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**Priorities for Action in Managing the  
Epidemics**

**HIV/AIDS in BC: 2003-2007**

**BC Ministry of Health Planning**

**BC Ministry of Health Services**

Workshop Draft - March 2003

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## EXECUTIVE SUMMARY

The HIV/AIDS epidemic is a human tragedy of global proportion. It has been responsible for the premature deaths of 20 million people and in many parts of the world has turned back the development clock by several decades.

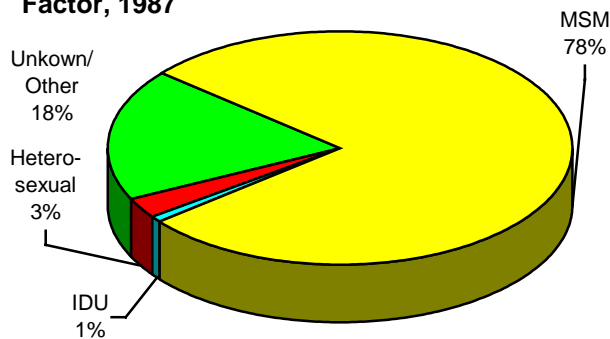
In British Columbia, the HIV/AIDS epidemic is a very serious public health challenge, particularly in light of the 6.5% increase in new infections during 2001, and a further estimated increase of 4% in 2002. To address the epidemic, the Ministries of Health Planning and Health Services have developed this document to complement, guide and support community and health authority efforts to manage the HIV/AIDS epidemic.

### New Trends

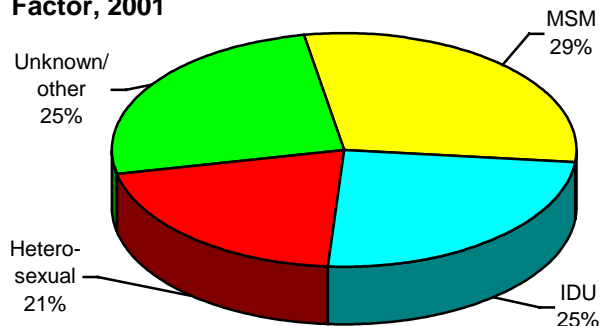
Since the 1980s, the HIV/AIDS epidemic has changed very dramatically. What was once one epidemic is now several very different epidemics, each affecting a different community of people and each requiring a different public health response. The epidemic has gained ground primarily through a shift to younger and more marginalized populations of injection drug users, Aboriginal people, women and young gay men.

These are people who often live at the margins of society. They are hard to reach, and challenge current techniques for monitoring and preventing the spread of the epidemic. The following charts illustrate how the epidemic has changed as increasing numbers of people have contracted the virus through heterosexual contact and injection drug use.

**Newly Reported Infections by Risk Factor, 1987**



**Newly Reported Infections by Risk Factor, 2001**



Just as the epidemic has changed in terms of risk factors, it has changed also in terms of gender. In the past, women made up only a small proportion of those infected: for example, 4% in 1987 and 8% in 1990. They now represent 20% of all new cases.

From 1987 to 2001, there was a 270% increase in the number of newly reported cases among women compared to a decrease of 40% among men.

Throughout this same period, there has also been an emerging and potent threat to the Aboriginal community, where discrimination, poverty, homelessness and violence too often combine to make people vulnerable to HIV infection. Although Aboriginal people make up less than 4% of the province's population, they represented 16% of newly reported cases in 2001. Aboriginal women are at highest risk and represented over 36% of all women newly reported as HIV-positive in 2001.

More recently, advances in medical science along with improved quality of care and support have enabled many people living with HIV/AIDS to manage their health more effectively and extend their life expectancy. As a consequence, the number of people in BC living with HIV/AIDS has grown steadily and now numbers between 9,500 and 13,500. As many as one-third of all HIV-positive British Columbians may be unaware of their condition and hence unaware of the need to take precautions to avoid infecting others.

## Responding to HIV/AIDS in BC

British Columbia has long been at the forefront of the Canadian response to HIV/AIDS, and this document builds on that foundation. It begins with a vision, a statement of principles and strategic priorities that articulate a consistent, results-based approach to the HIV epidemic across the province's regions. The vision is *to make British Columbia a Canadian and world leader in effectively and responsibly managing the HIV/AIDS epidemic.*

Accordingly, this document incorporates lessons learned from many international jurisdictions, including jurisdictions that have addressed HIV/AIDS with great success in resource-constrained environments, such as Brazil.

This document clearly outlines provincial priorities, positioning BC to engage effectively in strategic discussions with Health Canada as it considers renewal and funding levels associated with the Canadian Strategy on HIV/AIDS.

This document contributes to improved health and a more sustainable health care system for all British Columbians, as outlined in the Population Health and Wellness Framework. It is consistent with BC's draft framework for core programs, which focuses on improving health and preventing disease, disability and injury.

Structural changes in the health authorities are acknowledged. The document complements, guides and supports health authority efforts to respond to HIV/AIDS through either direct or funded services.

Finally, this document recognizes that HIV/AIDS is a complex disease that cannot yet be fully prevented. The approach focuses on managing the epidemics through sustained effort in four key areas: prevention; care, treatment and support; capacity; and coordination and cooperation.

### **Prevention**

This approach emphasizes prevention and commits to a 50% reduction in both the number of people becoming infected each year and the number who are HIV-positive but unaware of their infection. This will be achieved by focusing on those who are most vulnerable to HIV infection and who engage in practices that put them at risk of HIV infection. The goal is to prevent a total of 660 new HIV infections by 2007 and avert between \$118.8 million and \$148.5 million in future direct health care expenditures.

**Note:** Successfully identifying infected but unaware persons will result in an increase in newly reported HIV infections.

### **Care, Treatment and Support**

Care, treatment and support services are integral to prevention efforts, and need to be available in communities across BC and accessible to both those who are vulnerable to HIV infection and those living with HIV/AIDS. The goal in this area is to increase by 25% the proportion of HIV-positive individuals who are linked to appropriate services.

Effective services must be tailored to the populations being served. Efforts to manage the epidemic in the Aboriginal community, for example, will have to accommodate, first, the movement of people between reserve and urban communities, and, second, the special relationship between the First Nations and the Government of Canada.

Care and support for the infected will assist in promoting prevention among those already living with HIV/AIDS in order to limit its transmission to others. "Every new HIV infection is the result of a seropositive individual inadvertently transmitting the virus."<sup>1</sup>

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<sup>1</sup> National Center for HIV, STD and TB Prevention, Program Briefing 2001, 4/10/02. See [www.cdc.gov/nchstp/od/program\\_brief\\_2001](http://www.cdc.gov/nchstp/od/program_brief_2001)

### ***Capacity***

It will be important to strengthen the capacity of the province, the health authorities and the network of community-based organizations in order to respond to BC's current HIV/AIDS epidemics and to anticipate future developments.

### ***Cooperation and Coordination***

Experience in Australia, Brazil and Switzerland illustrates the importance of consensus in developing and implementing a strategy founded upon knowledge and evidence, rather than stigma and stereotype.

The BC approach to HIV/AIDS, therefore, is designed to encourage consensus and cooperation among the different provincial, regional and community-based stakeholders. It builds upon the province's strong history of cooperation across sectors, exemplified by the Pacific AIDS Network and the Red Road HIV/AIDS Network Society. This approach envisions the integration of the management of HIV and hepatitis C and enhanced contributions to the international effort to prevent HIV/AIDS in the developing world.

## CONTENTS

EXECUTIVE SUMMARY .....	iii
1. INTRODUCTION .....	1
1.1 Purpose and Organization .....	2
1.2 Document at a Glance .....	3
2. BUSINESS CASE FOR ACTION .....	7
3. THE HIV/AIDS EPIDEMICS IN BRITISH COLUMBIA .....	9
3.1 Trends .....	9
3.2 Living with HIV/AIDS .....	10
3.3 Gender .....	12
3.4 Age .....	12
3.5 Risk Factors .....	13
3.6 HIV, Hepatitis C and Tuberculosis .....	17
4. MANAGING THE EPIDEMICS .....	19
4.1 Building on our Strengths .....	19
4.2 Learning from Other Jurisdictions .....	20
4.3 Vision .....	21
4.4 Guiding Principles .....	21
4.5 Goals, Objectives and Key Strategies .....	22
4.6 Resource Implications .....	24
5. ROLES AND RESPONSIBILITIES .....	27
5.1 BC Ministries of Health Planning and Health Services .....	27
5.2 Health Authorities .....	27
5.3 Community .....	27
5.4 Government of British Columbia .....	28
6. MONITORING FRAMEWORK .....	29
REFERENCES .....	31
Appendix 1 .....	34

## 1. INTRODUCTION

The *Human Immunodeficiency Virus* (HIV) attacks the human immune system, leaving infected individuals vulnerable to chronic, progressive illness, opportunistic infections and cancers. Once those infected with HIV cross a certain medically defined threshold, they are described as having AIDS, the *Acquired Immunodeficiency Syndrome*.

The virus spreads as infected body fluids – blood, semen, vaginal fluids and breast milk – pass from one person to another; for example, through unprotected sexual intercourse, shared needles or vertical transmission from mother to child (in vitro, during delivery, or through breastfeeding). At present, there is neither a vaccine to prevent HIV infection nor a cure for AIDS. The disease is both incurable and 100% preventable.

The human tragedy associated with HIV/AIDS has reached pandemic proportions. More than 40 million people in the world today are living with HIV/AIDS, while 20 million have already died as a result of this disease. In 2001 alone, five million people became infected with HIV and a further three million died of AIDS.<sup>2</sup> Even in the world's developed countries where medical science is expected to solve almost every problem, over 75,000 people became infected with HIV and another 23,000 died of AIDS during 2001.<sup>3</sup>

Canada has certainly not been spared. Between 15,000 and 17,000 Canadians have died as a result of HIV/AIDS. More than 50,000 Canadians today are living with HIV/AIDS, including an estimated 15,000 who are not aware of their infection and who, inadvertently, may be passing the virus on to others.<sup>4</sup> Each day in Canada, eleven additional people become infected.<sup>5</sup>

The HIV/AIDS epidemic has taken a heavy toll in British Columbia. More than two thousand people in this province have already died as a result of HIV/AIDS, and AIDS is one of the four leading causes of death among men and women aged 25 to 44.<sup>6</sup> Every day, between one and two people in BC contract HIV and join the perhaps 13,500 already living with this disease. As many as one-third of these may not know they are carrying, and possibly spreading, the virus. Vancouver's Downtown Eastside has been particularly hard hit, and it is estimated that the infection rate among injection drug users there is 25%.<sup>7</sup>

British Columbia reports a disproportionate number of positive HIV tests. Although BC has only 13% of the Canadian population, this province has 20% of the HIV/AIDS cases in Canada. Nationally during 2001, British Columbians accounted for 38% of those testing positive who engaged in any heterosexual contact, 37% of men testing positive who have sex with men, and 50% of injection drug users who tested positive.

Recent work from UNAIDS, illustrated in **Figure 1**, suggests that HIV incidence among men who have sex with men is significantly higher in Vancouver than in either Madrid or San Francisco.

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2 UNAIDS, *Fighting HIV-Related Intolerance*, 2001:3.

3 UNAIDS, *High-Income Countries, Fact Sheet*, 2002. Today, more than 1.5 million people in the developed world are living with HIV/AIDS, including 950,000 in North America and 550,000 in Western Europe.

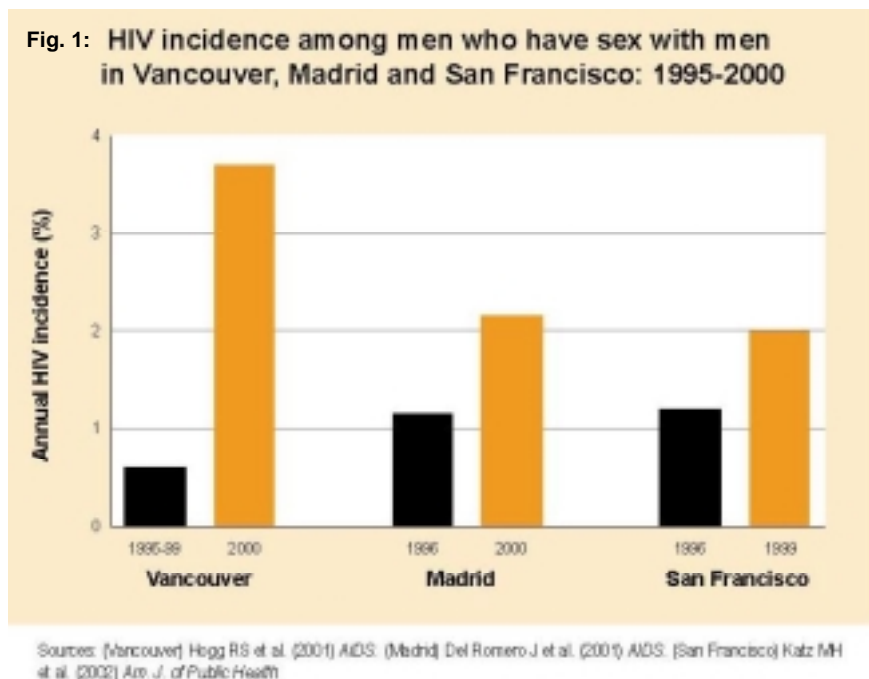
4 Health Canada, 2002:6. Estimate from the Canadian Centre for Infectious Disease Prevention and Control. See also Health Canada, *HIV/AIDS Epi Update*, April, 2002

5 Health Canada, *HIV and AIDS in Canada: Surveillance Report to December 31, 2001*; 2002:18.

6 British Columbia, 1998a: 5-6.

7 See S.A. Strathdee, 1997b. See also Wiebe, 2000.

Although the number of new infections in BC has declined dramatically over the past decade,<sup>8</sup> there are indications that the epidemic may again be expanding. In 2001, the number of new infections increased by 6.5%, compared to only 2.5% for Canada as a whole, while the incidence rate (per 100,000 people) increased to 10.74 from 10.15 in 2000.<sup>9</sup> Furthermore, the epidemic is now taking root in new populations



and new neighbourhoods. What was once perceived as an urban “gay men’s disease” has clearly become a threat to everyone, and the public health system faces the challenge of addressing several HIV/AIDS epidemics at the same time.

