

# The Epidemiology of HIV in Canada

This fact sheet provides a snapshot of the HIV epidemic in Canada. All epidemiological information is approximate, based on the best available data. Most of the data contained in this fact sheet come from the latest estimates from the Public Health Agency of Canada, which are for the year 2020. More information can be found in the section “Where do these numbers come from?” at the end of the fact sheet.

## What is HIV?

HIV stands for human immunodeficiency virus. HIV is a virus that can weaken the immune system, the body’s built-in defence against disease and illness. With proper treatment and care, people with HIV can live long and healthy lives and avoid passing HIV to others. There is no vaccine to prevent HIV but there are ways to avoid passing or getting HIV.

## Why are certain populations disproportionately impacted by HIV in Canada?

HIV can affect anyone, no matter their age, sex, gender, sexual orientation, race or ethnic origin. However, certain populations carry a disproportionate burden of HIV in Canada. In Canada, the HIV epidemic is concentrated in marginalized communities, notably sexual minorities and racialized communities, because of structural and social factors that create health inequities.

While these populations have higher rates of HIV and carry a disproportionate burden of HIV compared with the broader population, this does not mean that being a member of one of these populations is itself a risk factor for HIV. Rather, the intersections of many factors and experiences over an individual’s lifetime can lead to increased risk among people within these populations. It is also important to recognize the strengths and protective factors that exist within each of these communities and to work to build on those strengths to support and enhance health and wellness.

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## What statistics are available in Canada to inform programming?

There are two main types of numbers available, HIV estimates and HIV surveillance data (reported HIV diagnoses).

HIV estimates are developed by the Public Health Agency of Canada through statistical modelling, using a variety of data sources. There are two main types of estimates:

- *Prevalence* estimates tell us how many people are living with HIV at a given point in time. They include estimates for the number of people who are undiagnosed and take into account the number of people with HIV who have died.
- *Incidence* estimates tell us how many people got HIV in a given year, including those who had not yet been diagnosed.

HIV surveillance data are published by the Public Health Agency of Canada and tell us how many people were diagnosed with HIV in a given year. This information does not tell us when they got HIV, just when the diagnosis was made. People may have had HIV for many years before diagnosis.

## How many people are living with HIV in Canada (prevalence)?

According to national HIV estimates, there were 62,790 Canadians living with HIV at the end of 2020. This means that for every 100,000 Canadians, 170 people were living with HIV (prevalence rate).

## How many people are living with HIV but don't know it (undiagnosed) in Canada?

According to national HIV estimates, 6,590 people were living with HIV but didn't know it (undiagnosed) at the end of 2020. This represents 10% of the estimated number of people with HIV.

## How many new HIV infections are there in Canada (incidence)?

According to national HIV estimates, there were 1,520 new HIV infections in Canada in 2020. This means that for every 100,000 Canadians, four people became HIV positive in 2020 (incidence rate).

There was a small decrease in the number of estimated new HIV infections in 2020 compared with 2018, when there were 1,760 new HIV infections. This decrease may be due to the negative impact of the COVID-19 pandemic on access to HIV testing.

Among the 1,520 new HIV infections in Canada in 2020, 43.8% were among gay, bisexual and other men who have sex with men (gbMSM), 2.8% were among gbMSM who also injected drugs, 19.8% were among people who injected drugs and 33.6% were among heterosexual people.

## How many new HIV infections are there in the provinces and territories?

According to national estimates, the provinces with the highest number of new HIV infections were Ontario, Saskatchewan and Quebec in 2020. There was significant provincial variation in the populations impacted by new HIV infections:

- There were an estimated 108 new HIV infections in British Columbia in 2020: 51.8% were among gbMSM, 1.9% were among gbMSM who also injected drugs, 21.3% were among people who injected drugs and 25.0% were among heterosexual people.
- There were an estimated 149 new HIV infections in Alberta in 2020: 32.9% were among gbMSM, 2.7% were among gbMSM who also injected drugs, 20.1% were among people who injected drugs and 44.3% were among heterosexual people.
- There were an estimated 214 new HIV infections in Saskatchewan in 2020: 6.5% were among gbMSM, 2.9% were among gbMSM who also injected drugs, 62.6% were

among people who injected drugs and 28.0% were among heterosexual people.

