such as substance use, unprotected sexual activity or sex work. [176] For some sexual minority youth, substance abuse can be an attempt to self-medicate to manage stigma or shame, to deny same-sex feelings, or as a defence mechanism against ridicule or discrimination by others.[177] For example, self-identified sexual minority youth who participated in the *Toronto Teen Survey* explained that engaging in unprotected or risky sexual behaviour helped them cope with the negative social environment in which they live, despite the risk of HIV and other STBBIs.[178]

Compared to their heterosexual peers, research has shown that lesbian, gay and bisexual, youth are more likely to experience first sexual intercourse before 14 years of age, to consume drugs and alcohol before intercourse, to have multiple sexual partners, to have been pregnant or to have got their partner pregnant, to self-report problems with drugs and alcohol, and to be involved in survival sex work.[179] Similarly, among a cohort study of Montreal high-school students, self-identified gay, lesbian or bisexual youth reported significantly higher rates of smoking, drinking, and use of marijuana and hard drugs than their heterosexual peers.[180] In a sample of youth from rural British Columbia, lesbian, gay, and bisexual youth were more likely than their heterosexual peers to report substance use as a way of coping with stigma and discrimination.[181]

Homophobia is another health-compromising stressor. Social and cultural attitudes towards sexual minorities are often expressed in negative ways ranging from more covert forms of discrimination to more visible forms of verbal harassment, physical violence or other forms of bullying. These experiences can lead to physiological responses (e.g. high blood pressure, anxiety), mental illness (e.g. depression), poor mental health (e.g. low self-esteem), substance use, and self-harm (e.g. suicide).[182] Among youth in particular, these experiences can jeopardize academic achievement and increase the likelihood of school dropout, learning difficulties and social isolation.[183] In a national sample of high school youth from the *First National Climate Survey on Homophobia in Canadian Schools*, over half (56.6%) of lesbian, gay, bisexual, transgender, queer and questioning youth reported verbal harassment due to their perceived sexual orientation, compared to 14.1% of other youth.[184] In a 2008 Quebec study of 2,747 high school students, 38.6% of participants reported having been victims of an act of violence at school based on their identity or on the way that their peers perceived their sexual identity.[185]

As a result of their sexual orientation and social attitudes, sexual minority youth may be removed from key protective factors in their lives, such as connections to their family, school or community.[186] Social isolation can increase the likelihood of these youth engaging in negative coping behaviour. The effects of homophobia and social isolation may be heightened for sexual minority youth from rural and remote communities who are more likely to migrate to big cities to escape stigma and discrimination.[187] Moving to urban areas also physically removes these youth from family and peers. For example, a small qualitative cohort of 13 two-spirit Aboriginal youth reported that 90% of them had migrated to Toronto because of the homophobic attitudes and abuse they had faced, both from families and the broader community.[188] Sexual minority youth who migrate to urban centres may experience additional challenges such as racism, poverty and isolation, unemployment, unstable housing, lack of access to health and other services, and sexual exploitation.[189] For other sexual minority youth, moving to an urban centre can be empowering and can increase resiliency by removing them from a negative social environment.

Researchers have begun to focus on strategies for fostering resilience among sexual minority youth. For example, the McCreary Centre Society examined strategies to help support sexual minority youth at school. These included providing safe and caring schools, promoting healthy attitudes about risky behaviours, supporting families in parenting roles, providing opportunities to get involved, and creating an environment for positive youth development.[190] A positive school environment helps to foster coping skills among sexually diverse youth that support learning, finishing high school and aspiring to post-secondary education.[191]

4.4 CULTURE, RACE AND ETHNICITY

> *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.*[192]

Chapter 2 presented data to profile the increasing ethno-cultural diversity of youth in Canada. Culture is an important element of people's identity and is made up of behaviours, practices, values and attitudes. These elements of culture are shaped by other elements of human identity including race, ethnicity, gender or sexual orientation. Culture is also shaped by historical, socio-economic and political contexts, by power relations within and between groups and by the institutionalized attitudes and practices that result.

Culture, race and ethnicity are important determinants of health outcomes, including infection with HIV and other STBBIs. First, culture shapes knowledge, attitudes and behaviours in ways that influence an individual's vulnerability or resistance to these infections. For example, research indicates a gap in knowledge about sexuality and HIV among racialized and immigrant communities in Canada.[193] Substance use, a well-researched risk factor for HIV and other STBBIs, is shaped by cultural values, too. Cultural values and attitudes play a part in: whether people use alcohol, tobacco or drugs; the age at which they begin using substances; frequency of use; and the contexts in which they use certain substances. Cultural values also include beliefs about health and illness themselves, such as: sources or causes of illness; whether and how illnesses can be treated; who is able to treat illness; and who should be involved in making treatment decisions. For example, in some cultures illnesses such as HIV are believed to be caused by supernatural forces, while in others it is believed to be caused by a virus. These culturally-based beliefs shape youths' perceptions of their vulnerability to infection, the precautions they take to avoid them, their use of preventive health services (e.g. HIV or STI testing) and the treatments they seek if they experience symptoms. Cultural values also include perceptions about sexual identity. In particular, non-heterosexual identities take on other meanings and values in different cultural contexts. In many cultures, non-heterosexual identities are feared and perceived negatively (i.e. homophobia). In others, non-heterosexual identities are revered. Similarly, cultural values include perceptions of sexuality which impact the norms and patterns of sexual relationships such as how and with whom people communicate about sex, and the types of behaviours engaged in. For example, cultural values and attitudes may dictate whether youth in certain ethno-cultural groups feel comfortable discussing issues of sexuality with parents or health professionals. South Asian youth who participated in the *Toronto Teen Survey* reported a general discomfort communicating about sexuality and sexual health with their parents. They also expressed concern that their parents would find out about any consultation with a sexual health clinic.[194]

Culture, race and ethnicity are also closely linked with socio-economic status, gender roles and other determinants of health. Ethno-cultural minorities are disproportionately represented in lower socio-economic categories in Canada.[195] Several factors contribute to lower socio-economic status among ethno-cultural minorities including internalization of racial stereotypes, history of colonization, racial discrimination and employment inequality.[196] The effects of lower socio-economic status on vulnerability to HIV and other STBBIs also affect ethno-cultural minority youth disproportionately (e.g. less access to health services or information, inability to afford condoms or other prevention). In addition, gender roles are also shaped by cultural contexts in ways that create differences among ethno-cultural youth in their vulnerability to HIV and other STBBIs. For example, in some cultures, female gender roles are constructed in ways that place greater restrictions on women's sexuality, their ability to make decisions in sexual relationships and power to choose with whom they have sex. These gender roles in turn increase the vulnerability of women in these groups to HIV and other STBBIs.

Cultural values can also create social, political and structural conditions which affect sexual health among youth in Canada. In particular, racial discrimination or a history of colonization can limit opportunities for ethno-cultural minority youth to protect, improve or maintain their health. For example, these conditions can limit access to health information or services or access to education and employment. A comparison of data collected in the *Toronto Teen Survey*, suggests that the history of colonization and racial discrimination continues to fuel structural and social racism, exclusion and discrimination among the Black, African and Caribbean youth communities. This in turn affects access to sexual health information and services and drives higher rates of HIV and other STBBIs.[197] Black youth in this study were the least likely to report having access to sexual health services and explicitly identified racism as a factor preventing them from doing so.[198]

Research also points to the effects of the historical marginalization of Aboriginal peoples in Canada. Data from a cohort of 61 Aboriginal youth living in urban and rural Ontario emphasized the multi-generational effects of colonization on Aboriginal communities, families and parents. These effects included lower self-esteem, loss of self-care and parenting skills, recurring cycles of violence and substance use, and lower likelihood of using condoms during sexual intercourse.[199] Participants linked individual HIV-related risk behaviours, such as substance use, with the historical context of discrimination and violence resulting from colonization.[200] In a separate study of 18 homeless women in Edmonton, aged 19–26, who were moving out of homelessness, nine self-identified Aboriginal participants reported that the historical legacy of colonization, racism and poverty had major impacts on the overrepresentation of female Aboriginal youth on the street and their ability to find stable and safe housing. For young Aboriginal women, historical and ongoing discrimination and sexism were factors that amplified their vulnerability to homelessness and HIV infection.[201] Participants also noted that their spirituality and connection to Aboriginal culture helped them to survive on the street and to transition out of it.[202] In this way, culture can be a source of resiliency for some groups.[203] For Aboriginal people, resilience involves the ability to withstand challenges and maintain identity.[204] Initiatives have been developed throughout Canada to support and build on Aboriginal youth resiliency and to impart skills to cope with the consequences of colonization and HIV vulnerability.[205]

4.4.1 IMMIGRATION

Experiences of immigration can compound the challenges, obstacles and opportunities youth face in protecting their health. For example, the experience of migrating to Canada can be a challenge for some as they learn a new language, adjust to a new social status and income, or struggle to find employment. Experiences of migration can impact access to health services, such as testing or treatment for HIV and other STBBIs, or seeking out health information. For some newcomers, meeting basic needs such as food, shelter and clothing may be so challenging that finding health services or taking care of their health are not priorities. Others may come from countries where HIV and other STBBI prevention, screening and treatment are not widely available. As a result, they may have little experience, knowledge or awareness of these services and lack comfort in accessing them. [206]

Newcomers may also struggle to negotiate the norms and expectations of their own culture and those of other cultural groups in Canada. Some may feel a loss of control over their lives or lower self-esteem, while others may experience greater control over their bodies and their sexuality in a new country. [207] Experiences of migration can impact access to social support and information, resulting in feelings of social isolation or lack of awareness about available health services.

4.5 HEALTHY CHILD DEVELOPMENT

The earliest years are pivotal to a child's growth and development. Nurturing caregivers, positive learning environments, good nutrition and social interaction with other children all contribute to early physical and social development in ways that can positively affect health and wellbeing over a lifetime.[208]

4.5.1 FAMILY CONNECTEDNESS

Early childhood experiences and the family environment can have a positive impact on human development and health throughout the life course. In particular, the presence or lack of family support can contribute to long-term physical and mental health outcomes. Many children

experience positive parenting, live in a well-functioning family, and have strong connections with their family and community.[209] Family connectedness, family function and quality of relationships between youth and their parents or caregivers shape the norms, attitudes and behaviours of youth in ways that influence their vulnerability to or resilience against HIV and other STBBIs.

Data from the 1992–2003 *British Columbia Adolescent Health Survey* (AHS) of youth in grades 7 to 12 (*N*=72,000) suggests that family connectedness is an important protective factor in the healthy development of young people. Among adolescent males, those with the highest levels of family connectedness were less likely to have ever had sex, to have had sex before age 14, or to have caused a pregnancy compared to same-age peers with the lowest levels of family connectedness. Similarly, females with the highest degree of family connectedness had lower odds of ever having had sex, of engaging in early first sexual intercourse, and of becoming pregnant compared to females of the same age with the lowest levels of family connectedness.[210] Positive relationships during childhood between parents and children can increase children's resiliency later in life, and act as a protective factor against health-compromising behaviour.

4.5.2 SUBSTANCE USE DURING PREGNANCY

Substance use during pregnancy is another factor related to healthy childhood development given its health consequences and adverse effects for mother and child. The use of substances such as injection drugs during pregnancy can also increase the likelihood that mothers will contract HIV or hepatitis C and pass these infections onto their children. Data from the 2007–2008 *Canadian Community Health Survey* found that 5.8% of mothers surveyed consumed alcohol during pregnancy.[211] That prevalence might be as high as 10.8% according to data from the *Canadian Maternity Experiences Survey (MES),* in which 5,882 mothers participated.[212] Marital status, smoking status, immigrant status and reaction to pregnancy were also found to be important correlates with maternal alcohol use during pregnancy.[213] The initial health consequences of maternal alcohol use extend into adulthood and can include early adult alcohol abuse and increased likelihood of alcohol dependence.[214] The impact of alcohol use on youths' vulnerability to HIV and other STBBIs is well-documented throughout this report.

Similarly, tobacco use during pregnancy can lead to long-term adverse health effects. In 2007, 10% of Canadian women aged 20–44 who had been pregnant in the previous five years reported that they smoked regularly during their most recent pregnancy.[215] Studies have shown that maternal smoking during pregnancy is associated with increased risk of behavioural problems such as inattention and attention deficit hyperactivity disorder,[216] as well as increased lifetime risk for problems with alcohol use.[217]

Women who use alcohol, tobacco or other drugs during pregnancy may experience stigma in accessing substance use treatment services and health care, including prenatal services.[218] Furthermore, those women most vulnerable to substance use during pregnancy are often the most difficult to reach. The *Canadian Prenatal Nutrition Program* (CPNP) specifically targets at-risk pregnant women facing life circumstances such as poverty, teenage pregnancy, alcohol or substance use, family violence, social and geographical isolation and recent arrival in Canada.[219] A 2004 to 2009 summative evaluation of the program found that participants who entered the program earlier in their pregnancy were more likely to decrease or stop smoking and/or alcohol consumption, adopt positive health practices and experience healthier birth outcomes.[220] Programs such as these demonstrate the importance of supporting the health of pregnant women, and women at risk of becoming pregnant, to reduce the likelihood that they and their children will be vulnerable to poor health outcomes, including HIV and other STBBIs.

4.5.3 SENSE OF COMMUNITY BELONGING

Attachment to community provides children with the opportunity to develop trust, self-esteem and emotional control and to build positive relationships with others.[221] A greater sense of community belonging has been linked to higher self-reported general and mental health.[222]

Using a nationally representative sample of Canadian youth aged 15–19, the *National Population Health Survey* examined the effects of community involvement on risk behaviours.[223] Results suggested that regular contact with neighbours, membership in community organizations and participation in religious services were associated with lower likelihood of tobacco use, binge drinking, having multiple sexual partners and inconsistent condom use.[224] Theoretical models indicate that a sense of community through friendship groups, neighbourhoods, faith and religious institutions, schools, and clubs or sports teams can influence healthy decision making and other behaviours among youth. It does this by establishing norms of behaviour and health-supporting attitudes, and fostering a greater sense of self-worth and self-esteem.[225]

4.5.4 CHILDHOOD STRESSORS

Stress plays an important role in helping children develop the skills they need to cope with situations throughout life. While some levels of stress can be positive, intense and prolonged stress may result in short- and long-term negative health effects.[226] During childhood, young people are highly sensitive and susceptible to adverse childhood experiences, such as physical or sexual abuse, parental depression, and parental substance use. These experiences may result in short-term and chronic stressors that affect healthy childhood development as well as vulnerability to and resilience against HIV and other STBBIs.[227]

A large body of research demonstrates the link between childhood stressors and health outcomes in later life. For children who are victims of sexual, physical, emotional or mental abuse, the consequences extend beyond the early years of life. The experience of childhood sexual abuse is often linked with lower self-esteem, early age of first sexual intercourse, difficulties discussing contraception and safer sex with partners, non-condom use, multiple sexual partners, teen pregnancy, and a history of sexually-transmitted infections.[228] Childhood stressors have also been linked to post-traumatic stress disorder, mental illness and physical diseases including eating disorders and alcohol and drug abuse.[229] Data from a sample of over 17,000 participants in the *Adverse Childhood Experiences Study,* a collaboration between the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente's Health Appraisal Clinic in San Diego, suggest a strong relationship between experiences of traumatic or abusive childhood events before the age of 18 and a wide range of health and behavioural problems, such as depression, suicide attempts, alcoholism, smoking and substance abuse, risk for intimate partner violence, multiple sexual partners and sexually transmitted infections.[230]

Childhood stressors are experienced more often by certain groups of youth in Canada. The Canadian Centre on Substance Abuse reported that groups of youth who experience increased vulnerability (i.e. street-involved, those in custody, sexual minority and gender-variant, Aboriginal, and those with mental health issues) are more likely to have undergone sexual and physical abuse, other forms of violence, and stigma and racism. Notably, rates of HIV and other STBBIs are higher among these groups than among the general youth population in Canada.

Data from the *Enhanced Street Youth Surveillance Study* supports research which suggests street-involved youth are disproportionately affected by childhood stressors. Among youth who participated in cycle 5 of E-SYS, 58.8% reported having been physically abused, 15.0% sexually

abused, 65.3% emotionally abused, and 60.7% having been neglected.[231] For street-involved youth, the experience of childhood emotional, physical and/or sexual abuse is a major factor in their decision to leave the family home, [232] which can lead to a cycle of exposure to other risk factors for HIV and other STBBIs. Data from the *At-Risk Youth Study* (ARYS), a cohort study of street-involved youth in British Columbia, suggests that stressors such as childhood emotional and sexual abuse are linked to initiation into injection drug use and engagement in survival sex work among this population.[233] Data from a longitudinal sample of Aboriginal youth in British Columbia, aged 14–30, who were participating in the *Cedar Project*, suggests that Aboriginal youth are also disproportionately affected by childhood stressors. Among this sample, 43.6% of the 605 participants reported a history of childhood sexual abuse.[234] Among those in the sample reporting recent involvement in sex work, 76% had a history of sexual abuse.[235] Young Aboriginal women who had experienced sexual abuse were more likely to report injecting cocaine daily, being HIV positive, having been assaulted recently, and being involved in survival sex work in the six months prior to the interview.[236] Participants in the male cohort who had been sexually abused also reported higher rates of HIV, HCV and STIs, and involvement in sex work.[237]

Sexually diverse youth are also at increased risk of experiencing childhood stressors. A Montreal-based qualitative study of 40 MSM with histories of childhood sexual abuse found that such abuse impacted adult sexual risk taking and led to increased vulnerability to HIV. In particular, study participants reported that experiences of sexual abuse led to negative views of homosexuality, low self-esteem, poor ability to negotiate sexual relations, drug or alcohol abuse, problems related to the body and suicidal ideation.

Early experiences affect a child's development and are critical in lifelong health and wellbeing. While many youth find positive mechanisms to cope with and overcome abuse and other early life stressors, some do not. Public health interventions that foster resilience among youth through family and community connectedness may help mitigate the effects of childhood stressors.

4.6 SOCIAL ENVIRONMENTS

> *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(ing) with adversity, as well as in maintaining a sense of mastery and control over life circumstances.*[238]

Social environment is an important determinant of health and wellbeing.[239] This chapter has already outlined the protective effects of family and community connection against behaviours that increase the risk of HIV and other STBBIs. Peers and school environments also influence vulnerability to and resilience against HIV and other STBBIs.

4.6.1 PEER INFLUENCES

Relationships with peers play a significant part in sexual behaviour among youth. A review of literature on the impact of peer groups on sexual behaviours concluded that youth were most likely to adopt their peers' sexual norms and to engage in sexual practices that they believed their peers approve.[240] However, the types of behaviour engaged in may depend on dominant attitudes in the peer network. For example, some research suggests that peers promote inconsistent condom use [241] and earlier age of first sexual intercourse,[242] while other research finds that peers groups promote health-enhancing behaviours.[243]

Still other studies indicate that peer groups may also have an indirect effect on sexual behaviour among youth. For example, a study conducted in northwestern Quebec followed 312 students from kindergarten through seventh grade to explore the association between peer rejection and factors such as age of first sexual intercourse, general delinquency and self-esteem.[244] The study found that peer rejection was indirectly associated with early age of first sexual intercourse through its association with lower self-esteem.[245]

Youth who live on the street or are street-involved are embedded in peer networks that can be a source of both resiliency and vulnerability to HIV/AIDS and other STBBI. Previous sections of this chapter presented evidence that street youth engage in risk behaviours such as drug use, inconsistent condom use and sex work to a greater extent than youth not involved in the street. It is possible that peer networks, coupled with other social, cultural, and structural conditions, promote adoption of risk behaviours among street-involved youth. At the same time, research also suggests that peer networks of street-involved youth provide a source of support and may foster resiliency. Street-involved youth place great importance on the support they receive from friends.[246] For example, in a study conducted in Alberta among youth at risk of homelessness or who were homeless at the time of the study, participants reported feeling a "sense of camaraderie and community" with their peers.[247] They viewed street culture in general as a main component of their social life and put great emphasis on 'hanging out' with friends.[248] Studies report that many street-involved youth value their community highly and feel the need to band together as they are often a minority in shelters. Street friends were often described as family who provided support in dealing with the challenges of street life.[249] A qualitative study of 18 young women in the early stages of exiting street life reported that street community offered a sense of social competency, belonging and freedom to be themselves.[250] In other words, street relationships, families and friendships can be important resources for survival.[251]

4.6.2 SCHOOL ENVIRONMENT

School connectedness has been shown to reduce the likelihood of having multiple sexual partners and using condoms inconsistently.[252] It has also been shown to reduce the likelihood that youth will engage in behaviours that put them at risk for HIV and other STBBIs.[253] Quality of relationships with teachers is one aspect of the school environment that may provide resilience against behaviours that lead to HIV and other STBBIs. Higher levels of perceived support from teachers have been linked to a lower likelihood of having ever engaged in sex and a higher likelihood of consistent condom use.[254]

The school environment is a particularly important determinant of health for sexually diverse and gender-variant youth. Schools can be particularly hostile for lesbian, gay, bisexual, transgender, queer or questioning youth who are vulnerable to isolation and discrimination.[255] Stressors related to homophobic violence, discrimination and stigmatization can place sexually diverse and gender-variant youth at increased risk for physical, emotional and mental health problems.[256] Social connectedness and inclusive environments provide a safe space for sexually diverse youth to grow and foster healthy behaviours.[257]

Positive relationships with teachers and school peers can help sexually diverse youth cope with the stresses associated with coming out and with formation of their sexual identity. Teachers can help create positive, inclusive and supportive school environments and play a key role in reducing incidents of bullying and violence against sexually diverse and gender-variant youth.[258] Moreover, peer-to-peer and support group networks, such as gay-straight alliances, can help decrease isolation, alienation and despair. Safe and affirming schools support the health, safety and education needs of all youth. Overall, strong social ties to family and community can help to develop and support youth's resilience to HIV and other STBBI.

4.6.3 SUPPORT FOR YOUTH LIVING WITH HIV[XV]

Literature about youth living with HIV is scarce. Qualitative in-depth interviews with 34 HIV-positive youth (aged 12–24) living in Ontario underlined the importance of a strong supportive social network to overcome the specific challenges of living with HIV.[259] Many of the participants had rich support networks consisting of their parents, other family members and friends. These youth also highlighted the social support value of knowing other young people living with HIV.[260] Moreover, the participants had mostly positive comments about youth services and reported regular contact with one or more service providers.[261] Young people living with HIV identified the need for tailored, youth-friendly programs, such as summer camps or youth drop-ins, to help build their social support networks.[262]

Disclosure in sexual relationships is a common issue faced by youth born with HIV.[263] Two Montreal-based qualitative studies of youth (aged 10–22) with perinatally acquired HIV reported the fear of being rejected, stigmatized, betrayed and misunderstood when disclosing their HIV status to peers.[264] Although they felt the need to disclose their status, they were also concerned about being rejected and identified several conditions required before they would feel comfortable disclosing their status to a peer or partner. These included having a trustworthy and meaningful relationship with the other person, feeling loved and being involved in a romantic relationship.[265] However, many of the first experiences of disclosure reported were with a significant peer, not a romantic partner. Disclosure to an intimate partner came later in their lives.[266] Participants explained that they were fully aware of the need to prevent HIV transmission to their partner and that they felt responsible for doing so.[267] Similar results were found in a qualitative study of 10 children (aged 9–16) who were perinatally infected with HIV (interviews included 11 family members and 11 service providers in British Columbia).[268] Some youth were concerned about being rejected or stigmatized after they disclosed their status to a romantic partner. Findings suggest the importance of support for youth living with HIV as they transition into adulthood.[269]

4.7 MENTAL HEALTH AND MENTAL ILLNESS

> *Mental health is the "capacity of each and all of us to feel, think, and act in ways that enhance our ability to enjoy life and deal with the challenges that we face. It is a positive sense of emotional and spiritual wellbeing that respects the importance of culture, equity, social justice, interconnections and personal dignity."*[270]

4.7.1 MENTAL HEALTH

Mental health is an important aspect of overall health and wellbeing. Levels of self-esteem, self-efficacy and general life satisfaction are predictors of behaviours among youth that increase risk of HIV and other STBBIs.

Low self-esteem has been shown to influence sexual risk behaviour, including inconsistent condom use[271] as well as injection drug use. For example, data from a 2008 cohort study of street-involved youth aged 14–24 in New York City and Toronto suggests that youth who reported higher self-esteem also reported better health and less substance use than those with low self-esteem.[272] Lower levels of self-esteem were shaped by social exclusion, marginalization and resource deprivation.[273] The study results suggest that self-esteem plays an important protective role

[xv] For further information on issues faced by youth living with HIV, consult the *Population-Specific HIV/AIDS Status Report: People Living with HIV and AIDS*.

against substance use and abuse.[274] Similarly, among a sample of street-involved youth across Canada, participants with lower self-esteem were at higher risk of becoming street-involved and were more vulnerable to drug use, sex work and other behaviours that increased their susceptibility to HIV and other STBBIs.[275] Studies have also shown that self-efficacy (i.e. the measure of one's own ability to complete tasks and reach goals) to be predictive of risk factors for HIV and other STBBIs, including inconsistent condom use.[276] For example, a study of Aboriginal youth in Regina, Saskatchewan, revealed that youth with higher self-efficacy were more likely to use condoms.[277]

4.7.2 MENTAL ILLNESS

Youth may experience challenges and life events that increase stress and lead to depression, anxiety, post-traumatic stress disorder and suicide. In turn, mental illness increases vulnerability to HIV and other STBBIs.[278] The link between mental illness and risk behaviours is especially pronounced among youth who are disproportionately affected by childhood stressors, stigma and discrimination such as sexually diverse and gender-variant youth, immigrants and newcomers to Canada, and ethno-cultural minorities. For example, data collected from youth over a three-year period revealed that risks of suicidal behaviour or mental health illness were most strongly associated with gay, lesbian or bisexual sexual identities.[279] Immigrants and newcomers to Canada are also at risk for mental illness due to the physical, emotional, social and financial stress of moving to a new country. Factors such as learning a new language, underemployment, low socio-economic status, separation from family and cultural background can also lead to stress, depression or anxiety. [280]

Mental illness is also an important health determinant for youth managing chronic STBBIs such as HIV, hepatitis B or HCV. People living with these chronic conditions were twice as likely to experience depression and anxiety compared to the general population.[281] At the same time, depression and other mental illnesses can interfere with the ability of people living with chronic diseases to take their medications as prescribed, exercise, eat properly and communicate with family, friends and health service providers.[282] In addition, the stigma associated with mental illness may discourage youth from seeking care and support and result in feelings of shame or negative coping mechanisms.[283]

Much like vulnerability to HIV and STBBIs, mental health and mental illness are influenced by multiple factors in a broader social context. To reduce the vulnerability of youth populations to HIV and other STBBIs, it is important to address these factors. The literature suggests that supporting positive mental health among young people (e.g. self-esteem, self-efficacy, sense of worth, satisfaction with life) has benefits not only for avoiding mental illness, but for protecting against HIV and STBBIs as well.