## 1.1 Purpose and Organization

The BC Ministries of Health Planning and Health Services are proposing revised priorities for action in managing HIV/AIDS through 2007. The approach is intended to complement, guide and support community and health authority efforts to address what is one of the most serious public health challenges in BC today.

This document contains an epidemiological profile of HIV disease in BC, and proposes several strategic priorities, a series of measurable goals and objectives, and evidenced-based strategies that, taken together, establish a framework for action at the provincial and regional levels. Progress in achieving the Provincial goals and objectives will be measured.

The document primarily examines functions that fall within the domain of the province’s health sector. It does not address the broader range of action that would enable the Province of British Columbia to address the root causes of HIV vulnerability and infection, such as efforts to prevent discrimination, to protect children from sexual and emotional abuse and to alleviate family poverty. These more comprehensive efforts are long-term in nature and require the involvement of many different sectors. These sectors are currently brought together within the government’s Interministry Committee on HIV/AIDS.

8 See BC Centre for Disease Control (BCCDC), 2002:23. See also Health Canada, 2002:19; and BCCDC, 2002:4.

9 BCCDC, 2002:23.

## 1.2 Document at a Glance

PREVENTION		
Goals	Objectives	Key Strategies
<p><i>To reduce the incidence of HIV infection by 50% over the next five years</i></p>	<ul style="list-style-type: none"> <li>▪ To reduce the incidence of HIV infection among the most vulnerable groups by 50% over the next five years</li> <li>▪ To reduce the proportion of seropositive individuals who are unaware of their HIV infection by 50% over the next five years</li> <li>▪ To sustain effective systems of care for women living with HIV and ensure no infants are born with HIV over the next five years</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ensure that current and future HIV/AIDS-related prevention efforts across the province effectively attract and retain the most vulnerable populations</li> <li>▪ Expand provincial support for low threshold harm reduction initiatives, including supervised consumption sites, needle exchange and addiction treatment services, and a randomized trial of prescribing controlled substances and ensure that they are accessible and culturally appropriate to populations most at risk of HIV infection</li> <li>▪ Establish, monitor and evaluate a public health reporting requirement for HIV infection under the Health Act, with provisions for anonymous, voluntary partner notification</li> <li>▪ Expand HIV testing capability, education and prevention efforts in all of the province's correctional facilities; given the evidence of both IDU and HIV/HCV transmission in provincial jails, and the positive evaluations of needle exchange pilots in European jails, assess the feasibility of a pilot needle exchange program in a provincial correctional facility; develop a partnership with Correctional Services Canada to enhance HIV/AIDS-related services in federal institutions in BC</li> <li>▪ Create an HIV/AIDS roundtable involving BC ministries and health authorities, Health Canada and First Nations organizations to identify and pursue efforts to address the HIV epidemic among Aboriginal people</li> </ul>

<b>CARE, TREATMENT AND SUPPORT</b>		
<b>Goals</b>	<b>Objectives</b>	<b>Key Strategies</b>
<p><i>To increase the proportion of HIV+ individuals who are linked to appropriate care, treatment and support services by 25% over the next five years</i></p>	<ul style="list-style-type: none"> <li>▪ To ensure that HIV+ individuals are aware of the care, treatment and support services available in their communities</li> <li>▪ To ensure that care, treatment and support services are readily available and accessible to vulnerable groups of HIV+ individuals</li> <li>▪ To ensure HIV+ women from the most vulnerable groups access antiretroviral therapy at the same rate as women in the general population</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ensure that current and future HIV/AIDS-related care, treatment and support, and secondary prevention services across the province effectively attract and retain the most vulnerable populations</li> <li>▪ Work with the BC Medical Association and the College of Physicians and Surgeons to expand the provincial methadone program, and the range of addictions treatment options</li> <li>▪ Work with the College of Physicians and Surgeons to increase the number of physicians providing HIV/AIDS care and treatment, and expand innovative training programs for physicians and other key health care providers</li> <li>▪ Establish, monitor and evaluate the public health follow-up to the reporting requirement for HIV infection under the Health Act, with provisions for anonymous, voluntary partner notification</li> <li>▪ Develop the capacity to provide continuity of care and bridging services for HIV+ individuals at time of discharge from federal and provincial correctional institutions in BC</li> </ul>

<b>CAPACITY</b>		
<b>Goals</b>	<b>Objectives</b>	<b>Key Strategies</b>
<p><i>To enhance the province's capacity for monitoring the HIV epidemic over the next five years</i></p>	<ul style="list-style-type: none"> <li>▪ To strengthen the province's ability to reach and inform persons who may be unaware of their HIV infection</li> <li>▪ To strengthen the province's ability to anticipate epidemiological trends and service needs in HIV/AIDS</li> <li>▪ To improve epidemiological and other knowledge about HIV/AIDS among health authorities and community-based organizations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Support the expansion of HIV/AIDS-related medical and social research undertaken in BC and explore alternate means of disseminating new knowledge</li> <li>▪ Develop an effective sentinel surveillance system through linking existing data sources that will enable the province and health authorities to anticipate new epidemiological trends and service needs with regard to HIV/AIDS, hepatitis C and other co-infections</li> <li>▪ Identify and disseminate best practices information to health authorities, local governments and AIDS service organizations and other community-based organizations on a timely basis</li> <li>▪ Work with Health Authorities in planning, monitoring and evaluating HIV/AIDS services including the public health follow-up for partners of newly reported HIV positive individuals</li> </ul>

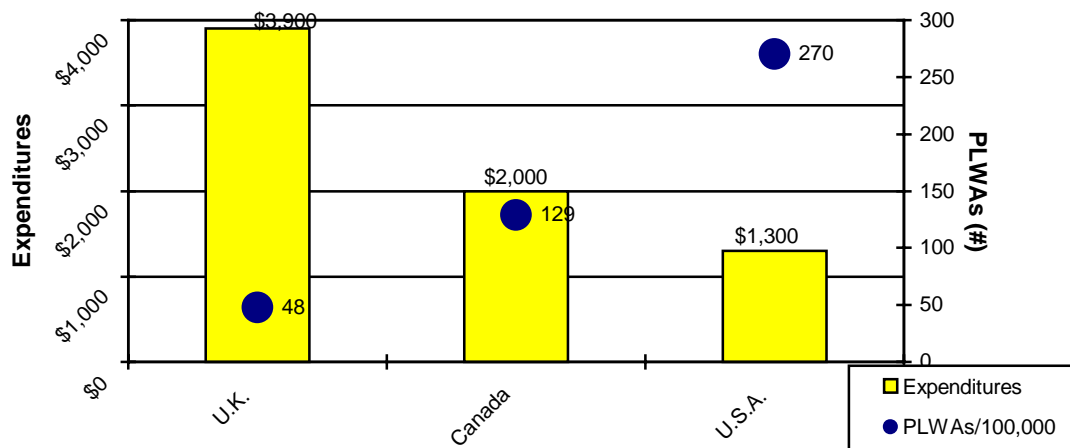
<b>COORDINATION AND COOPERATION</b>		
<b>Goals</b>	<b>Objectives</b>	<b>Key Strategies</b>
<p><i>To create and sustain broad-based support for the approach outlined in Priorities for Action</i></p>	<ul style="list-style-type: none"> <li>▪ To strengthen the policy, program and service co-ordination among provincial ministries, health authorities and AIDS service organizations</li> <li>▪ To integrate the prevention, surveillance and treatment activities associated with HIV/AIDS and hepatitis C</li> <li>▪ To contribute more fully to international efforts to combat HIV/AIDS in developing countries</li> </ul>	<ul style="list-style-type: none"> <li>▪ Create mechanisms for encouraging coordination and cooperation among stakeholders</li> <li>▪ Forge new partnerships with Correctional Services Canada, Health Canada and Indian and Northern Affairs to foster coordination and cooperation in efforts directed at vulnerable populations</li> <li>▪ Support efforts to share the province's HIV/AIDS knowledge and experience with countries in the developing world</li> <li>▪ Explore an enhanced role for the Provincial Health Services Authority in contributing to provincial coordination and the identification and dissemination of best practises</li> </ul>

## 2. BUSINESS CASE FOR ACTION

There is a compelling public interest in managing the HIV epidemics and limiting their human, social and economic impacts. GPI Atlantic asserts that “because of the enormous economic burden of HIV/AIDS, prevention and management strategies are highly cost effective and will produce significant long-term direct and indirect cost savings to the Canadian economy.”<sup>10</sup>

On an international and national basis, there appears to be a demonstrable relationship between the level of investment in HIV prevention and care and the rates of infection. In 1996, the Canadian investment in HIV prevention totalled approximately \$2,044 per person living with HIV. In comparison, the United Kingdom invested \$3,897 and the United States \$1,300. In that year, Canada had approximately 129 people per 100,000 population living with HIV/AIDS, compared to 48 people in the United Kingdom and 270 people in the United States<sup>11</sup> (see **Figure 2**).

**Fig. 2: Per Capita Expenditures and Number (per 100,000) Living with HIV/AIDS**



Although the number of newly reported infections of HIV in BC has declined dramatically over the past decade, there are indications that the incidence rate may again be on the rise. Young gay men, women and Aboriginal people appear to be the most vulnerable. Extrapolations from the prevalence data suggest there could be as many as 13,000 people living with HIV/AIDS in BC today. As many as three to four thousand of these people may be unaware of their situation and inadvertently infecting their spouses, partners or unborn children. *Priorities for Action* acknowledges the importance of promoting prevention among those already living with HIV/AIDS in order to limit its transmission to others. “Every new HIV infection is the result of a seropositive individual inadvertently transmitting the virus.”<sup>12</sup>

Epidemiologists and other researchers are concerned that the data from 2001 and 2002 signal a new upward trend in the number of new infections in BC. Left unaddressed, this upward trend will not only result in considerable downstream personal and social costs, but would also place enormous additional burden on BC's health care system.

10 GPI Atlantic, 2001. See [http://www.gpiatlantic.org/pr\\_cost\\_aids.shtml](http://www.gpiatlantic.org/pr_cost_aids.shtml).

11 Ministerial Council on HIV/AIDS, 2001(b):ii.

12 National Center for HIV, STD and TB Prevention, Program Briefing 2001, 4/10/02. See [www.cdc.gov/nchstp/od/program\\_brief\\_2001](http://www.cdc.gov/nchstp/od/program_brief_2001).

Each new HIV infection will burden the BC health care system with somewhere between \$180,000 and \$225,000 in direct costs alone per person per lifetime.<sup>13</sup> That means that if British Columbia reduced the annual number of new infections by 50% over the next five years, from 440 in 2002 to 220 in 2007, it would prevent 660 new HIV infections and save between \$118.8 million and \$148.5 million in future direct health care costs. Among injection drug users alone, an annual investment in HIV/AIDS prevention of \$1 million per year over five years would result in savings of as much as \$24 million.<sup>14</sup>

When indirect expenses related to sickness and years of life lost are taken into account, the real cost of the epidemic rises to \$1 million per lifetime for every person living with HIV/AIDS.<sup>15</sup> These indirect costs of HIV/AIDS far outweigh the costs of prevention, care and treatment. By preventing 660 new infections over the next five years, BC would avert approximately \$660 million in future direct and indirect costs combined.

To the extent that the highly active antiretroviral drug therapies (HAART) permit people living with HIV to return to normal patterns of living, the economic burden in terms of lost productivity and participation in society is reduced. If BC increased the availability of HAART treatments, "the period of productive life for those people living with HIV/AIDS would increase by 15 percent, and the savings in indirect costs would cover the increased costs of treatment."<sup>16</sup>

For many living with HIV/AIDS, the advent of HAART has resulted in tremendous improvements in their ability to manage the disease. However, without access to healthy living conditions and appropriate care, treatment and support services, people living with HIV/AIDS will place significant pressures on the health care system as their disease progresses. In late 2002, more than half of St. Paul's Hospital's palliative care beds were occupied by individuals living with HIV/AIDS, circumstances not seen since 1997. Over and above the economic burden on the health care system, the loss of productivity and the weakening of our social fabric due to preventable HIV infection and AIDS-related deaths will be incalculable.

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13 British Columbia, 1998(a):25. See also the Canadian Medical Association Journal, 1998 (158):14.

14 Canada's Drug Strategy: Reducing the harm associated with injection drug use in Canada, 2001. <http://www.hc-sc.gc.ca/hppb/cds-sca/cds/publications/h36-589-2001e-chap3.htm>.