- There were an estimated 85 new HIV infections in Manitoba in 2020: 9.4% were among gbMSM, 2.4% were among gbMSM who also injected drugs, 60.0% were among people who injected drugs and 28.2% were among heterosexual people.
- There were an estimated 507 new HIV infections in Ontario in 2020: 58.6% were among gbMSM, 3.7% were among gbMSM who also injected drugs, 8.3% were among people who injected drugs and 29.4% were among heterosexual people.
- There were an estimated 410 new HIV infections in Quebec in 2020: 52.4% were among gbMSM, 2.2% were among gbMSM who also injected drugs, 3.4% were among people who injected drugs and 42.0% were among heterosexual people.
- There were an estimated 45 new HIV infections in the Atlantic provinces in 2020: 57.8% were among gbMSM, 2.2% were among gbMSM who also injected drugs, 13.3% were among people who injected drugs and 26.7% were among heterosexual people.
- There were an estimated 2 new HIV infections in the Territories in 2020. No breakdown by mode of transmission is available.

## Is Canada reaching the global HIV targets?

The Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO) have established a global health sector strategy on HIV to help eliminate AIDS as a public health threat by 2030. Canada has endorsed this strategy. The strategy consists of the following targets for the years 2020 and 2025:

- 90% of people with HIV have been diagnosed with HIV (2020)
- 90% of people diagnosed with HIV are on HIV treatment (2020)

- 90% of people on HIV treatment have achieved viral suppression (2020)
- 95% of people with HIV have been diagnosed with HIV (2025)
- 95% of people diagnosed with HIV are on HIV treatment (2025)
- 95% of people on HIV treatment have achieved viral suppression (2025)

Of the estimated 62,790 people with HIV in Canada in 2020, an estimated:

- 90% of people with HIV had been diagnosed with HIV (56,200 people)
- 87% of people diagnosed with HIV were on HIV treatment (48,660 people)
- 95% of people on treatment had achieved viral suppression (46,100 people)

While these numbers represent progress from 2018 (when an estimated 89% of people with HIV had been diagnosed, 85% of people diagnosed were on HIV treatment and 94% of people on treatment had achieved viral suppression) there is still significant work to be done. Overall, an estimated 16,690 Canadians living with HIV in Canada (26.6%) do not have a suppressed viral load, including 6,590 people who are undiagnosed, 7,540 people who have been diagnosed but are not on treatment and 2,560 people who are on treatment but not virally suppressed. We need to better reach the undiagnosed through testing, ensure better engagement and retention in care for those who test positive and support people on treatment to attain a suppressed viral load.

## Are the provinces reaching the global HIV targets?

The following provinces and territories have met all of the 2020 targets: British Columbia, Nova Scotia, Newfoundland and Labrador and the Territories.

In British Columbia an estimated:

- 94% of people with HIV were diagnosed with HIV

- 92% of people diagnosed with HIV were on treatment
- 95% of people on treatment had achieved viral suppression

In Nova Scotia an estimated:

- 90% of people with HIV were diagnosed with HIV
- 98% of people diagnosed with HIV were on treatment
- 93% of people on treatment had achieved viral suppression

In Newfoundland and Labrador an estimated:

- 96% of people with HIV were diagnosed with HIV
- 95% of people diagnosed with HIV were on treatment
- 99% of people on treatment had achieved viral suppression

In the Territories an estimated:

- 92% of people with HIV were diagnosed with HIV
- 97% of people diagnosed with HIV were on treatment
- 92% of people on treatment had achieved viral suppression

Seven provinces have not reached all of the 2020 targets: Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick and Prince Edward Island.