4.8 PHYSICAL ENVIRONMENTS

4.8.1 UNSTABLE HOUSING, HOMELESSNESS AND LIVING ARRANGEMENTS

For some youth, it can be difficult to find a safe, stable place to live. There are few safe and affordable housing opportunities for young people with minimal incomes.[284] Similarly, street-involved youth transitioning out of the street face challenges in finding living arrangements that are affordable, safe and in good condition.[285] Furthermore, youth may face discrimination from property owners, and may not have access to references from previous rental properties or to advance rental payments such as certified cheques.[286] Studies of street-involved youth in Canada have reported multiple

barriers to finding affordable, subsidized and adequate housing.[287] In one study of this population, participants underscored the poor conditions of affordable apartments such as lack of cleanliness, disrepair and their location in underserved neighbourhoods[288] and indicated that they would rather return to the street or to shelters.[289]

Besides unstable housing, many street-involved youth experience hidden homelessness, meaning that they have no permanent dwelling but make use of a range of transitional living arrangements. Among street-involved youth from the *Enhanced Street Youth Surveillance* study: 38.8% indicated that they would be sleeping in a shelter or hostel that night; 19.6% reported that they had their own home to go to; 14.2% would go to a parent's home; 11.6% would stay with friends or a significant other; and nearly 10% would sleep on the street.[290] Other vulnerable groups of youth, including youth who use injection drugs, also experienced unstable housing. Among youth who participated in I-Track (2005–2008), over half of both male and female youth had lived in a mix of stable and unstable housing in the previous six months (52.1% of male and 56.3% of female youth).[291]

Research also shows that the lack of affordable housing in middle-class neighbourhoods pushes street-involved youth away from safer neighbourhoods to disadvantaged areas.[292] In disadvantaged neighbourhoods youth are more likely to become involved with peers who are engaged in drug injection or other risk behaviours, and may have more limited access to health services or health information. Living or being street-involved in a neighbourhood where there is an active drug scene can increase vulnerability to drug consumption, injection, and survival sex, which increases the risk of exposure to HIV.[293]

The street environment can also affect the ability of street-involved youth to inject drugs safely. A Montreal study of 39 street-involved youth with HCV who injected drugs examined the impact of street-living on safer injection practices.[294] Youth who use injection drugs and lack stable, safe housing may be forced to inject on the street in precarious conditions to avoid being caught by law enforcement.[295] In these circumstances, using clean injection equipment is a challenge.[296] Among a cohort of street-involved youth in Vancouver who reported injection drug use in the past six months, similar findings emerged.[297] About three-quarters (76.5%) reported injecting in a public setting at least once and 27.2% reported injecting in public all the time.[298] Youth in the study reported that they most often injected on the streets (74.7%), public washrooms (40.7%), parking lots (37.7%) and parks (36.4%).[299] Because clean equipment is not often available in those situations, public injection can increase the risk of HIV, HCV and other injection-related infections.[300] Furthermore, living on the street or in unstable conditions can be an obstacle to accessing health care and taking medications as prescribed.[301] One such obstacle would be a lack of a physical place to store medication.[302]

Access to stable, adequate and supportive living conditions is also a concern for youth living in long-term care facilities. Results from the *Youth, Disability, HIV Vulnerability & Prevention Community-Based Participatory Research Project* in the Greater Toronto Area revealed that physical restrictions in their care facility limited the ability to engage in sexual activity. As a result, youth had developed strategies to have intercourse in unsafe and uncomfortable spaces, such as bathhouses and in public (e.g. the street, parks). Research suggests that condom use in these spaces is less likely.[303]

Data from a Canadian cohort study of 4,000 sexually active youth between 15 and 19 years old also found that household size was associated with non-condom use at last intercourse.[304] While living in a household with a large number of persons was a risk factor for non-condom use, living in a larger dwelling with more bedrooms was a protective factor. Study authors suggested that decreased privacy may promote sexual activity in other locations where parental supervision and access to condoms is limited.[305] This study underlines the important role that the physical environment plays in the ability of youth to mitigate sexual risk and engage in protected intercourse.[306]

4.8.2 YOUTH AND THE CRIMINAL JUSTICE SYSTEM

There is limited research on the impact of incarceration on youths' vulnerability to HIV and other STBBIs. Rates of drug use (both injection and non-injection) among youth in prison suggest there is potential for infection while incarcerated. A study of 417 youth (aged 14–19) in custody in British Columbia reported considerable non-injection drug use among participants.[307] Nearly all of the youth (98%) reported having used marijuana, over 80% had used mushrooms or ecstasy, and 72% had used cocaine. While reported injection drug use was less than 8%, the study noted that this population of incarcerated youth might be at risk of transitioning to injection drug use in the future.[308]

The challenges and obstacles faced by youth who have been released from prison may also create conditions that make them more vulnerable to HIV and other STBBIs. For example, they may have difficulty finding employment, have limited income to support basic needs, and face stigma and discrimination as a result of their incarceration. Having a history of imprisonment has been linked to unstable housing and homelessness.[309] For example, 58.8% of street-involved youth from the *Enhanced Street Youth Surveillance* study reported ever being in a detention facility, youth detention centre, prison or jail, overnight or longer.[310] Among street-involved youth from the ARYS cohort, 80.5% reported ever having been incarcerated.[311] Among I-Track youth, 16.3% reported incarceration in the past six months.[312]

Challenges to meeting basic needs upon release can lead to negative coping mechanisms such as injection drug use, unprotected sex and sex work. Findings from a study of street-youth in Vancouver suggested a strong link between incarceration and methamphetamine use.[313] At the same time, a history of incarceration may also have protective effects and promote help-seeking behaviours upon release. For example, among street-involved youth, previous incarceration was found to be associated with a higher participation rate in some form of addiction treatment.[314]

4.9 PERSONAL HEALTH PRACTICES

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. Definitions of lifestyle include not only individual choices, but also the influence of social, economic, and environmental factors on the decisions people make about their health. There is a growing recognition that personal life "choices" are greatly influenced by the socio-economic environments in which people live, learn, work and play.[315]

4.9.1 SEXUAL HEALTH EDUCATION

Sexual health education is an essential tool in the prevention of HIV and other STBBIs because it provides individuals with information, motivation and behavioural skills to support sexual health and avoid these negative health outcomes. The *Canadian Guidelines for Sexual Health Education* states that:

Sexual health education should be available to all Canadians as an important element of health promotion programs and services. All Canadians have a right to sexual health education that is relevant to their needs. Diverse populations such as (lesbian, gay, bisexual, transgender, transsexual, two-spirit, queer and questioning individuals), seniors, individuals with disabilities (physical/developmental) and socio-economically disadvantaged individuals such as street-involved youth often lack access to information and education that meets their specific needs.[316]

There are many formal and informal vehicles for delivering sexual health education. Schools are key for this delivery, but capacity varies across Canada depending on the provincial or territorial curriculum, whether the school is public, private or has a faith-based curriculum, and on teacher training. The vast majority (92%) of Canadian-born youth participants in the *Toronto Teen Survey* said that they had received some form of sexual health education.[317] However, newcomer youth (i.e. in Canada for three years or less) had significantly lower rates of sexual health education by 18 years old.[318] Seventy-eight percent reported some learning about HIV; yet, HIV/AIDS was also one of the top three priorities in sexual health that youth want to learn more about.[319] Youth in this study also reported that they wanted information about healthy relationships, pleasure, pregnancy, sexual orientation, and HIV/AIDS and STBBI prevention. They also said that they would prefer to get this information from professionals, such as physicians, nurses and sexual health educators.[320]

Knowledge about HIV and other STBBIs has historically been quite high among youth in Canada.[321] For example, results from the M-Track study showed that gay, bisexual men, two-spirit men, and other MSM aged 15–24 had relatively high levels of knowledge about HIV.[322] Most participants knew that having sex with one monogamous, uninfected partner can reduce the risk of HIV transmission (~84%), and that people can protect themselves from HIV by using a condom correctly every time they have anal sex (~80%).[323] Almost all youth correctly identified that a healthy-looking person can have HIV (~93%), while approximately 75% of youth knew that they would not necessarily have symptoms if they contracted an STI.[324] Nevertheless, knowledge related to sexual health, HIV and other STBBIs may be declining. Data from *The Canadian Youth, Sexual Health and HIV/AIDS Study*, found that knowledge about sexual health and HIV has fallen among youth aged 12–16 since 1989; for example, the study reported that a large proportion of youth in this age group believed that AIDS could be cured.[325] Results from the Canadian Association for Adolescent Health online study of more than 1,000 youth aged 14–17 also pointed to lack of knowledge about STBBIs. Barriers to accessing accurate sexual health information may be driving these low levels of knowledge.[326] For example, 69% of youth reported in the online study that they could not find sexual health information and 62% reported that they had experienced other obstacles in getting information.[327]

Effective and broad-based sexual health education that addresses the diverse needs of all individuals is critical in helping youth avoid HIV and other STBBIs. It ensures that youth have access to non-judgmental information to make informed decisions about their own health. It can also increase the ability of youth to build resilience to the social, economic, and cultural risk factors that threaten their sexual health.

4.9.2 PERCEPTIONS OF HIV RISK AND HIV TESTING

Youth have different perceptions of their personal risk of contracting HIV. While perceptions of illness can be shaped by cultural values, they can also be influenced by factors such as income level, knowledge of the disease and HIV-related discrimination and stigma. For some, HIV is a disease experienced by other people, not them. On the other hand, some youth hold fatalistic views about their health and future.[328] For example, in a study of Aboriginal youth, participants reported feelings of hopelessness and a "general feeling of despair about the future,"[329] which included the risk of HIV infection. Other studies have found that some Aboriginal youth perceived HIV as a community issue[330] and commonly experienced being in contact with someone affected by or living with HIV.[331] Awareness of and ongoing discussions about HIV among Aboriginal youth in their communities may be a positive resiliency factor.

Young men and women vulnerable to HIV infection have different responses to testing for infection. For example, some want to know their status while others do not and avoid testing. Reasons for deciding to undergo testing are diverse. The fear of a positive HIV test result is commonly reported by youth as a motive for not testing.[332] In addition, the stigma associated with a positive HIV test may deter youth from testing.

Perceptions of personal risk to HIV infection can influence subsequent HIV testing practices. Among participants in the M-Track survey who did not self-report as HIV positive or who had never been tested for HIV, the most common reason for not being tested was the perception that they were at low risk (reported by approximately 48% of youth).[333] Approximately 28% of youth also reported they were afraid to get tested and a roughly equal proportion reported they already knew their HIV status (27%).[334] The Ontario component of the M-Track study, the *Lambda Study* (*N*=2,438), reported similar findings on HIV testing among gay and bisexual youth.[335] The youngest participants (aged 16–19) had the lowest testing rate, with 46.2% never having been tested.[336] About one-quarter (25.9%) of those aged 20 to 24 had never been tested, which represents an increase in testing rates over time.[337] The British Columbia *ManCount* (*N*=1,139) survey, also linked to the M-Track study, found that 23% of gay, bisexual men, two-spirit and other MSM participants under the age of 30 had never been tested for HIV.[338]

In the I-Track survey, a high proportion of participants reported having been tested for HIV (81.0%) and HCV (79.3%).[339] Among those who had never been tested for HIV, the most commonly reported reasons included: "I have never thought about it" (22.6%), "I am at low risk for HIV infection" (14.5%), "I could not deal with knowing I was infected" (12.9%), "I am worried about being discriminated against" (9.7%), and "It could affect my relationships" (9.7%).[340] Among street-involved participants in the *Enhanced Street Youth Surveillance* study, over 70% perceived their risk of getting HIV, STIs or viral hepatitis as being none or low.[341] However, large proportions reported previous testing for HIV (81.3%), HCV (76.0), chlamydia (75.1%) and gonorrhea (73.6%).[342]

4.10 ACCESS TO HEALTH SERVICES AND INFORMATION

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.[343]

4.10.1 GEOGRAPHICAL LOCATION AND PHYSICAL ENVIRONMENT

Some youth experience difficulty accessing health services because of their geographical location or physical environment. Youth in rural and isolated communities experience more difficulties accessing a family physician and STBBI/HIV testing services than youth in urban centres which can contribute to health inequalities among rural and urban youth.[344] Studies conducted with youth and health care workers in remote communities in British Columbia identified several structural barriers to health services for this population.[345] These included the geographic inaccessibility of health clinics, limited operating hours (e.g. during school or work hours) and lack of public transportation. These barriers are further compounded among youth who must rely on parents or guardians to access clinics.

Physical location can also pose an obstacle. For example, street-involved youth may lack an identification card, may be unable to travel for services or may not be able to frequent them during standard hours of operation. A Calgary study found that street-involved youth were more inclined to access emergency health services such as hospital emergency rooms and walk-in clinics than to use preventive services.[346] Street-involved youth who had never lived on the street were more likely to access preventive services such as family physicians while youth currently living on the street were more likely to use mobile clinics during non-standard business hours.[347]

4.10.2 ACCESS TO CONFIDENTIAL HEALTH SERVICES

Concerns about confidentiality are a consistent theme in the literature on barriers to health services access among youth. Young people worry that their sexual practices and sexual health outcomes will be disclosed to parents, and that they will be judged by health professionals and their friends and communities.[348]

As a result, youth may worry that their test results for HIV and other STBBIs will be disclosed to family, friends and the community,[349] motivating them to travel to another neighbourhood or community to protect their confidentiality. However, travelling to other locations is not always possible, particularly for youth living in rural or remote areas. In a study of youth living in British Columbia, concerns about confidentiality and anonymity were higher among those living in northern rural communities than among those living in urban settings.[350]

The stigma associated with HIV and STBBIs compounds confidentiality concerns for youth living with or at risk for infection. Research suggests youth may increasingly be relying on alternative sources for health services and information, including Internet-based resources. Health service providers have begun to explore the potential for online health services in an effort to address confidentiality issues. For example, Ottawa Public Health, a local health authority in Ontario, recently explored using the Internet to provide youth with laboratory requisition forms for HIV and other STBBIs without a physician visit. The number of downloads of the requisition form and the increase of laboratory tests conducted during the campaign attested to its popularity among area youth.[351] However, such services may not be established enough to address fully the concerns of youth about confidentiality. Qualitative research with HIV-positive Ontario youth aged 12–24 explored the Internet as a channel for health promotion and information.[352] Although participants reported high rates of Internet access, use and interest, few used it to seek health information or services.[353] Reasons identified included concerns about confidentiality when viewing HIV websites.[354] Although participants did not use the Internet for health information, they were enthusiastic about future opportunities to have HIV-positive youth create a website for health promotion and social networking.[355]

4.10.3 DISCRIMINATION

Stigma and discrimination are further factors that affect youth access to health services and information. Results from the *Toronto Teen Survey* showed that many sexually diverse and gender-variant youth had had negative experiences accessing sexual health services, mainly because they felt that service providers stigmatized them and lacked awareness of their particular needs.[356] For example, young gay men in the study reported negative experiences with the health care system, significant gaps in sexual health services adapted for men, lack of comprehensive sexual health education in schools, fear and stigma associated with STBBIs and HIV/AIDS, and the impact of homophobia and gender norms.[357]

Discrimination based on race and ethnicity can also discourage youth from seeking out health services. For example, results from the *Toronto Teen Survey* showed that Black youth experienced racism when reaching out for sexual health services.[358] This population also reported the lowest rates (34%) of sexual health clinic attendance.[359] Youth of Aboriginal or Asian backgrounds also reported being less likely to visit health services for sexual health information or testing, while White youth reported being most likely to do so.[360] Among Aboriginal participants in a community-based cohort, 12.3% of youth indicated that they experienced fear, discrimination and avoidance during their testing experience.[361]

Just as the identity of individuals is made up of many elements (e.g. gender, age, sexual identity, race, ethnicity, ability), so discrimination can be experienced on multiple levels. These multiple layers of discrimination based on race, ethnicity, religion, age, socio-economic status, ability, gender or sexual identity can compound obstacles to accessing health services and information about HIV and other STBBIs.[362] The *Teens Resisting Urban Trans/Homophobia* (TRUTH) project examined the impact that various forms of social exclusion, such as homophobia and heterosexism, have on newcomer lesbian, gay, bisexual, transgender and queer youth in Toronto.[363] Preliminary results showed that these youth experienced multiple layers of discrimination in the forms of homophobia, transphobia and racism, which, in turn, created barriers to accessing health and information services.[364]

Stigma and discrimination, including homophobia and racism, can result in youth having negative experiences when accessing services and care.[365] Reduced access to services can further contribute to their vulnerability to STBBI and HIV infection.[366] Many service providers recognize the need for sexual health counselling and services that address the specific needs of youth, including structural discrimination, and support diversity through culturally inclusive programs.

4.11 SUMMARY

The inequalities in rates of HIV and other STBBIs are impacted in complex ways by broader social, cultural, economic and structural determinants of health that influence the health status and wellbeing of youth throughout their lives. This chapter has provided an overview of how these determinants of health create inequities among youth, making some groups of youth more vulnerable to HIV and other STBBIs. It is important that programs and interventions aimed at the prevention and control of these illnesses identify and address broader determinants of vulnerability among youth. Chapters 5 and 6 provide an overview of the current response to HIV and other STBBI among youth in Canada, including research efforts to expand our knowledge of determinants of vulnerability and programmatic responses to risk of infection.

CHAPTER 5 – CURRENT HIV/AIDS RESEARCH

This chapter provides an overview of current Canadian research projects funded and underway between 2008 and 2011 related to HIV/AIDS and other STBBIs among youth.

5.1 METHODOLOGY

The information in this chapter was gathered from national and provincial organizations that provide funding to research on HIV/AIDS and other STBBIs in Canada or support venues for presentation of this research. The national organizations included:

- 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).

Information was also gathered from these provincial organizations:

- British Columbia Centre for Excellence in HIV/AIDS (BC-CfE)
- Michael Smith Foundation for Health Research (MSFHR)
- Fonds de recherche du Québec – Société et culture (FQRSC)
- Prairie Community-Based HIV Research Program
- Alberta Innovates Health Solutions
- Ontario HIV Treatment Network (OHTN).

Research projects included in this chapter and their abstracts (where available) are listed in Appendix B and meet all of the following selection criteria:

- funded by one of the above organizations between 2008 and 2011
- have a specific focus on youth
- address at least one determinant of human immunodeficiency virus (HIV) vulnerability and/or resiliency that affects health among youth
- include projects on HIV and hepatitis C (HCV) co-infection, sexually transmitted and blood borne infections (STBBIs) and sexual health, discrimination, stigma and homophobia
- based in Canada or be immediately relevant to Canadian youth.

This chapter focuses on specific populations of youth which are particularly affected by HIV and other STBBIs including: sexually diverse and gender-variant youth; Aboriginal youth; street-involved youth; youth from racialized communities; youth in prison; youth living in foster care; and youth living in rural and remote communities.

Exclusion criteria applied to research:

- related to basic science, microbiology and/or clinical medicine
- from international studies conducted abroad by Canadian researchers unless the nature of the study would provide additional insight into the lived experience of Canadian youth living with, or vulnerable to, HIV/AIDS
- related to surveillance or enhanced surveillance, as this type of research is included in Chapter 3 of this report
- research completed prior to 2008.

Research completed before 2008 was excluded as it was assumed that these projects would have been identified in the academic and grey literature review conducted for the previous chapters of this status report. However, given that there may be a gap between research and publication, some material may not be included at all. Projects listed in Appendix B were scheduled to be completed after October 2008 or later, or are currently under development.

It should be noted that research funded through basic science, microbiology or clinical medicine funding streams is highly relevant to youth living with HIV. However, these themes were excluded because the focus of this report is the lived experience of youth, including youth living with HIV, and the impact on this population of various factors that determine health.

5.1.1 METHODOLOGICAL LIMITATIONS

One limitation of the selection criteria is that some projects received grants from more than one organization or more than one grant in a different year from the same organization. Thus, some projects may be documented in Appendix B more than once. Conversely, some funding was provided to support research salary, student grants, knowledge translation or operating costs. As a result, these funds may support more than one project over several years but only one project is outlined in the application to the funding source.

A second limitation in the selection is that abstracts and full descriptors were not available for all projects. In some cases, there may not have been a requirement to identify youth as a studied population in the summary information (abstract, key words or title). Projects with no available abstracts were included here if the title or project keywords contained any of the search terminology. Some project descriptions required further exploration and where possible, principal investigators were contacted to determine whether their projects were specifically related to youth in Canada.

In addition, research funding bodies were not identified for every province and territory, and not all abstracts identified a geographic focus for the research. Consequently, the section on geographic location (see Geographic location section) may not reflect the full scope of work taking place in each region.

Because of the breadth of research underway in the field of sexual health, the methodological limitations of this report may have resulted in some research having been excluded inadvertently. In addition, this report does not include research funded by the private sector or by pharmaceutical companies.

5.2 OVERVIEW OF RESEARCH PROJECTS FUNDED BETWEEN 2008–2011

5.2.1 GEOGRAPHIC LOCATION

In total, 59 research projects were identified using the methodology described in the section on methodology in this chapter. Of these, 43 specify a location of research.

It should be noted that several research projects in this chapter are connected to the same overall study or draw from the same cohort of participants. For example, in British Columbia, projects R5, R6, R27 and R30 all draw on data from the *At-Risk Youth Study* (ARYS) cohort or recruit participants from within the cohort. Similarly, projects R44 to R49 all use data from the *Cedar Project*.

TABLE 4: Distribution of research projects by geographic location

PROVINCE/TERRITORY	NUMBER OF PROJECTS	PROJECT NUMBER
National	3	R15, R42, R59
British Columbia	22	R5, R6, R7, R20, R22, R23, R26, R27, R28, R30, R33, R34, R35, R37, R44, R45, R46, R47, R48, R49, R50, R51, R56
Alberta	0	n/a
Saskatchewan	0	n/a
Manitoba	2	R19, R55
Ontario	12	R1, R2, R8, R18, R29, R36, R37, R38, R43, R53, R54, R57
Quebec	4	R3, R9, R10, R32
Atlantic provinces (New Brunswick, Nova Scotia, Newfoundland and Labrador, Prince Edward Island)	0	n/a
Territories (Yukon, Northwest Territories, Nunavut)	1	R40

Three national-level projects were identified. Project R15 is a pan-Canadian project that assesses intervention strategies for young HIV-positive women and factors that make sexual health promotion programs successful. Project R42 uses an arts-based approach to prevention education among Aboriginal youth and aims to include Aboriginal youth representatives from every region of Canada. Project R59 aims to enhance evaluation capacity of HIV and sexual health education programs for Canadian youth.

Twenty-two research projects were identified in British Columbia. Of these, six form part of the *Cedar Project*, which follows a cohort of Aboriginal youth who use drugs (R44, R45, R46, R47, R48, R49). Projects R6 and R7 investigate the impacts of crystal methamphetamine use on sexual and injection related risk behaviour, trauma and HIV infection. Project R20 examines use of online STI testing among young women. Project R22 examines determinants of health among youth with perinatally acquired HIV. Project R23 assesses the experiences of sexually exploited and vulnerable male youth in accessing health and social services. Project R26 studies patterns of illicit drug use and the environment in which they are used, and evaluates their effects on initiation of injection

drug use, sexual risk behaviour and incidence of HCV and HIV among a cohort of 500 street-involved youth. Project R27 examines determinants of injection drug use initiation among street-involved youth in Vancouver. Project R28 investigates population-level interventions affecting youth sexual health within and outside of the health sector. Project R30 analyses the structural, social and physical landscape of the downtown Vancouver drug scene, and how this environment shapes experiences of safety and risk among youth who use drugs. Two related projects concentrate on youth and online STI testing (R33), one of which focuses particularly on young men (R56). Projects R34 and R35 investigate protective factors associated with injection drug use initiation among youth. Project R50 examines the social and structural contexts of HIV risk for youth and women involved in sex work. Project R51 investigates HIV and HCV vulnerability and prevention for youth and others who inject drugs.

Two research projects were identified in Manitoba. Project R19 engages newcomer communities in sexual health research, and explores cultural factors for HIV risk reduction. Project R55 addresses the social environments of youth from racialized communities.

Twelve research projects from Ontario were identified. Many of these include community-based research among urban youth from racialized communities and youth who use injection drugs. Project R1 takes a community-based research approach to enhance HIV prevention services for newcomer youth in Toronto. Project R2 studies pregnancy and HIV risk among Toronto street-involved youth. Project R8 is a capacity-building project with the goal of evaluating youth sexual health peer education programs. Project R18 examines determinants of HIV risk behaviour among South Asian youth, and evaluates a brief HIV risk prevention intervention. Project R29 assesses the HIV and HCV prevention needs of youth who smoke crack. Project R36 looks at the use of sexual health services by street-involved youth in Hamilton. Project R37 identifies the concerns of youth living with HIV in the context of sexual health. Project R38 looks at social exclusion and the health and wellbeing of gender-variant and sexual minority youth. Project R43 focuses on the issues of transphobia and homophobia experienced by urban teenagers. Projects R53 and R54 are part of the Toronto Teen Survey which examines sexual health services among diverse urban youth. These Toronto Teen Survey projects aim to inform development of a city-wide youth sexual health services strategy. Project 57 considers resilience and HIV-related stigma among youth living with HIV.

Four research projects were identified in Quebec. Projects R3 examines the development and experiences of youth living with HIV. Projects R9 and R10 are a part of the Chî Kayeh project on culturally appropriate sexual health promotion among the Cree community of James Bay. Project R32 focuses on the use of information technology to promote sexual health among Aboriginal youth.

One project is located in the Northern region among Inuit communities (R40) but the exact location is not specified. This project investigates health promotion and culturally sensitive health care among Inuit youth.

The search did not identify any currently funded projects about youth and HIV/AIDS in Alberta, Saskatchewan or the Atlantic provinces (Nova Scotia, New Brunswick, Newfoundland and Labrador and Prince Edward Island). This may be in part because some research projects do not identify a location, and also due to the scope of the methodology.

5.2.2 SPECIFIC POPULATIONS OF YOUTH

All 59 projects identify a particular group of youth as a focus, which is captured in Table 5. In some cases, the project relates to more than one of the eight populations identified in the *Federal Initiative to Address HIV/AIDS in Canada*.

TABLE 5: Distribution of research projects by population

POPULATION	NUMBER OF PROJECTS	PROJECT NUMBER
Aboriginal youth	16	R9, R10, R14, R16, R31, R32, R40, R41, R42, R44, R45, R46, R47, R48, R49, R51
Youth who use drugs	18	R5, R6, R7, R16, R21, R26, R27, R29, R30, R34, R35, R44, R45, R46, R47, R48, R49, R51
Street-involved youth	10	R2, R6, R7, R21, R23, R26, R27, R29, R34, R36
Youth living with HIV	6	R3, R12, R15, R22, R37, R57
Young women	6	R2, R15, R20, R24, R35, R50
Young men	2	R23, R56
Youth from racialized communities	3	R18, R19, R55
Newcomer and immigrant youth	3	R1, R19, R55
Sexually diverse and gender variant youth	3	R38, R43, R56
General youth population	11	R8, R13, R17, R25, R28, R31, R33, R39, R53, R54, R59
Other populations	5	R4, R11, R50, R52, R58

ABORIGINAL YOUTH

Sixteen projects focus on Aboriginal youth. Of these, six are part of the *Cedar Project* (R44, R45, R46, R47, R48, R49), an ongoing prospective community-based cohort study of more than 500 Aboriginal young people (status and non-status First Nations, Inuit and Métis) between 14 to 30 years old, who self-reported use of injection or non-injection illegal drugs in the previous month in Prince George and Vancouver (Downtown Eastside), British Colombia. Projects R9 and R10 are part of the *Chî kayeh* project, and focus specifically on the Cree of James Bay in Quebec. This community-based research project examines a culturally appropriate health and prevention program and engages in knowledge transfer for Aboriginal youth from this community. Project R14 examines public health messages that are culturally appropriate for Aboriginal youth. Project R16 studies social environments and the impacts of colonialism on risk factors for injection drug use among Aboriginal youth. Project R31 examines interventions, such as prevention, evaluation, implementation, knowledge translation and development, to enhance prevention policy for Aboriginal youth. Project R32 considers the promotion of sexual health via information technologies and social media. Project R40 deals with culturally sensitive health promotion and capacity building among Inuit youth. Projects R41 and R42 examine an arts-based approach to develop and disseminate HIV prevention materials among Aboriginal youth.

YOUTH WHO USE DRUGS

Eighteen projects focus on youth who use drugs. Of these, seven form part of the *Cedar Project* cohort study (R44, R45, R46, R47, R48, R49, R51). Many of the projects listed focus on injection drug use (R5, R6, R7, R16, R21, R26, R27, R34, R35) including patterns of use and related determinants of health such as early childhood development, personal health practices, physical and social environments. Other projects examine specific issues such as crack smoking (R29) or general illicit drug use among youth (R30, R44, R45, R46, R47, R48, R49, R51).

Project R5 examines injection drug use and HIV infection among youth. Project R6 analyses risk factors for crystal methamphetamine use and sexual and injection related risk behaviours. Project R7 explores unhealthy childhood development, including issues such as sexual abuse and trauma, as a risk factor for injection drug use and the use of crystal methamphetamine. Project R16 studies the role of social environments and youth coping skills on risk and protective factors for injection drug use. Project R21 aims to enhance public health policy and intervention programming for marginalized youth vulnerable to injection drug use and HIV infection. Project R26 focuses on social and physical environments and risk factors for injection drug use, homelessness, sex work, and risk for acquiring STBBIs. Project R27 examines factors leading to initiation, involvement and cessation of injection drug use, and other risk factors such as dealing drugs.