15 See Robin Hanvelt et al., 1999.

16 Terry Albert and Greg Williams, 1997:4.

### 3. THE HIV/AIDS EPIDEMICS IN BRITISH COLUMBIA

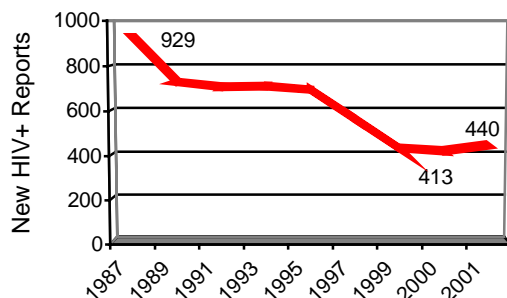
In the 1980s, HIV infected primarily gay men and a small number of those receiving blood transfusions.<sup>17</sup> More recently, the epidemic has struck women, youth and Aboriginal people. Increasingly, it is taking root among those living on the margins of mainstream society, including people who are poor, homeless, the targets of violence and discrimination, or struggling with mental health problems. Their vulnerability often leads to behaviours, such as sharing needles or engaging in unprotected sex, that place them at risk of HIV infection.

Following is an epidemiological overview of HIV/AIDS in BC that shows how the single epidemic of the 1980s has now become a series of epidemics affecting different groups of people.<sup>18</sup>

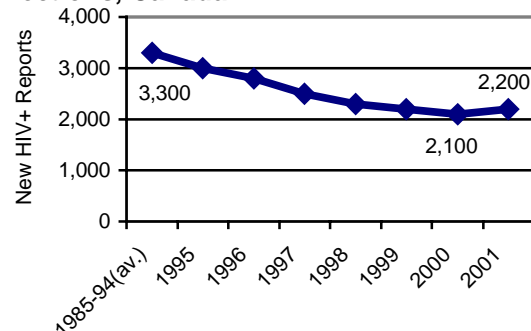
#### 3.1 Trends<sup>19</sup>

**Figures 3 and 4** illustrate how the numbers of new infections in BC and Canada have declined dramatically over the past two decades. However they also show that both jurisdictions experienced an increase in new infections in 2001. Epidemiologists and other researchers are concerned that 2001 represents the beginning of a new upward trend, confirmed by preliminary 2002 data from BCCDC.<sup>20</sup>

**Fig. 3: Newly Reported HIV+ Infections, BC**



**Fig. 4: Newly Reported HIV+ Infections, Canada**



The number of people whose HIV infection became AIDS has also declined very dramatically since 1994.<sup>21</sup> This pattern is illustrated in **Figure 5**.

These incidence patterns, and the apparent decline in new HIV infections and new AIDS cases, have to be treated cautiously.

As illustrated by **Figure 6**, the pattern is somewhat different for different groups of people.

<sup>17</sup> In 1987, for example, there were 735 new HIV infections reported among gay men and 44 among haemophiliacs or others receiving blood products in BC.

<sup>18</sup> Many of the tables and charts in this section begin with data from 1987 when the BC Centre for Disease Control began collecting and maintaining such HIV/AIDS-related information.

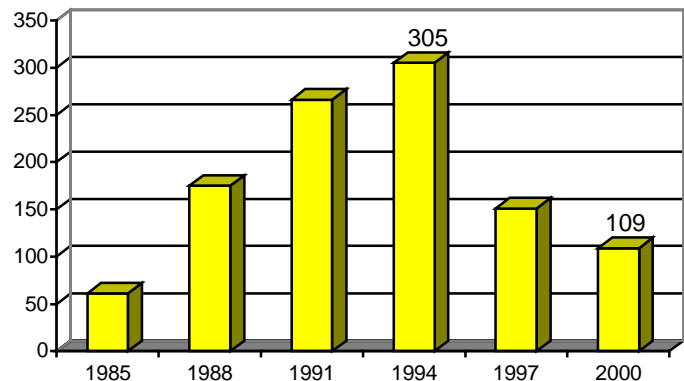
<sup>19</sup> Unless otherwise noted, the data presented in the following sections were provided by the BC Centre for Disease Control (BCCDC) and the BC Ministry of Health Planning. The BCCDC reports are available at <http://www.bccdc.org/stdaids/index.shtml>.

<sup>20</sup> Health Canada, HIV and AIDS in Canada, Surveillance Report to December 31, 2001:8,19. Also, Dr. Michael L. Rekart, Director, STD/AIDS Control, BCCDC, personal communication February 3, 2003

<sup>21</sup> There are significant reporting delays for AIDS cases. There are currently 38 reported cases for 2001. This figure will increase as the BCCDC receives additional reports, but the number is unlikely to exceed 60.

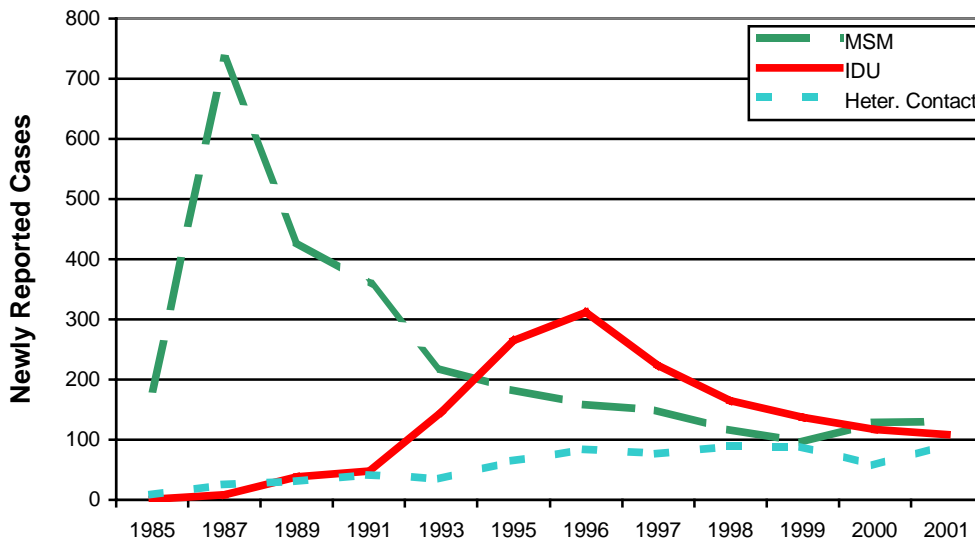
The number of newly reported HIV cases among men who have sex with men began declining in 1987. However, the number has increased recently - results from the Vanguard study, a prospective cohort of young gay and bisexual men in Vancouver, have shown that the rate of new HIV infections among men who had never injected drugs has increased from 0.6 per 100 person years in 1995-99 to 3.7 per 100 person years in 2000.<sup>22</sup>

**Fig. 5: AIDS Cases Reported, BC**



- Incidence among injection drug users peaked in 1996 and has been declining ever since.
- Except for a small decline in 2000, infection through heterosexual contact has continued to rise since early in the 1990s.

**Fig. 6: Newly Reported HIV Cases by Risk Factor, BC 1985-2001**



### 3.2 Living with HIV/AIDS

For many years, funerals seemed to be the defining characteristic of the AIDS epidemic. There were 1,482 AIDS-related deaths in Canada in 1995, for example, compared to 216 in 2000.<sup>23</sup> In BC, a similar sharp decline in AIDS-related death rates is evident, though preliminary data from the BC Centre for Excellence in HIV/AIDS suggest that BC Vital Statistics reports mortality where HIV/AIDS is the underlying cause of death that is 23% lower than the number of deceased persons identified as having had HIV/AIDS, primarily because these individuals died of causes not attributable to HIV/AIDS.<sup>24</sup>

<sup>22</sup> Health Canada, Epi Update, 2002

<sup>23</sup> Health Canada, HIV and AIDS in Canada: Surveillance Report to December 31, 2001; 2002:43.

<sup>24</sup> Personal communication, Dr. R.S. Hogg, Population Health Program, BC Centre for Excellence in HIV/AIDS, October 21, 2002. (Abstract: An Estimation of the Degree of Underreporting of HIV/AIDS Deaths by Vital Event Registries).

More recently, advances in medical science, the use of antiretroviral drugs and the quality of the care and support now available have enabled many people living with HIV/AIDS to manage their condition very effectively. Many continue in their employment and continue to participate in community life.

As a consequence, the number of people living with HIV/AIDS is higher now than ever before. As recently as 1996, there were perhaps 7,400 people living with HIV/AIDS in British Columbia. Today there are between 9,500 and 13,500.<sup>25</sup> This population is heavily concentrated in the Lower Mainland, although significant numbers live in the other regions as well.<sup>26</sup> **Figures 7 and 8** compare the distribution of newly reported HIV-positive cases, by health authority region, in the year 2000 relative to the period 1989-2001.<sup>27</sup> They show that the proportion of total cases on Vancouver Island and in the Interior is increasing while the proportion in the Lower Mainland is declining. The North has only 1% of all cases but northerners infected with HIV often move south for treatment, care or support. In any case, the flow of people between regions speaks to the need for addressing the epidemic everywhere in BC. HIV does not respect any boundaries.

In spite of tremendous advances in treatment, the burden of care still lies in the future in British Columbia's HIV epidemics. The current situation at St. Paul's Hospital in Vancouver serves as an early warning with respect to future acute and community care needs. By the beginning of 2003, staff at St. Paul's were reporting a significant increase in the numbers of in-patients living with HIV disease - as many as 35 to 39 on any given day, sometimes as many as 40. These are numbers which have not been seen at St. Paul's since the early 1990s, before the advent of improved treatment.

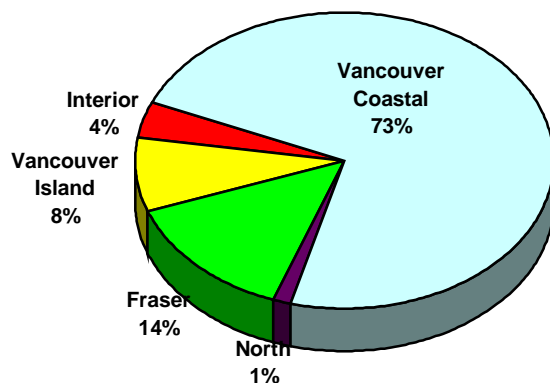
Hospital staff and researchers suggest this renewed pressure on acute care capacity is in large part the result of a convergence of two epidemics:

- large numbers of individuals for whom all existing treatments options have failed, many of whom are gay men infected relatively early in the epidemic; and,
- individuals who have never received treatment, mostly injection drug users infected in Vancouver's downtown east side during the HIV outbreak in that community during the early and mid 1990s.

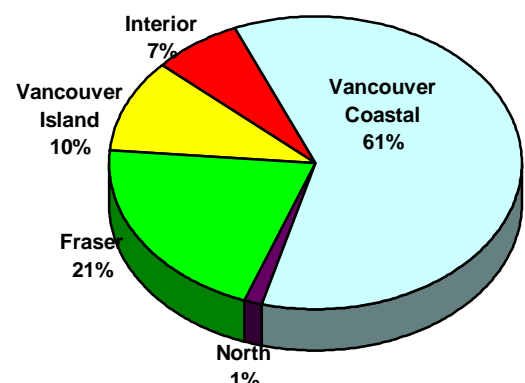
Many in-patients are now being admitted to St. Paul's with CD4 counts of less than 200, meeting the clinical criteria for an AIDS diagnosis. Researchers suggest that, while AIDS is reportable in BC, the numbers of in-patients being seen at St. Paul's with low CD4 counts and AIDS defining illnesses are not well reflected in the provincial statistics, and cite "reporting fatigue" as a contributing factor.

Further complicating the situation, as many as one third of HIV positive in-patients at St. Paul's are ready for discharge to a sub-acute setting, but must remain in acute care given the dearth of facilities able to accommodate these patients' on-going need for relatively intensive nursing and medical support.

**Fig. 7: Persons Testing HIV Positive, by Region of Test 1989-2001 (n=8113)**



**Fig. 8: Persons Testing HIV Positive, by Region of Test 2000 (n=413)**



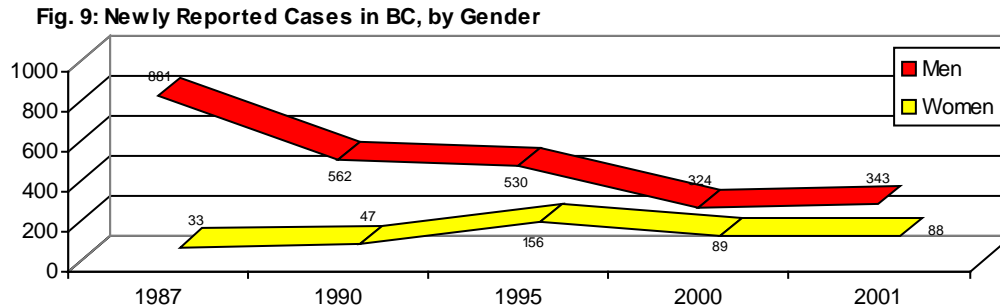
25 See BCCDC, 2002:4. The 1996 estimate was also provided by the BCCDC.

26 See BCCDC, 2002:10-11 and 36-37.

27 The regional numbers are estimates that endeavour to accommodate the health region reorganization and restructuring of the past decade.