In Alberta an estimated:

- 92% of people with HIV were diagnosed with HIV
- 77% of people diagnosed with HIV were on treatment
- 95% of people on treatment had achieved viral suppression

In Saskatchewan an estimated:

- 77% of people with HIV were diagnosed with HIV

- 90% of people diagnosed with HIV were on treatment
- 65% of people on treatment had achieved viral suppression

In Manitoba an estimated:

- 87% of people with HIV were diagnosed with HIV
- 81% of people diagnosed with HIV were on treatment
- 89% of people on treatment had achieved viral suppression

In Ontario an estimated:

- 89% of people with HIV were diagnosed with HIV
- 87% of people diagnosed with HIV were on treatment
- 98% of people on treatment had achieved viral suppression

In Quebec an estimated:

- 90% of people with HIV were diagnosed with HIV
- 85% of people diagnosed with HIV were on treatment
- 96% of people on treatment had achieved viral suppression

In New Brunswick and Prince Edward Island an estimated:

- 86% of people with HIV were diagnosed with HIV
- 98% of people diagnosed with HIV were on treatment
- 97% of people on treatment had achieved viral suppression

## HIV among gbMSM

### How many gay, bisexual and other men who have sex with men (gbMSM) are living with HIV in Canada (prevalence)?

According to national HIV estimates, 33,335 gbMSM were living with HIV in Canada in 2020. This represents 53.1% of all people with HIV in Canada. The estimate included 31,589 men who had sex with men and 1,746 men who both had injected drugs and had sex with men.

### How many new HIV infections (incidence) are there in gbMSM in Canada?

According to national HIV estimates, 709 new HIV infections in Canada were in gbMSM in 2020 (46.6% of all new infections). This estimate included 666 new HIV infections in men who had sex with men and 43 new infections in men who both had injected drugs and had sex with men. The number of new HIV infection in gbMSM is lower than the estimated 864 new infections in 2018.

Despite this decrease, gbMSM remain over-represented in new HIV infections in Canada. There were an estimated 166 new infections per 100,000 sexually active gbMSM in Canada in 2020 compared with an estimated four new infections for every 100,000 Canadians in 2020.

### How is Canada doing at reaching the global HIV targets for gbMSM?

According to a study conducted with gbMSM in Canada from 2017–19, Canada is reaching the global targets of 90-90-90 for gbMSM and is close to reaching the global targets of 95-95-95:

- 98% of gbMSM with HIV had been diagnosed with HIV
- 96% of gbMSM diagnosed with HIV were on HIV treatment
- 94% of gbMSM on HIV treatment had achieved viral suppression

## HIV among PWID

### How many people who inject drugs (PWID) are living with HIV in Canada (prevalence)?

According to national HIV estimates, 10,084 people who had injected drugs (PWID) were living with HIV in Canada in 2020. This represents 16.1% of all people with HIV in Canada. The estimate included 8,338 people who had injected drugs and 1,746 men who both had injected drugs and had sex with men.

### How many new HIV infections (incidence) are there in PWID in Canada?

According to national HIV estimates, 343 new HIV infections in Canada were in PWID in 2020 (22.6% of all new HIV infections). This estimate included 300 new HIV infections in people who had injected drugs and 43 new infections in men who both had injected drugs and had sex with men. The number of new HIV infections in PWID is higher than the estimated 335 new infections in 2018.

People who use drugs are over-represented in new HIV infections in Canada. There were an estimated 239 new infections per 100,000 among people who had injected drugs in the past six to 12 months in Canada in 2020. This is significantly higher than the estimated four new infections for every 100,000 Canadians in 2020.

### How is Canada doing at reaching the global HIV targets for PWID?

According to a surveillance study conducted with people who inject drugs (PWID) in Canada between 2017 and 2019, Canada is not reaching the global HIV targets for PWID:

- 83% of PWID with HIV had been diagnosed with HIV
- 88% of PWID diagnosed with HIV were on HIV treatment
- 63% of PWID on HIV treatment had achieved viral suppression

## HIV among people who acquire HIV through heterosexual sex

### How many people living with HIV in Canada acquired HIV through heterosexual sex?

According to national HIV estimates, 20,597 people living with HIV in Canada acquired HIV through heterosexual sex in 2020. This represents 32.8% of all people with HIV in Canada.

