

HIV/AIDS in Ontario: Epidemiological Fact Sheet 2009

The HIV/AIDS epidemic in Ontario differs from other jurisdictions in Canada and internationally, and it varies from region to region within Ontario as well. Therefore, it is important to use Ontario and/or local epidemiology when describing the impact of HIV/AIDS in your community and/or across the province.

In order to understand the nature of the HIV/AIDS epidemic and the direction its taking, we review data on the estimated number of people newly infected with HIV (incidence), and the estimated total number of people living with HIV/AIDS (prevalence). In addition, we review data on the actual number of people who have been diagnosed, as well as HIV testing rates.

In Ontario, the majority of people living with HIV/AIDS are gay and bisexual men (see epidemiologic term Men who have Sex with Men (MSM) below), followed by African, Caribbean, and Black Ontarians (see epidemiologic term HIV Endemic below), Aboriginal Peoples and people who use drugs (see epidemiologic term Injection Drug User (IDU) below).

In Canada, gay and bisexual men also make up the majority of people living with HIV, but are followed by people who use injection drugs; and globally, HIV is largely a heterosexually acquired infection, concentrated in Sub-Saharan Africa, some parts of the Caribbean region and increasingly in Central Asia. In these regions, women make up half of those infected.

The Epidemic in Ontario

Epidemiological evidence shows that the *prevalence* of HIV/AIDS or estimated number of people living with HIV/AIDS (PHA) in Ontario continues to grow, from 22,535 PHAs in 2005 to **27,420** in 2009, an increase of 22%. This is due to decreased mortality related to more effective drug therapy and new HIV infections in specific populations. The *incidence* of HIV/AIDS or estimated number of new HIV infections was **1,535** in 2009, which represents a 4% increase since 2005.

The available data indicates that there are five broad populations in Ontario most likely to be living with or at high-risk of HIV infection: gay and bisexual men; African, Caribbean, and Black Ontarians; Aboriginal Peoples; people who use injection drugs; and, women (who are either members of the high-risk populations or engage in HIV risk activities with them).

Through other evidence, we know that there are additional populations, not always immediately clear in the above descriptors, who are part of or networked with the above populations and are at heightened risk of HIV infection. These include people who use drugs through means other than injecting, transwomen and transmen, and people who are incarcerated.

Trends in Ontario as of 2009

Population specific analysis of HIV/AIDS data for Ontario shows the following five-year trends in the epidemic:

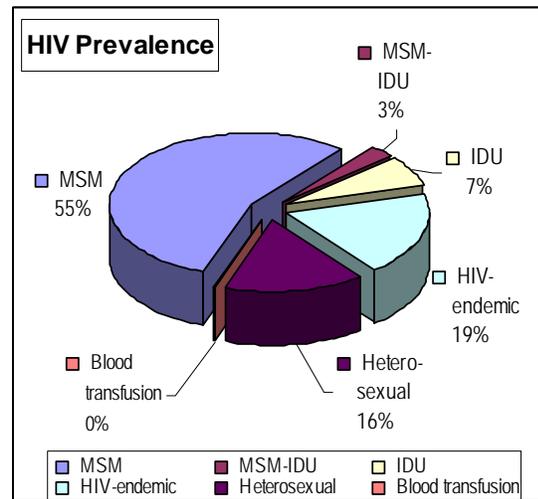
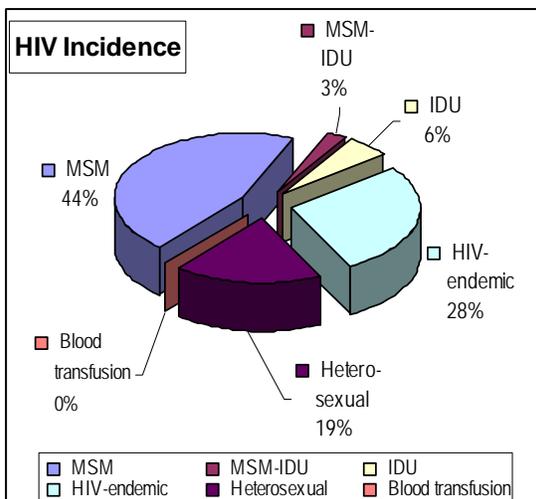
- There were an estimated 15,175 gay and bisexual men living with HIV in Ontario in 2009. This represents 55% of people living with HIV in the province. Gay and bisexual men accounted for 45%, or 693, of the 1,535 estimated new HIV infections in 2009. An analysis of the past five years of epidemiologic data suggests that while HIV prevalence continues to rise amongst gay and bisexual men, the number of new infections appears to have levelled at about or just below 700.
- African, Caribbean, and Black Ontarians, male and female, infected heterosexually accounted for 5,160 or 19% of people living with HIV/AIDS and 28% of new HIV infections, or 431. Over the past five years, both those living with HIV and those newly infected in this population has continued to grow.
- People who use injection drugs, male and female, accounted for 1,945 or 7% of people living with HIV/AIDS in the province and 88 or 6% of new HIV infections in 2009. The long-term data show a significant decrease in new infections for IDU, while recent data show instability in the number of new HIV infections since 2005. In some regions, IDU account for a larger proportion of new infections compared to the province overall. In Ottawa, IDU account for 9% of new infections, and in the North, they account for 30% of new infections.
- Men and women infected heterosexually were individuals who did not identify as members of Ontario's high-risk populations. However, research shows that this group consists of those who engage in HIV risk activity with Ontario's high-risk populations. Heterosexual men and women accounted for 4,304 or 16% of people living with HIV/AIDS and 19% of new HIV infections or 284. The number of new infections in this population has been unstable since 2005.
- Women who are represented in Ontario's high-risk populations or who engage in HIV risk activities with them accounted for 5,079 or 18% of people living with HIV/AIDS in the province and 26% of new infections, or 395. (*Note: Data not separated out for women in the charts and tables below.*)
- Ontario data on HIV infections amongst Aboriginal Peoples is incomplete. Data collected on Aboriginal Peoples through Ontario's Laboratory Enhancement Program which obtains race/ethnicity data on approximately 70% of individuals who test HIV positive, shows that for the 2009-2011 period Aboriginal Peoples represented 2.7% or 43 new infections. Men accounted for 26 new infections, and women 17. In most regions of Ontario, statistical modelling of HIV prevalence show higher rates of HIV amongst the Aboriginal Peoples as compared to the general population.

The following charts and tables illustrate the estimates of HIV incidence (number of new infections) and HIV prevalence (number of people living with HIV) for Ontario.

Estimated HIV Incidence and Prevalence by Population 2009.

Population*	HIV incidence	%
MSM	693	45%
MSM-IDU	39	3%
IDU	88	6%
HIV-endemic	431	28%
Heterosexual	284	19%
Blood transfusion	0	0%
TOTAL	1,535	100%

Population*	HIV prevalence	%
MSM	15175	55%
MSM-IDU	730	3%
IDU	1945	7%
HIV-endemic	5160	19%
Heterosexual	4304	16%
Blood transfusion	106	<1%
TOTAL	27,420	100%



*MSM: Men who have Sex with Men; MSM-IDU: MSM-Injection Drug User; IDU: Injection Drug User; HIV-endemic: In Ontario, primarily African and Caribbean countries. Source: Remis RS, Swantee C, Liu J. Report on HIV/AIDS in Ontario 2009. Ontario Ministry of Health and Long-Term Care, June 2009

HIV Diagnoses

By the end of 2009, 30,800 people in Ontario had been diagnosed with HIV and 9,990 had died. Based on these numbers, we can calculate that there were 20,810 people living with HIV who had been *diagnosed*. Since not everyone who has HIV has been tested and diagnosed, we must add the estimated number of undiagnosed to those diagnosed to better understand the scope of the epidemic. Epidemiologists estimate that about 25% or 6,610 HIV infected persons in Ontario have not been diagnosed. Therefore, the estimated number of people living with HIV or prevalence of HIV in Ontario was 27,420 in 2009.