### 3.3 Gender

In the past, women made up only a small proportion of the total number of newly reported HIV-positive cases. **Table 1** illustrates how this pattern is changing. Whereas women made up only 4% of newly reported cases in 1987 and 8% in 1990, they now represent 20% of such cases.

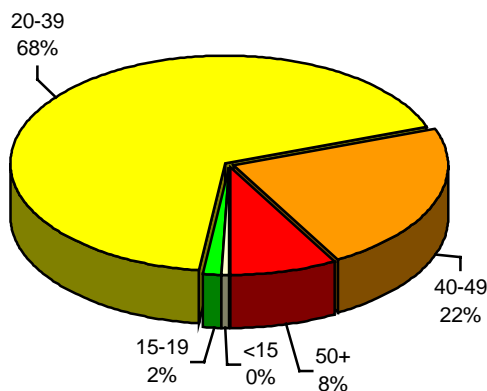


**Table 1: Newly Reported HIV-Positive Cases in BC, by Gender**

	1987		1990		1995		2000		2001	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<b>Number</b>	881	33	562	47	530	156	324	89	343	88
<b>% of Total Cases</b>	96%	4%	92%	8%	77%	23%	78%	22%	80%	20%

From 1987 to 2001, there was a 270% increase in the number of newly reported cases among women compared to a decrease of 40% among men. This pattern is illustrated in **Figure 9**. The epidemic's spread across gender lines poses new challenges for managing the epidemic and providing service to those living with HIV/AIDS.

**Fig. 10: New HIV+ Cases by Age, BC 1990**



The number of women with HIV/AIDS remains relatively small, however. Table 1 above indicates that in 2000 there were only 89 women newly reported as HIV-positive (4.35 per 100,000) compared to 324 men (16.88 per 100,000). In 2000 also, there were only 9 newly reported AIDS cases among women compared to 96 among men, while the rate per 100,000 population was 0.44 for women and 4.75 for men.<sup>28</sup>

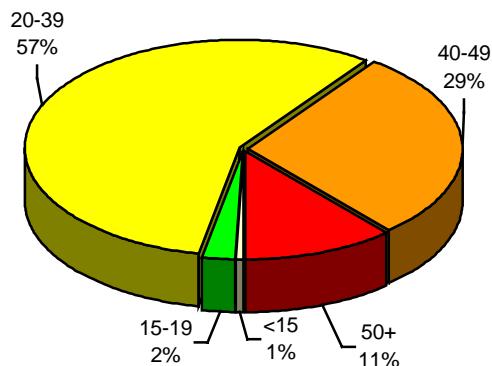
### 3.4 Age

Since 1985, there have been only twenty-two infants (younger than 18 months) who have tested positive for HIV, including four in 1993 and five in 1994. There has not been a single case reported to the BC Centre for Disease Control (BCCDC) since 1998. However, approximately 17 cases of perinatal transmission known to the Oak Tree Clinic have not been reported to the BCCDC. There have also been 30 children

(19 months to 14 years) who tested positive for HIV during this period. Recent estimates suggest about 36,000 BC women are screened for HIV each year, about 80% of pregnant women.

**Figures 10 and 11** illustrate, for 1990 and 2001, the proportion of people newly testing HIV-positive by age. They show a trend toward a significantly larger proportion of cases among older individuals (40-49 years and 50+).<sup>29</sup> There is also a slightly larger proportion of cases among those under 15 years of age. This has implications for the nature of the services available: they must be able to accommodate a more diverse population of people living with HIV/AIDS.

**Fig. 11: New HIV+ Cases by Age, BC 2001**



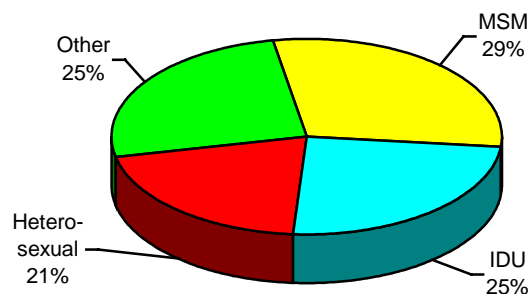
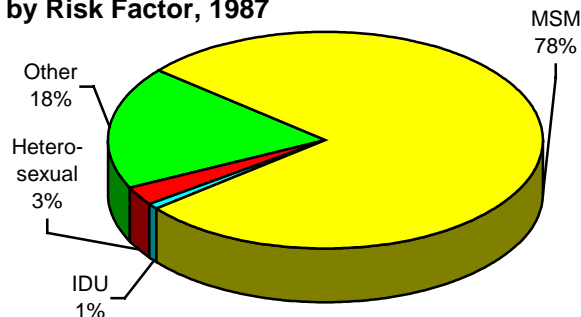
### 3.5 Risk Factors

Studies undertaken by the Ministerial Council on HIV/AIDS, the BC Centre for Excellence in HIV/AIDS<sup>30</sup> and elsewhere emphasize how those who engage in high-risk behaviours – for example, needle sharing or unprotected anal sex – very often:

- have experienced sexual, physical or emotional violence, either as a child or as an adult;
- have suffered from discrimination, perhaps because of their race or sexual orientation; or
- are poor and homeless, and as a result do not have the power necessary to avoid engaging in

**Fig. 13: Newly Reported Infections by Risk Factor, 2001**

**Fig. 12, Newly Reported Infections by Risk Factor, 1987**



<sup>29</sup>

BCCDC, 2002:23.

activities that place them at high risk of HIV infection.

These factors are difficult to determine. Consequently, it has been easier to track and report the individual behaviours that most likely contributed to a person's HIV infection. These "risk factors" include men having sex with men (MSM), injection drug use (IDU) and needle sharing, engaging in the sex trade and heterosexual activity with a person at risk.

Strategies to prevent the epidemic's spread have focused on these behaviours. In the 1980s, for example, AIDS was concentrated among men who were having sex with men, and the public health and community response could be directed almost exclusively to that population. As illustrated in **Figures 12** and **13**, this situation has changed dramatically over the years.

As **Table 2** indicates, this pattern of greater diversity is evident not only in BC but across Canada as well.

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<sup>30</sup> For example, see Ministerial Council on HIV/AIDS, 2002 and Steffanie Strathdee, 1997.

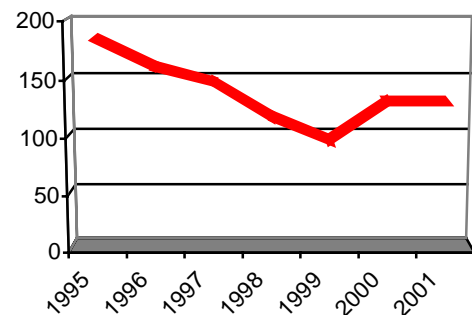
**Table 2: Newly Reported HIV-Positive Cases, BC and Canada, 2001**

Risk Factor	BC	Canada
MSM	29.5%	36.6%
IDU	24.5%	24.6%
Sex Trade	2.5%	22.4%
Heterosexual Contact	20.6%	
Other	22.9%	16.4%

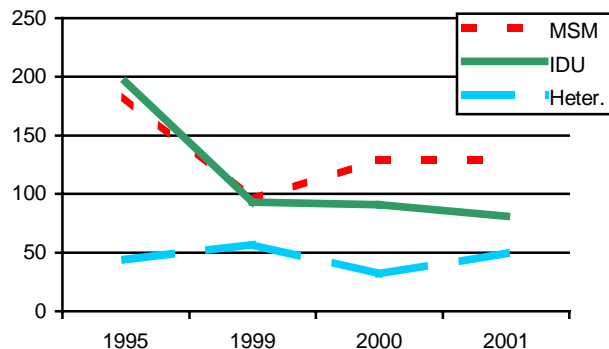
As illustrated earlier (Figure 5), the numbers of infections among injection drug users and sex trade workers have continued to decline in recent years. This is not the case among men who have sex with men. **Figure 14** shows how the number of infections among this population is again increasing.

Researchers suggest that young men in particular are vulnerable for a number of reasons. First, they did not witness the deadly impact of AIDS in the 1980s and, second, they have come to believe that HIV and AIDS are now curable. "Condom fatigue" may be an additional factor. Young men who have sex with men and are street involved

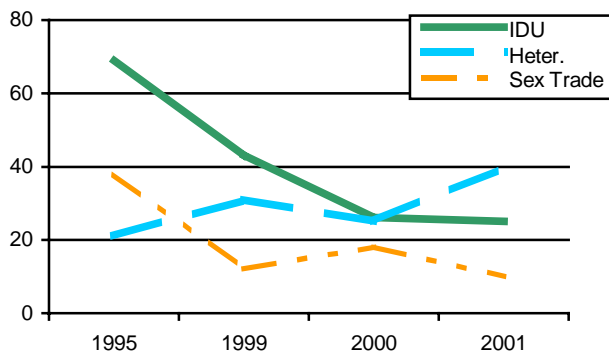
**Fig. 14: Newly Reported Cases among Men who have Sex with Men**



**Fig. 15: Risk Factors, Male**



**Fig. 16: Risk Factors, Female**



appear to be especially vulnerable.

**Figures 15 and 16** present trends by major risk factor for both men and women. They show that different factors are at play and that the number of newly reported cases resulting from heterosexual contact is increasing most rapidly among women. Among women:

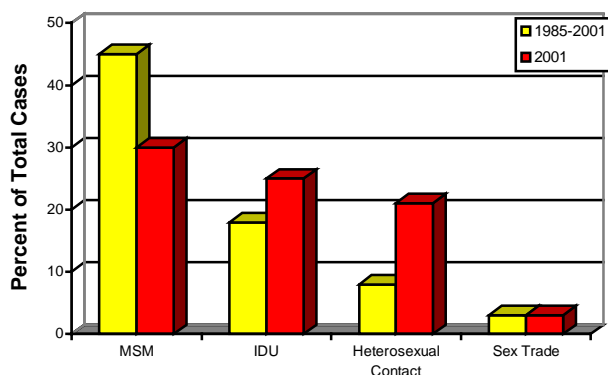
- 28% contracted HIV through injection drug use and 45% through heterosexual contact in 2001, many through partners who use injection drugs; and
- 42% contracted HIV through injection drug use and 23% through heterosexual contact in 1996.

The pattern for all people since 1985 serves to illustrate how the HIV/AIDS epidemic has changed and, indeed, how there are now different epidemics confronting health authorities. **Figure 17**

compares cases newly reported in 2001 to cases reported throughout the entire period 1985-2001. It shows significant increases among injection drug users and through heterosexual contact. It shows no change among those engaged in the sex trade, a pattern that is consistent with data from elsewhere in Canada.

The data also speak to the impending crisis within the Aboriginal community, where discrimination, poverty, homelessness and violence too often combine to make people extremely vulnerable to HIV infection. **Table 3** illustrates the distribution of newly reported HIV cases by ethnicity and year.

**Fig. 17: Changes in Risk Factor - Percent of All Newly Reported HIV+ Tests, 1985-2001**



**Table 3: Newly Reported HIV-Positive Cases by Ethnicity and Year**

Ethnicity	1995	1996	1997	1998	1999	2000	2001	Total	% of Total
White	388	413	340	273	253	252	288	2,207	59.6
Aboriginal <sup>31</sup>	68	123	87	71	79	55	70	553	14.9
Asian	29	30	25	32	23	32	18	189	5.1
Black	14	17	12	22	19	26	34	144	3.9
Hispanic	19	17	14	14	12	20	12	108	2.9
Unknown	149	114	83	70	40	28	18	502	13.6
<b>Total</b>	<b>667</b>	<b>714</b>	<b>561</b>	<b>482</b>	<b>426</b>	<b>413</b>	<b>440</b>	<b>3,703</b>	<b>100.0</b>

While Aboriginal people make up less than 4% of the province’s population, they accounted for almost 15% of the HIV infections reported between 1995 and 2001, and almost 16% in 2001. The situation has worsened considerably since 1995, when only 10.2% of the newly reported infections occurred among Aboriginal people.<sup>32</sup> **Figure 18** shows the pattern through these years. Nationally, Aboriginal Canadians accounted for 1% of total newly reported HIV infections in 1990; by 1999, Aboriginals accounted for 15% of all newly reported HIV infections. Injection drug use is more likely to be the attributed reason for infection among Aboriginal people than among other populations.

Aboriginal people in general are at risk for HIV and figure too prominently among the vulnerable populations. HIV infection rates were about twice as high among both male and female aboriginal injection drug users compared with non-aboriginals.

31 Includes First Nations, Métis and Inuit people.

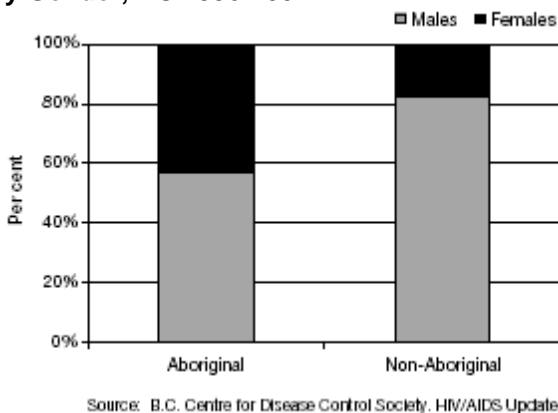
32 BCCDC, 2002:35.

In 2001, 36.3% of all women newly reported as HIV-positive in BC were Aboriginal. The incidence rate among Aboriginal women is increasing while among Aboriginal men it is declining.<sup>33</sup> **Figure 19** illustrates the greater proportion of women testing newly positive in the Aboriginal population as compared to the non-Aboriginal population.