### How many new HIV infections (incidence) are acquired through heterosexual sex in Canada?

According to national HIV estimates, 511 new HIV infections in Canada were acquired through heterosexual sex in Canada in 2020 (33.6% of all new HIV infections). The number of new HIV infections acquired through heterosexual sex is lower than the estimated 606 new HIV infections in 2018.

## HIV among African, Caribbean and Black (ACB) people

### How many ACB people are living with HIV in Canada? How many new infections are there?

There are currently no national estimates on the number of ACB people living with HIV or the number of new infections in ACB people.

### How is Canada doing at reaching the global HIV targets for African, Caribbean and Black (ACB) communities?

National-level estimates do not exist for ACB people in Canada. According to 2018 estimates from the Ontario HIV Epidemiology and Surveillance Initiative, Ontario is not reaching the global targets for ACB communities:

- No estimate is available for the percentage of ACB people with HIV who were diagnosed
- 83%–85% of ACB people diagnosed with HIV were on HIV treatment

- 96%–97% of ACB people on HIV treatment had achieved viral suppression

## HIV among Indigenous people

### How many Indigenous people are living with HIV in Canada (prevalence)?

According to national HIV estimates, 6,472 Indigenous people were living with HIV in Canada in 2020. This represents 10.3% of all people with HIV in Canada.

### How many new HIV infections (incidence) are there in Indigenous people in Canada?

According to national HIV estimates, 276 new HIV infections in Canada were in Indigenous people in 2020 (18.2% of all new infections). The number of new HIV infections in Indigenous people is higher than the estimated 258 new HIV infections in 2018.

Almost one-third (32%) of new HIV infections in Indigenous people were among females in 2020.

Indigenous people are over-represented in new HIV infections in Canada. There were an estimated 15.2 new infections per 100,000 Indigenous people in Canada in 2020 compared with the estimated four new infections for every 100,000 Canadians in 2020.

### How is Canada doing at reaching the global HIV targets for Indigenous people?

National-level estimates do not exist for Indigenous people in Canada. There are two sources of data that provide some information on how Canada is doing at reaching the global targets for Indigenous people.

According to data from 82 First Nations communities in Saskatchewan from 2020, global targets are not being reached:

- No estimate is available for the percent of Indigenous people with HIV who were diagnosed
- 88% of Indigenous people diagnosed with HIV were on treatment

- 78% of Indigenous people on HIV treatment had achieved viral suppression

According to a surveillance study conducted with Indigenous people who inject drugs (PWID) in Alberta and Saskatchewan between 2018 and 2020, the global targets are not being reached:

- 64% of Indigenous PWID with HIV were diagnosed with HIV
- 81% of Indigenous PWID diagnosed with HIV were on HIV treatment
- 54% of Indigenous PWID on HIV treatment had achieved viral suppression

## HIV among females

### How many females are living with HIV in Canada (prevalence)?

According to national HIV estimates, 15,470 females were living with HIV in Canada in 2020. This represents 24.6% of all people with HIV in Canada.

### How many new HIV infections (incidence) are there in females in Canada?

According to national HIV estimates, 487 new HIV infections in Canada were in females in 2020 (32.0% of all new infections). The number of new HIV infections in females is lower than the estimated 531 new HIV infections in 2018.

### How is Canada doing at reaching the global HIV targets for females?

According to national estimates, Canada is not reaching all the global targets for females. Of the 15,470 females living with HIV, an estimated:

- 88% were diagnosed with HIV
- 85% of females diagnosed with HIV were on HIV treatment
- 90% of females on HIV treatment had achieved viral suppression

The percentage of females in Canada reaching each target was lower than for males (90%, 87% and 96%). Overall, 68% of females living with HIV had a suppressed viral load compared with 75% of males.