Project R29 examines the HIV and HCV prevention needs of youth who smoke crack. Project R30 explores gentrification and risk factors such as drug-related harms, physical violence and HIV risk behaviours. Project R34 aims to inform the development and implementation of prevention programs, and also studies coping skills and social support networks of youth who inject drugs. Project R35 surveys HIV and HCV vulnerabilities and resilience among adolescent Aboriginal women.

STREET-INVOLVED YOUTH

Ten projects address street-involved youth. Of these, seven are discussed in the section on youth who use drugs (R6, R7, R21, R26, R27, R29, R34). Project R2 is discussed in the section on street-involved young women. Project R23 examines the experiences of sexually exploited male youth in accessing health and social services. Project R36 is a community-based research project assessing youth sexual health knowledge and needs, as well as enhanced health services for marginalized street-involved youth.

YOUTH LIVING WITH HIV

Six projects focus on youth living with HIV. Four of these involve youth who acquired HIV through vertical transmission, or in early adolescence, and address topics such as access to health and social services, social support networks, stigma and discrimination, disclosure of HIV status, and the trajectories of sexual relationships (R3, R12, R22, R37). Project R15 examines sexual health interventions for young HIV-positive women. Project R57 considers the resiliency of young people living with HIV and the stigma they experience.

YOUNG WOMEN

Six projects focus on young women. Project R2 is community-based research about street-involved young women and explores issues such as pregnancy and HIV risk factors. Project R15 is also community-based research that looks at the social environments and social support networks of young women living with HIV. Project R20 aims to engage young women in online STI testing, especially among more vulnerable groups of young women. Project R24 is prevention research that seeks to feed into enhanced policy making and increase access to health services for female

youth. Project R35 explores resiliency among young Aboriginal women who use drugs. Project R50 examines the social and gender contexts of HIV and STI risks for young women involved in sex work.

YOUNG MEN

Two projects focus on young men. Project R23 investigates access to health and social services for sexually exploited male youth, while Project R56 concentrates on improving access to online sexual health and testing services for young men in British Columbia.

YOUTH FROM RACIALIZED COMMUNITIES

Three projects focus on youth from racialized communities. Project R18 examines determinants of HIV risk behaviour among South Asian youth in Toronto. It evaluates an HIV prevention video intervention developed in collaboration with a local AIDS service organization, the Alliance for South Asian AIDS Prevention. Projects R19 and R55 investigate cultural factors that are linked to HIV and STI vulnerability and resilience among African newcomer youth living in western Canada.

NEWCOMER AND IMMIGRANT YOUTH

Three projects address youth who are newcomers to Canada (R1, R19, R55). Project R1 looks at social environments and access to culturally sensitive health programs to meet the unique needs of newcomer youth in Toronto, including issues associated with racism. Project R19 examines cultural factors that increase vulnerability to HIV infection among African newcomer youth living in western Canada. Project R55 focuses on understanding cultural factors for HIV and STI risk reduction among African refugee and immigrant youth in Winnipeg.

SEXUALLY DIVERSE AND GENDER-VARIANT YOUTH

Three projects were identified that address sexually diverse and gender-variant youth. Project R38 draws on the social determinants of health to examine the impact of social exclusion on health outcomes and health care needs of lesbian, gay, bisexual and transgender youth. Project R43 examines homophobia and transphobia among urban youth. Project R56 examines ways to engage young men in online HIV and STI testing in British Columbia, including young men who have sex with men.

GENERAL POPULATION OF YOUTH

Eleven projects address youth in the general population. The majority of these look at prevention, sexual health promotion and education (R8, R17, R25, R28 R31, R39, R53, R54, R59). Project R13 examines beliefs and attitudes that predict sexual risk behaviours among youth, while project R33 studies the use of online STI testing among youth in British Columbia.

OTHER POPULATIONS

Five projects study other youth populations. Projects R4 and R11 focus on adolescents in the child welfare system, who have experienced sexual abuse and how this shapes sexual risk behaviours. Project R50 analyses the social and gender contexts of HIV and STI risks for young women involved in sex work. Projects R52 and R58 investigate sexual health and HIV prevention issues among youth with disabilities.

The search did not identify any currently funded projects that address youth in prison, or youth living in rural and remote communities who are not a part of the vulnerable populations listed above.

5.2.3 DETERMINANTS OF HEALTH

TABLE 6: Distribution of research projects by determinant of health

DETERMINANT OF HEALTH	NUMBER OF PROJECTS	PROJECT NUMBER
Healthy child development	6	R4, R7, R11, R46, R47, R49
Gender	4	R20, R23, R49, R56
Culture	6	R16, R18, R35, R39, R41, R42
Education	3	R9, R10, R59
Employment/working conditions	0	n/a
Income and social status	0	n/a
Physical environments	3	R6, R26, R30
Social environments including stigma and discrimination	15	R1, R6, R15, R16, R20, R26, R30, R33, R38, R43, R46, R47, R50, R55, R57
Health and social services	11	R1, R15, R20, R23, R24, R33, R36, R39, R40, R53, R54
Personal health practices and coping skills	11	R3, R13, R18, R20, R26, R29, R35, R45, R46, R49, R51
Protective factors and social support networks	9	R3, R8, R15, R17, R34, R41, R42, R43, R57
Biology and genetic endowment	0	n/a

Six projects focus on healthy childhood development. In many cases, these examine issues of violence or sexual abuse. Four projects focus on gender and six on culture, including research to support the development of culturally relevant HIV prevention interventions for different communities. Three projects address education and literacy as a determinant of health, looking at issues such as prevention and sexual health education. Three projects study the physical environments experienced by youth who are vulnerable to HIV infection.

Fifteen projects analyse social environments, including stigma and discrimination. Eleven explore issues surrounding access to health services for youth who are vulnerable to HIV/AIDS, including testing, diagnoses, treatment, and prevention services. Eleven projects investigate personal health practices and coping skills, while nine consider protective factors and social support networks.

5.2.4 COMMUNITY RESEARCH CAPACITY, RESEARCH DISSEMINATION, HEALTH POLICY RESEARCH AND KNOWLEDGE TRANSFER

TABLE 7: Distribution of research projects by type of response

TYPE OF RESPONSE	NUMBER OF PROJECTS	PROJECT NUMBER
Community research capacity	3	R8, R19, R40
Community-based response	9	R8, R9, R17, R40, R41, R43, R47, R48, R53
Health policy research	3	R21, R24, R31
Knowledge transfer	8	R9, R25, R41, R42, R47, R48, R54, R55
Education	3	R3, R40, R52
Prevention	10	R1, R9, R17, R18, R19, R31, R32, R34, R36, R41
Intervention	10	R9, R15, R18, R20, R28, R32, R33, R41, R42, R56
Evaluation	3	R10, R18, R59

COMMUNITY RESEARCH

Three projects focus explicitly on developing community research capacity. Project R8 aims to build capacity within communities to conduct evaluation research on youth sexual health peer education programs. Project R19 involves a collaborative partnership between African immigrant and refugee youth, community-based organizations and university researchers. Project R40 uses a community-based research approach involving community-based organizations and community members in the research process.

COMMUNITY-BASED RESPONSES

Nine projects consider community-based responses to HIV among youth. Project R8 focuses on building capacity to conduct community-based research on evaluating youth sexual health peer education programs. Project R9 examines implementation of the *Chî kayeh* program in Cree communities. Project R17 looks at approaches to HIV prevention, support and community-based research among youth. Project R40 focuses on strengthening community-based approaches to HIV/AIDS education, screening and treatment among Canadian Inuit youth. Project R41 uses arts-based approaches to develop Aboriginal youth leadership in HIV prevention. Project R43 studies the *Teens Resisting Urban Transphobia and Homophobia* (TRUTH) project. Projects R47 and R48 aims to facilitate knowledge translation of *Cedar Project* findings to community members and leaders. Project R53 is a community-based survey to assess sexual health services among diverse urban youth in Toronto.

HEALTH POLICY

Three projects look at health policy research. Project R21 goals include generating insights that public health agencies and other decision makers can use to implement evidence-based programs and policies dealing with youth and HIV. Project R24 examines the impact of policy decisions and service delivery models on HIV prevention in young women. Project R31 focuses on translating primary HIV prevention research into prevention policy.

KNOWLEDGE TRANSFER

Eight projects support knowledge transfer activities. Project R9 focuses on applying information gathered in implementing the *Chî kayeh* program to develop an implementation guide. Project R25 aims to share international knowledge on the use of information communication technology to promote the sexual health of adolescents and young adults. Project R41 proposes to hold six community workshops to teach arts-based approaches to prevention in Aboriginal communities. Project R42 supports Aboriginal youth to develop and screen short films on HIV prevention in their communities. Projects R47 and R48 are related to the *Cedar Project*; R47 is a leadership forum and R48 seeks to facilitate the involvement of young Aboriginal people and Elders in knowledge translation and exchange. Project R54 supports knowledge translation and exchange from the *Toronto Teen Survey*. Project R55 facilitates discussions around sexual health, STIs and HIV/AIDS for African immigrant and refugee youth living in Winnipeg.

EDUCATION

Three projects focus on education about HIV and STI prevention. Project R3 follows the trajectory of youth with perinatally acquired HIV in order to inform an education and prevention program that takes into account the issues facing this population. Project R40 is focused on strengthening community-based approaches to HIV/AIDS education, screening and treatment for Canadian Inuit youth. Project R52 is geared towards improving education and communication strategies for discussing sexuality issues with youth who have a disability.

PREVENTION

Ten projects study prevention. Project R1 aims to enhance HIV prevention services for newcomer youth in Toronto. Project R9 is the *Chî kayeh* project, which examines prevention and sexual health promotion in Cree communities. Project R17 analyses approaches to HIV prevention among youth. Project R18 includes the evaluation of a short HIV prevention video. Project R19 studies prevention and risk reduction in newcomer communities in Western Canada. Project R31 concentrates on prevention research in marginalized communities. Project R32 looks at HIV/AIDS prevention within First Nations communities and includes a focus on promotion of sexual and reproductive health. Project R34 examines factors that prevent injection drug use initiation among youth. Project R36 explores the use of sexual health services by street-involved youth in Hamilton. Project R41 uses an arts-based approach to develop Aboriginal youth leadership in prevention.

INTERVENTION

Ten projects focused on interventions. Project R9 assesses the implementation of the *Chî kayeh* sexual health, HIV and STI prevention program in Cree communities. Project R15 explores intervention approaches that make sexual health promotion programs for young, HIV-positive women successful. Project R18 evaluates an HIV risk prevention intervention among South Asian youth in Toronto. Project R20 reviews an online STI testing project in British Colombia, while project R33 explores online STI testing interventions among youth. Project R28 investigates population-level interventions aimed at improving youth sexual health. Project R32 examines sexual health promotion and HIV prevention using information technology among Aboriginal youth. Projects R41 and R42 propose to hold workshops with Aboriginal youth to teach arts-based approaches to prevention. Project R56 seeks to improve access to online sexual health and testing services for young men in British Columbia.

EVALUATION

Three projects evaluate various initiatives. Project R10 is an evaluation research project on how the *Chî kayeh iyaakwaamiih* program is being adopted in the Aboriginal educational context of the James Bay Cree in Quebec. Project R18 includes the evaluation of an HIV risk prevention intervention for South Asian youth in Toronto. Project R59 explores what is needed to enhance evaluation capacity on youth HIV and sexual health education programs.

5.2.5 RESILIENCE

Although this report highlights the vulnerability of certain populations of youth, it is important to note that youth and their communities have demonstrated considerable resilience in responding to HIV vulnerability. Three projects address this resilience among youth (R34, R46, R49). Project R34 explores factors that prevent street-involved youth from initiating injection drug use. Project R46 studies resiliency among *Cedar Project* participants, specifically against HIV vulnerability and drug use. Project R49 seeks to gain better understanding of which protective factors prevent greater negative health outcomes among the *Cedar Project* participants who have experienced sexual trauma.

5.3 AREAS FOR FURTHER RESEARCH

The following list highlights areas where future research could address gaps in knowledge about youth and HIV/AIDS. Geographical disparities, specific youth populations and determinants of health and resilience were identified as particularly requiring more research to understand better the complex role that determinants of health play on the vulnerability and resilience of youth to HIV/AIDS. Though the following list should not be considered exhaustive, it was developed through an examination of the research gaps emerging from chapters 4 and 5 and discussion with Working Group members.

GEOGRAPHY

- youth living in rural and remote areas
- youth living in First Nations communities on-reserve, and Métis or Inuit communities
- Aboriginal youth living in urban centres
- youth who migrate from rural and remote to urban areas
- youth living in the Prairies and the Atlantic region
- youth who migrate throughout the country

SPECIFIC POPULATIONS

- sexually diverse and gender-variant youth (e.g. gay, bisexual, transgender and other male youth who have sex with males, and questioning youth)
- female street youth (e.g. how HIV and STI risk is affected by the interplay of multiple socio-economic factors and gender)
- male youth who have experienced sexual abuse
- male heterosexual youth (e.g. effective sexual health promotion interventions for this population)
- newcomer, immigrant and youth from racialized communities (e.g. sexual health, racism, HIV and STI vulnerability, including among those who are sexually diverse and gender-variant)

- Aboriginal youth (e.g. vulnerability and resilience of female Aboriginal youth; First Nations, Inuit and Métis-specific research in the context of culturally appropriate prevention materials)
- youth living with HIV (e.g. romantic relationships and disclosure; role and experiences of the family–parents and siblings–of HIV-positive youth; social support network; sexual health and HIV prevention/information needs; experiences of and access to health services and treatment; use of the Internet for social support and knowledge)
- youth in foster care or group homes
- youth in prison
- youth living with physical or intellectual disabilities
- evaluation of interventions for specific populations of youth

DETERMINANTS OF HEALTH

- emotional consequences of childhood emotional, sexual or physical abuse on vulnerability and resilience to HIV and STIs among youth
- impact of positive parental-child relationships on resilience and protective factors
- gender-based analysis research approach
- sexual health education (e.g. access, evaluation, identification of best practices)
- formal employment, income and HIV vulnerability
- physical environments and its impacts on HIV and STI vulnerability (e.g. social housing, prison, foster care or group homes)
- role and influence of social media on youth sexual behaviour
- impact of bullying, homophobia and stigma on sexually diverse and gender-variant youth
- mental health, HIV and STIs vulnerability (e.g. poor body image, self-harm, depression, anxiety, suicidal ideation)
- impact of criminal prosecutions for HIV non-disclosure on youth
- role of parents and older siblings on resiliency of youth living with HIV
- biology and genetic endowment (e.g. impacts of physical or intellectual disabilities on HIV and STI vulnerability, foetal alcoholism syndrome)

RESILIENCE

- factors that protect and promote resilience among youth, including specific populations of youth such as sexually diverse and gender-variant, girls and youth from racialized communities, both at the individual and broader socio-structural levels

CHAPTER 6 – CURRENT RESPONSE TO HIV/AIDS AMONG YOUTH

This chapter provides an overview of the strategies, coalitions, networks, organizations and programmatic responses to the issue of HIV/AIDS and other STBBIs among youth in Canada.

6.1 METHODOLOGY

To obtain information on youth-focused strategies, networks, coalitions, advisory bodies and projects in existence during the years 2009–2011, federal, provincial and territorial officials and other stakeholders were contacted through:

- the Status Report Working Group
- the former Federal/Provincial/Territorial Advisory Committee on AIDS (F/P/T-AIDS)
- Health Canada's First Nations and Inuit Health Branch
- the Federal/Provincial/Territorial Heads of Corrections Working Group on Health
- the Public Health Agency of Canada's national and regional HIV/AIDS program consultants.

Projects funded by Toronto Public Health's AIDS Prevention Community Investment Program in 2009–2010 and 2010–2011 were also included in the analysis but private sector organizations were not. Although efforts were made to identify as many activities as possible, this chapter may not have identified all projects, networks, coalitions and advisory bodies addressing HIV among youth in Canada.

A variety of organizations, time-limited projects and online resources were identified through the information-gathering process and organized into four categories, listed in Appendix C:

- youth-specific networks, coalitions and advisory bodies[xvi]
- time-limited projects underway between 2009–2011 addressing HIV among youth
- organizations and online resources for youth related to HIV, STBBIs and sexual health
- organizations and online resources that address determinants of health related to HIV among youth.

Time-limited projects were included in this chapter if they focused on HIV, STBBIs and/or sexual health, specifically addressed youth, and were underway 2009–2011.[xvii] Where available, organization websites were reviewed to determine and analyze the type of services being offered and which specific population was addressed (if any) within the youth population.

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

[xvii] The purpose of this chapter is to provide a snapshot of the activities and initiatives underway between 2009 and 2011 to address HIV/AIDS among youth in Canada. All time-limited projects were underway at some point during those years but there are projects and activities that may extend beyond them (i.e. begun earlier than 2009 or continued past 2011).

6.2 OVERVIEW

Canada's response to HIV/AIDS has grown in scope and complexity since the infection first emerged. Governments, non-governmental and community-based organizations, researchers, health professionals and people living with and vulnerable to HIV/AIDS are taking action to manage the infection and the conditions that sustain it. In addition, these groups are increasingly recognizing the interrelationship between HIV and other STBBIs, including common transmission routes, risk factors, vulnerable populations and determinants.

Through the *Federal Initiative to Address HIV/AIDS in Canada*, 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, have the primary responsibility for providing health and social services to people living with, and at risk for, HIV/AIDS and other STBBIs.

Using public and private funding, organizations in all provinces and territories are working to reduce the impact of HIV/AIDS and other STBBIs and to provide diagnosis, prevention, care, treatment and support services to those most vulnerable. The private sector and religious communities are also involved in the response to HIV and other STBBIs in Canada, by providing funds or delivering programs. Depending on the jurisdiction, community-based organizations work through pre-defined structures to determine priorities and allocate resources. Communities and local health authorities, governments, frontline organizations, volunteers and affected populations are uniquely positioned to determine the appropriateness of the response.

6.3 POPULATION-SPECIFIC STRATEGIES

This section provides an overview of existing national and provincial/territorial strategies to address HIV/AIDS and other STBBIs among youth.

6.3.1 NATIONAL POPULATION-SPECIFIC STRATEGIES

The *Federal Initiative to Address HIV/AIDS in Canada* identifies youth at risk as one of eight key populations vulnerable to, or disproportionately affected by, HIV/AIDS.[367]

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.[368]

In 2010, the Canadian Aboriginal AIDS Network (CAAN) released its *National Aboriginal Youth Strategy on HIV and AIDS in Canada* which covers the years 2010 to 2015. The strategy was developed with the guidance of the CAAN National Aboriginal Youth Council on HIV and AIDS, as well as Aboriginal people living with HIV/AIDS, representatives from Aboriginal AIDS service organizations and community stakeholders, among others.

6.3.2 PROVINCIAL POPULATION-SPECIFIC STRATEGIES

Most jurisdictions have strategies that address HIV and other STBBIs and deal with prevention, care, treatment and support. Increasingly, many jurisdictions have moved to an integrated approach as part of a broader STBBI strategy, or strategies for sexual health. Most provinces and territories did not have a specific strategy focused on youth, but many of them identify youth as a population particularly affected by and vulnerable to HIV and other STBBIs.

BRITISH COLUMBIA

British Columbia's *Priorities in Action in Managing the Epidemics—HIV/AIDS in BC: 2003–2007* has guided the health system toward sustained improvements in HIV/AIDS prevention, harm reduction, care, capacity, treatment and support, and coordination and cooperation.[369] Each regional health authority in the province develops its own strategies to complement provincial directions. The provincial strategy identifies youth (including Aboriginal youth and youth who use injection drugs) as being particularly vulnerable to HIV infection. Youth-specific objectives include: ensuring that care, treatment and support are available to vulnerable populations including homeless youth; and reducing the incidence of HIV infection by half among youth and other populations.

ALBERTA

Alberta's *Sexually Transmitted Infections and Blood Borne Pathogens Strategy and Action Plan (2011–2016)* provides provincial direction to focus and coordinate the efforts of all partners involved in sexually transmitted infections and blood borne pathogen prevention, control and management.[370] Youth-specific activities include: developing and implementing targeted sexual health information and interventions to help delay the age of sexual debut; promoting safer sex practices; increased testing for early detection of STBBIs; and providing relevant information on sexual health and STBBI prevention and treatment. Youth populations to be targeted include: youth in the general population; those in youth correctional centres; out-of-school youth; homeless and street-involved youth; and other vulnerable youth.

SASKATCHEWAN

Saskatchewan's HIV Strategy 2010–2014 identifies youth as a population experiencing increased rates of HIV infection.[371] The strategy calls for: creating peer support networks for vulnerable populations such as HIV-positive youth; and improving prevention for children and youth, "such as Kids-First programming, which focuses on areas such as home visiting, parent engagement and promoting linkages with mental health and addictions services."[372]

MANITOBA

Manitoba Healthy Living, Seniors and Consumer Affairs continues to implement a healthy sexuality action plan that promotes holistic sexual health practices and works toward reducing the rates of STIs, increasing access to screening and testing for STIs, reducing the rates of teen and unplanned pregnancies, improving overall sexual negotiation skills and healthy relationships, and improving levels of care and treatment for those living with HIV/AIDS. The government department is also co-leading development of a new provincial *Sexually Transmitted Blood Borne Infections Strategy 2012–2017*, a process that has resulted from key collaborations between provincial, regional, federal, and community partners and stakeholders. This province-wide approach integrates HIV into the overall STBBI prevention, treatment and surveillance strategy and will address chlamydia, gonorrhea, syphilis, hepatitis B and C viruses, human papilloma virus and HIV. The updated strategy is intended to promote a more coordinated provincial response to STBBI prevention and control, and youth are among the primary target populations.

ONTARIO

The Ontario Advisory Committee on HIV/AIDS developed *A Proposed HIV/AIDS Strategy for Ontario to 2008*. The proposal highlighted the need to "identify and implement strategies to ensure that young people in Ontario receive education about HIV and other STDs (sexually transmitted diseases)" through school curricula and non-school settings (e.g. clubs, programs, and organizations for youth) and to create a strategy for gay and bisexual youth.[373] The *Ontario Aboriginal HIV/AIDS Strategy Strategic Plan for the Years 2010–2015* also identifies Aboriginal youth as a population that is particularly vulnerable to HIV.[374] The strategic plan includes this population in a range of activities, with the specific goal that "Aboriginal youth have a better understanding of the threat of HIV/AIDS and how to prevent infection."[375] Strategies to achieve this goal emphasize working with Aboriginal youth in the design and delivery of prevention messages, and liaising with education authorities to ensure that communications are implemented in schools that have significant Aboriginal populations.

QUEBEC

The *Quebec Strategy on HIV and AIDS, HCV and Sexually Transmitted Diseases, 2003–2009* (*Stratégie québécoise de lutte contre l'infection par le VIH et le sida, l'infection par le VHC et les infections transmissibles sexuellement, 2003–2009*) identifies youth as one population that is particularly vulnerable to STIs, and notes that particular groups of vulnerable youth require specific interventions (i.e., youth who are MSM, those using injection drugs, youth coming from countries where HIV is endemic, vulnerable female youth, and Aboriginal youth).[376] The strategy identifies various activities that include population-specific elements, such as targeting activities to specific populations and increasing access to youth-specific sexual health clinics.

NOVA SCOTIA

Nova Scotia's Strategy on HIV/AIDS identifies youth aged 15 to 19 as a population that is particularly vulnerable to HIV infection and recommends creating supportive school environments as part of a coordinated to approach to HIV prevention.[377] In addition, the *Framework for Action: Youth Sexual Health in Nova Scotia* was produced by the Nova Scotia Roundtable on Youth Sexual Health in consultation with government and community stakeholders.[378] It "provide(s) suggested roles for youth, communities, community-based agencies, and all sectors of government in improving the sexual health of youth in Nova Scotia."[379] The framework contains five key components: leadership and commitment; community awareness and support; school-based sexual health education; youth involvement and participation; and sexual health-related services for youth. *Standards for Blood Borne Pathogens Prevention Services in Nova Scotia*[380] also identifies youth as a vulnerable population. The document highlights programs and initiatives that target provincial youth and identifies standards for prevention services addressing youth populations.

NORTHWEST TERRITORIES

The *Sexually Transmitted Infections–The Naked Truth: A Strategic Directions Document* notes that youth in the territory are particularly affected by STIs.[381] Many of the document's goals and objectives are specific to youth, and include: supporting youth-oriented healthy lifestyle initiatives; implementing STI prevention strategies for individual communities; enabling youth to make informed decisions about sexual behaviours; implementing multimedia educational campaigns on STIs for youth; and strengthening school-based sexual education.

NUNAVUT

Goals of *Developing Healthy Communities: A Public Health Strategy for Nunavut 2008–2013* are to decrease the incidence of youth engaged in risk behaviours such as unprotected sex, and reducing the rate of teenage pregnancy.[382] Strategies to support these goals include providing sexual health curriculum in schools, and focusing on skills such as decision-making, assertiveness and communication.

OTHER

Although Newfoundland and Labrador, Prince Edward Island, New Brunswick, and the Yukon do not have specific strategies for HIV or other STBBIs, they do include approaches to address these illnesses among youth as part of broader provincial health strategies.

6.4 YOUTH-SPECIFIC NETWORKS, COALITIONS AND ADVISORY BODIES

This section provides an overview of youth-specific networks, coalitions and advisory bodies focused on HIV/AIDS which undertake a variety of activities such as providing advice, advocacy and research. Some of the networks 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 and other STBBIs among youth.

At the national level, three organizations were identified:

1. The Canadian Association for Adolescent Health (CAAH) is a national non-profit organization consisting of healthcare professionals that aims to: promote the health and wellbeing of youth, particularly those aged 10 to 19 years of age; set standards in healthcare and services for youth; and promote cooperation between healthcare professionals and organizations.
2. The National Aboriginal Youth Council on HIV and AIDS (NAYCHA) is a committee of the Canadian Aboriginal AIDS Network (CAAN). NAYCHA membership consists of First Nations, Inuit and Métis youth (aged 18–29 years) representing each province and territory. NAYCHA provides youth-specific advice and leadership on HIV/AIDS issues for Aboriginal youth.
3. The Native Youth Sexual Health Network (NYSHN) is a peer-based network created by Indigenous youth which focuses on sexual and reproductive health, including HIV, other STBBIs and related issues. It engages in advocacy, resource development and specific projects with Indigenous youth in Canada and the United States.

At the provincial level, one organization was identified. The Nova Scotia Roundtable on Youth Sexual Health is a group of health professionals, educators, government and non-government organizations interested in youth sexual health. The Roundtable developed the *Framework for Action: Youth Sexual Health in Nova Scotia*.[383] In Cape Breton, the Sexual Health Network consists of several HIV and educational partners and focuses on improving sexual health among youth in junior and senior high schools in the region.

6.5 PROGRAM ANALYSIS

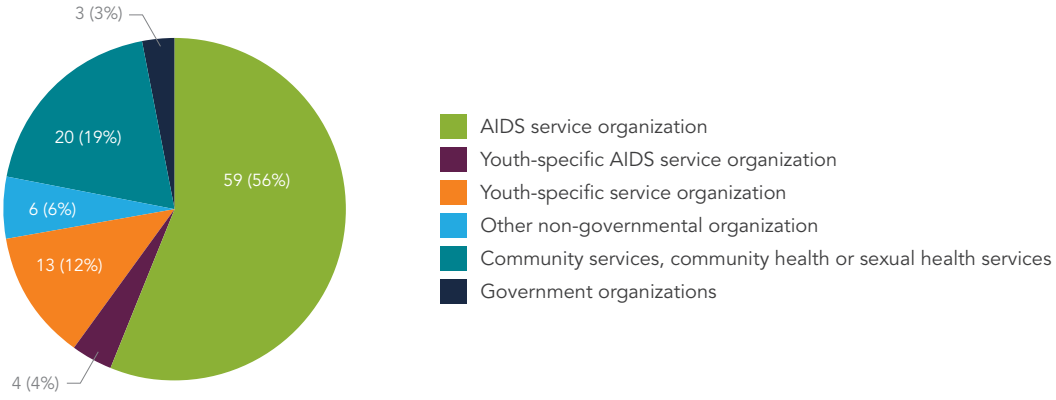
This section provides an overview of the types of organizations and projects underway from 2009 to 2011 that relate to HIV and other STBBIs among youth in Canada. Funded projects included for discussion, were those directed at youth, had a specific youth-focused component, or targeted youth directly within a broader group. Projects and the responsible organizations are listed in Section 2 of Appendix C.