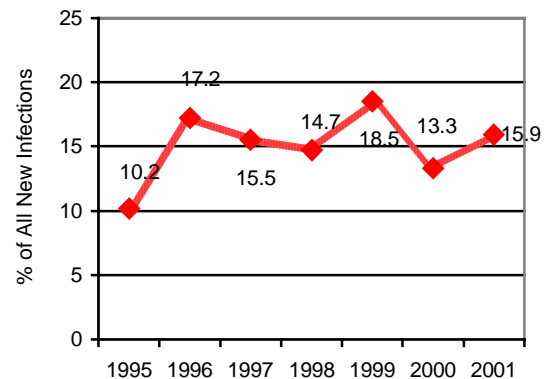
Additionally, HIV/AIDS appears to take a much harder toll on Aboriginal people. **Figure 20** presents the mortality rate from HIV/AIDS for both Status Indians and other residents of BC.<sup>34</sup> Not only is the rate for Aboriginal people much higher, but the trend line is ascending while the trend line for other residents is descending.

As mentioned above, infection rates among injection drug users have been declining in recent years, perhaps as the result of epidemic saturation.

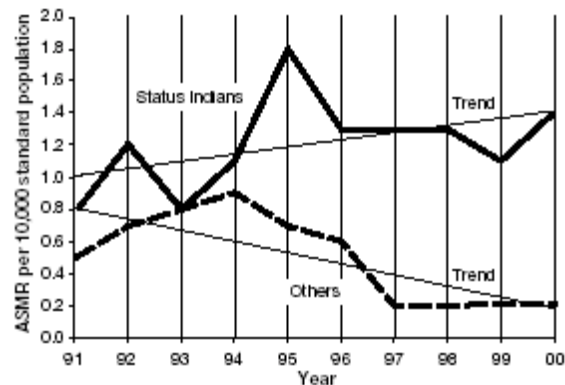
**Fig. 19: Persons Testing Newly Positive for HIV by Gender, BC 1996-2001**



**Fig. 18: Aboriginal People as % of New Cases, BC by Year**



**Fig. 20: HIV/AIDS Mortality Rates, Status Indians and Other Residents of BC, 1991-2000**



Nevertheless, infection rates among injection drug users remain unacceptably high. The need for preventive action among young injectors is particularly urgent. Researchers with the Vancouver Injection Drug User Study have concluded that "relative to older injectors, youth in our study have lower prevalences of HIV and HCV, but alarmingly high incidence rates, particularly among female and Aboriginal youth."<sup>35</sup> Thus, the window of opportunity is short, and preventive actions are urgently required.

Further complicating the situation in BC is the relationship between injection drug use and commercial sex work. Addressing HIV among these populations is a major public health challenge, as both injection drug use and prostitution are considered criminal activities.<sup>36</sup>

33 BCCDC, 2002:30-31. See also Ministerial Council on HIV/AIDS, 2001(a):iv. See also Risk factors for elevated HIV incidence among female injection drug users in Vancouver, Spittal et al. (CMAJ, April 2, 2002)

34 Age standardized mortality rate per 10,000 standard population (Canada 1991 Census). Source: B.C. Vital Statistics Agency. Unpublished tables, June 2002.

35 Risk factors for HIV and HCV prevalence and incidence among young injection drug users in a Canadian city coping with an epidemic, Miller et al. (CAHR, 2002).

36 Risky sexual behaviour among female IDUs, Tyndall et al. (CAHR, 2002).

## 3.6 HIV, Hepatitis C and Tuberculosis

### Co-infection with HIV and Hepatitis C Virus (HCV)

In 1998, an estimated 52,500 British Columbians were living with HCV infection, a prevalence rate of more than 1.3% - by far the highest in Canada. Approximately 3,350 British Columbians are infected with both HIV and HCV, approximately 30% of the total estimated number of HIV/HCV co-infected persons in Canada.<sup>37</sup>

The hepatitis C virus (HCV) is transmitted primarily by large or repeated direct percutaneous (i.e., passage through the skin by puncture) exposures to contaminated blood. Therefore, co-infection with HIV and HCV is common among HIV-infected injection drug users. Co-infection is also common among persons with hemophilia who received clotting factor concentrates before concentrates were effectively treated to inactivate both viruses (i.e., products made before 1987). For persons infected with HIV through sexual exposure, the rate of co-infection with HCV is not significantly different than the rate among similarly aged adults in the general population.

Chronic HCV infection develops in 75%-85% of infected persons and leads to chronic liver disease in 70% of these chronically infected persons. HIV-HCV co-infection has been associated with higher titers of HCV, more rapid progression to HCV-related liver disease, and an increased risk for HCV-related cirrhosis of the liver. As highly active antiretroviral therapy (HAART) and prophylaxis of opportunistic infections increase the life span of persons living with HIV, HCV-related liver disease has become a major cause of hospital admissions and deaths among HIV-infected persons.

The effects of HCV co-infection on HIV disease progression are less certain. More data are needed to determine if HCV infection influences the long-term natural history of HIV infection.

Public Health /Infectious Diseases guidelines in many jurisdictions now recommend that all HIV-infected persons should be screened for HCV infection. Prevention of HCV infection for those not already infected and reducing chronic liver disease in those who are infected are important concerns for HIV-infected individuals and their health care providers.

### Interaction between HIV and Tuberculosis

There is a critical interaction between HIV infection and TB. HIV and TB are synergistic, that is one enhances the effect of the other. Thus individuals infected with HIV and TB have a higher risk of developing active tuberculosis. This is of particular concern in British Columbia. Nationally, TB prevalence is estimated to be 6/100,000, while in Vancouver the rate is 25/100,000 cases, and the Downtown East Side the rate reaches 85/100,000. HIV could well contribute to increasing rates of TB infections and active disease in our province.

For the HIV infected individual there is a 14% risk of developing TB over 2 years. For the non-HIV infected individual, there is a 5% to 10% lifetime risk of developing TB<sup>38</sup>. All HIV infected persons should be monitored closely for evidence of infection with TB and treated appropriately. Conversely, all TB positive persons should be offered HIV testing and appropriate treatment.

<sup>37</sup> R. Remis, Epidemiology of Hepatitis C co-infection in Canada, First Canadian Conference on Hepatitis C, Montreal, 2002; see also R. Remis, Final Report: Estimating the number of persons co-infected with hepatitis C and HIV in Canada, population and Public Health Branch, Health Canada, 2002

<sup>38</sup> Tuberculosis Fact Sheet, Tuberculosis Prevention and Control, Health Canada, 2002

## 4. MANAGING THE EPIDEMICS

### 4.1 Building on our Strengths

The BC experience with its earlier *Framework for Action*, as well as the experience of other Canadian and international jurisdictions, speaks to the importance of building an approach on a solid, evidence-based foundation. British Columbia has long been at the forefront of the Canadian response to HIV/AIDS. It was the first province in Canada, for example, to develop a province-wide voluntary prenatal HIV screening program, and in 1999, the BC Aboriginal HIV/AIDS Task Force prepared a groundbreaking strategy for addressing the HIV/AIDS epidemic among the Aboriginal population in this province.<sup>39</sup>

There are needle exchange programs in 14 municipalities around BC, distributing more than six million needles annually and preventing both many new infections and major new treatment expenditures.<sup>40</sup> There is also the province's centrally coordinated drug treatment program for HAART and other HIV medications.

Contributing to the province's achievements is the BC Centre for Excellence in HIV/AIDS, a world leader in scientific and social research and a pioneer in applied research. The Centre integrates research and treatment, and its efforts help to ensure that the newest and best treatments are available to people living with HIV/AIDS and that expert advice is available to clinicians. The Centre has developed methods of drug resistance testing, and it does serotyping/genotyping of all HIV isolates, which provides information on which strains of the virus are present in BC.

Several research projects with large cohorts from vulnerable population groups are being conducted by the BC Centre for Excellence in HIV/AIDS in partnership with a wide range of organizations. Specific projects include the Vanguard study, which has recruited a large cohort of gay men; the Vancouver Injection Drug User Study; and a new study that will investigate vulnerability among Aboriginal British Columbians. These cohorts give policy makers and program planners in BC a unique opportunity to understand the determinants of vulnerability among these three population groups, and to base policy and programs on solid, locally obtained evidence. Such research can be particularly helpful in guiding the development of effective prevention programs tailored to particular vulnerable communities.

One of the Centre for Excellence's many accomplishments has been the discovery that CD4 count is the major driving force in predicting disease progression. This discovery has enabled physicians to delay antiretroviral therapy and avoid subjecting patients to the side effects that often accompany such treatments. The discovery has also enabled the health care system to defer the expenditure of millions of drug treatment dollars and, in so doing, to redirect those funds over the short and medium term to address other HIV prevention and treatment needs.

British Columbia is home to more than 50 community-based organizations that deliver HIV/AIDS prevention, care and support programming at the community level. These groups have been important partners in efforts to control HIV/AIDS in BC, through raising awareness and delivering programs and services both to the general population and to vulnerable groups. Both membership and service organizations have developed extensive experience working with and among hard to reach populations.

The provincial government has adopted an inter-ministerial structure for addressing the epidemic that is the envy of other jurisdictions. This comprehensive and coordinated approach to HIV/AIDS, which endeavours to place HIV/AIDS within a population health model, allows the province to address issues such as prevention education in the schools, disability benefits within the Income Assistance Program, and social housing for those living with HIV/AIDS.

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37 See British Columbia Aboriginal HIV/AIDS Task Force, 1999, *The Red Road, Pathways to Wholeness: An Aboriginal Strategy for HIV and AIDS in BC*.

38 The needle exchange locations are listed at <http://www.healthservices.gov.bc.ca/hiv/needle.html>.

There is also a good history in BC of cooperation across sectors. For example, the Boys R Us project in Vancouver, which reaches young males involved in the sex trade, brings together a broad range of funding and service agencies, including two levels of government, the Vancouver Foundation, the Vancouver Coastal Health Authority, the Vanguard Project, AIDS Vancouver, YouthCO AIDS Society, and the private sector, especially small business. There is a strong network of community-based AIDS service organizations, along with coalitions and partnerships such as the Pacific AIDS Network and the Red Road HIV/AIDS Network Society.

## 4.2 Learning from Other Jurisdictions

### *Prevention, Care, Treatment and Support*

There are lessons to be learned from the lost ground in the fight against the HIV/AIDS epidemic, and there can be far-reaching consequences for not acting or acting inappropriately. Evidence from other jurisdictions indicates that good results are best achieved through a combination of efforts simultaneously aimed at the general population and focused on groups particularly vulnerable to HIV infection. UNAIDS emphasizes that “the most effective responses to the epidemic have integrated education, prevention and care strategies. Experience has shown communities are more active in mobilizing against the epidemic when they are motivated by concerns about prevention, care and support together.”<sup>41</sup>

For example, Brazil’s widely praised efforts to provide universal treatment and care, delivered in conjunction with its comprehensive prevention programs, are estimated to have avoided 234,000 hospitalizations in the period 1996–2000. Evidence from several western European nations and Australia has demonstrated the efficacy of implementing a range of low threshold harm reduction programs to help contain HIV and HCV infection rates among injection drug users. For example, a mid term evaluation conducted at a safe injection facility pilot in Sydney, Australia reports positive health and social outcomes for those using the program. Evaluations of needle exchange programs in correctional facilities in Germany, Spain and Switzerland have demonstrated the effectiveness of such programs in preventing the spread of HIV and HCV without placing correctional staff at risk. A recently conducted multi-site, controlled randomized trial of prescribing injectable and inhalable heroin to hard-core addicts in the Netherlands concluded that the supervised co-prescription of heroin to chronic, treatment resistant methadone patients leads to improvement in all health outcome domains: physical health, mental status and social functioning.<sup>42</sup>

Experience in Canada, the United Kingdom and elsewhere speaks to the importance of adapting HIV/AIDS-related initiatives to the different at-risk communities. Measures that are effective for middle-aged men may not work for youth or for women who are injection drug users; service models and supports developed for Aboriginal people may hold little appeal for Asian men who are HIV-positive.

Efforts to manage the epidemic in the Aboriginal community in BC will require special measures that acknowledge, first, the movement of people between reserve and urban communities, and, second, the special relationship between the First Nations and the Government of Canada. Partnerships with Aboriginal organizations such as the Red Road HIV/AIDS Network Society will be important in adapting HIV/AIDS-related measures to the needs of Aboriginal people and their urban and reserve communities.

### *Capacity, Coordination and Cooperation*

UNAIDS, the World Health Organization and Canada’s Ministerial Council on HIV/AIDS emphasize that the fight against HIV/AIDS requires a long-term commitment of adequate resources in order to promote greater cooperation and lessen the degree of competition among the different stakeholders.

39 See UNAIDS. 2002(b). Report on the global HIV/AIDS epidemic. See “Prevention: applying the lessons learned.”

42 UNAIDS Fact Sheet, 2002. The Impact of HIV/AIDS. See also Medical Co-prescription of Heroin: Two Randomized, Controlled Trials. Central Committee on the Treatment of Heroin Addicts, Dutch Ministry of Health and Amateur Sport, 2002. See also Kimber, J. MacDonald, M. Six Month Process Report on the Medically Supervised Injecting Centre, NDARC, NCHECR, UNSW, 2002

In examining successful HIV/AIDS strategies across jurisdictions, UNAIDS has identified multilevel responses at the national, provincial, regional and community levels as a key factor. The Australian model illustrates the importance of a non-partisan approach that includes political leaders from all parties, informed media and an educated public.

