

# Backgrounder: HIV/AIDS in Canada

## Definition

The Human Immunodeficiency Virus (HIV) is the virus that causes **Acquired Immunodeficiency Syndrome (AIDS)**. HIV attacks the immune system, resulting in a chronic, progressive illness, leaving infected people vulnerable to opportunistic infections (e.g., pneumonia), neurologic disease (e.g., AIDS dementia) and cancers (e.g., lymphoma). There is no cure and no vaccine available to prevent infection.<sup>1</sup>

## Transmission

- It has been more than 20 years since HIV/AIDS was first diagnosed in Canada. Thousands of Canadians are infected every year. HIV is transmitted through unprotected sexual intercourse (vaginal, anal and oral), shared needles and equipment for injecting drugs, unsterilized needles for tattooing, skin piercings and acupuncture, pregnancy, delivery and breast feeding, and occupational exposure in healthcare settings.<sup>2</sup>
- HIV/AIDS cannot be transmitted through casual, everyday contact such as shaking hands, hugging, kissing; or through coughs, sneezes, giving blood, swimming pools, toilet seats, sharing eating utensils, water fountains, or through mosquitoes and other insects, or animals.<sup>2</sup>
- Sexual transmission of HIV is enhanced by the presence of other sexually transmitted diseases such as syphilis, genital herpes, Chlamydia and gonorrhea.<sup>1</sup>

## Treatment

- HIV-infected patients are treated with antiretroviral (ARV) medicines. ARV's currently consist of four classes of medicines:
  - Nucleoside/nucleotide reverse transcriptase inhibitors (NRTIs)
  - Protease Inhibitors (PIs)
  - Non-nucleoside reverse transcriptase inhibitors (NNRTIs)
  - Entry Inhibitors (EIs)
- Most HIV-infected patients on therapy take a combination of three medicines from at least two classes of ARVs. This type of regimen is known as highly active antiretroviral therapy (HAART). The focus of treatment is maximum durable suppression of HIV with the ideal objective of achieving undetectable viral load.

- The success of HAART in transforming HIV infection into a chronic disease has increased the total burden of care and resulted in increased incidence of adverse effects from therapy and greater difficulty with long-term adherence to HAART. However, HAART has dramatically changed the face of the HIV epidemic – HAART has increased the lifespan of people living with HIV. <sup>1</sup>

## **Incidence**

- As of June 2006, 61,423 people in Canada have tested positive for HIV. Of these people, 83.5% are male and 16.5% are female. <sup>4</sup>
- Of the estimated 58,000 people living with HIV/AIDS at the end of 2005 in Canada, approximately 27% were unaware of their HIV status. <sup>3</sup>
- The number of new HIV infections in 2005 has not decreased and may have increased slightly compared to 2002. <sup>3</sup>
- In Canada, 11 new people are infected with HIV every day. <sup>5</sup>
- The total number of reported AIDS diagnoses in Canada for the year 2005 was 318. The highest number of diagnoses was 1,828 in 1993. <sup>4</sup>
- Heterosexual contact accounted for close to one-third (31.3%) of all positive HIV test reports among men and women in 2005. <sup>4</sup>
- Of the positive HIV test reports, the age group with the largest number of new infections is 30 to 39 year olds – both men (40%) and women (35.8%). <sup>4</sup>
- From 1980 to June 2006, 13,326 people have died as a result of AIDS. The largest number of deaths were reported from 1991-1996. <sup>4</sup>

## **Regional Breakdown**

The majority of Canadians (87.3%) who have tested positive for HIV are located in three provinces: British Columbia, Ontario and Quebec. <sup>4</sup>

### **British Columbia<sup>4</sup>**

- An estimated 12,533 people or 20.4% of the total number of people living with HIV/AIDS in Canada are located in British Columbia.
- In British Columbia, the ratio of men who have tested positive for HIV compared to women from 1985-2006 is 6:1.

### **Ontario<sup>4</sup>**

- An estimated 27,271 people or 44.4% of the total number of people living with HIV/AIDS in Canada are located in Ontario
- In Ontario, the ratio of men who have tested positive for HIV compared to women from 1985-2006 is 6:1.

## **Quebec<sup>4</sup>**

- An estimated 13,798 people or 22.5% of the total number of people living with HIV/AIDS in Canada are located in Quebec
- In Quebec, the ratio of men who have tested positive for HIV compared to women from 1985-2006 is 4:1.

## **Population Breakdown**

### **Men and HIV/AIDS**

- In Canada, men who have sex with men account for 45% of all new HIV infections, and 76.3% of cumulative reported AIDS cases.<sup>3</sup>

### **Women and HIV/AIDS**

- Women account for one-fifth of all people living with HIV/AIDS in Canada. This represents a 23% increase from 2002.<sup>3</sup>
- Heterosexual contact and injecting drugs are the two main risk factors for HIV infection in women.<sup>3</sup>
- Pregnant women infected with HIV are at risk of transmitting the virus to their unborn child. In the absence of any intervention, an estimated 15% to 30% of women with HIV infection will transmit the infection through pregnancy and delivery, and 10% to 20% through breast milk to their new-born child.<sup>3</sup>

### **Aboriginal persons and HIV/AIDS**

- The overall infection rate among Aboriginal persons is about 2.8 times higher than among non-Aboriginal persons.<sup>3</sup>
- The proportion of new HIV infections in 2005 due to intravenous drug use among Aboriginal Canadians (53%) is much higher than among all Canadian (14%).<sup>3</sup>

## **Other statistics**

### **Canadians from HIV Endemic Countries and HIV/AIDS**

- The estimated infection rate among Canadians from HIV-endemic countries (e.g., sub-Saharan Africa and the Caribbean) is at least 12.6 times higher than among other Canadians. Those particularly affected include Canadians under the age of 40 and women, including women of childbearing age.<sup>3</sup>

## Intravenous Drug Users and HIV/AIDS

- Of the estimated 58,000 persons living with HIV in Canada, about 17% are intravenous drug users. The high levels of risky injecting and sexual behaviors reported by intravenous drug users in Canada suggest that the potential for the transmission of HIV in these populations continues to be significant.<sup>3</sup>

### Sources:

1. Public Health Agency of Canada. *Canadian Guidelines on Sexually Transmitted Diseases. Management and Treatment of Specific Infections. Human Immunodeficiency Virus Infections.* 2006
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3. Public Health Agency of Canada. *HIV/AIDS Epi Updates.* August 2006
4. Public Health Agency of Canada. *HIV and AIDS in Canada; Surveillance Report to June 30, 2006.* November 2006
5. <http://www.farha.gc.ca/en/html/sidaqc.html>. Last accessed October 26, 2007.