Many AIDS service organizations provide services to youth, such as educational workshops or social support groups which are part of their regular activities related to HIV prevention, care and support. Due to methodology limitations, not all of these types of activities have been captured in this analysis. It is also important to note that HIV/AIDS projects that have been integrated into regular provincial or territorial health care and social services delivery activities have not been included here. Furthermore, due to the time-limited nature of the projects and the time lapse between writing and printing this report, some projects may no longer be active.

6.5.1 TYPES OF ORGANIZATIONS

Of the 105 projects reviewed, 44 (42%) addressed youth as part of a larger project while 61 targeted youth exclusively (Appendix C). Figure 35 shows that over half (56%) of the organizations involved in HIV and other STBBI prevention were AIDS service organizations, followed by community services, community health or sexual health services (19%) and youth-specific service organizations (12%). This analysis reveals the diversity of groups working on prevention and the complexities of youth's specific needs.

FIGURE 35: Distribution of organizations involved in the response to HIV and other STBBIs among youth, by type of organization (n=105)



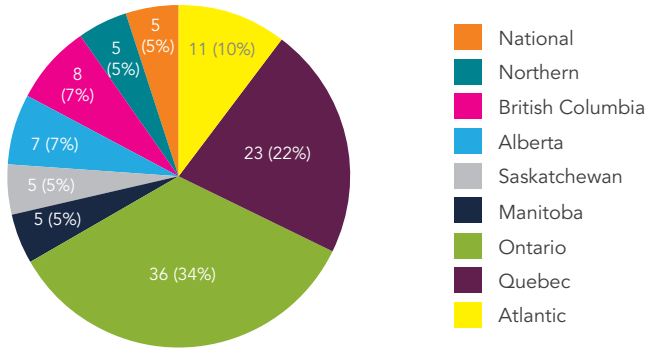
6.5.2 GEOGRAPHIC LOCATION OF PROJECTS

Table 8 and Figure 36 show the distribution of projects across Canada. Between 2009 and 2011, 105 projects addressing HIV and other STBBIs among youth in Canada were identified. Note that provinces with larger populations may have more funded projects.

TABLE 8: Geographic distribution of projects addressing HIV and other STBBIs among youth in Canada (n=105)

LOCATION	PROJECTS
National	Y1–Y5
British Columbia	Y6–Y13
Alberta	Y14–Y20
Saskatchewan	Y21–Y25
Manitoba	Y26–Y30
Ontario	Y31–Y66
Quebec	Y67–Y89
Atlantic Provinces	Y90–Y100
Northern Region	Y101–Y105

FIGURE 36: Geographic distribution of projects addressing HIV and other STBBIs among youth in Canada (n=105)



Of the 105 projects reviewed, 7% were located in British Columbia, 7% in Alberta, 5% in Saskatchewan, 5% in Manitoba, 34% in Ontario, 22% in Quebec, 10% in the Atlantic provinces and 5% in the North. In addition, there were five projects that were national in scope.

6.5.3 PROJECTS ADDRESSING SPECIFIC POPULATIONS OF YOUTH[xviii]

Half of the projects identified (50%) targeted the general youth population (Y7, Y11, Y13-Y22, Y27, Y28, Y33, Y34, Y35, Y37, Y38, Y40, Y41, Y43, Y44, Y46, Y47, Y57, Y59, Y66, Y67, Y68, Y71, Y72, Y74, Y75, Y79, Y80-Y83, Y86, Y88-Y92, Y94, Y95, Y96, Y98-Y103), while the other half focused on specific youth populations. The specific groups included youth who were:

- Aboriginal
- sexually diverse and gender-variant
- street-involved
- living with HIV
- from newcomer, immigrant and racialized communities
- used drugs
- in prison or involved with the justice system
- in foster care or group homes
- involved in sex work
- living with disabilities.

As discussed in Chapter 4, these groups often experience discrimination and multiple health and social challenges rooted in racism, sexism, homophobia and socio-economic deprivation which can affect their vulnerability to HIV and other STBBIs. As a result, these populations may require individual strategies to address their distinct health and socio-economic situations.

Of the projects identified, 88 (84%) involved the provision of information to youth through pamphlets, brochures and resources, and 68 (65%) focused on education through interactive workshops, presentations or peer groups. Topics included messaging on HIV/AIDS prevention, diagnosis, care and treatment, sexual health and other STBBIs. Over half (56%) of the projects provided outreach or peer-to-peer support to prevent HIV infection and included training of peer facilitators, peer youth counselling programs, and outreach programs designed for and by youth. Twenty-seven (26%) projects focused on prevention (e.g. distribution of HIV prevention manuals, prevention campaigns targeting safer sex behaviours). Twelve (11%) included harm reduction such as needle exchange, an injection drug use outreach program, access to safer sex and harm reduction kits and referral services.

ABORIGINAL YOUTH

Of the targeted projects, twenty-nine (28%) focused on Aboriginal youth. Four of these were national projects that examined culturally-appropriate messaging around sexual health and harm reduction for Aboriginal young people (Y1, Y2, Y3, Y5). Many of these projects used innovative peer-based approaches. For example, in British Columbia, AIDS Vancouver Island offered electronic HIV education tools and peer-to-peer education for Aboriginal youth living off-reserve (Y6). The *Chee Mamuk Aboriginal Program* undertook the Star in Your Own Stories project, engaging Aboriginal youth in BC to create their own positive sexual health campaign. Through this project, Aboriginal youth were able to explore HIV/AIDS and sexual health issues while gaining skills and knowledge (Y8). The Hiiye'yu Lelum (House of Friendship) Society provided Aboriginal youth with

[xviii] The number of projects for the response types and target populations is higher than the total number of reviewed projects as many projects involved more than one type of activity and/or targeted more than one specific population of youth.

the opportunity to develop and present materials such as workshops and theatre presentations on HIV, hepatitis C, healthy sexual behaviour (Y9) and other topics. The Okanagan Aboriginal AIDS Society offered a Youth Facilitators Boot Camp where Aboriginal youth were recruited and trained to present workshops in the community on preventing blood borne infection (Y10). In Vancouver, YouthCO AIDS Society delivered peer-driven, culturally appropriate HIV and hepatitis C prevention education through its Aboriginal Youth Program, which allows youth to use different artistic media to express their knowledge and skills (Y13). In Alberta, the First Nations and Inuit Health Branch (Health Canada) supported a DVD messaging program in which Aboriginal youth used theatre to address HIV, hepatitis C, sexually transmitted infections, sexual health, drug use (Y15) and other issues. In Saskatchewan, the Kikinahk Friendship Centre's *Sexual Health and Drug Use Awareness Program* trained youth facilitators to deliver workshops on HIV and other STBBI prevention and how these infections are affecting the North (Y25).

Some projects were aimed at specific groups of Aboriginal youth, including those who injected drugs, were in prison, and/or living with HIV. For example, Battlefords Family Health Centre's *Circle of Change: Reducing Harm* offered targeted HIV educational groups for Aboriginal youth who use injection drugs or who are in prison (Y24). In Winnipeg, the Nine Circles Community Health Centre conducted focus groups with Aboriginal and HIV-positive youth to explore perceptions of risk for HIV, hepatitis C and STIs as well as ways to improve engagement with youth (Y26). Similarly, in Ontario, the *Aboriginal Youth Peer Prevention Project,* a part of the *Ontario Aboriginal HIV/AIDS Strategy,* recruited HIV-positive and non-HIV youth to participate in regional peer youth networks as well as a provincial advisory committee to develop an Aboriginal youth strategy for HIV prevention (Y53). In addition, *Play It Safer* worked with high schools, youth centres and colleges/universities to offer peer training for youth to create and provide information on HIV/AIDS awareness and prevention through workshops (Y27).

Two projects involved Aboriginal youth HIV/AIDS conferences. In Saskatchewan, All Nations AIDS Network hosts an annual conference on HIV prevention with Aboriginal elders and youth (Y23). Similarly, in Winnipeg, the West Region Tribal Health Services and Manitoba First Nations AIDS Working Group hosted an HIV conference to bring together youth, health professionals and community members, including Elders, to discuss and promote awareness of HIV and other STBBIs (Y30).

Several projects emphasize HIV/AIDS awareness and prevention education that is developed for and by Aboriginal youth. In Toronto, the *Kwesk-iniwak Project* offered outreach and HIV prevention with peer educators to reach street-involved Aboriginal youth (Y51). Also in Toronto, the Native Youth Sexual Health Network's youth messaging initiative entitled *Normalizing healthy sexuality and reducing homophobia: Native youth photography* produced videos and a poster campaign about homophobia (Y52). In addition, the Ontario First Nations HIV/AIDS Education Circle offered peer education training to teach youth to deliver HIV awareness and prevention education in their communities (Y54).

In Quebec, the First Nations of Quebec and Labrador Health and Social Services Commission undertook culturally adapted workshops, training and education for Aboriginal youth:

- workshops with a focus on sexual health and HIV/AIDS (Y76)
- training young people from First Nation communities to carry out awareness activities in their communities (Y77)
- adaptation of the game "Who wants to be a millionaire" with trivia on HIV (Y78).

A project of the *Regroupement des centres d'amitié autochtone du Québec* supported sexual health and harm reduction initiatives for Aboriginal youth, including awareness workshops (Y84).

In the Atlantic region, *Healing Our Nations* engaged Aboriginal youth in developing and distributing an educational video on HIV prevention, as well as hosting a series of Youth Awareness workshops and discussion groups (Y97). Another project in the region offered targeted educational groups and outreach for Aboriginal street-involved youth (Y99).

In the North, variety projects provided culturally relevant education and services including youth outreach programs (Y101), a sexual health messaging video (Y104) and workshops and information material on HIV and other STBBI transmission and prevention (Y105).

SEXUALLY DIVERSE AND GENDER-VARIANT YOUTH

Seventeen (16%) projects focused on sexually diverse and gender-variant youth (Y4, Y6, Y13, Y31, Y32, Y33, Y39, Y40, Y48, Y50, Y56, Y60, Y68, Y69, Y79, Y85, Y93). Some of these included lesbian, gay, bisexual and transgender (LGBT) youth as part of a larger strategy to engage marginalized youth, such as:

- CATIE's National HIV/AIDS Knowledge Exchange Fund (Y4)
- Vancouver Island AIDS Society and YouthCO, whose activities included HIV prevention outreach, presentations, workshops and peer-to-peer education among youth at increased risk of contracting HIV (Y6, Y13)
- I.R.I.S Estrie, which offered outreach and prevention activities for vulnerable populations, including gay youth, in the Eastern Townships in Québec (Y79).

In Toronto, the 519 Church Street Community Centre offered outreach to transsexual sex workers and distributed a "Trans 101" manual for service providers (Y31). Africans in Partnerships against AIDS offered outreach to gay and bisexual youth in Toronto, including monthly sexual health support groups for vulnerable gay and bisexual young men (Y32). Similarly, the AIDS Committee of Cambridge, Kitchener, Waterloo & Area hosted weekly group meetings for LGBT males and females, and offered information to increase community awareness of LGBT youth (Y33).

Some projects targeted LGBT youth from newcomer, immigrant and racialized communities, such as outreach to South Asian gay and bisexual youth (Y39), HIV and STI prevention workshops and events targeting gay, transgender and transsexual Asian youth (Y40).

In Toronto, the sprOUT sexual health information project at the Griffin Centre offered HIV and STBBI information and support to LGBT youth with developmental disabilities. This included visual aids about HIV, STI and sexual health for LGBT youth with developmental disabilities (Y48).

Other projects made use of social media and arts-based interventions to engage young LGBT populations. For example, the Malvern Family Resource Centre involved gay, bisexual and other young men who have sex with men (MSM) through the *Photograph Your Thoughts* project (Y50). In the national capital region, the *Bureau régional d'action sida* (BRAS) offered pamphlets, posters, and videos on HIV prevention for young gay men (Y69). In Montréal, Rézo developed an online HIV prevention project for young MSM that provided information on safer sex, HIV and STIs (Y85).

In Newfoundland and Labrador, the *Gay Urban Youth Zone* (GUYZ) project aimed to increase HIV, HCV and STI knowledge and awareness among young gay men and service providers. Through peer education, young gay men had the opportunity to develop their own prevention materials including pamphlets, posters, and videos on sexual health issues (Y93).

Few projects explicitly address homophobia. The Peterborough AIDS Resource Network offered peer education and training for gay and bisexual men, in addition to workshops on safer sex and dealing with homophobia (Y56). In Sudbury, the healthy sexuality program of the Access AIDS Network provided bilingual safer sex workshops to gay, MSM and LGBT youth, service providers, and primary and secondary school teachers. It also delivered anti-homophobia and heterosexism workshops to service providers (Y60).

STREET-INVOLVED YOUTH

A total of 15 (14%) projects identified street-involved youth as their target audience (Y4, Y6, Y13, Y14, Y26, Y45, Y49, Y62, Y64, Y65, Y68, Y70, Y73, Y79, Y92). As addressed earlier, some of these projects included street-involved youth as part of a larger strategy to engage marginalized youth (Y4, Y6, Y13, Y62, Y68).

In Alberta, the AIDS Calgary Awareness Association conducted outreach on HIV and AIDS, shared prevention messages and connected street-involved youth to resources for safety, food and shelter (Y14). In Saskatchewan, the *Kikinahk Sexual Health and Drug Use Awareness* program conducted focus groups with street-involved youth to understand their unique needs and their use of mobile technologies for health promotion (Y26). In Toronto, *Eva's Initiatives for Homeless Youth* provided safe shelter and a range of services to homeless and vulnerable youth (Y45). In addition, Street Outreach Services worked with street-involved youth at risk of or engaged in sex work, providing counselling, HIV and harm reduction education, job skills training, and school and housing support (Y49). Two other Toronto projects provided peer-facilitated workshops on HIV and other STBBI prevention and risk reduction (Y64), and HIV and harm reduction street outreach such as access to safer sex and harm reduction kits and referral services (Y65).

In Quebec three projects were identified. Cactus Montreal worked with street-involved youth to increase knowledge of HIV transmission and the harms associated with substance abuse (Y70). *Coalition sherbrookoise pour le travail de rue* (Y73) and I.R.I.S Estrie (Y79) provided outreach and support for street-involved youth.

In the Atlantic region, the AIDS Coalition of Nova Scotia offered prevention and promotion workshops specifically for street-involved youth (Y92).

YOUTH LIVING WITH HIV

Projects targeting youth living with HIV represented 9% (or 10) of all projects reviewed (Y4, Y12, Y26, Y31, Y36, Y41, Y47, Y53, Y56, Y63). Many of these projects involved those living with, affected by or at risk of HIV (e.g. knowledge exchange activities to address HIV prevention, diagnosis, care and treatment, and support for HIV-positive youth (Y4)). Some projects focused on peer support for

HIV-positive youth and their families. Camp Moomba, a summer camp program for children and youth affected by HIV, offered a leadership program for youth aged 15 to 17 where participants engaged in a wide variety of experiences to build self-esteem and self-confidence (Y12). In Manitoba, the Nine Circles Community Health Centre held focus groups with HIV-positive youth to explore perceptions of existing services and ways to improve youth engagement (Y26). In Toronto, the Black Coalition for AIDS Prevention provided HIV education outreach, including a Project Hope for Africa (PHA) youth support group (Y41). Similarly, the Jane/Finch Community and Family Centre hosted *Positive Circles* where youth who are living with HIV or an STI can have a safe space to discuss their issues (Y47).

Through the *Positive Youth Outreach* project (Y36), the AIDS Committee of Toronto provided support such as health promotion information and skills development opportunities to young people (aged 29 and under) living with HIV. The Toronto People with AIDS Foundation's Speakers Bureau also provided HIV-positive youth with the opportunity to engage in HIV prevention workshops and outreach activities (Y63). In addition, Peterborough AIDS Resource Network provided support, health promotion and advocacy for people living with HIV/AIDS through peer education, outreach, and distribution of harm reduction and safer sex information, resources and services (Y56). Other projects considered the prevention needs of HIV-positive youth as part of broader outreach and prevention initiatives (Y31), e.g. involving positive youth in the development of an Aboriginal youth strategy for HIV prevention (Y53).

YOUTH FROM RACIALIZED COMMUNITIES

Of the projects reviewed, 8% focused on youth from racialized communities (Y32, Y38, Y39, Y40, Y41, Y44, Y61, Y83). There were several culturally specific responses, including those focused on African (Y32), African and Caribbean (Y41), Ethiopian (Y44), Somali (Y61) and South Asian (Y38, Y39, Y40) communities. One project offered outreach and peer support groups to South Asian gay and bisexual youth, in addition to HIV and STI awareness brochures, and online postings of prevention messages for South Asian and Tamil communities (Y39). Another project provided training and support to gay, transgender and/or transsexual Asian youth peer volunteers to help with prevention education outreach and workshops. This project also involved developing Asian print media to raise awareness of HIV/AIDS issues and HIV and STI testing for gay, transgender and transsexual Asian youth (Y40).

NEWCOMER AND IMMIGRANT YOUTH

Two projects (2%) specifically addressed newcomer and immigrant youth (Y29, Y38). The Sexuality Education Resource Centre Manitoba provided opportunities for newcomer youth in Winnipeg and Brandon to discuss sexual health in a culturally appropriate manner (Y29). In Toronto, the Alliance for South Asian AIDS Prevention held workshops and presentations to newcomer youth, promoting HIV/AIDS prevention awareness through the media, and conducted a one-day HIV/AIDS prevention forum for newcomer South Asian youth during South Asian Heritage Month (Y38).

YOUTH WHO USE DRUGS

Six projects (6%) focused on youth who use drugs. In British Columbia, YouthCO AIDS Society provided harm reduction and HIV prevention activities targeted to youth vulnerable to HIV infection (Y13). In Saskatchewan, Battlefords Family Health Centre addressed injection drug use and harm reduction through an art, drama and music drop-in for youth (Y24). In Toronto, Breakaway addiction services for young adults offered counselling, education and related activities for individuals experiencing problems with drugs or alcohol (Y42). Also in Toronto, Youthlink provided HIV/AIDS and harm reduction street outreach for youth who inject drugs (Y65). This assistance took the form

of safer sex and harm reduction kits, referral services, sexual health education workshops, HIV/AIDS and hepatitis C counselling and testing and implementation of a harm reduction survey to track significant trends in injection drug use and common issues among service users. The Sudbury Action Centre for Youth's harm reduction program included outreach, needle exchange, counselling and information, and an outreach program for youth who inject drugs that promotes safe disposal of needles in the community (Y62). At the Labrador Friendship Centre, targeted educational programs were offered to Aboriginal people in prison and youth to promote sexual health and injection drug use harm reduction (Y99).

YOUTH IN PRISON

Five projects (5%) focused on youth in prison or detention, and those who are involved with the justice system. In Saskatchewan, Battlefords Family Health Centre offered sexual health and harm reduction initiatives for vulnerable populations, including targeted educational groups and supports for youth in open custody at the Drumming Hill Youth Centre (Y24). The youth outreach and education program of the Prisoners with HIV/AIDS Support Action Network (PASAN) offered HIV prevention educational sessions, outreach and coordinated services for young people in conflict or at risk of becoming in conflict with the law (Y58). AIDS Community Care Montreal provided HIV/AIDS education and prevention services to vulnerable populations, including youth in the general population, youth in prison, and street-involved youth (Y68). In the Atlantic region, the John Howard Society of southeastern New Brunswick provided peer education to promote knowledge about hepatitis C among youth in various custodial settings of the justice system (Y98). Another project of the Labrador Friendship Centre focused on developing educational materials and providing awareness and prevention activities, including presentations on HIV prevention at the Labrador Correctional Centre and Charles Andrew Treatment Centre (Y99).

YOUTH IN FOSTER CARE OR GROUP HOMES

Four projects (4%) focused on youth in foster care or group homes. One project offered peer-led workshops and the development of sexual health information distributed to youth in care over the age of 13 (Y55). In Quebec, the Centre des R.O.S.É.S. de l'Abitibi-Témiscamingue addressed youth aged 12 to 17 years in youth centres or youth homes through the development of an educational graphic novel by and for these young people, to improve knowledge, attitudes and understanding of risk behaviours for HIV and other STBBIs (Y71). Another project provided sexual health education for youth aged 6 to 12 years in foster care or group homes (Y72). Additionally, *Sidaction (Trois-Rivières)* in Quebec provided prevention activities such as distribution of educational materials and development of training and workshops for youth in youth centres (Y87).

YOUTH INVOLVED IN SEX WORK

Only two projects (2%) focused on youth involved in sex work. The 519 Church Street Community Centre in Toronto provided a range of outreach activities to trans sex workers, including distribution of HIV prevention material, telephone outreach to indoor sex workers and HIV prevention workshops (Y31). In Winnipeg, the Sexuality Education Resource Centre Manitoba worked with youth aged 16 to 24 at risk of or engaged in sex work, including outreach, in-house counselling, HIV and harm reduction education and job skills training (Y29).

YOUTH LIVING WITH DISABILITIES

Only one project focused on youth living with disabilities (Y48). Through youth peer educators, the Griffin Centre provided HIV and STI information to LGBT youth with developmental disabilities in Toronto.

6.6 OTHER RELEVANT INITIATIVES

In collecting information on projects underway between 2009 and 2011, other relevant organizations and web-based resources concerning youth in Canada were identified. Although some focus specifically on HIV and other STBBIs, others deal with related issues of interest to young people such as sexual health, healthy relationships and mental health. Many organizations addressing these and related issues have websites that contain resources and information for youth on these topics, some of which have been created specifically for key populations such as street-involved youth or youth from racialized communities. A list of these organizations and online resources can be found in Appendix C, Section 3.

In addition, there are a wide range of organizations and web-based resources across Canada that relate to determinants of health that affect vulnerability and resilience among youth to HIV and other STBBIs. Some organizations and resources target the general youth population, while others address specific groups such as youth from racialized communities, sexually diverse and gender-variant youth, and homeless and street-involved youth. A list of these organizations and online resources can be found in Appendix C, Section 4.

Note that duplicates have been removed so that no initiatives are listed in both Section 2 (time-limited projects) and Sections 3 or 4 of Appendix C.

6.7 SUMMARY

Projects reviewed for this chapter focus on HIV and other STBBIs among youth in Canada. They reveal a wide variety of strategies, coalitions, networks, organizations and projects that span the country. While the majority of projects targeted youth in general, there is a clear need for individual strategies to address the health needs and lived realities of youth who experience increased vulnerability to infection. Many projects focused on providing education and information on HIV prevention, diagnosis, care and treatment, sexual health and other sexually transmitted and blood borne infections. Many of these projects adopted a peer education model to create workshops, presentations and support groups that were designed for and by youth. This emphasizes the importance and value of having youth involved in developing and implementing projects that affect them. Several projects demonstrate innovative ways to reach the youth population such as social media or arts-based interventions. Many projects went beyond sexual risk behaviour to build capacity among youth by strengthening their knowledge, leadership and decision-making skills. However, fewer projects addressed broader determinants of health, such as increasing access to services or providing social support to youth living with HIV or vulnerable to infection with HIV and other STBBIs.

While a number of projects dealt with the needs of Aboriginal youth, sexually diverse and gender-variant youth and street-involved youth, a limited number of projects focused on youth in foster care or group homes, youth involved in sex work and youth living with disabilities. Future responses to HIV and other STBBIs among youth should continue to tailor projects for specific groups of vulnerable youth.

CHAPTER 7 – CONCLUSION

The transition from childhood to adulthood is marked by many changes including physical maturation, increased independence, completion of high school and entry into post-secondary education or the labour force. While most youth make the transition to adulthood free from HIV and other sexually transmitted and blood borne infections (STBBIs), others face various challenges and obstacles. Some youth are more vulnerable to infection than others due to factors within their social, cultural, economic and physical environments. Historically, efforts to prevent HIV and other STBBIs among youth have directed at changing individual knowledge, attitudes and behaviours, failing to produce consistent, significant, long-term impacts. While addressing these individual factors is important, they must be considered within youths' broader social contexts.

This report focused on the complexity of social, cultural, political and economic factors that shape youths' vulnerability to HIV and other STBBIs. It explored how broader determinants of health such as education, income, employment, living conditions, and social environments affect the health and wellbeing of youth. The evidence and information provided in this report is intended to support communities, governments, non-governmental organizations, public health practitioners, researchers and others as they develop programs and policies targeted at these 'upstream' determinants to help all youth prevent poor health outcomes, including HIV and other STBBIs. The report has also attempted to balance a focus on vulnerabilities to infection, with one on resilience against infection. The report has elaborated on factors related to resiliency among youth in order to support communities, governments, non-governmental organizations, public health practitioners and others build community capacity, build upon the existing strengths of communities and foster individual resilience against HIV and other STBBIs.

Surveillance data indicate that youth in Canada remain disproportionately affected by HIV and STBBIs such as chlamydia and gonorrhea. This report confirms that vulnerability to and resilience against infection are directly and indirectly influenced by a variety of factors found in a youth's broader social context. An examination of these health determinants contribute to a better understanding of how and why particular groups of youth in Canada, such as street-involved youth, those who use injection drugs, and Aboriginal youth are particularly vulnerable to infection.

An overview of current research projects in Canada shows that researchers across the country are working to address the wide range of issues that affect youth and their vulnerability to STBBIs, including HIV. The report also identifies knowledge gaps and opportunities for further research, in areas such as youth living in rural and remote areas, specific groups of youth such as immigrant and newcomer youth, determinants of health such as mental health and STBBI and HIV vulnerability, and factors that promote resilience among youth.

Similarly, the Canadian response to HIV and other STBBIs demonstrates involvement from a wide array of organizations and communities. This report identifies numerous strategies, networks and organizations, both nationally and in provinces and territories that focus on education and capacity building among the youth population. Findings emphasize the importance of knowledge exchange activities and inclusive, culturally relevant approaches to HIV and STBBI prevention. Current evidence also highlights the importance of sharing best practices across sectors and jurisdictions, developing evidence-informed strategies and interventions, and continuing to collaborate across a wider range of stakeholders. There is a need for more programs that deal with the broader determinants of health, including increasing social support and access to services for Canadian youth vulnerable to or living with HIV and other STBBIs.

HIV and other STBBIs remain a significant public health challenge that requires a collaborative and comprehensive response. Stakeholders have demonstrated a strong collective will to increase awareness of these illnesses and reduce youth's vulnerability to them through prevention, education, care, treatment and support. This report acknowledges the key role that governments, stakeholders and communities continue to play in promoting and providing effective leadership, research, policy, programs and support services in preventing HIV and other STBBIs.

GLOSSARY

Aboriginal Peoples: Refers to First Nations, Inuit and Métis as recognized under the *Constitution Act*, 1982. These are distinct populations with unique cultural, linguistic, geographic and historic characteristics.

Acquired Immunodeficiency Syndrome (AIDS): A condition that describes an advanced stage of HIV infection involving significant loss of white blood cells (CD4 cells) and cancers or infections that result from immune system damage. An AIDS diagnosis is made if a person living with HIV is diagnosed with one or more of the clinical conditions characterized as "AIDS-defining illnesses." Antiretroviral therapy can suppress the HIV virus and slow the progression of the disease. Like HIV, there is no known cure for AIDS.

Bisexual: A person who has a physical and emotional attraction to both males and females.

Casual sex partner: A person with whom an individual had or has occasional sexual activity.

Culture: An important element of one's identity that includes shared symbols, behaviours, practices, values and attitudes. It is shaped by historical, socio-economic and political contexts, by power relations within and between groups and by institutionalized attitudes and practices that result.

Femininity: Refers to a set of qualities, attributes, behaviours and roles that are socially associated and considered appropriate for girls and women. Femininity is made up of both socially defined and biologically created factors.

First Nations: A term which usually refers to both Status and Non-Status Indians. First Nations are one of the three recognized Aboriginal Peoples in Canada, along with Métis and Inuit.