UNAIDS also emphasizes that to improve policies and programs and to sustain awareness, it is important to effectively monitor the epidemic and risk behaviours and to disseminate the findings. This requires a commitment to sentinel surveillance so that prevention efforts are as dynamic as the epidemic itself.

Research and the dissemination of knowledge are vital components of an effort to effectively manage the HIV/AIDS epidemic. The experience of countries as diverse as Australia, Thailand and Switzerland indicates the importance of “sentinel surveillance systems” that allow authorities to anticipate developments instead of always chasing the epidemic.

There is also evidence from other jurisdictions of the importance of special efforts to transform scientific and social research findings into practice at the community level. To achieve this transition, community-based service agencies need to incorporate research findings into their daily activities, and researchers need to make their work relevant to community-level practitioners. Australia, for example, has a national council that brings together the full range of research stakeholders to identify HIV-related research priorities.

### 4.3 Vision

The Province’s vision is *to make British Columbia a Canadian and world leader in effectively and responsibly managing the HIV/AIDS epidemic.*

Managing the epidemic means:

- ✓ **Preventing** the further spread of HIV/AIDS by focusing efforts on those groups of people who are at highest risk of infection
- ✓ **Providing appropriate care, treatment and support** to those already infected, regardless of where they live or their particular cultural needs
- ✓ **Building public awareness** and understanding through both research and efforts to share and disseminate new knowledge
- ✓ **Developing the capacity** to address the challenges presented by the epidemic at the community, regional and provincial levels
- ✓ **Coordinating BC’s efforts** and cooperating with other governments, in Canada and internationally

### 4.4 Guiding Principles

Principles serve to articulate common beliefs and common commitments. They serve as a road map to guide action; they enhance accountability by allowing agencies to check whether their activities conform to their intentions; and they can bring a basic level of consistency to efforts undertaken in the province’s different regions.

1. The first principle is to focus on prevention and includes efforts to promote prevention among those who are most vulnerable to infection, those who are already infected with HIV, and among the general population. At the same time, however, the approach will be to focus equitably on other aspects of the epidemic such as care, treatment and support for those living with HIV/AIDS.
2. The second is to acknowledge that each population has different needs and faces different barriers. Prevention, care, treatment and support efforts will accommodate and reflect these differences. The ideal is a seamless continuum of action and support directed both at those at high risk of HIV infection and at those living with HIV/AIDS.

3. The third is, in the short term, to prioritize those population groups – for example, Aboriginal people – who are at highest risk of HIV infection. Over the long-term the approach must address the social and economic conditions and individual behaviours that contribute to HIV vulnerability.
4. The fourth principle is to ground the approach in good science and careful monitoring. The approach will encourage scientific, clinical and social research and will use the findings to guide change. Research involving large cohorts drawn from vulnerable populations in BC will help tailor prevention efforts. Research currently being undertaken with the VIDUS, Vanguard and Aboriginal study cohorts will provide BC with a unique opportunity to base policy and program decisions on solid, locally-obtained evidence. Ongoing evaluation will be used to adjust activities and efforts as appropriate.
5. In BC, health authorities are responsible for the delivery of HIV/AIDS prevention, care, treatment and support services in their regions. The government of British Columbia will provide leadership and assist health authorities to plan their activities and to monitor and assess progress. The province and health authorities will work cooperatively with other community, provincial, national and international organizations.
6. The province and health authorities will be fully accountable for their activities to the general public and to people living with HIV/AIDS. Efficiency, cost-effectiveness and service quality will serve as key accountability benchmarks.

## 4.5 Goals, Objectives and Key Strategies

### **Prevention**

**Goal:** *To reduce the incidence of HIV infection by 50% over the next five years*

- To reduce the *number* of people testing newly positive for HIV from 440 per year in 2001 to 220 per year in 2007
- To reduce the *rate* of HIV infection from 10.7 per 100,000 population in 2001 to 5.4 in 2007

### **Objectives:**

- To reduce the incidence of HIV infection by 50% over the next five years among the most vulnerable groups, including young gay men and other men who have sex with men, Aboriginal people and particularly Aboriginal women, and injection drug users
- To reduce the proportion of seropositive individuals who are unaware of their HIV infection by 50% over the next five years
- To ensure that no infants are born with HIV over the next five years

### **Key Strategies:**

- Ensure that current and future HIV/AIDS-related prevention efforts across the province, including testing, education and prevention, effectively attract and retain the most vulnerable populations
- Expand provincial support for low threshold harm reduction initiatives, including supervised consumption sites, needle exchange programs and addiction treatment services, and a randomized trial of prescribing controlled substances and ensure that they are accessible and culturally appropriate to populations most at risk of HIV infection
- Establish, monitor and evaluate a public health reporting requirement for HIV infection under the Health Act, with provisions for anonymous, voluntary partner notification
- Expand HIV testing capability, education and prevention efforts in all of the province's correctional facilities; given the evidence of both IDU and HIV/HCV transmission in provincial jails, and the positive evaluations of needle exchange pilots in European jails, assess the feasibility of a pilot

needle exchange program in a provincial correctional facility; and develop a partnership with Correctional Services Canada to enhance HIV/AIDS-related services in federal institutions located in BC

- Create an HIV/AIDS roundtable involving BC ministries and health authorities, Health Canada and First Nations organizations to identify and pursue efforts to address the HIV epidemic among Aboriginal people

### **Care, Treatment and Support**

**Goal:** *To increase the proportion of HIV+ individuals who are linked to appropriate care, treatment and support services by 25% over the next five years*

**Objectives:**

- To ensure that HIV-positive individuals are aware of the care, treatment and support services available in their communities
- To ensure that care, treatment and support services are readily available and accessible to vulnerable groups of HIV-positive individuals, including homeless youth, injection drug users and those with intellectual disabilities or mental illnesses
- To ensure HIV-positive women from the most vulnerable groups access antiretroviral therapy at the same rate as women in the general population

**Key Strategies:**

- Ensure that current and future HIV/AIDS-related care, treatment and support services across the province effectively attract and retain the most vulnerable populations
- Work with the BC Medical Association and the College of Physicians and Surgeons to expand the provincial methadone program, and the range of addictions treatment options
- Establish, monitor and evaluate the public health follow-up to the reporting requirement for HIV infection under the Health Act, with provisions for anonymous, voluntary partner notification
- Work with the College of Physicians and Surgeons to increase the number of physicians providing HIV/AIDS care and treatment, and expand innovative training programs for physicians and other key health care providers
- Develop the capacity to provide continuity of care and bridging services for HIV-positive individuals at time of discharge federal and provincial correctional institutions in BC

### **Capacity**

**Goal:** *To enhance the province's capacity for monitoring the HIV epidemic over the next five years*

**Objectives:**

- To strengthen the province's ability to reach and inform persons who may be unaware of their HIV infection
- To strengthen the province's ability to anticipate epidemiological trends and service needs in HIV/AIDS
- To improve epidemiological and other knowledge about HIV/AIDS among health authorities and community-based organizations

**Key Strategies:**

- Support the expansion of HIV/AIDS-related medical and social research undertaken in the province and explore alternative means of disseminating new knowledge

- Develop an effective sentinel surveillance system through linking existing data sources that will enable the province and health authorities to anticipate new epidemiological trends and service needs with regard to HIV/AIDS, hepatitis C and other co-infections
- Identify and disseminate best practices information to health authorities, local governments and AIDS service organizations and other community-based organizations on a timely basis
- Work with Health Authorities in planning, monitoring and evaluating HIV/AIDS services including the public health follow-up for partners of newly reported HIV positive individuals.

### **Coordination and Cooperation**

**Goal:** *To create and sustain broad-based support for Priorities for Action*

**Objectives:**

- To strengthen the policy, program and service co-ordination among provincial ministries, health authorities and AIDS service organizations
- To integrate the prevention, surveillance and treatment activities associated with HIV/AIDS and hepatitis C
- To contribute more fully to the international effort to combat HIV/AIDS in developing countries

**Key Strategies:**

- Create mechanisms for encouraging coordination and cooperation among the Strategy's various stakeholders
- Forge new partnerships with Correctional Services Canada, Health Canada and Indian and Northern Affairs to foster coordination and cooperation in efforts directed at vulnerable populations
- Support efforts to share the province's HIV/AIDS knowledge and experience with countries in the developing world
- Explore an enhanced role for the Provincial Health Services Authority in contributing to provincial coordination and the identification and dissemination of best practises

## **4.6 Resource Implications**

An investment in addressing the various HIV epidemics makes sound economic sense. *Priorities for Action* envisions a 50% reduction in the annual number of new infections by 2007. Reaching this prevention target necessitates action to achieve a steady year over year decline in new HIV infections over the five years, 2003 to 2007. This ambitious target would see a 10% reduction in the first year, 20% in the second year, and so on until 2007 when our target of 220 new HIV infections per year is reached.

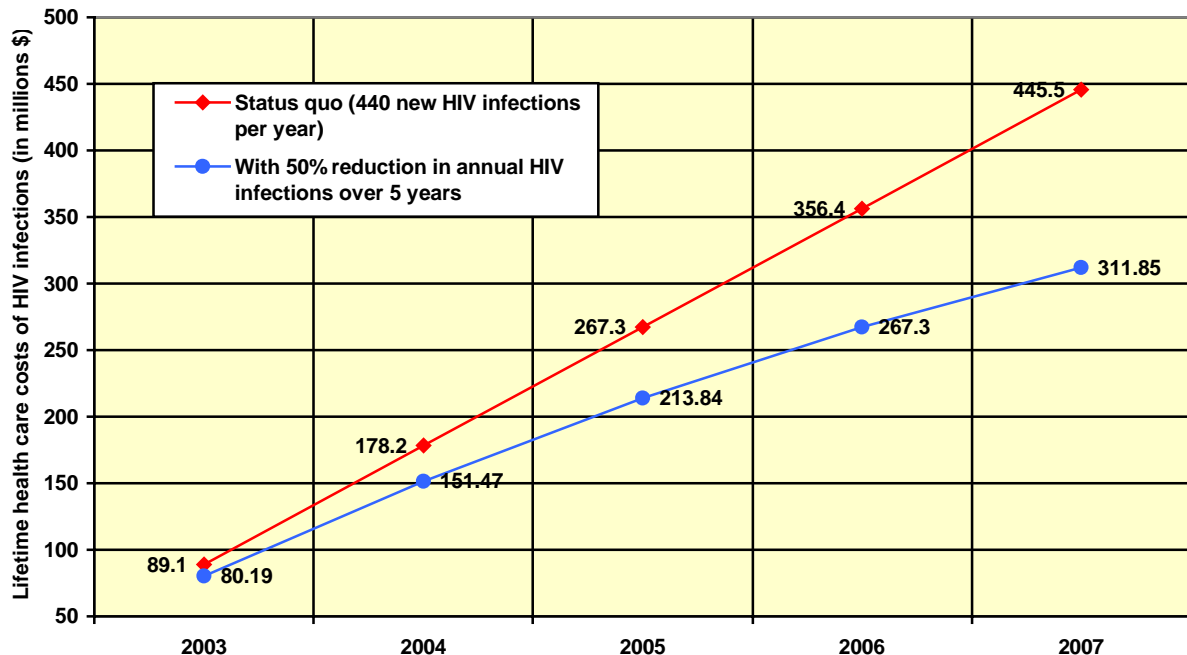
As **Figure 21** shows, by cutting the annual number of new infections in half over the next five years, BC could prevent a total of 660 new HIV infections and avoid approximately \$133.6 million in health care expenditures over the long term; a significant proportion of these savings would be accrued over the life of the Strategy. The combined lifetime direct and indirect costs associated with 660 new HIV infections, including lost productivity associated with morbidity and premature mortality, exceeds \$650 million.

The BC Ministries of Health currently invest in the response to BC's HIV epidemics in a number of ways:

- Directly, through BC Ministry of Health Services and BC Ministry of Health Planning, in programs such as:
  - Medical and pharmaceutical services
  - Vital Statistics Agency
  - BC Ambulance service

- Indirectly, through funding to the Provincial Health Services Authority, which is accountable for managing the quality, coordination, accessibility and cost of selected province-wide health care programs and services. In the context of HIV/AIDS, this includes:
  - BC Centre for Disease Control
  - Needle exchange supplies
  - Children and Women's Health Centre of BC
  - Province-wide community groups that deliver or support HIV/AIDS programming. Indirectly,

**Fig. 21: Potential Reduction in Direct Lifetime Health Care Costs\***



through funding to the five health authorities with regional responsibilities. These health

\* Based on an estimated average lifetime cost per HIV infection of \$202,500; assumes a 10% reduction in the number of new infections each year

authorities deliver or fund a range of health care services. In the context of HIV/AIDS, this includes:

- Acute care
- Community care
- Community clinic services
- Addictions services
- Prevention and public health services
- Regionally-based community groups that deliver HIV/AIDS programming

### **Devolved Funding**

Health authorities have historically held responsibility for operating or contracting acute care, community care, community clinics and public health services within their geographical region.

