Understanding HIV estimates

The Public Health Agency of Canada collects, measures and reports information about people living with HIV in Canada in two ways.

New HIV diagnoses
(Reported cases of HIV)

The number of people who are **diagnosed** with HIV during a reporting year

This includes:

- People who acquired HIV and were diagnosed in the reporting year.
- People who acquired HIV earlier but were only diagnosed for the first time during the current reporting year.

This number does ***not*** include people who acquired HIV during the reporting year but have not yet been tested.

These numbers are included in the annual national HIV Surveillance report

Estimated new HIV infections
(HIV incidence)

An estimated number of people who **acquired** HIV during a reporting year

This includes:

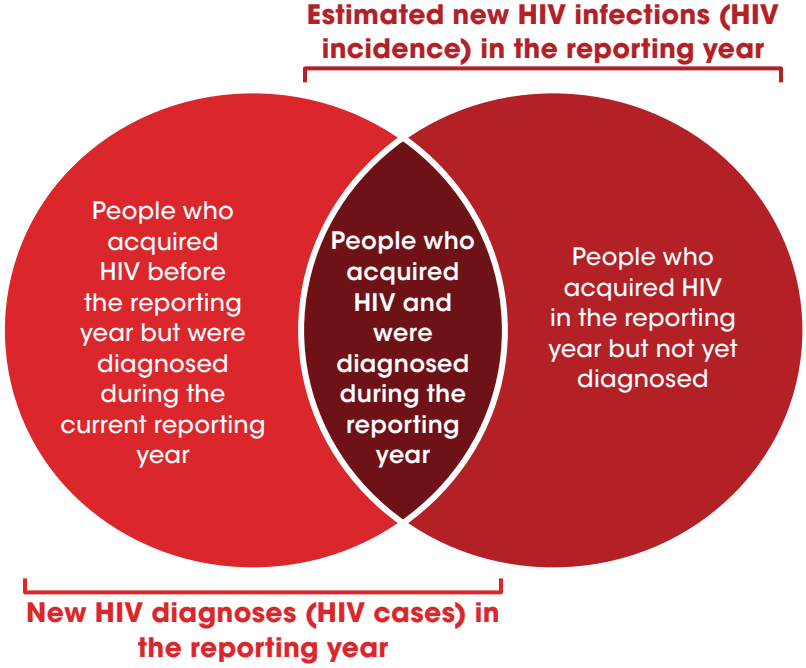
- People who acquired HIV and were diagnosed in the reporting year.
- People who acquired HIV in the reporting year but not yet diagnosed (i.e. They may not yet be aware themselves that they have HIV)

The number of people who are living with HIV and not yet diagnosed cannot be known precisely. This number is estimated using statistical models and methods with data from a variety of sources.

These numbers are included in the report on Canada's progress towards ending the HIV epidemic

New diagnoses vs Estimated new infections

These two numbers may be similar, or they may be very different, depending on the infection and testing trends in the population.



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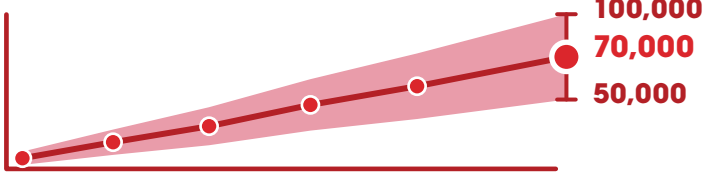
HIV prevalence

It is also possible to estimate the prevalence of HIV in Canada, which is the total number of people living with HIV. This estimate includes all people living with HIV in Canada, regardless of whether they are aware of their HIV status or when they were diagnosed.

This information helps guide planning, programming and investments in HIV prevention, testing, treatment, care and support. It also helps us measure Canada's progress towards ending the HIV epidemic.

Range of uncertainty

Within the national HIV estimates report, estimates will be shown like this: e.g. 70,000 (50,000 – 100,000). The numbers in brackets are the ***range of uncertainty*** or ***plausible range***.



Uncertainty can arise in developing the estimates due to the incompleteness of the available data.

For example, it is not always possible to know whether a person living with HIV has been counted twice among the number of people diagnosed with HIV, since a person could have been tested anonymously and then again using their name.

Since the data may not be perfectly accurate, **we use a range to show the possible variation in the estimate.** While we cannot confirm the exact number, we can be fairly sure that the true number lies somewhere within that range.

Revisions to historical estimates

Estimates for previous years may change over time. **The latest national HIV estimates have been released based on the most recent data and methods, replacing all previous estimates.**

The difference can be due to many factors including:

- Updated surveillance data were available.
- Some provinces and territories were able to remove duplicate cases.
- Improvements are incorporated into the methods based on the latest available science and understanding of the epidemic.

This is why revised historical estimates are included in the most recent publication, enabling a more accurate description of trends over time.

The Public Health Agency of Canada has been estimating HIV incidence and prevalence since **1996**

Other international organizations, such as the European Centre for Disease Prevention and Control, the U.S. Centers for Disease Control and Prevention, Public Health England, UNAIDS, and the Kirby Institute in Australia, **also produce HIV estimates that include uncertainty ranges and revise previously published HIV estimates based on updated data and new methods.**

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