Gay: A person who is physically and emotionally attracted to members of the same sex. The word 'gay' can refer to both males and females, but is commonly used to refer to males only.

Gender: The array of socially determined roles, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis. Gender is distinct from biological sex.

Gender identity: A person's internal sense or feeling of being male or female, which may or may not be the same as one's biological sex.

Gender norms or roles: Refers to the set of social and behavioural norms that are considered to be traditionally and socially appropriate for individuals of a specific sex in the context of a specific culture. Norms differ widely between cultures and over time.

Gender-variant: Refers to individuals whose expressions of gender do not conform to the dominant and socially ascribed gender norms of masculinity and femininity for men and women.

Hepatitis C virus (HCV): 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 inject drugs.

Heterosexism: The assumption that everyone is or should be heterosexual and that this sexual orientation is superior. Heterosexism is often the belief system that underlies homophobia.

Homophobia: Fear or hatred of people who are attracted to those of the same sex (homosexuals). This is often expressed through prejudice, discrimination, intimidation or acts of violence.

Human immunodeficiency virus (**HIV)**: The virus that causes AIDS. This virus is passed from one person to another through blood-to-blood, unprotected vaginal and/or anal sex and from mother-to-child through pregnancy, delivery or breast-feeding. HIV attacks the immune system, resulting in a chronic progressive illness that leaves people vulnerable to opportunistic infections and cancers. There is no known cure or vaccine for HIV, but for most people, the virus can be managed through daily doses of antiretroviral medication. In the absence of treatment with antiretroviral medication, HIV infection will progress to AIDS.

Immigrant: A person residing in Canada who was born outside of Canada, excluding temporary foreign workers, Canadian citizens born outside of Canada and those with student or working visas.

Injection drug use (IDU): An epidemiological classification for HIV transmission among people who use injection drugs.

Inuit: Canada's Aboriginal people of the Arctic. Inuit are one of the three recognized Aboriginal Peoples in Canada, along with the First Nations and Métis.

Lesbian: A female who is attracted physically and emotionally to other females.

Lesbian, gay, bisexual, transgender, transsexual, two-spirit and queer (LGBTTQ): A commonly used acronym for the constellation of lesbian, gay, bisexual, transgender, transsexual, two-spirit, and queer identities. The term "sexually diverse and gender-variant youth" is used in this document as it encompasses youth expressing a LGBTTQ identity, youth questioning and/or exploring their sexual identity/orientation and youth expressing a gender identity that does not conform with the socially ascribed gender norms of their biological sex.

Masculinity: Refers to a set of qualities, attributes, behaviours and roles socially associated and considered appropriate for boys and men. Masculinity is made up of both socially defined and biologically created factors. This makes it distinct from the simple definition of the biological male sex, as men, women, and transgender people can all exhibit so-called masculine traits.

Men who have sex with men (MSM): An epidemiological classification for HIV transmission.

Métis: One of the three recognized Aboriginal Peoples of Canada, along with First Nations and Inuit. Métis are people of mixed Aboriginal and European ancestry.

Newcomer: A recent landed immigrant who has been in Canada for five years or less.

Risk factor: A factor associated with increased chance of getting a disease or infection. It may be a causal determinant or simply a risk marker. Factors associated with decreased risk are known as protective factors.

Self-efficacy: The set of beliefs that one can perform adequately in a particular situation.

Sex: Refers to the biological characteristics that generally distinguish males and females. Biological differences include such things as anatomy, genetics, hormones, metabolism and physiology. Sex is distinct from gender.

Sexual health: A state of physical, mental and social wellbeing in relation to sexuality. It is not merely the absence of sexually transmitted infections or sexual dysfunction. It also includes positive and respectful approach to sexuality and sexual relationships as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence.

Sexual orientation: Made up of a person's sexual identity, emotional or sexual attraction to others, and preferred sexual partners.

Sexually transmitted and blood borne infections (**STBBIs)**: A group of infections that spread from one person to another through sexual contact or contact with blood or blood products (e.g., sharing needles). Sexual contact includes vaginal, anal or oral sex, and sometimes skin-to-skin contact. Transmission can also occur from mother to child during pregnancy and childbirth.

Sex work: The exchange of sexual services for money or other goods or services (e.g., food, shelter).

Socio-economic status: A person or group's relative position within a social hierarchy. Socio-economic status is determined by such indicators as education, employment and income.

Street-involved youth: Youth experiencing unstable housing and hidden homelessness, meaning that they have no permanent dwelling but make use of a range of transitional living arrangements. The term "street-involved youth" is used in this document to encompass the large range of living arrangements that street involvement youth might experience, from living with their parents but being engaged on the street to being without any shelter at all.

Transgender: A person whose gender identity, outward appearance, expression and/or anatomy do not fit with their gender assigned at birth.

Transphobia: Refers to the fear and/or hatred of transgender individuals and is exhibited by prejudice, discrimination, intimidation, or acts of violence.

Two-spirit: Two-spirit people are able to understand both male and female viewpoints. They can also assume the sexual identity and be granted the social status of the opposite sex. Some Aboriginal cultures may give two-spirit people respect and special status as leaders or medicine people.

APPENDIX A: SEARCH TERMS AND DATABASES SEARCHED

1) Search Terms

Literature was identified through a systematic search of electronic databases and grey literature. All search strings involved a combination of one term from each column.

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

A	B	C
Youth*	Alberta	Acquired immunodeficiency
Youth* at-risk	British Columbia	AIDS
At-risk youth*	Calgary	AIDS serodiagnosis
Vulnerable youth*	Canad*	APHA
Teenager*	Colombie-Britannique	APHAs
Juvenile	Edmonton	HIV
Adolescent*	Halifax	HIV+
Adolescence	Haligonian	HIV-1
Jeune*	Île-du-Prince-Edouard	HIV infection*
Garçon*	Labrador	HIV positive
Fille*	Manitoba	HIV seropositivity
Girl*	Montreal	HIV seroprevalence
Boy*	New Brunswick	Human immune deficiency
Teen*	Newfoundland	Human immunodeficiency
Pre-teen*	NFLD	Immunodeficience/y
Jeune* adulte*	Northwest Territor*	D'immunodeficience (acquise; acquise humaine)
Young*	Nouveau-Brunswick	L'immunodeficience
Young adult*	Nouvelle Écosse	Infection*
Young adulthood	Nova Scotia	Infectious disease*
Young people	Nunavut	Prevalence
Street youth*	NWT	HIV-risk
Female street youth*	Ontario	HIV antibodies
Male street youth*	Ottawa	HIV incidence
Street involved youth*	PEI	HIV testing
Runaway youth*	Prince Edward Island	HIV transmission
Runaway young*	Quebec	Sida
Runaway adolescent*	Quebec city	Syndrome
Young wom*n	Regina	VIH
Young m*n	Saskatchewan	VIH+
Female youth*	Saskatoon	VIH positi*
Male youth*	Terre-Neuve	Virus
Aboriginal youth*	Territoires du Nord Ouest	Virus transmission
First Nations youth*	Toronto	Virus acquisition
Young Aboriginal	Vancouver	

A	B	C
Two-Spirit Youth*	Winnipeg	Virus infection
HIV positive youth*	Yukon	Blood borne pathogens
Youth PHA		Communicable diseases Epidemiology in adolescence
Young PHA		Communicable diseases/ep (epidemiology)
High school student*		HIV-and-HCV-coinfection
College student*		Hepatitis
Student*		Hepatitis C
Homeless youth*		Hepatitis C virus
Homeless adolescent*		C virus infection
Young urban		HCV
Marginalized youth*		
Youth* who use injection drugs		
Youth injection drugs user*		
Young injection drug user*		
IDU youth*		
Young IDU		
Sexual minority youth*		
Gay, lesbian, bisexual youth*		
Young gay m*n		
Young lesbian wom*n		
Ethno-cultural youth*		
African-Canadian youth*		
Caribbean-Canadian youth*		
Black youth*		
Young Black wom*n		
Asian-Canadian youth*		
Sex worker* youth		
Rural adolescent*		
Rural youth*		
Incarcerated youth*		
Juvenile detention		
Youth* in custody		
Youth* sexual risk behaviours		
Juvenile Delinquency		
Juvenile rehabilitation center		
Youth offender*		

2) Databases searched

The following databases were searched for English- and French-language articles from 2003 to 2010.

- MEDLINE
- PreMEDLINE
- Embase
- CINAHL
- PsycInfo
- Global health
- SocAbs
- Eric

APPENDIX B: RESEARCH PROJECTS FOCUSING ON HIV/AIDS AMONG YOUTH

PROJECT R1

Title: *A CBR approach to enhancing Toronto HIV prevention services for newcomer youth*

Principal investigator: Roxana Salehi

Co-investigator: Sarah Flicker

Abstract: The early teen years are the period where first sexual encounters occur and risk for HIV emerges. Current HIV prevention services have been deficient given the increasing rates of STIs among youth, coupled with an alarming decrease in their knowledge of HIV/AIDS. Newcomer youth immigrants, refugees, or Non-Status youth who have lived in Canada for five years or less are some of the fastest-growing populations affected by HIV/AIDS in Ontario. We know very little about their unique health needs. To fill this gap, my PhD work explores the accessibility and effectiveness of Toronto HIV/AIDS prevention services for newcomer youth aged 13–19 as a basis for reducing the existing racial and ethnic disparities in health outcomes. My work is nested within a community-based project called Toronto Teen Survey. My focus within the larger project is specifically on newcomer youth. Many newcomer youth encounter immigration-related factors that can put them at risk of marginalization, including poverty, and cultural/ linguistic barriers to accessing services. Thus, effective HIV preventive services should be sensitive to the unique vulnerabilities of this group. Newcomers, however, are not a homogeneous group. Individual and interpersonal differences, such as gender, race, substance use or family dynamics, differentially expose youth to HIV transmission. Traditional HIV/AIDS research has paid inadequate attention to: i) larger structural factors, such as racism or sexism, that affect HIV risk, and ii) to the variations in sex, gender, and sexual orientation that represent lived experiences of youth. I will work towards compiling a theoretical model that explores diversity and the larger social context. I will use both survey and focus group data to generate theories and disseminate practical knowledge for enhanced programming and service delivery. This work should create better HIV prevention programs and contribute to the global movement to eliminate HIV/AIDS.

Dates: May 2009–April 2011

Funding program: CIHR Doctoral Research Awards-HIV/AIDS Community-Based Research-General Stream

Source: CIHR database

PROJECT R2

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

Principal investigator: Allison Scott

Abstract: not available

Dates: February 2007–January 2009

Funding program: OHTN Operating Grant

Sources: OHTN & CAHR databases

PROJECT R3

Title: *Adolescents infected through vertical transmission: Analysis of their developmental trajectory*

Principal investigator: Mylène Fernet

Abstract: The profile of the pediatric epidemic has changed and is now characterized by the emergence of a high number of young people who have lived with HIV infection since birth; some are on the threshold of adolescence while others have reached the age of majority. Although many studies have been conducted in the adult HIV population, few have examined the situation of pre-adolescents and adolescents infected at birth through vertical transmission (Battles and Wiener, 2002; Fielden, 2005; Mialky, Vagnoni and Rutsein, 2001). As they enter adolescence, these young people are faced with the question of disclosing their HIV status (Fielden, 2005), along with the various issues associated with treatment management and the many changes that accompany puberty (Fielden, 2005; Hoffman, Futterman and Myerson, 1999; Trocmé et al., 2002). Results: An initial study funded by the CIHR (2004–2006) recruited from among the CMIS mother-child cohort at CHU Sainte-Justine a total of 30 pre-adolescents and adolescents who were infected at birth (participation rate of more than 88%) and identified the key areas in which child development appears to have been comprised. Objectives: The purpose of this renewal application is to illustrate the developmental trajectory of adolescents in the following areas: (1) health management and modes of treatment appropriation (side effects, treatment compliance, etc.); (2) the types of interactions adolescents establish with their environment, particularly with respect to disclosure of their HIV status; (3) the feelings of isolation that are frequently associated with a burdensome secret that is difficult to share; and (4) adolescents' relationships with others and with their sexuality, as well as the prevention issues with which they are faced. Research plan: This qualitative study is informed by the theory of symbolic interactionism (Blumer, 1969; Le Breton, 2004). It involves conducting a second qualitative data collection exercise with the same 30 youths (15 girls and 15 boys, average age 14.5 years) 24 months after the first series of interviews. Non-directive individual interviews of approximately two hours duration will be conducted at the CMIS, CHU Ste-Justine. An interview grid derived from that of the Children's and Women's Health Centre of British Columbia (2000) and informed by the interview data obtained in the course of the first study will be used. Once it has been matched on a case-by-case basis with the first set of interviews, the data collected in the present study will be subjected to chronological analysis (Miles and Huberman, 2005), with an emphasis on grounded theory procedures (Fernet, 2005). Benefits: Given the scarcity of Canadian studies that deal with these issues and the specificity of a study that examines the first generation of adolescents to have lived with HIV infection from birth, this study clearly addresses

an immediate need and will contribute to the advancement of knowledge in this area. The study will begin by establishing the developmental characteristics of adolescents living with a chronic disease that affects not only their health but also their personal and sexual interactions. From a methodological standpoint, this study is highly innovative in that it proposes to qualitatively analyse the developmental trajectories of these adolescents from a chronological (longitudinal) perspective. To our knowledge, only one quantitative longitudinal study has focused on this unique population. The results of this study will be used to establish an education and prevention program that takes into account the developmental issues facing these adolescents; they may also serve as a model for studies and intervention programs in other places where vertical transmission is still taking place, both in Canada and in Europe.

Dates: January 2007–January 2009

Funding programs: Fonds québécois de la recherche sur la société et la culture (FQRSC)-Operating Grant and Fonds de la recherche en santé du Québec (FRSQ)-Operating Grant

Source: OHTN database

PROJECT R4

Title: *A longitudinal examination of child sexual abuse and motivations for sex as predictors of sexual risk behaviours and poor sexual health outcomes among adolescents in the child welfare system*

Principal investigator: Carolyn A. James

Co-investigator: Jennifer S. Mills

Abstract: Youth in the child welfare system are a greatly at-risk, yet relatively understudied population. Those who have experienced childhood sexual abuse (CSA) may be at particular risk for engaging in maladaptive health behaviours, including various risky sexual behaviours. However, the pathways leading from CSA to maladaptive sexual health behaviours are poorly understood among this population. Motivations for sex, or reasons for engaging in sexual behaviour, have been found to be related to various sexual risk behaviours. As such, motivations for sex might be important in explaining the relationship between CSA and later sexual risk behaviours. Additionally, some research has suggested that the degree to which CSA is associated with negative outcomes is related to the severity and chronicity of such abuse. The proposed study will examine how CSA and motivations for sex are related to changes in sexual risk behaviours over time (baseline, one-year and two-year follow-ups) among child welfare youth. Understanding the mechanisms by which CSA leads to maladaptive health behaviours is necessary for the development of interventions to break the cycle of maltreatment and adverse health outcomes.

Dates: September 2006–February 2010

Funding program: CIHR Frederick Banting and Charles Best Canada Graduate Scholarships-Doctoral Award

Source: CIHR database

PROJECT R5

Title: *An investigation of injection drug use and HIV infection among drug using youth*

Principal investigator: Thomas H. Kerr

Abstract: not available

Dates: July 2006–June 2011

Funding program: CIHR New Investigator

Source: CIHR database

PROJECT R6

Title: *An investigation of the impact of crystal methamphetamine use on sexual and injection-related risk behaviour among street youth and injection drug users*

Principal investigator: Brandon D. Marshall

Co-investigators: Thomas H. Kerr; Jean A. Shoveller

Abstract: Illicit drug use remains a major public health concern throughout Canada. The health and social consequences of injection drug use are particularly severe and include high rates of blood borne disease transmission, including HIV and Hepatitis C. Additionally, in Vancouver and elsewhere in Canada, there is concern regarding escalating rates of crystal methamphetamine (CM) use. The prevalence of CM use is rising in other settings internationally and has been associated with unsafe sexual and injecting practices among specific subpopulations at risk for HIV. However, the potential associations between CM use and sexual and injection-related risk behaviour among marginalized populations in Vancouver have not been fully investigated. A fundamental aim of the proposed research is to improve our understanding of the interactions between CM use and sexual and injection-related risk behaviour that concomitantly result in increased vulnerability to HIV and other sexually transmitted infections among street youth and injection drug users. The specific objective of this project is to examine a number of factors that predict frequent CM use and engagement in sexual and injection-related risk behaviour. The primary hypothesis is that social disadvantage, impoverished living conditions, intensified law enforcement, and poor access to health-related services will be associated with higher frequency and intensity of CM use. The secondary hypothesis is that CM use will mediate sexual and injection-related risk behaviour in specific ways across different subpopulations (e.g., youth and IDU who do not identify as heterosexual, are homeless, or are currently involved in sex work). Given the growing concerns related to CM use and the scarcity of evidence to inform related health and social policy, this research is urgently needed to develop effective public health interventions that reduce and prevent HIV and STI transmission within marginalized populations in our country.

Dates: 2007 and 2008 and September 2008-March 2011

Funding programs: MSFHR Research Trainee Award, Junior Graduate Studentship and MSFHR Research Trainee Award, Senior Graduate Studentship and CIHR Frederick Banting and Charles Best Canada Graduate Scholarships-Doctoral Award

Sources: MSFHR and CIHR databases

PROJECT R7

Title: *An investigation of the impact of trauma and crystal methamphetamine use on injection drug use and HIV infection among drug using youth*

Principal investigator: Jo-Anne M. Stoltz

Co-investigators: Robert S. Hogg; Evan Wood

Abstract: This study examines the ongoing impact of childhood trauma on injection drug use and HIV infection among illicit drug-using youth. Although a link has been established between childhood abuse and drug use in adolescence, there remains a lack of understanding of how abuse leads to drug use. In an effort to fill this gap, this study will sub-divide trauma into sexual/physical/emotional abuse and neglect, and explore each type of trauma in terms of its ability to predict HIV risk behaviour, HIV incidence, and initiation of injection drug use. This study also will examine the impact of crystal methamphetamine use on injection drug use and HIV infection among drug-using youth. Specifically, this research will explore the influence of crystal methamphetamine use on HIV risk behaviour, HIV incidence, and initiation of injection drug use among youth. Five hundred street-involved youth in downtown Vancouver, British Columbia, will be followed for five years. Participants will complete the Childhood Trauma Questionnaire at baseline, and an interviewer-administered questionnaire and blood testing for HIV and hepatitis C at baseline and every six months. The study is part of a larger, CIHR funded research project on the natural history of injection drug use.

Dates: July 2006–June 2009

Funding program: CIHR HIV/AIDS IPPH-Public Health Agency of Canada Fellowship

Source: CIHR database

PROJECT R8

Title: *Building capacity to conduct community based research on evaluating youth sexual health peer education programs*

Principal investigators: June A. Larkin; Denise W. Jaworsky

Co-investigators: Sarah Flicker; Susan Flynn; Jesse M. Janssen

Abstract: Many youth organizations and community groups have responded to the HIV epidemic and growing incidence among youth by implementing peer education programs; however these organizations often have limited capacity to properly evaluate the efficacy of these programs. The need for scientifically proven program evaluation methods is long overdue in the field of sexual health education as the current level of knowledge is insufficient to allow for policy decisions to be based on scientific data. The purpose of this application is to build the capacity of the youth-run organization, Children's AIDS Health Program, to evaluate youth sexual health peer education programs so that future research on the efficacy of youth peer education may be conducted. This project will be carried out as a collaboration between academic researchers in the fields of health promotion and health psychology and youth-focused HIV and sexual health community organizations. This project aims to review existing literature on levels of sexual health education among Canadian youth and on current evaluation methods for peer education programs. The next objective will be to develop and pilot a method of evaluating the efficacy of youth-peer education programs. Finally, a key component will be knowledge translation where the findings will be disseminated to community groups and youth organizations.

Dates: April 2008–March 2009

Funding program: CIHR HIV/AIDS Community Based Research Program-General-Catalyst Grant

Source: CIHR database

PROJECT R9

Title: *Analyse d'implantation du Chî kayeh : application des connaissances auprès des communautés cries* (Chî kayeh implementation analysis: Applying knowledge in Cree communities)

Principal investigator: Joanne Otis

Co-investigators: Thérèse M. Bouchez; Françoise Caron; Isabelle Duguay; Manon Dugas; Marlène Beaulieu; Gaston Godin; Joseph J. Lévy

Abstract: In 2005, following several consultations, Cree government authorities decided to adapt the theoretically anchored program Express Protection, which was found to be effective in Montérégie. That is how the innovative *Chî kayeh* program came to be developed with a view to respecting the needs and cultural distinctness of Cree youth and in accordance with 2005 data on students' beliefs, thus ensuring extremely valid program content. In 45 lessons, the program aims to promote sexual health and to prevent STD and HIV infections and unplanned pregnancies among youth attending school. Implementation of the program was analyzed from 2006 to 2008. The next crucial step is a collaborative process for applying the knowledge acquired during analysis of the implementation, so that the findings can be validated and a basic implementation guide based on the recommendations made by those concerned during implementation of the program can be developed. The overall objective of the proposed process will therefore be to facilitate implementation of the findings of the *Chî kayeh* implementation analysis among those involved in the implementation. The specific objectives are as follows: (1) synthesize the findings and recommendations arising from the *Chî kayeh* project implementation analysis; (2) mobilize those involved in the *Chî kayeh* program implementation; (3) submit the implementation analysis findings to those involved; (4) discuss the research findings and the recommendations put forward by the researchers; (5) obtain a consensus on the *Chî kayeh* implementation recommendations and the program's durability.

Dates: April 2006–March 2009 and September 2009–August 2010

Funding programs: CIHR-Operating Grant and CIHR Meetings, Planning and Dissemination Grant-Knowledge Translation Supplement

Sources: CAHR and CIHR databases

PROJECT R10

Title: *Recherche-action évaluative du processus d'appropriation du programme "Chî kayeh iyaakwaamiih" implanté dans le milieu scolaire autochtone des Terres-Cries-de-la-Baie-James* (Evaluation action research on the process of taking ownership of the "Chî kayeh iyaakwaamiih" program in the Aboriginal educational environment of Terres-Cries-de-la-Baie-James)

Principal investigator: Joanne Otis

Co-investigators: Martin Blais; Sarah Flicker; Joseph J. Lévy; Jill E. Torrie

Abstract: To respond to Cree communities' concerns about the sexual health of their young people, the *Chî kayeh* program was developed and incorporated into the school curriculum of two Cree communities in 2006–2007. From 2006 to 2009, an implementation study was done on the program, with the focus on the program itself (validation) and the factors influencing the process of taking ownership of the program, primarily by the teachers. The study results gave rise to a new version of the program, *Chî kayeh iyaakwaamiih*, which is more culturally adapted and sensitive to the realities and ways of living and learning of Cree youth. The program has been implemented in nine Cree communities since September 2009. This evaluative action research is being proposed with the ultimate goal of fostering program sustainability in these nine communities and building capacity among community members to implement it. The research will answer the following questions: What strategies will be used to ensure the sustainability of *Chî kayeh iyaakwaamiih* from one community to another and how will each community adapt the program to its own situation? What effects does the program have on students, and their school, family and community environment? To answer these questions, two goals have been set: 1) support and document the process of taking ownership and ensuring the sustainability of *Chî kayeh iyaakwaamiih* in each of the communities; 2) document the program's effects in terms of the achievement of its goals, according to the indicators that the community considers significant. Multiple data collection methods will be used to achieve these goals, as well as a self-administered questionnaire for students three times before and after their participation in the program.

Dates: October 2010–September 2011

Funding program: CIHR Operating Grant Priority Announcement: First Nations, Inuit and/or Métis Health

Source: CIHR database

PROJECT R11

Title: *Child sexual abuse as a predictor of sexual risk behaviour in adolescent youth in the Canadian child welfare system*

Principal investigator: Tiziana Fulco

Co-investigator: Sandra Clare Paivio

Abstract: not available

Dates: 2007–2009

Funding program: CIHR Frederick Banting and Charles Best Canada Graduate Scholarships-Master Award

Source: CIHR database

PROJECT R12

Title: *Analyse chronologique des trajectoires amoureuses et sexuelles des adolescents vivant avec le VIH/SIDA depuis la naissance* (Chronological analysis of the affective/sexual trajectories of adolescents living with HIV/AIDS since birth)

Principal Investigator: Kimberly H.Y. Wong

Abstract: not available

Date: 2008

Funding program: Canada Graduate Scholarships Program-Master Award

Source: SSHRC database

PROJECT R13

Title: *Cognitive beliefs and social attitudes as predictors of sexual risk behaviours among adolescents and young adults*

Principal investigator: Michael Lima

Co-investigator: Steven R. Bray

Abstract: not available

Dates: September 2009–August 2010

Funding program: CIHR Frederick Banting and Charles Best Canada Graduate Scholarships-Master Award

Source: CIHR database

PROJECT R14

Title: *Colliding worlds: Looking behind HIV/AIDS discourse in public health campaigns and among Aboriginal youth*

Principal investigator: Jorge Laucirica

Abstract: not available

Dates: January 2006–January 2009

Funding program: SSHRC Student Award

Source: CAHR database

PROJECT R15

Title: *Comprehensive intervention strategies with young HIV-positive women in Canada: Individual, social, and cultural factors that make sexual health promotion programs successful*

Principal investigator: Sarah J. Fielden

Co-investigators: Jean A. Shoveller; Joanne Otis

Abstract: Despite extensive global efforts to combat HIV/AIDS through prevention, treatment and care services, HIV infection rates continue to rise and approximately 25% of new infections are among young people. Young women are especially vulnerable to infection due to developmental, biological, social and cultural factors contributing to the feminization of the pandemic. Research that extends beyond behavioural models of sexual health promotion is urgently needed to help curb the spread of HIV and provide support and care for those already living with HIV/AIDS. This proposed research is Pan-Canadian and aims to both develop and evaluate innovative sexual health interventions with HIV-positive young women. Given evidence of the multiplicity of factors impacting on health and wellness outcomes for women living with HIV, the objectives of the study include examining social and community influences. As a qualitative program of research, this work will enhance the understanding of developing successful interventions with groups of marginalized young women through using qualitative and community-based methodologies. This will involve combining various qualitative methods including naturalistic observation and in-depth interviews with young women and other key stakeholders such as family members and service providers. It will use intervention mapping, a step-wise systematic method of determining relevant stakeholders, community needs, program directions and evaluation. The proposed research explores and addresses support and service needs of young women living with HIV in various geographic and cultural communities as it relates to their sexual health. In addition to the development of theoretically and empirically-based interventions, the project will serve to elicit cultural knowledge including understandings about the daily experiences of these young women in relation to their medical institutions, community-based services and family systems.

Dates: June 2009–May 2012

Funding program: CIHR Fellowships in Priority Announcement-In the Area of Health Services/ Population Health HIV/AIDS Research

Source: CIHR database

PROJECT R16

Title: *Coping with the effects of cultural dislocation: Young Aboriginal People, the perils of injection drug initiation and the associations of HIV incidence*

Principal investigator: Caroline Miller

Co-investigator: John D. O'Neil

Abstract: not available

Dates: January 2007–August 2008

Funding program: CIHR Fellowships in Priority Announcement-In the Area of Health Services/ Population Health HIV/AIDS Research

Source: CIHR database

PROJECT R17

Title: *Critical approaches to youth HIV prevention, support and community based research*

Principal investigator: Sarah Flicker

Abstract: not available

Date: 2008

Funding program: OHTN Grants

Source: OHTN database

PROJECT R18

Title: *Determinants of HIV-risk behaviour among South Asians, and evaluation of a brief HIV-risk prevention intervention*

Principal investigator: Amrita Ghai

Co-investigators: Joel D. Katz; Trevor A. Hart

Abstract: HIV prevention remains an important challenge given stable rates of new infections per year. Considering the multicultural makeup of Canada, it is important that the prevention needs of particular cultural/ethnic groups be fully examined. Among cultural groups, South Asians in North America have not been adequately represented in HIV prevention efforts and literature. The proposed research program will investigate how particular cultural factors may impact individual risk factors and sexual risk behaviours in a sample of 400 South Asians, aged 18–35, in Toronto. Participants in the study will answer questions about their sexual risk behaviours (e.g., inconsistent condom use, unprotected sex), cultural variables (e.g. the extent to which they identify with their ancestral culture or the culture of majority, perceived support from their cultural community, perceived discrimination) and individual risk variables (negative attitudes towards using condoms, depression). The study will also evaluate an HIV-prevention video that is specifically targeted for a South Asian audience. This video was developed by a local AIDS service organization (The Alliance for South Asian AIDS Prevention), and depicts South Asian actors encouraging condom use. The study will assess how well the sample understands the video, how often they have seen it and how important they believe its message to be. It will also examine whether exposure to the video predicts sexual risk behaviour after six months. This information collected will help elucidate the role of cultural and individual risk factors on sexual risk behaviours. It will also help in the development of effective HIV prevention and educational campaigns that address the particular needs of the growing South Asian community.