Responsibility and approximately \$11 million in annualized funding for contracted community-based HIV/AIDS services, including AIDS service organizations, consumer groups and needle exchange programs, were transferred to the health authorities effective April 1, 2002.

Responsibility for addictions services was transferred to the Vancouver Coastal Health Authority in 2001. More recently, responsibility for addictions services has also been transferred to other health authorities.

The Provincial Health Services Authority now holds responsibility for provincial programs such as the BC Centre for Disease Control.

### ***Centralized Funding***

The Ministry of Health Services continues to hold responsibility for directly funding several programs vital to reaching the goals outlined in this document, including:

- BC's HIV/AIDS Drug Treatment Program. In 2002, there were 2,700 patients on treatment, and an additional 1,500 patients enrolled in the program but not currently on treatment, for a total of 4,200 patients. The budget for this program in 2002–2003 was \$36,788,000.
- The BC Methadone Program, which currently involves 8,300 patients and 600 doctors. For the twelve-month period October 2001 to September 2002, the total costs for this program were \$18,422,724.36, including ingredients costs, professional fees and plan C interaction fees. In addition, the College of Physicians and Surgeons received \$250,000 during the 2002–2003 fiscal year to manage the program.

### ***Implications for the Future***

Implementing Priorities for Action may entail realigning the current mix of provincial, health authority and contracted programming to ensure current resources are spent where they can best assist in achieving the goals articulated in this plan. For example:

- Meeting the prevention target may require that some resources and programming efforts currently delivered directly by or under contract with health authorities be refocused or realigned to increase the impact of prevention efforts in those communities most vulnerable to HIV.
- Meeting the care, treatment and support target may require additional short-term resources dedicated specifically to HIV, although this target is an integral component of the overall prevention effort and resultant cost avoidance. For example, engaging individuals currently unaware they are infected with HIV in a program of care may slightly increase the number of patients enrolled in the HIV/AIDS Drug Treatment Program operated through the BC Centre for Excellence in HIV/AIDS. Currently, approximately 9 new patients a month are enrolled in the program. It is important to note that the Centre's post-marketing monitoring and evaluation of drugs has resulted in on-going modifications of its therapeutic guidelines for the treatment and management of HIV disease. Recent changes, for example, have spared patients unnecessary side effects associated with the initiation of drug treatment drug treatment too early in the course of HIV disease, while also permitting some cost savings.
- Meeting the care, treatment and support target may also have an impact on programs with broader purposes than HIV care alone. For example, key strategies targeting injection drug users may also see an increase in the number of methadone patients in BC; again, analysis shows that engaging injection drug users in methadone care is very cost effective.

Please see Appendix 1 for further analysis of investment implications associated with each key strategy.

## 5. ROLES AND RESPONSIBILITIES

### 5.1 BC Ministries of Health Planning and Health Services

The two BC health ministries have a vital role to play in managing the HIV epidemics in the province. The health authorities, working independently without a province-wide perspective, are unlikely to as effectively contain these epidemics.

In addition to setting broad strategic direction, the ministries will maintain a planning and monitoring function that will enable the government and health authorities to anticipate emerging trends and respond quickly should the epidemic make its way into new populations and regions. The ministries will also help to ensure a consistent level of service quality across the regions with no significant service gaps.

Building on concepts developed at the World Health Organization, this role could be described as:

- **articulating** consistent, ethical and evidence-based policy positions;
- **managing information** by assessing trends and comparing performance; setting the agenda for and stimulating research and development;
- **catalyzing change** through technical and policy support, in ways that stimulate cooperation and action and help to build sustainable province-wide capacity;
- **negotiating and sustaining intergovernmental and intersectoral partnerships**;
- setting, validating, monitoring and pursuing the implementation of **norms and standards**;
- **stimulating the development and testing of new technologies**, tools and guidelines for disease control, risk reduction, health care management, and service delivery.

The Ministries will support the BC Centre for Disease Control and the BC Centre for Excellence in HIV/AIDS in disseminating new knowledge and building greater awareness of best practices in HIV prevention, care, treatment and support.

### 5.2 Health Authorities

Health authorities have the most immediate role to play in managing the HIV epidemics, as they either provide or fund direct HIV prevention, care, treatment, and support services. Health authorities must consider whether existing or planned services will effectively engage vulnerable populations. They must also draw on the best available evidence as they consider ways to get ahead of the epidemic and prevent infection and illness, perhaps through new education, prevention and harm reduction efforts.

HIV prevention, care, treatment and support services must be available and accessible to British Columbians across the province, in every health authority region. This can best be achieved through the cooperation of all stakeholders, including health authorities, community-based organizations and government.

The Provincial Health Services Authority, with its province-wide mandate, has a special role to play. Currently, organizations with province-wide mandates are contracted through the Provincial Health Services Authority; involving province-wide membership and consumer organizations in both service delivery and capacity building efforts will be important, since HIV infection transcends regional boundaries and manifests itself principally within population groups.

### 5.3 Community

Internationally, best results in addressing HIV/AIDS are consistently obtained where government has supported the development of capacity within civil society, and enabled people and groups to be active participants in, rather than passive targets of, programming. Supporting both the ministries and the health authorities in British Columbia is the network of AIDS service organizations and coalitions working at the community level with vulnerable groups and with people living with HIV/AIDS.

Community is a vital partner in the implementation of the strategic plan. Community organizations play several important roles, such as: participating in policy development; program design, implementation and evaluation; and the provision of services, especially at the community level.

The Pacific AIDS Network includes most British Columbia community organizations involved in HIV/AIDS work. This province-wide structure offers opportunities for collaboration, sharing of skills and information, and the development of strategies for collective action – all with the goal of enhancing community capacity in terms of HIV/AIDS.

Given the ambitious goals proposed in this document, community organizations will provide critical strategic support by:

- engaging members of groups most vulnerable to HIV in prevention and care efforts;
- engaging those already living with HIV in enhanced secondary prevention efforts; and
- providing a vital bridge for mainstream health and research initiatives.

## **5.4 Government of British Columbia**

Finally, there is an important role for the government of British Columbia as a whole, and that is to address the broader social and economic issues that underlie the HIV/AIDS epidemic. The population health model provides the most promising long-term prevention strategy. Its pursuit, however, requires a commitment from across government.

Research from Canada and other countries clearly indicates that factors such as emotional, physical and sexual abuse and inequities based on income, race and gender leave groups of people particularly vulnerable to HIV infection.

These health determinants operate on an individual level when, for example, child abuse and adult homelessness increase the likelihood of a person engaging in high-risk behaviours. They are at work at the societal level when, for example, economic inequalities affect a woman's ability to negotiate safe sex practices.

Health determinants influence:

- whether a person or certain groups of people will engage in behaviours that place them at risk of HIV infection;
- the speed with which HIV infection will progress to AIDS; and
- a person's or community's ability to manage and live with HIV/AIDS.

Coordinated efforts across government departments to address the public health determinants that contribute to HIV vulnerability are essential to a strategic and effective response to HIV/AIDS throughout the province.

## 6. MONITORING FRAMEWORK

The implementation and the results of Priorities for Action in Managing the HIV Epidemics- HIV/AIDS in BC will be monitored on an annually using outcome and progress measures.

The short-, medium- and longer-term results of the approach will be monitored using the following set of provincial indicators and data sources. For each indicator, the province will need to establish baseline data (level of current performance), benchmarks (desired level of future performance) and annual targets to measure progress over time.

<b>PREVENTION</b>		
<b>Goals</b>	<b>Core Indicators</b>	<b>Data Sources</b>
<i>To reduce the incidence of HIV infection by 50% over the next five years</i>	<ul style="list-style-type: none"> <li>▪ Numbers and rates of HIV incidence among the general population and target populations, including women, youth, infants, Aboriginal people, men who have sex with men, and injection drug users</li> <li>▪ Estimated proportion of HIV+ people who do not know that they are infected</li> </ul>	<ul style="list-style-type: none"> <li>▪ BC Centre for Disease Control; Vancouver Injection Drug Use Study; Vanguard study; Aboriginal study</li> <li>▪ BCCDC – to be developed (e.g., once HIV is a reportable condition, use partner notification and aggressive outreach in high risk populations to encourage testing among people who may be unaware they are infected)</li> </ul>

<b>CARE, TREATMENT AND SUPPORT</b>		
<b>Goals</b>	<b>Core Indicators</b>	<b>Data Sources</b>
<i>To increase the proportion of HIV+ individuals who are linked to appropriate care, treatment and support services by 25% over the next five years</i>	<ul style="list-style-type: none"> <li>▪ Proportion of HIV+ individuals receiving care, treatment and support services by target population</li> <li>▪ Number and proportion of women receiving antiretroviral therapies by target population</li> <li>▪ Rates of HIV/AIDS disease progression among the general and target populations</li> </ul>	<ul style="list-style-type: none"> <li>▪ BC Centre for Excellence in HIV/AIDS – to be developed (e.g., once HIV is a reportable condition, use assigned ID #s to track HIV-related service utilization at hospitals and health clinics)</li> <li>▪ BC Centre for Excellence in HIV/AIDS, Drug Treatment Program database</li> <li>▪ BC Centre for Excellence – to be developed</li> </ul>

<b>CAPACITY</b>		
<b>Goals</b>	<b>Core Indicators</b>	<b>Data Sources</b>
<i>To enhance the province's capacity for monitoring the HIV epidemic over the next five years</i>	<ul style="list-style-type: none"> <li>▪ HIV is a reportable condition and partner notification system is in place</li> <li>▪ HIV testing uptake within the most vulnerable groups</li> <li>▪ HIV/AIDS service plans and monitoring systems developed by each health authority</li> </ul>	<ul style="list-style-type: none"> <li>▪ BCCDC – to be developed</li> <li>▪ BC health authorities; BC Centre for Excellence in HIV/AIDS; VIDUS; Vanguard; BC Aboriginal study</li> <li>▪ BC health authorities</li> </ul>

<b>COORDINATION AND COOPERATION</b>		
<b>Goals</b>	<b>Core Indicators</b>	<b>Data Sources</b>
<i>To create and sustain broad-based support for Priorities for Action</i>	<ul style="list-style-type: none"> <li>▪ Inventory of Priorities for Action stakeholders by role, responsibility and sector</li> <li>▪ Report by Inter Ministry Committee on HIV/AIDS</li> <li>▪ Inventory of BC involvement in international HIV/AIDS work</li> </ul>	<ul style="list-style-type: none"> <li>▪ BC health authorities, BC Ministry of Health Planning</li> <li>▪ Inter Ministry Committee on HIV/AIDS</li> <li>▪ BC Ministry of Health Planning; Canadian International Development Agency; Health Canada</li> </ul>

## REFERENCES

1. Albert, Terry and Williams, Gregory. 1997. The Economic Burden of HIV/AIDS in Canada. November. CPRN Study Number H02. [CPRN1997] [paper]
2. Alberta, Health and Wellness. 2001. Healthy Response to HIV/AIDS. Alberta Aboriginal HIV/AIDS Strategy. Spring.
3. Anderson R, Garnett G and Weiss P. 1999. The Dynamics and Determinants of HIV in High-Income Countries. Dialogue on AIDS. Montebello, November 8-10. [Montebello –Disc] [paper]
4. Australia, Health and Aged Care. 2000. Nations HIV/AIDS Strategy, 1999-2000 to 2003-2004. Changes and Challenges.
5. Australian National Council on AIDS and Related Diseases. 1999. Proving Partnership. Review of the Third National HIV/AIDS Strategy. May.
6. Backmund M, Meyer K, Von Zielonka M, Eichenlaub D. 2001. Treatment of hepatitis C infection in injection drug users. *Hepatology*, July, 34(1):188-93.
7. British Columbia. 1998a. British Columbia's Framework for Action on HIV/AIDS. Prepared by the BC Ministry of Health and Ministry Responsible for Seniors in consultation with the Provincial HIV/AIDS Strategy Advisory Committee.
8. \_\_\_\_\_. 1998b. HIV, Hepatitis and Injection Drug Use in British Columbia. Pay Now or Pay Later? Prepared by Dr. John S. Millar, Provincial Health Officer. June.
9. \_\_\_\_\_. 2002. Provincial Health Officer's Report on HIV Reportability. Prepared by Dr. P.R.W. (Perry) Kendall, Provincial Health Officer. February.
10. British Columbia Aboriginal HIV/AIDS Task Force. 1999. The Red Road, Pathways to Wholeness: An Aboriginal Strategy for HIV and AIDS in BC.
11. British Columbia Centre for Disease Control (BCCDC), 2002. HIV/AIDS Update Annual 2001.
12. Brundtland, Dr Gro Harlem (Director General, WHO). 2001. Opening Remarks to a meeting of Interested parties, Geneva, 18/6/01. [http://www.who.int/director-general/speeches/2001/english/20010618\\_mipgeneva2001.en.html](http://www.who.int/director-general/speeches/2001/english/20010618_mipgeneva2001.en.html) (accessed 5/6/02)
13. Canada, House of Commons. 1996. Standing Committee on Health, Report on the AIDS Epidemic in Canada.
14. Canadian HIV/AIDS Legal Network. 1999. Legal, Ethical, and Human Rights Issues Raised by HIV/AIDS: Where Do We Go From Here? Planning for 1998-2003. A Planning Report. January [AIDS-Law, successes and shortcomings; criteria for allocating funding]
15. Centers for Disease Control and Prevention. 2001. HIV Prevention Strategic Plan through 2005. Atlanta.
16. Futures Group International, The. 2002. Literature Database for Evaluating HIV/AIDS Interventions. March.
17. Glen Brown and Associates. 2002. From direction to Action – Environmental Scan Report for the Montreal Direction Setting Follow-Up Meeting on the Canadian Strategy on HIV/AIDS, April 14-16, 2002. Prepared for Health Canada.
18. Globe and Mail. 2002. An investment of \$27-billion could halt march of AIDS. By Andre Picard. Friday July 5, A3.
19. Hanvelt, Robin, Copley, Tobin, Schneider, David and Meagher, Nancy. "The Economic Costs and Resource Impacts of HIV/AIDS in British Columbia." Vancouver: Community Health Resource Project, 1999.
20. Health Canada. 1997. The Canadian Strategy on HIV/AIDS: Moving Forward Together.