HIV Testing

425,366 people in Ontario were tested for HIV in 2009 (this does not include prenatal HIV testing, see below). Women accounted for 55% of people who tested in that year. Overall, HIV testing rates have been trending upwards by almost 10% since 2005. Gay

and bisexual men, along with African, Caribbean and Black Ontarians experienced a 13% increase in testing rates, and heterosexuals experienced an 11% increase in testing rates since 2005.

Prenatal HIV Testing

147,995 women tested for HIV through Ontario's prenatal HIV testing program. The program has been successful at promoting the offer of an HIV test to all pregnant women. HIV testing rates among pregnant women have increased from 33% in 1999 to at least 95% in 2009. It is estimated that mother-to-infant transmissions have been reduced from an estimated 10 a year in 1992 through 1995 to about 2 a year in 2005 through 2009.

Mortality Rate Decreases

People are living with HIV longer. Since the introduction of anti-retroviral therapies in 1996, the number of HIV-related deaths has decreased by over 50%. As of 2009, an estimated 9,993 people with HIV/AIDS have died since the onset of the epidemic.

Definitions

Epidemiology – The science of understanding diseases and their progression. Epidemiologic data helps in understanding the nature and direction of an epidemic (i.e. who is most affected) and assists in determining whether prevention efforts are working.

Epidemic – The term is used when there are a greater number of cases of a disease than would normally be expected to occur. The HIV/AIDS epidemic in Ontario disproportionately affects specific populations considered to be at high-risk of HIV infection and include gay and bisexual men, African, Caribbean, and Black Ontarians, Aboriginal Peoples, people who use injection drugs, and women at greatest risk.

Incidence – The estimated number of new infections in a given year. Scientific estimates are used to obtain this number and it is important in understanding whether prevention efforts are working. A decrease in new infections suggests successful interventions.

Prevalence – The estimated total number of people living with HIV/AIDS, including those diagnosed and those who have not yet been diagnosed. Prevalence helps to understand the overall burden of disease in a community or population.

Diagnosis – The actual number of people diagnosed with HIV/AIDS. This data is obtained from the number of HIV positive test results. Diagnosis helps in the estimation of the number of new infections and the number of people living with HIV/AIDS. This information also helps in determining the effectiveness of HIV testing initiatives.

Epidemiologic HIV Risk Categories:

For identification, tracking and data analysis purposes, epidemiologists have developed the following HIV risk classification categories:

- *MSM: Men who have Sex with Men – Identifies Gay, bisexual, and other men who have sex with men.*
- *MSM-IDU: MSM-Injection Drug User – Identifies Gay, bisexual, and other men who have sex with men, and who are also people who use injection drugs.*
- *IDU: Injection Drug User – Identifies people who use injection drugs and includes men and women.*
- *HIV-endemic – Refers to people from countries where the prevalence of HIV/AIDS is considered to be high at 1% or more of the general population. In Ontario, this category refers to people primarily from African and Caribbean HIV endemic countries.*
- *Heterosexual – Includes heterosexual men and women who are at high-risk and at low-risk of acquiring HIV. “High-risk heterosexual” refers to person who has reported engaging in HIV sexual risk activity with someone from Ontario’s high-risk populations, but does not identify as a member of one of the populations. “Low-risk heterosexual” refers to a person who is not a member of Ontario’s high-risk populations, and has not reported any sexual contact with Ontario’s high-risk groups. Research on the “Low-risk heterosexual” population often shows HIV sexual risk-taking activity with a person from a high-risk group has.*

References

Remis RS, Swantee C, Liu J. Report on HIV/AIDS in Ontario 2009. Ontario Ministry of Health and Long-Term Care. June 2012.

Ontario HIV/AIDS epidemiology can be found at the Ontario Epidemiologic Monitoring Unit located at the University of Toronto. Visit their website at:
<http://www.ohemu.utoronto.ca/>