Dates: September 2008–August 2011

Funding program: CIHR Frederick Banting and Charles Best Canada Graduate Scholarships-Doctoral Award

Source: CIHR database

PROJECT R19

Title: *Engaging newcomer communities in sexual health research: Understanding cultural factors for HIV risk reduction amongst immigrant and refugee ethno-racial youth in western Canada*

Principal investigator: Susan E. Frohlick

Abstract: The main aim of this project is to build a unique and innovative collaboration of African immigrant and refugee youth, community organizations and university researchers across three cities to develop a process for a community-based research team involving youth as peer researchers. This project is the outgrowth of a community-university partnership in Winnipeg, partly funded by a CIHR MPD Grant that facilitated an exchange of knowledge about sexuality, sexual health and sexually transmitted infections with African newcomer youth grappling with cultural norms from their African heritage and Canadian society in the negotiation of safe sex practices. A clear message from these exchanges was that a public discourse around sex and sexuality was missing within these communities and that knowledge about culturally-sensitive strategies was sorely wanted in order to reduce their vulnerability to HIV infection related to linked factors of poverty, race, cultural gender and sexual norms, and stigma associated with sex and HIV. It was also clear that to be effective, intervention needs to engage the community at all levels of research and implementation including the research process, from design to data collection to youth-focused delivery of the messaging. Given the lack of information on youth and sexuality and HIV in ethnic minority immigrant populations in Canada, this project seeks to expand the scope of community-research partnerships to three cities in western Canada and the number of youth participants in order to develop a multi-year project using community-based research principles. The strength of the project lies in the multi-disciplinary regional team approach to CBR for HIV risk reduction targeted at and engaging marginalized and under-represented youth in African newcomer communities in identifying cultural factors that put them at risk. The team will generate a larger research proposal as the final outcome of activities outlined for this catalyst project

Dates: October 2010–September 2011

Funding program: CIHR Catalyst Grant-HIV/AIDS Community-Based Research Program-General Stream

Source: CIHR database

PROJECT R20

Title: *Engaging young women in online STI testing: The role of social context*

Principal investigator: Wendy M. Davis

Co-investigator: Jean A. Shoveller

Abstract: New interventions, such as British Columbia's Online Sexual Health Services Program (OSHSP), are being launched to complement existing face-to-face clinical services, in the hopes that they may improve young women's participation in STI/HIV testing. Seeking STI testing remains a deeply stigmatized behaviour for many young women, a reality that is unlikely to be fully remedied by online services (e.g. face-to-face enactments of gendered stereotypes can also be represented online through a text-based medium). Unfortunately, we do not yet fully appreciate how important social factors (e.g. social norms; stereotypes women's responsibilities for sexual health) affect experiences with online STI testing (particularly within vulnerable subgroups of young women). Thus, the proposed study will seek to better understand young women's perspectives on

the ways in which important aspects of their social contexts (e.g. stigma; gendered stereotypes) affect their engagement in this and other sexual health promotion activities. Multiple data collection and analysis techniques will be used (e.g. focus groups and individual in-depth interviews; a Youth Roundtable to refine analysis from focus groups and individual interviews and a Youth Working Group will be formed to provide insights into the development and design of the look, feel and content of website. The proposed study will be conducted in Greater Vancouver, and will adopt participatory approaches. Ultimately, the new information gathered during this study will help inform the development and design of an online STI testing service in British Columbia.

Dates: September 2010–August 2011

Funding program: CIHR Frederick Banting and Charles Best Canada Graduate Scholarships-Master Award

Source: CIHR database

PROJECT R21

Title: *Examining structural vulnerabilities to injection drug use and HIV infection among marginalized young people: An approach using complex systems modeling and social epidemiology*

Principal investigator: Brandon D. Marshall

Co-investigators: Sandro Galea; Evan Wood

Abstract: Injection drug use among young people is a growing national and international health problem. Given that injection drug use is a primary mode of HIV transmission and is responsible for many other health and social harms, preventing youth from initiating injecting is a major public health priority. However, there exists little scientific evidence to guide effective HIV and injection drug use prevention measures among at-risk youth. This research will address these urgent challenges and will provide necessary information to inform appropriate and effective responses to this health crisis nationally and internationally. The primary goal of this research is to use complex systems modeling (a form of mathematical modeling) to understand how rates of injection initiation and HIV infection are affected by social, environmental, and political factors—and are essential for the development of effective interventions. Specifically, new mathematical modeling techniques will be used to test the potential effectiveness of several interventions to prevent transitions to injection and reduce HIV risk among young drug users. Interventions to be examined include the expansion of addiction treatment programs for drug-dependent youth and the provision of safe housing options for homeless young people. The proposed research has important implications for a segment of the Canadian population that experiences considerable health-related harms and contributes substantially to societal and health costs. Given the growing concerns related to the initiation of injecting and the complexities of the interventions required to reduce HIV infections and other harms, the proposed research will generate valuable insights that can be applied by public health agencies and other decision makers to implement evidence-based programs and policies to address this important health issue.

Dates: January 2011–December 2013

Funding program: Fellowship-Priority Announcement-Health Services/Population Health HIV/AIDS Research

Source: CIHR database

PROJECT R22

Title: *Exploring and addressing the determinants of health in older children with perinatally acquired HIV-1 in British Columbia in partnership with families and communities*

Principal investigator: Sarah J. Fielden

Co-investigators: Christabelle Sethna; Peter S. Tugwell

Abstract: With the advent of effective antiretroviral therapies, children with pediatric HIV are now maturing into adolescence and young adulthood. As they experience these transitions, additional age-appropriate services are needed to support their positive development. This research explores the health and wellbeing of older children with perinatally acquired HIV in British Columbia through three phases with the aim of laying the foundation for future health promotion interventions with this population of children. The first phase involves children, their family members and their healthcare and community service providers, and explores the needs of this cohort of children through a community-based, participatory, consultative process using qualitative inquiry. Based on findings from the first phase, a program model will be created which will combine empirical knowledge gained from the various stakeholders with theoretical models in the areas of health promotion, HIV/AIDS, and child and youth development. A third study will add a contextual, quantitative component to the research through a retrospective cohort study describing the mortality rates, drug treatment trends and demographic profiles of children with pediatric HIV in British Columbia.

Dates: September 2005–August 2008

Funding program: CIHR Frederick Banting and Charles Best Canada Graduate Scholarships-Doctoral Award

Source: CIHR database

PROJECT R23

Title: *Guys un-limited: Young men speak out about health services*

Principal investigator: Elizabeth Marie Saewyc

Abstract: Sexually exploited and at-risk teen males often experience serious health issues. Recent research in British Columbia has shown as many as one in three street youth have been sexually exploited, males at equal rates as females. However, services to help sexually exploited youth are often focused on girls and young women, and use female-centred approaches that may not be supportive for young men. While young men in general access help less often than young women, sexually exploited teens experience stigma that may make them even more reluctant to access services they need. This study will explore sexually exploited and at-risk young men's experiences of health and social services, how their views and ideals about masculinity influence their decisions to access services and ways health care can be delivered using male-friendly approaches for this marginalized population.

Dates: April 2009–March 2011

Funding program: CIHR Operational Grant

Source: CIHR database

PROJECT R24

Title: *Impact of policy decisions and service delivery models on HIV/AIDS prevention: Ensuring comprehensiveness and accessibility for female adolescents*

Principal investigator: Charlene P. Cook

Abstract: not available

Dates: 2006–2009

Funding program: SSHRC Doctoral Fellowships

Source: SSHRC database

PROJECT R25

Title: *Interventions utilisant les TIC pour la promotion de la SSR: partage d'expériences internationales* (Interventions using ICT to promote SRH: Sharing of international experiences)

Principal investigator: Marie-Pierre Gagnon

Co-investigators: Françoise Coté; José Coté

Abstract: The situation of adolescents and young adults with respect to sexuality is a matter of concern despite multiple interventions aimed at this segment of the population. The younger generation's familiarity with technology makes ICT a promising option for promoting sexual and reproductive health, including STD/HIV/AIDS prevention in adolescents and young adults, referred to herein as SRH. However, developing effective interventions using ICT requires solid scientific evidence. The purpose of the proposed project is to stimulate knowledge sharing among researchers with complementary expertise, policy makers and national and international stakeholders to create a solid, ongoing partnership. The subject of the first workshop will be a review of SRH interventions and strategies. Experts will share their experiences and explain the indicators used to evaluate the projects carried out so far by their respective institutions and the evaluation results. The purpose of the second workshop will be to develop an evaluation grid for studies on interventions using ICT to promote SRH. The main speakers at the workshop will be researchers who will present existing knowledge on the use of ICT to promote SRH. A discussion will follow to identify the intervention strategies, indicators and results to be validated in the studies included in the projected knowledge synthesis. The resulting grid will be used to examine the studies that meet the eligibility criteria established for the systematic review. This partnership among domestic and international players holds the potential for greater collaboration to improve strategies and the results of interventions to promote SHR.

Dates: October 2010–September 2011

Funding program: CIHR Planning Grants—Priority Announcement: HIV/AIDS (biomedical/clinical research and health services/population)

Source: CIHR database

PROJECT R26

Title: *Investigating and addressing injection drug use and other harms among street-involved youth: The ARYS project*

Principal investigator: Evan Wood

Co-investigators: Jane Buxton; Scott E. Hadland; Richard P. Harrigan; Thomas H. Kerr; Brandon D. Marshall; Julio S. Montaner; Thomas L. Patterson; Élise Roy; Kate Shannon; Jean A. Shoveller; Steffanie A. Strathdee; Mark W. Tyndall

Abstract: This research will address the urgent challenge of illicit drug use among street-involved youth. By studying a large group of street-involved youth in Vancouver, we will acquire the evidence-based information necessary to inform appropriate responses to this health crisis locally, nationally and internationally. Specifically, the project will examine patterns of illicit drug use and the risk environment in which they are used, and evaluate their effects on initiation of injection drug use, sexual risk behaviour, and incidence of hepatitis C and HIV among a cohort of 500 street-involved youth from 14 to 24 years of age. The study will investigate not only individual circumstances but also social, structural and environmental influences on risk behaviour. For instance, the study will assess specific factors such as homelessness and sex-trade involvement on sexual and drug risk-taking and infectious disease incidence, with the aim of informing pragmatic intervention strategies. The study will be carried out by inviting youth to conduct a standardized survey every six months for five years. The knowledge gained through this research should prove useful in guiding HIV and hepatitis C prevention measures, as well as initiatives to prevent the initiation of injection drug use among youth. Street youth represent one of the most vulnerable populations in Canada, and research to determine how to reduce harm among this population will be of benefit to all Canadians.

Dates: April 2010–March 2015

Funding program: CIHR Operating Grant

Source: CIHR database

PROJECT R27

Title: *Investigating determinants of injection drug use initiation among street youth in Vancouver*

Principal investigator: Daniel M. Werb

Co-investigators: Evan Wood; Jane Buxton

Abstract: While significant resources have been devoted to reducing the size and scope of illicit drug markets, recent data suggests that drug use and other drug-related behaviours such as drug dealing continue to occur at high rates in areas where these markets are located. Because HIV and other blood borne diseases are transmitted through injection drug use, research has focused on preventing the initiation of such behaviours. Of particular concern, then, is that research suggests that proximity to a drug market may increase the risk of initiation of illicit drug use and the initiation of drug dealing among vulnerable populations such as street youth. The proposed research project consists of an investigation of the factors that make individuals in vulnerable populations such as street youth more likely to engage in drug dealing. As well, this project will also investigate the factors that influence individuals entrenched in a drug market scene to cease both drug dealing and injection drug use. This investigation will use data collected among illicit drug users and street

youth in Vancouver over three years. By focusing on initiation into drug dealing and cessation of drug dealing, it is hoped that this research will allow for the development of effective interventions aimed at preventing drug market involvement. Further, by focusing on the factors that affect cessation of drug use and drug market involvement, this investigation will also provide a framework within which to develop interventions targeted towards entrenched drug market participants. Given the intimate relationship between drug dealing and drug use at the street level in Vancouver and other Canadian urban areas, a project investigating both of these phenomena, and the way that they interact, will provide important findings that have implications for the development and implementation of a wide range of public health interventions.

Dates: September 2010–August 2013

Funding program: CIHR Frederick Banting and Charles Best Canada Graduate Scholarships-Doctoral Award

Source: CIHR database

PROJECT R28

Title: *Investigating population-level interventions to improve youth sexual health*

Principal investigator: Jean A. Shoveller

Co-investigators: Mark P. Gilbert; Thomas H. Kerr; Marc Levine; Gina S. Ogilvie; John L. Oliffe; Kate Shannon; Judith A. Soon; Jessica Yee

Abstract: The proposed research program focuses on investigating population-level interventions affecting youth sexual health (ages 12–24) within and outside of the health sector. Across Canada, many young people experience serious health and social problems related to sexually transmitted infections (STIs) and unwanted pregnancies. Despite public health efforts, STI rates among youth are high and rising; and, while teen pregnancy rates are levelling off within the population in general, the health and social impacts of these problems manifest disproportionately among vulnerable populations. Moreover, as sexual health inequities grow, conventional interventions appear to be increasingly disconnected from youth's primary prevention needs, especially the needs of vulnerable sub-groups of youth. Our research program is integrated within a set of established and growing partnerships amongst researchers (UBC; BC Centre for Excellence in HIV/AIDS) and our collaborative linkages with: (a) the public health system (e.g. BC Centre for Disease Control; Regional Health Authorities); (b) decision-makers in sectors other than health (e.g. education; social services; employment; housing); and (c) relevant NGOs and youth-led organizations (e.g. OPTions for Sexual Health BC; YouthCO AIDS Society; Native Youth Sexual Health Network). Together, we will launch multiple studies that are conceptually linked and will be implemented over the next five years, with the components of our proposed studies necessarily (and beneficially) informing one another to: 1) identify the mechanisms through which population-level interventions enhance or detract from youth sexual health; 2) describe how population-level interventions can be scaled up effectively to avoid exacerbating existing sexual health inequities, particularly amongst vulnerable sub-groups of youth; 3) assess the relative impacts on youth sexual health of population-level interventions within and beyond the health sector.

Dates: November 2010–March 2011

Funding program: CIHR-Operating Grant-Programmatic Grants to tackle health and health equity

Source: CIHR database

PROJECT R29

Title: *Learning from the voices of youth: A participatory research study exploring the HIV and HCV prevention needs of youth who smoke crack*

Principal investigator: Lynne E. Leonard

Abstract: This research is driven by the expressed need of community partners for age-specific data relating to the HIV- and HCV-related prevention needs of youth who smoke crack. The lack of targeted health care and HIV and HCV prevention support services for people who smoke crack is particularly concerning considering the epidemiologic evidence demonstrating escalating engagement in crack smoking and virologic evidence documenting the HIV- and HCV-related risks associated with this practice. Street-involved youth are particularly vulnerable to crack use initiation. In Ottawa, 64% of street-involved youth reported using crack and/or cocaine without injecting. Youth engagement is an essential component of this project, as it is through the knowledge provided by youth that we will create the research tools, develop effective recruitment strategies, appropriately understand the research findings and design a targeted plan for the dissemination of findings. As such, youth under 25 who have experience with crack (direct or indirect) will be recruited to join the Project Team, which will serve as a working group to inform the research process and ordering of priorities. As a component of each Project Team meeting, youth will participate in a guided debriefing session in order to provide them with a safe space to share their feelings, reflect on their experiences in the meetings and make suggestions for ways of improving the process. This study will employ a sequential mixed methods design. We will use qualitative interviews to gather the perspectives of youth who have been identified as holding insight into the particular risk environments occupied by certain groups of youth who smoke crack. This data will inform the development of the quantitative analysis plan and survey tool. We will then carry out a quantitative survey to document engagement in HIV- and HCV-related risk behaviours and practices that may place youth who smoke crack at risk of HIV and HCV infection.

Dates: April 2011–March 2014

Funding program: CIHR Operating Grant-HIV/AIDS CBR Program-General

Source: CIHR database

PROJECT R30

Title: *Place and experiences of risk among young drug users in downtown Vancouver*

Principal investigator: Danya Fast

Co-investigator: Thomas H. Kerr

Abstract: Illicit drug use is associated with severe harms among youth. In Vancouver, recent epidemiological research has revealed alarming rates of mortality as well as HIV and HCV incidence among drug using youth. These problems persist despite the recent establishment of an array of youth services, including various harm reduction programs. While there is growing recognition that contextual factors play a central role in determining high-risk drug using behaviour, there exist few in-depth investigations of drug using contexts or 'scenes' that focus on the perspectives of young drug users. Such an approach is critical to the development of meaningful policy and program interventions that seek to address the severe and preventable suffering among drug-using youth. The proposed study will employ qualitative ethnographic methodology to explore young people's understandings of the structural, social and physical landscape of the downtown Vancouver drug

scene, and how this environment shapes experiences of safety and risk among drug using youth. Although new lines of inquiry are likely to emerge as the research progresses, the primary objectives of this study are: 1) to examine how young drug users are initiated into and come to understand the downtown Vancouver drug scene; 2) to examine how this landscape shapes experiences of risk (including HIV risk behaviour, drug-related harms and physical violence) among young people, and alternatively, how it facilitates situations of safety; and 3) to examine the effects of spatial exclusion as a result of urban revitalization and gentrification on experiences and understandings of safety and risk. By exploring each of these objectives, this study aims to identify those aspects of this 'risk environment' that mediate harm among young drug users, and are therefore relevant to policy and program intervention.

Dates: September 2009–August 2012

Funding program: CIHR Vanier Canada Graduate Scholarships

Source: CIHR database

PROJECT R31

Title: *Primary HIV prevention research in marginalized communities*

Principal investigator: Neil Andersson

Co-investigators: Chris P. Archibald; J. K. Barlow; Douglas A. Coyle; Nancy L. Gibson; Beverley J. Shea

Abstract: Primary HIV prevention involves reduction of risk factors for HIV prevention in the first place. This Centre will develop research methods and capacity for primary HIV prevention, focussing particularly on resilience in Aboriginal youth and in marginal communities. It will develop primary prevention interventions for these settings, test and implement decision aids to support translation of primary HIV prevention research into effective prevention policies.

Dates: September 2008-December 2008

Funding program: CIHR HIV/AIDS Population Health and Health Services

Source: CIHR database

PROJECT R32

Title: *La promotion de la santé sexuelle et reproductive, incluant la prévention du VIH-sida, soutenue par les technologies de l'information et des communications: une étude de faisabilité chez les Premières Nations* (Promotion of sexual and reproductive health, including HIV/AIDS prevention, supported by information and communications technologies: A feasibility study among First Nations)

Principal investigator: Roy Bernard

Co-investigators: Marie-Pierre Gagnon, Nancy Gros-Louis

Abstract: There is great inequality in the distribution of prevalence rates of sexually transmitted diseases (STDs) and HIV/AIDS in Canada. Such rates can be up to 10 times higher among First Nations than in the population as a whole. This is why STDs and HIV/AIDS are a priority for the *Quebec First Nations Health and Social Services Blueprint 2007–2017*. The approach and interventions seem to focus more on adherence to antiretroviral treatment on the part of

persons living with HIV, and secondary rather than primary prevention. However, the situation of adolescents and young adults with respect to sexuality is a concern despite the many interventions aimed at this segment of the population. The younger generation's familiarity with information and communications technologies, or ICT, provides a highly promising opportunity in the area of sexual and reproductive health promotion, including STD/HIV/AIDS prevention in First Nations adolescents and young adults. However, developing effective interventions using ICT requires solid scientific evidence. To reduce the above-mentioned inequalities, the project will involve planning and conducting a feasibility study in close collaboration with the First Nations of Quebec and Labrador Health and Social Services Commission. In this initial phase of the partnership, the needs of the organization will be evaluated, and it will be prepared and supported in developing interventions using ICT to promote sexual and reproductive health and preventing HIV/AIDS among adolescents and young adults in Quebec and Labrador First Nations communities.

Dates: March 2011–February 2012

Funding program: CIHR Catalyst Grant: HIV/AIDS Community Based Research Program—Aboriginal Stream

Source: CIHR database

PROJECT R33

Title: *Online STI testing and youth*

Principal investigator: Jean Shoveller

Co-investigators: Mark P. Gilbert; Gina S. Ogilvie; John L. Oliffe

Abstract: New interventions, such as British Columbia's Online Sexual Health Services Program (OSHSP), are being launched to complement existing face-to-face clinical services, in the hopes that they may improve youth participation in STI/HIV testing. Seeking STI testing remains a deeply stigmatized behaviour, a reality that is unlikely to be fully remedied by online services (e.g. face-to-face enactments of gendered stereotypes can also be represented online through a text-based medium). Unfortunately, we do not yet fully appreciate how important social factors (e.g. social norms; stereotypes about men's and women's responsibilities for sexual health) affect experiences with online STI testing (particularly within vulnerable subgroups of youth). Thus, the proposed study will seek to better understand youth's perspectives on the ways in which important aspects of their social contexts (e.g. stigma; gendered stereotypes) affect their engagement in this and other sexual health promotion activities. Multiple data collection and analysis techniques will be used (e.g. focus groups and individual in-depth interviews; a Youth Roundtable to refine analysis from focus groups and individual interviews and a Youth Working Group will be formed to provide insights into the development and design of the look, feel and content of website). Throughout the project, a series of "Reality Checks" with youth also will be used to obtain feedback on emerging versions of the website, with a particular emphasis on checking in with vulnerable subgroups of youth. The proposed two-year study will be conducted in Greater Vancouver, and will adopt participatory approaches. Together, we will use new information gathered during our study inform the development and design of an online STI testing service in British Columbia.

Dates: October 2010–September 2012

Funding program: CIHR Operating Grant

Source: CIHR database

PROJECT R34

Title: *Protective factors associated with preventing injection drug use initiation among at-risk youth in Vancouver, British Columbia*

Principal investigator: Catharine Chambers

Abstract: Street youth—15- to 24-year-olds without a permanent residence – are at considerable risk for acquiring HIV and hepatitis C due to participation in high-risk activities such as injection drug use (IDU) and sex trade work. In comparison to their older counterparts, street youth who use injection drugs are at greater risk for blood borne infections because of their lack of experience: they are more likely to share needles and other drug equipment, and they are more likely to initially require a friend or acquaintance to inject them, decreasing their control over the use of clean equipment. In addition to the risk for HIV and hepatitis C infection, initiation of IDU at a young age is associated with participation in sex trade work, binge drug use events, criminal activity, and long-term injection drug use. While most research concerned with IDU in street youth populations examines high-risk behaviours for HIV and hepatitis C infection, few studies have investigated factors that prevent street youth from initiating IDU. Catharine Chambers' research aims to determine why certain street youth are resilient to IDU initiation and, for those youth who have experimented with injection drugs, why they initiated IDU and what can potentially prevent them from transitioning into regular users. She hypothesizes that stable relationships with primary caregivers, social support networks separate from the street community, and absence of criminal activity may provide resilience from IDU initiation. Chambers' findings will inform the development and implementation of prevention programs to reduce initiation of injection drug use among Vancouver's street youth. Ultimately, this could reduce the prevalence of blood borne infections, HIV and hepatitis C, in these high-risk groups.

Dates: 2008 and September 2008–August 2009

Funding programs: MSFHR Research Trainee Award, Junior Graduate Studentship and CIHR Frederick Banting and Charles Best Canada Graduate Scholarships-Master Award

Sources: MSFHR and CIHR databases

PROJECT R35

Title: *Research for injection drug use prevention: Exploring risk and resiliency among adolescent Aboriginal women who use drugs in British Columbia*

Principal investigator: Caroline Miller

Co-investigators: Wayne M. Christian; John D. O'Neil; Margo E. Pearce; Chris G. Richardson; Martin T. Schechter; Patricia M. Spittal

Abstract: Recent groundbreaking work in Canada has shown that, among young Aboriginal people, vulnerability to HIV, HCV and injection drug use rests among young women. Moreover, epidemiological evidence regarding vulnerability to these three conditions among young Aboriginal women suggests that historical traumas may be colluding with more recent traumas including homelessness, sexual abuse and survival sex work. However, there remains a dearth of evidence regarding effective drug prevention programs and policies for adolescents generally, and much less for young women who may be coping with multi-layered traumas. The proposed research seeks to address the paucity of young Aboriginal women's voices in drug use prevention by building on a unique and strong Aboriginal research partnership in British Columbia, Canada to contribute new

evidence regarding risk and resiliency to injection drug use among at-risk (defined as using illicit drugs in the previous month other than marijuana) Aboriginal adolescent (aged 14–19 years) women. To accomplish this we will utilize ethnographic methods to qualitatively explore the following four objectives: investigate the relationships between trauma, resiliency and transitioning to injection drug use; examine the intersection between cultural safety and harm reduction; explore the role of specific drugs and their respective transition trajectories; and synthesize the evidence to develop a framework for action towards the prevention of injection drug use for at-risk adolescent Aboriginal women. This research will generate much needed evidence to inform drug prevention policy targeted towards those most at risk in Canada.

Dates: March 2011–February 2012

Funding program: CIHR Operating Grant-Priority Announcement-Gender, Sex and Health Research

Source: CIHR database

PROJECT R36

Title: *Safe n Sexy: Use of sexual health services by street-involved youth in Hamilton, Ontario*

Principal investigators: Sandra Bullock; Adrian Betts

Abstract: not available

Date: 2009

Funding program: OHTN Grants

Source: OHTN database

PROJECT R37

Title: *Sexual health matters: Concerns of HIV+ adolescents and young adults*

Principal investigator: Tamara Landry

Co-investigator: William Fisher

Abstract: Background: HIV+ youth face vulnerabilities such as stigma, emotional or sexual disturbance, compromised immune systems, alcohol/substance use and risk of sexually transmitted infections. A number of these vulnerabilities may be enhanced by the very act of self-disclosure of HIV. Few Canadian studies have explored HIV+ youths' experience with disclosure of HIV status, or compared the experience of youth infected at birth to youth infected during adolescence. In Canada there are no existing health promotion guidelines or "disclosure scripts" on how to assist HIV+ youth to disclose (or not) their HIV status. Objectives: This study explores: a) the experience of disclosure of HIV+ status of a diverse group of Canadian HIV+ youth infected at birth or during adolescence; b) the impact of disclosure on their sexual health; c) their access to available support services. It compares HIV disclosure experience of HIV+ youth infected at birth or infected during adolescence to identify key distinctions. Methodology: In June 2010, a youth advisory committee identified key themes, and helped develop interview questions. Up to 48 HIV+ youth from London, Toronto and Vancouver, 14–29 years of age, will be participating in in-depth interviews with ethics clearance from the University of Western Ontario. Using a phenomenological approach, data analysis will describe and catalogue the lived experience of the participants. Themes and patterns will be compared across all transcripts to describe individual and collective experiences. Relevance

and potential impact: This research is intended to advance knowledge to help create and implement education, support and prevention programs tailored specifically to the sexual health and health status disclosure concerns of HIV+ youth, as well as minimize the risk of HIV transmission and protect the health of HIV+ and HIV- individuals. Education programs designed with the assistance of HIV+ youth can help to facilitate an approach to disclosure with which they can feel comfortable to discuss their health status with health care providers, intimate friends and partners.