21. \_\_\_\_\_. 1998. Reviewing Canada's Strategy on HIV/AIDS. Successes, Barriers and Lessons Learned.
22. \_\_\_\_\_ and UNAIDS. 2000. Dialogue on HIV/AIDS: Policy Dilemmas Facing Governments. November.
23. \_\_\_\_\_. 2001a. Current Realities: Strengthening the Response. Canada's Report on HIV/AIDS 2001.
24. \_\_\_\_\_. 2001b. Meeting Report. Canadian Strategy on HIV/AIDS Annual Direction-Setting Meeting. Gray Rocks Inn, Mont Tremblant, Quebec. October 29 – November 1, 2000. February.
25. \_\_\_\_\_. 2002a. HIV/AIDS Epi Update[s]
26. \_\_\_\_\_. 2002b. HIV and AIDS in Canada: Surveillance Report to December 31, 2001.
27. Institute of Medicine. 2000. No Time to Lose – Getting More from HIV Prevention (Prepublication Copy). Washington, DC: National Academy Press.
28. Martin Spigelman Research Associates. 2001. Sharing Experiences: Learning from Five Countries Experiences with the HIV/AIDS Epidemic. Prepared for the Departmental Program Evaluation Division, Health Canada, as part of the CSHA Evaluation. June.
29. Millar, John S. 1998. HIV, Hepatitis and Injection Drug Use in British Columbia – Pay Now or Pay Later? Office of the Provincial Health Officer, June.
30. Ministerial Council on HIV/AIDS. 2001(a). Situational Analysis: A Background Paper on HIV/AIDS and Aboriginal People.
31. \_\_\_\_\_. 2001(b). Taking Stock: Assessing the Adequacy of the Government of Canada Investment in the Canadian Strategy on HIV/AIDS. Prepared by Martin Spigelman Research Associates. January.
32. \_\_\_\_\_. 2002. HIV/AIDS and Health Determinants. Lessons for Coordinating Policy and Action. Prepared by Martin Spigelman Research Associates. January.
33. Murray C and Frenk J. 2001. "World Health Report 2000: a step towards evidence-based health policy." *Lancet*, 357:1698-700.
34. National Center for HIV, STD and TB Prevention. Program Briefing 2001, 4/10/02. [www.cdc.gov/nchstp/od/program\\_brief\\_2001](http://www.cdc.gov/nchstp/od/program_brief_2001).
35. National HIV/AIDS Organizations. 2001. AIDS in Canada 2001. Report from the National HIV/AIDS Organizations. November 30.
36. Pacific AIDS Network. 2002. Organizing for Effective Action. Health Care Restructuring and HIV/AIDS in British Columbia. Prepared by Martin Spigelman Research Associates for discussion by the Government of British Columbia and the Pacific AIDS Network. January.
37. Riley D, Teixeira P and Hausser D. 1999. HIV/AIDS policy issues related to large-scale targeted interventions for injection drug users. Dialogue on AIDS, Montebello, November 8-10.
38. Schwartlander, B. et al. 2001. AIDS: Resource Needs for HIV/AIDS. *Science*, 292 (5526), 29 June, 2434-2436.
39. Spittal PM, Craib KJP, et. al. 2002. "Risk Factors for elevated HIV incidence rates among female injection drug users in Vancouver." *Canadian Medical Association Journal*, 166(7):894-99.
40. SPR Associates Ltd. 2002. Final Report on the Year Three Evaluation of the Canadian Strategy on HIV/AIDS. A Report to Health Canada. January.
41. Stover, John et al. 2002. Can we reverse the HIV/AIDS pandemic? *The Lancet*, 360, July 6: 73-77.
42. Strathdee, SA. 1997a. Social determinants related to the risk of HIV infection and progression to AIDS. *The Clarion* 4, no. 1: 2-4.

43. Strathdee SA, Patrick DM, Currie SL, Cornelisse PGA, Rekart ML, Montaner JSG, Schechter MT, O'Shaughnessy MV. 1997b. Needle exchange is not enough: lessons from the Vancouver injecting drug use study. *AIDS*, 11:F59-F65.
44. UNAIDS. 2002(a). Opening Up the HIV/AIDS Epidemic. Guidance on encouraging beneficial disclosure, ethical partner counselling and appropriate use of HIV case-reporting. Geneva.
45. \_\_\_\_\_. 2002(b). Report on the global HIV/AIDS epidemic. Geneva. Prepared for the Barcelona Conference.
46. \_\_\_\_\_. 2002(c). Fact Sheet: High Income Countries. <http://www.unaids.org/barcelona/presskit/factsheets>
47. \_\_\_\_\_. 2002(d). Fact Sheet: The Impact of HIV/AIDS.
48. \_\_\_\_\_. n.d. Canada. National Consultation to Renew Canada's Strategy on HIV/AIDS. Best Practices Summary Booklet.
49. Vancouver Richmond Health Board. 1998. Vancouver Downtown Eastside HIV/AIDS Action Plan. Evaluation Report. Prepared by Wolfe-Gordon Consulting. November.
50. Vanguard Project. 2001. Five Year Report. Summary of Research Findings, 1995-2000. July.
51. Wiebe J, Single E. 2000. Profile of Hepatitis C & Injection Drug Use in Canada: A Discussion Paper. Prepared for Hepatitis C Prevention, Support & Research Program, Population & Public Health Branch. Ottawa: Health Canada.
52. World Health Organization and UNAIDS. 2000. Key Elements in HIV/AIDS Care and Support. A Working Document. December. [http://www.who.int/HIV\\_AIDS/HIV\\_AIDS\\_Care/Key\\_elements\\_HIV\\_AIDS\\_care.htm#\\_Toc506380342](http://www.who.int/HIV_AIDS/HIV_AIDS_Care/Key_elements_HIV_AIDS_care.htm#_Toc506380342) (accessed 5/6/02)
53. Young, Jim. 2000. Legacy Discussion Paper: An Overview of HIV/AIDS in Canada – Past, Present, and Future (Working Draft). October 10.

## APPENDIX 1

### Investment Implications

The tables that follow provide further analysis for each key strategy by:

- identifying responsibility, impact and funding (existing, new or external); and
- identifying the annual level of investment required, as outlined below.

Level	Amount
Minimal	Less than \$50,000
Low	\$50,000 to \$500,000
Medium	\$500,000 to \$2 million
High	More than \$2 million

### Prevention Strategies

1. Ensure that current and future HIV/AIDS-related prevention efforts across the province effectively attract and retain the most vulnerable populations

	BC Health Ministries	Health Authorities
<b>Investment</b>	n/a	low
<b>Impact</b>	n/a	high
<b>Type of funding</b>	n/a	existing

*n/a = not applicable*

2. Expand provincial support for low threshold harm reduction initiatives, including supervised consumption sites, needle exchange programs and addiction treatment services, and a randomized trial of prescribing controlled substances and ensure that they are accessible and culturally appropriate to populations most at risk of HIV infection

	BC Health Ministries	Health Authorities
<b>Investment</b>	low	medium
<b>Impact</b>	high	high
<b>Type of funding</b>	existing	existing (and external)

3. Establish, monitor and evaluate a public health reporting requirement for HIV infection under the Health Act, with provisions for anonymous, voluntary partner notification

	BC Health Ministries	Health Authorities
<b>Investment</b>	n/a	low
<b>Impact</b>	n/a	medium
<b>Type of funding</b>	n/a	Existing and new (external)

4. (a) Expand HIV testing capability, education and prevention efforts in all of the province's correctional facilities; (b) given the evidence of both IDU and HIV/HCV transmission in provincial jails, and the positive evaluations of needle exchange pilots in European jails, assess the feasibility of a pilot needle exchange program in a provincial correctional facility; and (c) develop a partnership with Correctional Services Canada to enhance HIV/AIDS-related services in federal institutions located in BC

(a)	Province	Health Authorities
<b>Investment</b>	low	n/a
<b>Impact</b>	high	n/a
<b>Type of funding</b>	existing	n/a

(b)	Province	Health Authorities
<b>Investment</b>	low	n/a
<b>Impact</b>	high	n/a
<b>Type of funding</b>	existing	n/a

(c)	Province	Health Authorities
<b>Investment</b>	n/a	n/a
<b>Impact</b>	medium	n/a
<b>Type of funding</b>	n/a	n/a

5. Create an HIV/AIDS roundtable involving BC ministries and health authorities, Health Canada and First Nations organizations to identify and pursue efforts to address the HIV epidemic among Aboriginal people

	BC Health Ministries	Health Authorities
<b>Investment</b>	n/a	minimal
<b>Impact</b>	medium	medium
<b>Type of funding</b>	n/a	n/a

### *Treatment Strategies*

1. Ensure that current and future HIV/AIDS-related care, treatment and support services across the province effectively attract and retain the most vulnerable populations

	BC Health Ministries	Health Authorities
<b>Investment</b>	n/a	medium
<b>Impact</b>	n/a	high
<b>Type of funding</b>	n/a	existing

2. Work with the BC Medical Association and the College of Physicians and Surgeons to expand the provincial methadone program, and the range of addictions treatment options

	<b>BC Health Ministries</b>	<b>Health Authorities</b>
<b>Investment</b>	high	high
<b>Impact</b>	high	high
<b>Type of funding</b>	existing	existing

3. Establish, monitor and evaluate the public health follow-up to the reporting requirement for HIV infection under the Health Act, with provisions for anonymous, voluntary partner notification. See Prevention Strategy #3, above.
4. Work with the College of Physicians and Surgeons to increase the number of physicians providing HIV/AIDS care and treatment, and expand innovative training programs for physicians and other key health care providers

	<b>BC Health Ministries</b>	<b>Health Authorities</b>
<b>Investment</b>	low	n/a
<b>Impact</b>	medium	n/a
<b>Type of funding</b>	existing	n/a

5. Develop the capacity to provide continuity of care and bridging services for HIV-positive individuals at time of discharge from federal and provincial correctional institutions in BC

	<b>BC Health Ministries</b>	<b>Health Authorities</b>
<b>Investment</b>	low	n/a
<b>Impact</b>	high	n/a
<b>Type of funding</b>	existing	n/a

### Capacity Strategies

1. Support the expansion of HIV/AIDS-related medical and social research undertaken in the province and explore alternative means of disseminating new knowledge

	BC Health Ministries	Health Authorities
<b>Investment</b>	low	low
<b>Impact</b>	medium	medium
<b>Type of funding</b>	existing	existing

2. Develop an effective sentinel surveillance system through linking existing data sources that will enable the province and health authorities to anticipate new epidemiological trends and service needs with regard to HIV/AIDS, hepatitis C and other co-infections

	Province	Health Authorities
<b>Investment</b>	n/a	low
<b>Impact</b>	n/a	high
<b>Type of funding</b>	n/a	existing

3. Identify and disseminate best practices information to health authorities, local governments and AIDS service organizations and other community-based organizations on a timely basis

	BC Health Ministries	Health Authorities
<b>Investment</b>	low	n/a
<b>Impact</b>	medium	medium
<b>Type of funding</b>	existing	n/a

4. Work with Health Authorities in planning, monitoring and evaluating HIV/AIDS services including the public health follow-up for partners of newly reported HIV positive individuals.

	BC Health Ministries	Health Authorities
<b>Investment</b>	low	n/a
<b>Impact</b>	low	low
<b>Type of funding</b>	existing	n/a

### Coordination and Cooperation Strategies

1. Create mechanisms for encouraging coordination and cooperation among the Strategy's various stakeholders

	BC Health Ministries	Health Authorities
<b>Investment</b>	minimal	n/a
<b>Impact</b>	medium	n/a
<b>Type of funding</b>	existing	n/a

2. Forge new partnerships with Correctional Services Canada, Health Canada and Indian and Northern Affairs to foster coordination and cooperation in efforts directed at vulnerable populations

	<b>BC Health Ministries</b>	<b>Health Authorities</b>
<b>Investment</b>	low	n/a
<b>Impact</b>	medium	n/a
<b>Type of funding</b>	existing	n/a

3. Support efforts to share the province's HIV/AIDS knowledge and experience with countries in the developing world

	<b>BC Health Ministries</b>	<b>Health Authorities</b>
<b>Investment</b>	minimal	n/a
<b>Impact</b>	low	n/a
<b>Type of funding</b>	external	n/a

4. Explore an enhanced role for the Provincial Health Services Authority in contributing to provincial coordination and the identification and dissemination of best practises

	<b>BC Health Ministries</b>	<b>Health Authorities</b>
<b>Investment</b>	n/a	minimal
<b>Impact</b>	n/a	low
<b>Type of funding</b>	existing	existing