## HIV among people in federal correctional facilities

### What percentage of people in federal correctional facilities are living with HIV?

According to national estimates 0.92% of people in federal correctional facilities were living with HIV in 2020.

### How is Canada doing at reaching the global HIV targets for people in federal correctional facilities?

According to national estimates, Canada is not reaching the global targets for people in federal correctional facilities:

- 88% of people living with HIV in federal correctional facilities had been diagnosed with HIV
- 98% of people in federal correctional facilities diagnosed with HIV were on HIV treatment
- 97% of people in federal correctional facilities on HIV treatment had achieved viral suppression

Overall, an estimated 83% of people in federal correctional facilities who were living with HIV in Canada had achieved a suppressed viral load.

## HIV diagnoses in Canada (surveillance data)

### How many people are newly diagnosed with HIV in Canada?

There were 1,722 HIV diagnoses in Canada in 2021. This represents a 5% increase compared with 2020.

The national rate of new HIV diagnoses in 2021 was 4.5 for every 100,000 Canadians. The national rate for males was 6.5 for every 100,000 males in



Canada. The national rate for females was 2.5 for every 100,000 females in Canada.

Almost a quarter (24.2%) of all HIV diagnoses in males were in male youth (aged 15 to 29) in 2021. Over a quarter (27.5%) of all HIV diagnoses in females were in female youth (aged 15 to 29) in 2021.

### How many people test positive during the immigration process to Canada each year?

A total of 743 people tested positive during the immigration process to Canada (399 tested in Canada and 344 tested outside of Canada) in 2020. This is a decrease from 1,188 in 2019. This decrease may be due to the impact of the COVID-19 pandemic in 2020.

### How many babies are born to HIV-positive females in Canada?

There were 210 babies born to mothers with HIV in 2021. Two of these infants were confirmed to be HIV positive. Neither of their mothers received HIV treatment.

### Key definitions

**HIV prevalence**—The number of people with HIV at a point in time. Prevalence tells us how many people have HIV.

**HIV incidence**—The number of new HIV infections in a defined period of time (usually one year). Incidence tells us how many people are getting HIV.

**HIV diagnoses**—The number of new HIV diagnoses in a defined period of time (usually one year). HIV diagnoses tell us how many people have been diagnosed within a certain time frame.

### Where do these numbers come from?

Most of the data contained in this fact sheet come from Estimates of HIV incidence, prevalence and Canada's progress on meeting the 90-90-90 HIV targets, 2020, the HIV in Canada, Surveillance

Report to December 31, 2020, and HIV in Canada: 2021 Surveillance Highlights.

### Estimates of HIV incidence, prevalence and Canada's progress on meeting the 90-90-90 HIV targets, 2020

National HIV estimates are produced by the Public Health Agency of Canada using statistical modelling that takes into account some of the limitations of surveillance data (the number of HIV diagnoses reported to the Public Health Agency of Canada) and also accounts for the number of people with HIV who do not yet know they have it and the number of people with HIV who have died.

This report also compiles information from various sources to provide 90-90-90 estimates for specific populations.

### HIV in Canada, Surveillance Report to December 31, 2020

Healthcare providers are required to report HIV diagnoses to their local public health authorities, including diagnoses resulting from anonymous tests. Each province and territory then compiles this information and provides it to the Public Health Agency of Canada. This information does not contain names or personal identifiers. Sometimes additional information is also collected and sent to the Public Health Agency of Canada, such as information about a person's age, gender, ethnicity, exposure category (the way the person may have acquired HIV) and laboratory data such as the date of the HIV test.

This report also compiles data from the Canadian Perinatal HIV Surveillance Program maintained by the Canadian Pediatric and Perinatal HIV and AIDS Research Group. It also compiles numbers on immigration medical screening maintained by Immigration, Refugees and Citizenship Canada (IRCC).

### HIV in Canada: 2021 Surveillance Highlights

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This infographic also compiles data from the Canadian Perinatal HIV Surveillance Program maintained by the Canadian Pediatric and Perinatal HIV and AIDS Research Group.

## References

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