Dates: 2009–2010

Funding program: OHTN Studentship Award

Source: OHTN database

PROJECT R38

Title: *Social exclusion and the health and wellbeing of gender and sexual minorities*

Principal investigator: Robb Travers

Abstract: HIV has been shown to disproportionately affect groups that experience social exclusion, and in Canada, a strong case has been made to understand HIV in its social context. The Canadian Public Health Association notes that poverty, homelessness, stigma, addiction, violence, untreated mental health problems, lack of employment opportunities, powerlessness, lack of choice, lack of legal status and lack of social support create environments in which HIV and other illnesses flourish and spread. Very little Canadian health research has focussed on understanding the health issues and health care needs of two marginalized populations: transgendered and transsexual individuals as well as lesbian, gay, bisexual and transgender youth. Drawing on a social-determinants-of-health framework, this five- year program of research will focus on exploring the role that social exclusion plays in shaping health outcomes, and healthcare access barriers for gender and sexual minorities. Given the dearth of information addressing the needs of these populations in the Canadian context, a significant emphasis of this research program will be on identifying factors that will: 1) lead to improved health outcomes; 2) help to ameliorate service access barriers; and 3) help to overcome vulnerability by fostering personal resiliency. The program of research will be community-based and collaborative, involving a number of community agencies and service providers as partners. In addition, this research program will include significant opportunities for student mentoring. This will help to support the development of a new generation of researchers in Ontario able to work collaboratively with community partners and other stakeholders to impact this epidemic. A key goal of the research program will be to prioritize knowledge transfer and exchange initiatives that get data into the hands of decision makers who need them.

Dates: July 2011–June 2016

Funding program: New Investigator Award-Priority Announcement-HIV/AIDS Services/ Population Health Research

Source: CIHR database

PROJECT R39

Title: *Socio-cultural and individual determinants of accessing sexual health services among young adults*

Principal investigator: Bojana Petrovic

Co-investigators: Farah Ahmad; Trevor A. Hart

Abstract: Worldwide, young adults between the ages of 15 to 24 account for 45% of new HIV infections each year (UNAIDS, 2008). Among young adults in Canada between the ages of 15 to 19, women comprise more than half of the new HIV positive cases (Public Health Agency of Canada, 2007). Previous research evidence has demonstrated that members of ethnic and religious minority groups and immigrants experience barriers to accessing sexual health services. This study will examine how psychological and cultural factors affect access to appropriate services among a sample of undergraduate students, and whether these barriers are associated with gender.

Dates: September 2010–August 2011

Funding program: CIHR Frederick Banting and Charles Best Canada Graduate Scholarships-Master Award

Source: CIHR database

PROJECT R40

Title: *Strengthening community-based approaches to HIV/AIDS education, screening, and treatment among Canadian Inuit youth*

Principal investigators: Jeanette Doucet; Jacqueline C. Gahagan; Aideen F. Reynolds; Audrey Steenbeek

Co-investigators: Chris P. Archibald; Pitsulala S. 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 tends to get lost among Aboriginal or broader Canadian statistics and underrepresents 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 from 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

Funding program: CIHR HIV/AIDS Community-Based Research Program-Aboriginal-Catalyst Grant

Source: CIHR database

PROJECT R41

Title: *Taking Action: Using arts-based approaches to developing Aboriginal youth leadership in HIV prevention*

Principal investigator: Sarah Flicker

Co-investigators: Jeanette Doucet; Randy Jackson; June A. Larkin; Claudia Mitchell; Tracey Prentice; Jean-Paul Restoule; Melanie M. Rivers

Abstract: Aboriginal youth are overrepresented in the Canadian HIV epidemic. Arts-based approaches to engaging youth in health promotion activism have been effective locally and globally. With this in mind, several community partners and academic researchers have collaboratively developed this research grant application. The goal of this study is to engage Aboriginal youth in HIV prevention leadership using art-based approaches. Specific objectives include: (1) to explore how Aboriginal youth link structural inequalities with individual risk, HIV and Aboriginal culture(s) using art-based methodologies; (2) to investigate the efficacy of art-based methods models of engagement (e.g. hip-hop, video/photographic documentary, popular theatre, music and/or dance, etc.); (3) to build youth capacity to address HIV issues in their local communities; (4) to develop and disseminate community-specific "by youth for youth" HIV prevention and support materials; and (5) to create a national digital repository of "by youth for youth" HIV prevention materials. Embedded and underlying each of these goals and objectives, is respect for the principles of Ownership, Control, Access and Possession (OCAP). The research team will partner with six local communities in different regions of the country to co-sponsor "Taking Action" workshops. These will each have HIV educational and cultural production components where participants will be afforded opportunities to develop projects that unpack the links between structural inequalities, individual HIV risk, and Aboriginal culture(s). Post-workshop, participating youth will be interviewed individually and asked to reflect on key knowledge gained and how their artistic productions are embedded in structural realities. Interviews and media will be qualitatively analyzed for thematic content. Results will be disseminated in academic and community-accessible formats.

Dates: April 2008–March 2011

Funding programs: CIHR HIV/AIDS Community Based Research Program-Aboriginal-Operating Grant and OHTN Grants

Sources: CIHR and OHTN databases

PROJECT R42

Title: *Taking Action II: Fostering Aboriginal leadership in HIV prevention using arts-based methods*

Principal investigator: Sarah Flicker

Co-investigators: Jessica Yee; Randy Jackson; June A. Larkin; Claudia Mitchell; Vanessa J. Oliver; Tracey Prentice; Jean-Paul Restoule

Abstract: OBJECTIVES: (1) to understand what inspires some young people to become active around HIV prevention in their communities; (2) to explore digital storytelling as a strategy for increasing Aboriginal youth activism in HIV prevention; (3) to develop and disseminate community-specific "by youth for youth" HIV prevention and support materials. METHODS: Stage 1: We will invite Aboriginal youth from across Canada to apply to "tell their stories" about HIV leadership, activism and engagement. We will select youth (n=20; ages 16–25) to ensure representation from

all regions of the country. These youth will be welcomed to a week-long workshop at which they will be taught digital storytelling skills and provided assistance to create short (3–5 minute) films that tell their unique stories (in their own words and languages) about how and why they became involved and engaged in HIV prevention. Following the creation of these stories, each youth will be interviewed about their film and why they became HIV leaders and activists. Stage 2: Each youth leader/film maker will be asked to organize a screening of their film in their own community with other youth, elders and community members. Following the film, a facilitated discussion will ensue about the impact of HIV on Aboriginal communities, why it is so difficult to talk about and what might inspire others to become leaders. ANALYSIS: We will analyze all of the digital stories collected, and all of the interviews and facilitated discussions. DISSEMINATION: In addition to disseminating findings through traditional academic media, youth productions will also be shared online. We will create community-friendly packages with a copy of the DVD that has all the stories, a manual and a discussion guide for others seeking to screen the stories.

Dates: April 2011–March 2014

Funding program: CIHR Operating Grant-HIV/AIDS CBR Program-Aboriginal

Source: CIHR database

PROJECT R43

Title: *Teens resisting urban transphobia and homophobia (TRUTH)*

Principal investigator: Heidi H. Newton

Co-investigator: Robb Travers

Abstract: not available

Dates: September 2009–August 2011

Funding program: HIV/AIDS Community Based Research Program-General-Master Award

Source: CIHR database

PROJECT R44

Title: *The Cedar Project: A comparison of the sexual vulnerabilities of young Aboriginal men and women surviving drug use and sex work in Prince George and Vancouver*

Principal investigator: Negar Chavoshi

Co-investigator: Patricia M. Spittal

Abstract: This research will be conducted in collaboration with the *Cedar Project*; an ongoing prospective cohort study involving at-risk Aboriginal young people aged 14–30 who reside in Vancouver and Prince George, British Columbia, who either smoke or inject illicit drugs. For the PhD program, I propose to utilize time-series analyses to investigate predictors of transitioning to positive hepatitis C (HCV) status, becoming HIV positive and barriers to HIV/AIDS treatment access over time among the Cedar cohort. Appropriate time series models will adjust for significant predictors to determine which risk factors are independently associated with HIV seroconversion. The equivalent modeling will be conducted for all participants who seroconverted to HCV. The *Cedar Project* addresses a paucity of information on sexual vulnerabilities among Aboriginal young

people. My study findings will be brought back to the affected Aboriginal communities and federal/provincial authorities including Chief and Councils. Project partners will have the leading role in developing recommendations for programming and policy to reduce HIV and HCV infection risks. These will be derived from study evidence regarding the determinants of sexual and drug use vulnerabilities to meet the needs of the at-risk Aboriginal young people and their communities. Future studies will deliver meaningful research for the Aboriginal councils who use the findings for general planning of services and evaluating the efficacy of programs. My work for the *Cedar Project* will contribute to the capacity for Aboriginal service providers to raise awareness, identify needs, advocate for adequate resources, and develop an HIV/AIDS strategy that respects and integrates traditional and cultural values and beliefs of individuals, families and communities with mainstream HIV and HCV prevention and treatment, while taking into account determinants of health vulnerabilities of the cohort.

Dates: 2008–April 2009 and September 2009–August 2012

Funding programs: CIHR HIV/AIDS Community Based Research Program-Aboriginal-Master Award and CIHR Doctoral Research Award-HIV/AIDS Community Based Research-Aboriginal Stream

Source: CIHR database

PROJECT R45

Title: *The Cedar Project: Exploring HIV and hepatitis C vulnerabilities among young Aboriginal drug users in three Canadian cities*

Principal investigators: Patricia M. Spittal; Martin T. Schechter

Co-investigators: Catherine P. Baylis; Russell C. Callaghan; Wayne M. Christian; Kevin J. Craib; Patricia A. Janssen; David C. Marsh; Akm Moniruzzaman; Christopher H. Sherlock; Mary P. Teegee; Eric M. Yoshida; Reinhard M. Krausz; Caroline Miller; Eugenia Oviedo-Joekes; Chris G. Richardson

Abstract: During the past decade the number of Aboriginal people diagnosed with HIV in Canada has grown more than any other ethnicity. Although Aboriginal people comprise only 4% of British Columbia's population, they represent more than 13% of all positive tests. Whereas the majority of infections are related to injection drug use, factors that explain elevated risk and transmission of HIV among Aboriginal young people who use illicit drugs are not well understood. The *Cedar Project* is an observational study addressing HIV and HCV related vulnerabilities of Aboriginal young people living in Vancouver, Kamloops and Prince George, British Columbia. We have recently identified concerning rates of both HCV and HIV infection, transition to injection and crystal methamphetamine use. Having an established cohort designed and implemented with Aboriginal partners and investigators now allows us the opportunity to expand our work to include identification of resiliency and protective factors from the perspectives of Aboriginal young people and focus in particular on a case management intervention aimed at increasing utilization of HIV care among HIV positive Cedar participants.

Dates: July 2005–June 2010 and October 2006–September 2009 and April 2009–March 2012

Funding programs: CIHR New Investigator in the Area of Gender and Health Research and CIHR Operating Grant; HIV/AIDS Research Initiative-Health Services/Population Health Stream and CIHR Operating Grant

Source: CIHR database

PROJECT R46

Title: *The Cedar Project: Exploring resiliency and its influence on HIV vulnerability among young Aboriginal people who use drugs in two Canadian cities*

Principal investigator: Brittany L. Bingham

Co-investigator: Julian Somers

Abstract: The increasing rates of HIV among young Aboriginal people in British Columbia are deeply concerning. Few studies have investigated the role that historical trauma plays in HIV vulnerability of young Aboriginal people who use drugs. A holistic resiliency approach is a critical component of re-building healthy families and communities that have been heavily impacted by the effects of colonization, including multigenerational trauma. It is unknown how Aboriginal young people who use drugs define resilience for themselves. The *Cedar Project* is a cohort study of Aboriginal young people who use drugs in two Canadian cities. The proposed study will utilize mixed methods to investigate the impact of resiliency on HIV vulnerability among Aboriginal young people who use drugs. Through quantitative and qualitative inquiry the influence of structural factors, age, gender and trauma on young people's perceptions of resilience will be explored. It is hypothesized that structural factors, trauma, resiliency, age and gender are significant determinants of HIV vulnerability for Aboriginal young people. Through ethnographic interviews of *Cedar Project* participants the relationship between protective-resiliency and risk factors for HIV will be investigated. The proposed study aims to provide recommendations for fostering resiliency and preventing HIV vulnerability among Aboriginal young people who use drugs.

Dates: January 2011–December 2013

Funding program: CIHR Doctoral Research Award-HIV/AIDS Community Based Research-Aboriginal Stream

Source: CIHR database

PROJECT R47

Title: *The Cedar Project Leadership Forum: Acknowledging the pain of our children*

Principal investigator: Patricia M. Spittal

Abstract: The *Cedar Project* is an ongoing initiative addressing HIV and HCV vulnerability young Aboriginal people who use drugs in three Canadian cities. It is the first and only study of its kind in North America. One of the most disastrous outcomes of the legacy of historical trauma among Aboriginal people has been a higher rate of HIV and other infectious diseases among young Aboriginal people who use drugs. Since the study's inception, an Aboriginal partnership has led the *Cedar Project*. The Partnership has been planning *The Cedar Project Leadership Forum: acknowledging the pain of our children*. Using funding from a CIHR-Institute of Aboriginal People's Health Meetings, Planning and Dissemination grant, this event will provide an opportunity for translating *Cedar Project* information and dialogue on the subject of healing multigenerational trauma among young Aboriginal people. Leadership involved in the Partnership has committed to seek additional funding for the Forum. The Partnership has also emphasized the necessity of holding a preliminary meeting for knowledge transfer, planning, preparing and organizing the *Cedar Project* Leadership Forum. Part of the grant will be used to carry out this meeting. Meeting 1: Preparatory Gathering With support from the grant, *Cedar Project* partnership and investigators will gather in Vancouver in September 2008. This preliminary meeting will allow the partnership to carry out

important organizational tasks in preparation for the Forum. Meeting 2: The Cedar Project Leadership Forum In addition to funds raised by the partnership, the remainder of the grant will go toward the forum taking place in Vancouver, February 2009. This event will include voices of Aboriginal and non-Aboriginal leadership, Aboriginal youth delegates, law enforcement and justice, child welfare representatives, Aboriginal HIV/AIDS and health service organizations, health research scientists and other academics.

Dates: September 2008–August 2009

Funding program: CIHR Meetings, Planning and Dissemination Grant-Knowledge Translation

Source: CIHR database

PROJECT R48

Title: *The Cedar Project: Your voice making a difference*

Principal investigator: Patricia M. Spittal

Abstract: It is the aim of *Cedar Project* studies to provide an evidence base for Aboriginal communities, service providers, leaders and decision makers who support healthy community responses to healing and reconciliation. A critically important outcome of this research is to meaningfully translate knowledge gained from the research process and in turn to receive wisdom from the Partnership that will inform data interpretation and recommendations. In addition, an increasingly important part of *Cedar Project* knowledge transfer is the facilitation of the involvement of young Aboriginal people and elders in the sharing and discussion of study results. Finally, the Partnership has brought attention to the need for a newsletter that disseminates *Cedar Project* study findings and related community action, political discourse and media attention generated by the study. The newsletter would not only be a useful tool for translating *Cedar Project* findings to communities but also to let the young Aboriginal *Cedar Project* participants know that their voice is making a difference. With support from the CIHR Meetings, Planning and Dissemination Grant: Knowledge Translation Supplement, *Cedar Project* Partnership members, other Aboriginal social and health service organizations and Cedar Project scientific investigators will gather for a program of four meetings in The Cedar Project: Your Voice Making a Difference. The anticipated timeframe for the meetings is between May 2011 and January 2012. The proposed agendas and budgets for the meetings are attached to this grant application proposal. Additionally, a key deliverable of *The Cedar Project: Your Voice Making a Difference* program will be the development of *Cedar Project* newsletter. The newsletter will aid in the transfer and dissemination of results, community-based responses and media attention on *Cedar Project* research.

Dates: February 2011–January 2012

Funding program: CIHR Knowledge Translation Supplement

Source: CIHR database

PROJECT R49

Title: *Understanding the influence of early childhood sexual trauma and protective factors on incidence of HIV infection and other negative health outcomes among young Aboriginal people who use drugs in British Columbia*

Principal investigator: Margo E. Pearce

Co-investigator: Patricia M. Spittal

Abstract: OBJECTIVES: 1) to analyze gender differences of over time health outcomes related to antecedent sexual abuse, including incidences of social, physical and mental health issues, risk behaviours and HIV/hepatitis C infection (HCV), among young Aboriginal people who use drugs and participate in the *Cedar Project*; 2) to gain better understanding of what protective factors prevent greater negative health outcomes among *Cedar Project* participants who have experienced sexual trauma, such as injection drug use and sex work; 3) to address sexual trauma and protective factors within a global public health policy perspective that contributes to the health-determinants model of understanding young Indigenous people's health. HYPOTHESES: 1) trauma and resiliency are significant determinants of HIV and HCV seroconversion among young Aboriginal women and men participating in the *Cedar Project*; 2) young female participants who have experienced sexual abuse will be at greater risk for initiating sex work, injection opiate use and attempted suicide; 3) young male participants who have experienced sexual abuse will be at greater risk for incidence of incarceration, crystal methamphetamine and solvent use; 4) historical trauma among young Indigenous peoples must be addressed using a multidimensional approach at the individual, family, organizational, community and policy levels. METHODS: I will utilize data from the *Cedar Project*, an ongoing CIHR funded initiative that monitors HIV and HCV among over 600 young Aboriginal people aged 14–30 who use injection and non injection drugs in Vancouver, Prince George and Kamloops. Since 2003 the study has assessed demographic characteristics, historical and lifetime traumatic events, drug use patterns and sexual vulnerabilities among participants every six months. Quantitative and ethnographic methods will identify both risk and protective factors for harms associated with sexual abuse among male and female participants.

Dates: 2009 and September 2009–August 2012

Funding programs: MSFHR Research Trainee Award, Senior Graduate Studentship and CIHR Frederick Banting and Charles Best Canada Graduate Scholarships-Doctoral Award

Sources: MSFHR and CIHR databases

PROJECT R50

Title: *The social and structural contexts of HIV/STIs among women and youth working in the sex industry in Canada*

Principal investigator: Kate Shannon

Abstract: This new investigator award application aims to investigate the social (violence, work conditions) and structural (laws, regulations, urban renewal) contexts of HIV/STIs among youth and women working in the sex industry in Vancouver, British Columbia. The persistently high rates of health-related harms, violence and mortality among sex workers both in Canada and globally highlight a desperate need for renewed public health interventions targeting the reduction of harms in the sex industry. Building on international guidelines and the CIHR priorities for sex- and gender-based analyses, we will aim to evaluate longitudinally the broader risk environment that

shapes gendered negotiation of partner-level risk and HIV/STI acquisition among youth and adult women in sex industry work. To meet these objectives, the proposed research will be based upon the assembly and follow up of a real cohort consisting of: 1) 500 existing and new adult women working in both the street and indoor sex industry in the AESHA (An Evaluation of Sex Workers' Health Access) I cohort; and 2) 500 female youth aged 14–20 years who have exchanged sex for money, drugs, gifts, shelter or other commodities in the previous 30 days in the AESHA II cohort (youth arm). The novel integration of individual mapping data and neighborhood environment data from publicly available data sources (such as housing, violence) will increase the potential for directly informing interventions to reduce harm. To our knowledge this study is among the first prospective studies of sex work in North America. The team I have assembled brings a wealth of expertise in observational and intervention research, policy and sex work, and as such, is uniquely positioned to conduct this study, which aims to directly improve the health of some of the most marginalized youth and women in Canadian society.

Dates: July 2011–July 2016

Funding program: CIHR New Investigator

Source: CIHR database

PROJECT R51

Title: *The Vancouver injection drug users study: A programme of study of HIV and hepatitis C and other harms related to injection drug use*

Principal investigator: Evan Wood

Co-investigators: Patricia M. Spittal; Robert S. Hogg; Thomas H. Kerr; Julio S. Montaner; David M. Patrick; Martin T. Schechter; Mark W. Tyndall

Abstract: It is estimated that approximately 100,000 people inject illicit drugs in Canada and are experiencing an epidemic of drug-related harms. Fatal and non-fatal overdoses and assaults are extremely common. The prevalence of hepatitis C has reached in the order of 80% to 90% and HIV continues to spread. Moreover, it appears that specific vulnerable subgroups such as women, Aboriginal people and homeless people may be at even higher risk. The spread of HIV in drug users is the first step in a chain which leads to increasing HIV infection among injection drug users and their sexual partners. Strategies aimed at preventing these harms are the subject of considerable international attention. This study program will follow large numbers of people who inject drugs, and youth at risk of starting to inject drugs. This programmatic operating grant is to support a population-based prospective cohort study that will examine the impact of prevention, treatment, enforcement, and harm reduction strategies on rates of initiation into injection drug use among high-risk youth, and examine the impact of risk behaviours and service use activities on HIV and Hepatitis C infection and overdose mortality rates among active injection drug users. Only when we understand how this happens, can we design interventions that prevent injection drug use among young people who have not yet started to inject and that can stop and reverse the epidemic of harms among those who have.

Dates: April 2004–March 2009

Funding program: CIHR Operating Grant-Priority Announcement-HIV/AIDS Research Initiative-Health Services/Population Health Stream

Source: CIHR database

PROJECT R52

Title: *Understanding sexuality and sexual health among adolescents with physical disabilities: A narrative ethnography*

Principal investigator: Lauri East

Co-investigator: Treena R. Orchard

Abstract: Sexuality and physical disability is an aspect of health that is often overlooked, particularly when it comes to adolescents. While the research available in this area is limited, studies have shown that due to societal misconceptions and stigma, youth with physical disabilities show considerably lower levels of sexual knowledge compared to their able bodied peers. This lack of information and inadequate sex education puts these youth at a very high risk for sexual abuse, sexually transmitted infections, teen pregnancy and HIV/AIDS. This study will employ qualitative research methods, specifically narrative ethnography, in order to explore adolescent sexuality and disability. Narrative ethnography is guided by several different modes of data collection in order to examine a topic at both the individual and societal level. This is a particularly useful approach to discern locally constructed meanings, values, and discourses and is especially useful when exploring sensitive issues such as those under investigation. Currently, there is little qualitative research being undertaken on sexuality and disability within Canada; thus this project will provide vital base-line data for future research and program development in this area. The information generated by project will be of direct relevance to the development of resources that can improve education and communication strategies for discussing sexuality issues with youth who have a disability. These types of resources may include the development of curriculum guidelines for sex education, discussion guides for parents and teachers, policy recommendations, courses for health professionals and interactive, web-based resources for youth. By focusing on the perspectives of a marginalized group like adolescents with disabilities, this research also contributes to the empowerment of these youth as they struggle to obtain the knowledge and skills necessary to have safe, healthy and fulfilling relationships.

Date: September 2010

Funding program: CIHR Frederick Banting and Charles Best Canada Graduate Scholarships-Master Award

Source: CIHR database

PROJECT R53

Title: *Toronto Teen Survey: A community-based survey to assess sexual health services among diverse urban youth and develop a city-wide youth sexual health services access strategy*

Principal investigator: Sarah Flicker

Abstract: Canadian youth lack comprehensive knowledge of the risk factors associated with unprotected sexual activity and the necessary prevention skills required. Sexually transmitted infections (STI), including HIV/AIDS, pose a significant threat to the health and wellbeing of young people and improved youth access to information and appropriate prevention strategies are needed. The goal of the Toronto Teen Survey (TTS) is to increase health outcomes for youth aged 13–17 years by ensuring that services meet the needs of diverse communities living in Toronto. A Community-Based Research (CBR) model was used to engage teens in finding solutions to barriers they experience in accessing non-judgmental and relevant sexual health services. Diverse youth

completed 1,216 surveys exploring access to sexual health services. There have also been 13 focus groups conducted with 90 service providers from 55 agencies to discuss preliminary findings, and 14 focus groups with 108 youth to explore survey findings in greater depth. This is the largest and most diverse (85% of the sample is non-White) survey of its kind in Canada. TTS findings demonstrate that systemic barriers to youth access and uptake of sexual health services are experienced differently by age, gender, language, race and ethnicity, sexual orientation, immigrant/refugee status, socio-economic status and community membership. Community stakeholders have been engaged throughout the research process resulting in increased levels of project awareness and support from all stakeholders. A Youth Advisory Committee (YAC) of 20 youth received training to facilitate the 90 survey gathering and sexual health information sessions. Service providers have been engaged in analysis of preliminary data and community organizations will collaborate in the development of community specific bulletins to share in community forum settings. TTS findings will have an impact on communities at risk in the HIV epidemic and will include specific HIV/AIDS related recommendations. The TTS will contribute to HIV prevention efforts by promoting knowledge and exchange among key stakeholders involved in the fight against HIV. The OHTN has a significant interest in ensuring that research findings are shared and exchanged with stakeholders in ways that encourage networking, partnership, mobilization, action and change. Several of the 'research community bulletins' will be launched in partnership with local ASOs, targeting many of the communities vulnerable to HIV, as identified in the Ontario AIDS Strategy (including African and Caribbean youth, young MSM, and newcomers). The TTS team is committed to ensuring that findings have a direct and immediate impact on HIV and sexual health policy and programming and will implement a multi-faceted KTE plan between June 2009 and March 2010.

Dates: 2006–2008

Funding program: OHTN Grants

Source: OHTN database

PROJECT R54

Title: *KTE of the Toronto Teen Survey*

Principal investigators: Susan Flynn; Sarah Flicker; Robb Travers

Abstract: not available

Date: 2009

Funding program: OHTN Grants

Source: OHTN database

PROJECT R55

Title: *Winnipeg African refugee/immigrant youth and sexual health, sexually transmitted infections and HIV*

Principal investigator: Susan E. Frohlick

Co-investigators: Katie J. Dutfield; Paula Migliardi; Janice L. Ristock

Abstract: This project is aimed at exploring some of the issues affecting African immigrant and refugee male youth living in Winnipeg between the ages of 18 to 30. Specifically this research team hopes to facilitate a number of discussions around sexual health, STIs and HIV/AIDS for an underrepresented and socially and economically marginalized group living in urban Canada. We are interested in what effect, if any, social stigma, discrimination and racism have in the lives of this population and how it might impact how vulnerable to sexual health, STIs and HIV/AIDS they might be. It has come to the attention of this research team that in Winnipeg there is a lack of messaging, especially when it comes to HIV/AIDS. In Africa issues around sexual health, STIs and particularly HIV/AIDS are openly discussed. On the African continent where the prevalence of HIV/AIDS and STIs is so exceptional, the messaging around awareness, risk behaviour and treatment are all extremely visible. We are requesting these funds to help finance a series of four meetings that will help us ascertain a much better understanding of some of these issues within this population. Focussed discussions with the targeted research community will ensure that there is a collaborative and participatory methodology at work from the outset. A final online report and oral presentations will be used to disseminate the information as widely as possible. This research has far-reaching implications as no work has been done with this group in this field here in Winnipeg. In addition, possible research may be gathered that could be used to better target future public health campaigns or methods of treatment and care.

Dates: September 2009–August 2010

Funding program: CIHR Meetings, Planning and Dissemination Grant-Planning Grant-Priority Announcement-Institute of Infection and Immunity

Source: CIHR database

PROJECT R56

Title: *Young men and online STI/HIV testing services*

Principal investigator: Rodney E. Knight

Co-investigator: Jean A. Shoveller

Abstract: Rates of sexually transmitted infections (STI) and HIV are high among young people in Canada. However, young men's engagement with STI/HIV testing remains disproportionately low. The British Columbia Centre for Disease Control's (BC CDC) new Online Sexual Health Services Program (OSHSP) is developing online STI/HIV testing services in the hopes that it will improve young men's participation in STI/HIV testing. Understanding the processes by which the OSHSP can create new opportunities to meaningfully engage men in accessing STI/HIV testing services is therefore the fundamental aim of the proposed study. The findings from the proposed study will provide recommendations for tailoring the OSHSP to meet the needs of young men in British Columbia to improve young men's sexual health services. This study will: (1) examine young men's perspectives on the saliency, credibility and value of the emerging OSHSP; (2) describe and examine how men are represented (e.g. gender norms; sexuality) within the OSHSP; (3) use these perspectives to facilitate the development of recommendations for tailoring the OSHSP to accommodate the needs of young men; and (4) explore the differential effects of the OSHSP across potentially vulnerable subgroups of men and use this information to respond to their needs. The study will use a purposive sampling strategy to recruit participants (men ages 15–24) from a variety of socio-cultural backgrounds to ensure a wide variety of perspectives. There will be a particular emphasis recruiting young men who may be most vulnerable to the health and social

impacts of STIs/HIV (e.g. economically disadvantaged; men who have sex with men). A variety of qualitative data collection techniques will be used, including: in-depth, qualitative interviews (n=40); focus groups (4 groups with n=5 men); and a one-day participatory planning summit (n=12 men).

Dates: September 2011-August 2014

Funding program: CIHR-Doctoral Research Award-Priority Announcement-HIV Research

Source: CIHR database

PROJECT R57

Title: *Young people living with HIV: Resiliency factors and HIV-related stigma*

Principal investigator: Alexander L. McClelland

Co-investigator: Sarah Flicker

Abstract: This Community-Based Research (CBR) project with Positive Youth Outreach, the AIDS Committee of Toronto and York University aims to explore what factors enable an environment for healthy decision making and resiliency in the context of HIV-related stigma for young people living with HIV. The project seeks to better understand the individual, community, social and structural level factors that enable resiliency and healthy decision making among young people living with HIV in the context of significant HIV-related stigma. HIV-related stigma has significant and adverse effects on the health, quality of life, wellbeing and social support of young people living with HIV. The realities and fears of HIV-related stigma are felt intensely by young people living with HIV. HIV-related stigma has also been shown to impact access to services and adherence to antiretroviral therapy among young people living with HIV, as well as affecting self-esteem and depression levels. Better understanding how young people living with HIV respond to unique challenges and various forms of HIV-related stigma can assist in the development of relevant and effective interventions to address these factors. Using an asset-based, resiliency approach, a modified form of 'body mapping' methodology will be used to engage youth in identifying individual, community and institutional assets that enable resiliency in the face of HIV-related stigma. Body mapping is a process whereby people living with HIV are facilitated through a creative process of tracing, drawing and painting to depict pictures relating to their health, their history, their points of personal power and their life goals. Each resulting map tells a unique story that illustrates the impact of HIV on the body and the soul. Research outcomes will inform ongoing program development at PYO and other programs working with young people living with HIV.

Dates: September 2010–October 2011

Funding program: CIHR Master's Award-HIV/AIDS Community-Based Research-General Stream

Source: CIHR database

PROJECT R58

Title: *Youth, disability, HIV vulnerability and prevention*

Principal investigator: Sarah Flicker

Co-investigators: Marcia Rioux; Stephanie Nixion; Trevor A. Hart; June Larkin; Denise Nepveux; Robb Travers

Abstract: not available

Dates: 2007–2008

Funding program: CANFAR HIV/AIDS Research Grants

Source: CANFAR database

PROJECT R59

Title: *Youth HIV and sexual health education health programs in Canada: What's needed to enhance evaluation capacity?*

Principal investigators: June Larkin; Denise Jaworsky

Co-investigators: Jerri Clout; Sarah Flicker; Trevor Hart; Jesse Janssen; Alicia Jarvis; Henry Luyombya; Sarah Switzer

Abstract: not available

Dates: 2009–2010

Funding program: CANFAR HIV/AIDS Research Grants

Source: CANFAR database

APPENDIX C: COMMUNITY RESOURCES TARGETING YOUTH

Youth-specific networks, coalitions and advisory bodies

- Canadian Association for Adolescent Health (www.acsa-caah.ca)
- National Aboriginal Youth Council on HIV and AIDS (www.caan.ca)
- Native Youth Sexual Health Network (www.nativeyouthsexualhealth.com)

Time-limited projects (underway between 2009–2011) addressing HIV/AIDS among youth

NATIONAL

Assembly of First Nations National Youth Council (www.afnyouth.ca)

- **Project Y1:** Digital Stories on Sexual Health

Canadian Aboriginal AIDS Network (www.caan.ca)

- **Project Y2:** Culturally Appropriate Harm Reduction Program Development
- **Project Y3:** Youth Prevention Campaign

CATIE (www.catie.ca)

- **Project Y4:** National Network of Excellence in HIV/AIDS Knowledge Exchange

Society of Obstetricians and Gynaecologists of Canada (www.sogc.org)

- **Project Y5:** Advancement of Aboriginal Youth Materials on Sexuality and STI

BRITISH COLUMBIA

AIDS Vancouver Island (www.avi.org)

- **Project Y6:** 1-2-1: A Peer Training Network for Youth at Risk of HIV

Boys and Girls Club of Williams Lake and District (www.bgcwilliamslake.com)

- **Project Y7:** HIV/AIDS Prevention Program

Chee Mamuk Aboriginal Program
(www.bccdc.ca/SexualHealth/Programs/CheeMamukAboriginalProgram/default.htm)

- **Project Y8:** Star in Your Own Stories

Hiiye'yu Lelum (House of Friendship) Society (www.hofduncan.org)

- **Project Y9:** Kwam Kwum Súli: Strengthening the Spirit

Okanagan Aboriginal AIDS Society (http://bmairs.tripod.com)

- **Project Y10:** Youth Facilitators Boot Camp

Positive Women's Network (www.pwn.bc.ca)

- **Project Y11:** Women's Initiatives for Support and Education (WISE)

Western Canadian Pediatric AIDS Society (www.campmoomba.com)

- **Project Y12:** Camp Moomba

YouthCO (www.youthco.org)

- **Project Y13:** The Peer (Promoting an Effective Education Response) to Youth and HIV/AIDS Program

ALBERTA

NOTE: The Alberta Community Council on HIV (ACCH) is a provincial network of AIDS Service Organizations (ASOs) funded by Alberta Health and Wellness and the Public Health Agency of Canada. As a result of the third-party funding model in place in Alberta, the Public Health Agency of Canada does not have direct contribution agreements with ASOs in the province. This model suggests an alternative approach to funding as compared to other regions. Youth-specific programming is rolled up into the operational work of many of the organizations funded by Alberta Community HIV Fund (ACHF); there is no project funding stream in Alberta and, therefore, there are no youth-specific projects that are funded through the Public Health Agency of Canada's AIDS Community Action Program (ACAP). It is important to note that ASOs in the province provide education and outreach to youth as part of their general operations, but because of the structure just described, more specific information on youth specific projects and activities was limited.

AIDS Calgary Awareness Association (www.aidscalgary.org)

- **Project Y14:** Youth Outreach

First Nations and Inuit Health (Health Canada) Blood Borne Pathogens/STI Prevention Program

- **Project Y15:** DVD messaging project

HIV Edmonton (www.hivedmonton.com) and **Students' International Health Association (SIHA)** (https://alberta.collegiatelink.net/organization/siha)

- **Project Y16:** Think Positive, Test Negative

HIV West Yellowhead (www.hivwestyellowhead.com)

- **Project Y17:** Community Workshops
- **Project Y18:** Jasper: Enjoy Responsibly Campaign (with the Jasper Community Team: www.jaspercommunityteam.ca)

Three Eagle Wellness Society and **First Nations and Inuit Health (Health Canada) Blood Borne Pathogens/STI Prevention Program**

- **Project Y19:** "Expecting Respect" Annual Youth Gathering
- **Project Y20:** "Walking in Both Worlds" Youth Mentorship and Peer Training

SASKATCHEWAN

AIDS Programs South Saskatchewan (www.aidsprogramssouthsask.com) and **YEAH (Youth Educating About Health)**

- **Project Y21:** STI Testing Campaign

AIDS Saskatoon (www.aidssaskatoon.ca)

- **Project Y22:** Educational Sessions for Youth

All Nations Hope AIDS Network (www.allnationshope.ca)

- **Project Y23:** Annual Conference—Session on Youth

Battlefords Family Health Centre

- **Project Y24:** Circle of Change: Reducing Harm

Kikinahk Friendship Centre (www.kikinahk.com)

- **Project Y25:** Kikinahk Sexual Health and Drug Use Awareness Program

MANITOBA

Nine Circles Community Health Centre (www.ninecircles.ca)

- **Project Y26:** Focus groups with youth and youth at risk in Winnipeg exploring perceptions of risk for HIV and HCV

Play It Safer Network (www.playitsafer.ca)

- **Project Y27:** Play It Safer – Phase II Project

Sexuality Education Resource Centre Manitoba (www.serc.mb.ca)

- **Project Y28:** Little Black Book (LBB)
- **Project Y29:** Improving Access to Services by Immigrant and Refugee Communities in the Winnipeg and Brandon Regions

West Region Tribal Health Services (www.wrtchealth.com) and **Manitoba First Nations AIDS Working Group** (www.mfnawg.ca)

- **Project Y30:** Youth HIV/AIDS Conference

ONTARIO

519 Church Street Community Centre (www.the519.org)

- **Project Y31:** Trans Sex-Worker Outreach Project

Africans in Partnership Against AIDS (www.apaa.ca)

- **Project Y32:** HIV/AIDS Prevention, Education and Information

AIDS Committee of Cambridge, Kitchener, Waterloo & Area (www.acckwa.com)

- **Project Y33:** Community Education Program

AIDS Committee of Durham Region (www.aidsdurham.com)

- **Project Y34:** Healthy Sexuality Outreach Project

AIDS Committee of Guelph and Wellington County (www.aidsguelph.org)

- **Project Y35:** Wellington and Grey Bruce Rural Prevention/Outreach Program

AIDS Committee of Toronto (www.actoronto.org)

- **Project Y36:** Positive Youth Outreach: Health Promotion and Outreach to HIV-Positive Youth

AIDS Committee of York Region (www.acyr.org)

- **Project Y37:** Community Volunteer Program

Alliance for South Asian AIDS Prevention (www.asaap.ca)

- **Project Y38:** Desis Against HIV/AIDS
- **Project Y39:** Desis Men who Have Sex with Men

Asian Community AIDS Services (www.acas.org)

- **Project Y40:** Asian Youth-at-Risk Peer Outreach Project

Black Coalition for AIDS Prevention (www.black-cap.com)

- **Project Y41:** HIV/AIDS Prevention Community Investment Project

Young Adult Addiction Services

- **Project Y42:** Breakaway

Dixon Hall (www.dixonhall.org)

- **Project Y43:** Youth Leader Healthy Sexuality and AIDS Prevention Project

Ethiopian Association in the GTA and the Surrounding Regions (www.ethiocommun.org)

- **Project Y44:** Ethiopian Association HIV/AIDS Prevention Project

Eva's Initiatives for Homeless Youth (www.evasinitiatives.com)

- **Project Y45:** Youth Healthy Sexuality Project

HIV/AIDS Regional Services (www.hars.ca)

- **Project Y46:** Regional Prevention and Education Program

Jane/Finch Community and Family Centre (www.janefinchcentre.org)

- **Project Y47:** Breaking Down Barriers – HIV/STI Prevention and Sexual Health Promotion

J.D. Griffin Adolescent Centre (www.griffin-centre.org)

- **Project Y48:** sprOUT Sexual Health Info Project (SHIP)

LOFT Community Services (www.loftcs.org)

- **Project Y49:** Street Outreach Services

Malvern Family Resource Centre (www.mfrc.org)

- **Project Y50:** P.Y.T. (Photograph Your Thoughts)

Native Child and Family Services of Toronto (www.nativechild.org)

- **Project Y51:** Kwesk-iniwak Project (Aboriginal Youth AIDS Prevention)

Native Youth Sexual Health Network (www.nativeyouthsexualhealth.com)

- **Project Y52:** Normalizing Healthy Sexuality and Reducing Homophobia: Native Youth Photography Project

Ontario Aboriginal HIV/AIDS Strategy (www.oahas.org)

- **Project Y53:** Aboriginal Youth Peer Prevention Project

Ontario First Nations HIV/AIDS Education Circle (http://launch.ofnhaec.ca)

- **Project Y54:** Peer education training for youth

Pape Adolescent Resource Centre (www.parcyouth.com)

- **Project Y55:** Aware of Choices

Peterborough AIDS Resource Network (www.parn.ca)

- **Project Y56:** PARN HIV Education Program – Building Our Community Response

Planned Parenthood of Toronto (www.ppt.on.ca)

- **Project Y57:** The Positive Prevention Project: Developing Youth-led Strategies Supporting a Common Approach to HIV, Hepatitis C and STI Prevention

Prisoners with HIV/AIDS Support Action Network (www.pasan.org)

- **Project Y58:** Youth Outreach and Education Program

Réseau ACCESS Network (formerly: Access AIDS Network) (www.accessaidsnetwork.com)

- **Project Y59:** Community Education and Prevention Program
- **Project Y60:** Healthy Sexuality Program

Somali Immigrant AIDS Organization (http://webhome.idirect.com/~siao/)

- **Project Y61:** AIDS Prevention: Community Voice

Sudbury Action Centre for Youth (www.sacy.ca)

- **Project Y62:** Youth Drop-In Centre

Toronto People with AIDS Foundation (www.pwatoronto.org)

- **Project Y63:** Speakers Bureau

Yonge Street Mission's Evergreen Centre for Street Youth (www.ysm.ca)

- **Project Y64:** Dialogue on Sex and Life

Youthlink (www.youthlink.ca)

- **Project Y65:** HIV/AIDS Prevention Projects for Injection Drug Users

Youth Services Bureau of Ottawa (www.ysb.on.ca)

- **Project Y66:** HIV/AIDS and Hepatitis C Prevention Education Program

QUEBEC

Actions Sida Côte-Nord (www.ascn.qc.ca)

- **Project Y67:** Des ACTIONS… le SIDA… la CÔTE-NORD… notre CAUSE !

AIDS Community Care Montreal (www.accmontreal.org)

- **Project Y68:** Education and Prevention Initiatives

Bureau régional d'action sida (BRAS Outaouais) (http://lebras.qc.ca)

- **Project Y69:** Coordination du volet éducation à la prévention

Cactus Montréal (www.cactusmontreal.org)

- **Project Y70:** Projet d'intervention par les pairs auprès des jeunes de la rue du centre-ville de Montréal

Centre des R.O.S.É.S. de l'Abitibi-Témiscamingue (www.centredesroses.org)

- **Project Y71:** Ados-Cam « La prévention du VIH/sida »

Les Centres jeunesse de Lanaudière (www.centresjeunessedelanaudiere.qc.ca)

- **Project Y72:** Haut les voiles

Coalition sherbrookoise pour le travail de rue (www.travailderuesherbrooke.org)

- **Project Y73:** Projet de prévention des ITSS

Émiss-ère (www.emiss-ere.ca)

- **Project Y74:** Programme de consolidation organisationnelle
- **Project Y75:** Sexeprimer

First Nations of Quebec and Labrador Health and Social Services Commission (www.cssspnql.com)

- **Project Y76:** La sexualité… Parlons-en !
- **Project Y77:** Youth training for peer awareness-raising
- **Project Y78:** Who Wants to be a Millionaire CD-ROM trivia project

IRIS Estrie (www.iris-estrie.com)

- **Project Y79:** Projet de coordination et responsable des dossiers du secteur prévention à IRIS Estrie

M.A.IN.S. Bas-Saint-Laurent (Mouvement d'aide et d'information Sida) (www.mainsbsl.qc.ca)

- **Project Y80:** Programme de coordination des bénévoles

Le Miens (Mouvement d'information, d'éducation et d'entraide dans la lutte contre le sida) (www.lemiens.com)

- **Project Y81:** Programme éducation-prévention

MIELS-QUÉBEC (Mouvement d'information et d'entraide dans la lutte contre le VIH-sida à Québec) (www.miels.org)

- **Project Y82:** Coordination des liaisons avec les communautés

P.A.C.T. de rue (www.pactderue.org)

- **Project Y83:** Travail de rue : Mon quartier, ma sexualité, mes couleurs

Regroupement des centres d'amitié autochtones du Québec (www.rcaaq.info)

- **Project Y84:** Mobilisons notre support !

Rézo (www.rezosante.org)

- **Project Y85:** Projet Internet et intervention en ligne

Ruban en route (www.rubanenroute.org)

- **Project Y86:** Sensibilisation et prévention du VIH/sida et des ITSS

Sidaction Mauricie (formerly: Sidaction Trois-Rivières) (www.sidactionmauricie.ca)

- **Project Y87:** Prévention milieux

Sida-Vie Laval (www.sidavielaval.ca)

- **Project Y88:** Coordination régionale des programmes de prévention du VIH/sida

L'unité d'intervention mobile l'Anonyme Inc. (www.anonyme.ca)

- **Project Y89:** Attache ta tuque ! Fais un homme de toi !

ATLANTIC REGION

AIDS Coalition of Cape Breton (www.accb.ns.ca)

- **Project Y90:** Coordination of youth AIDS action teams in Cape Breton high schools
- **Project Y91:** Education Towards BBP Prevention Project

AIDS Coalition of Nova Scotia (www.acns.ns.ca)

- **Project Y92:** Youth-focused Web Page

AIDS Committee of Newfoundland and Labrador (www.acnl.net)

- **Project Y93:** GUYZ (Gay Urban Youth Zone) Project**AIDS New Brunswick** (www.aidsnb.com)
- **Project Y94:** Education program

AIDS PEI Community Support Group (www.aidspei.com)

- **Project Y95:** Youth drop-in

AIDS Saint John (www.aidssaintjohn.com)

- **Project Y96:** Peer youth HIV/AIDS education program

Healing Our Nations (www.hon93.ca)

- **Project Y97:** Youth art HIV prevention project

John Howard Society of Southeastern New Brunswick (www.johnhowardsenb.com)

- **Project Y98:** Peer Education for Youth in Custodial Settings

Labrador Friendship Centre (www.lfchvgb.ca)

- **Project Y99:** HIV/AIDS Labrador Project

SIDA/AIDS Moncton (www.sida-aidsmoncton.com)

- **Project Y100:** Peer Educators Project

NORTH

Blood Ties Four Directions Centre (www.bloodties.ca)

- **Project Y101:** Yukon Youth Outreach and Volunteer Events Program

La Fédération Franco-Ténoise (www.federation-franco-tenoise.com)

- **Project Y102:** Prévention du VIH/sida et de l'hépatite C dans les Territoires du Nord-Ouest

Fort Providence District Education Authority

- **Project Y103:** Healthy Choices Lead to a Healthy Community

National Aboriginal Health Organization (www.naho.ca) and **Ilisaqsivik Society** (www.ilisaqsivik.ca)

- **Project Y104:** Sexual Health Messaging Video

Tåîchô Community Services Agency (www.tlicho.ca/tlichocommunityservices)

- **Project Y105:** Hep C and HIV/AIDS Awareness Program

ADDITIONAL HIV/AIDS AND SEXUAL HEALTH-RELATED ORGANIZATIONS AND ONLINE RESOURCES FOR YOUTH

NATIONAL

- Live Positive (www.livepositive.ca)
- Sexuality and U (www.sexualityandu.ca)
- Taking Action! Project: Art and Aboriginal Youth Leadership for HIV Prevention (www.takingaction4youth.org)
- YAHAnet (Youth, the Arts, HIV & AIDS Network (http://yahanet.org)
- Young and Healthy (www.youngandhealthy.ca)

BRITISH COLUMBIA

- The Healthy Aboriginal Network (www.thehealthyaboriginal.net)
- Options for Sexual Health (www.optionsforsexualhealth.org)
- Planet Ahead (www.planetahead.ca)
- Won't Get Weird (www.wontgetweird.net)
- Youth Have the Power (www.youthhavethepower.com)

ALBERTA

- Calgary Sexual Health (www.calgarysexualhealth.ca)
- Options Sexual Health Association (www.optionssexualhealth.ca)
- Talking About Sexuality in Calgary Communities (www.tascc.ca)
- Teaching Sexual Health (www.teachingsexualhealth.ca)
- Won't Get Weird (www.wontgetweird.net)

SASKATCHEWAN

- Prince Albert Métis Women's Association—HIV Health Promotion Youth Ambassadors (www.princealbertmetiswomen.ca/en/youth.html)
- Sexual Health Centre Saskatoon (www.sexualhealthcentresaskatoon.ca)
- YEAH (Youth Educating About Health) (e-mail: yeah.ppr@accesscomm.ca)

ONTARIO

- AIDS Committee of Toronto
  - Youth Migration Project (www.actoronto.org/research.nsf/pages/youthmigration)
  - Youth Programs (www.actoronto.org/home.nsf/pages/youth)
- Brown Kiss (www.brownkiss.ca)
- Durham Region Healthy SexYOUTHality Coalition (www.truth4youth.ca)
- Gendering Adolescent AIDS Prevention (GAAP) Program (www.utgaap.info)
- Get The Low Down (www.getthelowdown.ca)
- HIV/AIDS Online School Support Kit (http://hae.ophea.net)
- One Night Your Choice (www.onenightyourchoice.com)

- Teen Health Source (www.teenhealthsource.com)
- TRIP! Project (www.tripproject.ca)

QUEBEC

- The Sex Educator (Ça sexprime) (www.casexprime.gouv.qc.ca)
- Centre Option-Prévention T.V.D.S. (www.centretvds.ca)
- Head & Hands (www.headandhands.ca)
  - Sense Project (www.senseproject.org)

ATLANTIC REGION

- AIDS Coalition of Cape Breton
  - Queer Youth Matter (www.accb.ns.ca/resources/transforming-communities)
- AIDS Coalition of Nova Scotia

Peer Education Project for Youth (PEPY) (http://acns.pbworks.com)

NORTH

- Arctic Foxy (www.arcticfoxy.com)
- Northern Sexual Health Portal (www.northernsexualhealth.ca)
  - Better to Know (Yukon) (www.bettertoknow.yk.ca)
  - I Respect Myself (Nunavut) (www.irespectmyself.ca)
  - Respect Yourself (Northwest Territories) (www.respectyourself.ca)

ORGANIZATIONS AND ONLINE RESOURCES ON HIV-RELATED DETERMINANTS OF HEALTH AMONG YOUTH

NATIONAL

- Aboriginal Youth Network (http://orgs.tigweb.org/aboriginal-youth-network)
- Boys and Girls Clubs of Canada (www.bgccan.com/EN)
- Canadian Centre of Substance Abuse (www.ccsa.ca/Eng/Priorities/YouthPrevention/Pages/default.aspx)
- Canadian Child Welfare Research Portal (www.cecw-cepb.ca)
- Centre of Excellence for Youth Engagement (www.engagementcentre.ca)
- Honouring Life Network (www.honouringlife.ca)
- Jer's Vision—Canada's Youth Diversity Initiative (www.jersvision.org)
- Kids Help Phone (www.kidshelpphone.ca)
- Love – Leave out Violence (www.leaveoutviolence.com)
- Mind Your Mind (http://mindyourmind.ca)
- My GSA (www.mygsa.ca)
- Operation Come Home (www.operationcomehome.ca)
- PFLAG Canada (www.pflagcanada.ca)
- Society for Safe and Caring Schools and Communities (www.sacsc.ca)

- Street Connect (http://streetconnect.org)
- What's the Deal (www.deal.org)
- YOUCAN (www.youcan.ca)
- Youth in Care Canada / National Youth in Care Network (www.youthincare.ca)
- YWCA Canada—Power of Being a Girl (http://ywcacanada.ca/en/pages/young/power)

BRITISH COLUMBIA

- BC Centre for Excellence in HIV/AIDS (www.cfenet.ubc.ca)
- Hello Cool World—WAVAW Raise It Up Youth Program (http://campaigns.hellocoolworld.com)
- Safe Teen (www.safeteen.ca)
- Take a Hike Foundation (www.takeahikefoundation.org)
- Youth Space (http://youthspace.ca)

ALBERTA

- Alt Youth (www.altview.ca)
- Boyle Street Community Services
  - Youth Services (http://boylestreet.org/index.php?page=youth-services)
- Calgary Outlink (Centre for Gender and Sexual Diversity) (http://calgaryoutlink.ca)
- Camp Fyrefly (www.fyrefly.ualberta.ca)
- Hope Mission Youth Unit (www.hopemission.com/services/youth)
- iHuman (www.ihuman.org)
- Old Strathcona Youth Society (www.osys.ca)
- SHINE Youth Clinic (www.shineclinic.ca)
- The Alex (www.thealex.ca/programs/youth-health)
- YOUCAN Edmonton (http://youcan.ca/content/about-youcan-edmonton)
- Youth at Risk of Suicide (http://ww3.suicideinfo.ca)
- Youth Emergency Shelter Society (www.yess.org)
- Youth Safe (www.youthsafe.net)
- Youth Understanding Youth (www.yuyedm.ca/home)

SASKATCHEWAN

- Avenue Community Centre for Gender and Sexual Diversity – Out and Proud Youth (www.avenuecommunitycentre.ca/what-we-do/groups/out-proud-youth)
- Camp Fyrefly Saskatchewan (www.usask.ca/education/fyrefly)
- Concern for Youth (www.concernforyouth.ca)
- Core Neighbourhood Youth Co-op (www.cnyc.ca)
- Crystal's Home (www.livingfaithchapel.ca/crystalshome)
- Eagle's Nest Youth Ranch (www.enyr.ca)
- E-Gadz (www.egadz.ca)
- Mobile Crisis (www.mobilecrisis.ca)

- Rainbow Alliance (www.rainbowalliance.ca)
- Salvation Army Bethany Home (www.bethanyhome.ca)
- Saskatoon Community Youth Arts Programming (SCYAP Inc.) (www.scyapinc.org)
- White Buffalo Youth Lodge (www.whitebuffalolodge.ca)
- YWCA Saskatoon Crisis Shelter and Residence (http://ywcasaskatoon.com/main/crisis-shelter-and-residence)

MANITOBA

- New Directions for Children, Youth, Adults and Families (www.newdirections.mb.ca)
- Rainbow Resource Centre (www.rainbowresourcecentre.org/youth)
- Resource Assistance for Youth (www.rayinc.ca)
- Stop Sex With Kids (www.stopsexwithkids.ca)
- Teen Talk (http://teentalk.ca)

ONTARIO

- Central Toronto Youth Services (www.ctys.org)
- Children's Mental Health Ontario (www.kidsmentalhealth.ca)
- Covenant House Youth Shelter Toronto (www.covenanthouse.org/homeless-youth-shelter/toronto)
- Empower (www.empoweryouth.info)
- Lesbian Gay Bi Trans Youth Line (www.youthline.ca)
- Queer Asian Youth (www.qay.ca)
- Rainbow Youth (www.rainbowyouth.ca)
- Reaching Our Outdoor Friends (ROOF) (www.roof-agency.net)
- Shameless (www.shamelessmag.com)
- Sketch (http://sketch.ca)
- Supporting Our Youth (SOY) (www.soytoronto.org)
- Ten Oaks Project (www.tenoaksproject.org)
- Toronto Teen Survey (www.torontoteensurvey.ca)
- Toronto Youth Street Stories (www.tyss.org)
- Turning Point Youth Services (www.turningpoint.ca)
- Youth Connect (www.youthconnect.ca)
- Youth Haven Barrie (www.youthhavenbarrie.com)
- Youth Out Loud (www.youthoutloudforchange.org)
- Youth Without Shelter (www.yws.on.ca)

QUEBEC

- Arrimage Jeunesse (http://arrimagejeunesse.abitemis.info)
- L'Association UnSurDix (http://etudiants.umoncton.ca/umcm-unsurdix/node/15)
- Canadian Association for Education and Outreach (CAEO Québec) (http://caeoquebec.org)
- Gris-Montréal (Groupe de Recherche et d'Intervention Sociale) (www.gris.ca)
- Head and Hands (http://headandhands.ca)
- Jeunesse Lambda (www.jeunesselambda.org)
- L'Ancre des Jeunes (http://ancredesjeunes.org)
- Maison Marie-Frédéric (www.maisonmarie-frederic.com)
- Plein milieu (www.pleinmilieu.qc.ca)
- Project 10 (http://p10.qc.ca)

ATLANTIC REGION

- Choices for Youth (www.choicesforyouth.ca)
- Native Council of Prince Edward Island Youth Program (www.ncpei.com/programs_youthprogram.php)
- New Brunswick Youth in Care Network (www.nbyicn.ca)
- Phoenix Youth (www.phoenixyouth.ca)
- Thrive Community Youth Network (www.thrivecyn.ca)
- The Youth Project (www.youthproject.ns.ca)

NORTH

- National Inuit Youth Council (www.niyc.ca)
- Northern Youth Abroad (www.nya.ca)
- Proud 2B NWT (www.proud2bnwt.ca)
- Yukon Youth (http://yukonyouth.com)

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