

SUMMARY: MEASURING CANADA'S PROGRESS ON THE 90-90-90 HIV TARGETS

BACKGROUND

Increased uptake of HIV testing and early access to antiretroviral treatment are critical to stopping the spread of HIV and ending the AIDS epidemic. Timely initiation of treatment and sustained engagement in HIV care are important to achieving viral load suppression, which is a key marker for successful treatment. This has individual benefits by preventing HIV-related illness and optimizing health, and also reduces the potential for onward HIV transmission in the community.

The Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization have established global targets that will generate momentum towards the elimination of AIDS as a public health threat by 2030.¹ Canada supports these targets, including the 90-90-90 targets that by 2020, 90% of all people living with HIV know their status, 90% of those diagnosed receive antiretroviral treatment, and 90% of those on treatment achieve viral suppression. Reporting on these targets supports national responses to HIV/AIDS, promotes the use of data in new ways to guide HIV prevention and care efforts, and helps to identify gaps and opportunities for intervention.

This report provides an update on Canada's progress towards reaching the UNAIDS 90-90-90 targets.

METHODS

The Public Health Agency of Canada worked closely with provinces, territories and other government departments to develop the 90-90-90 measures using new estimation methods and available information in each jurisdiction. These measures build on national estimates of people living with HIV in Canada at the end of 2014 and bring together additional clinical, laboratory and administrative information to provide a fuller picture across the HIV care cascade.

HIV estimates related to the first 90-90-90 target were previously developed using HIV surveillance data reported by provinces and territories, estimated deaths among persons living with HIV, and statistical modelling. Development of estimates for the second and third 90-90-90 targets required additional information from the provinces and territories, including the following where available:

- Centralized HIV care program data, including linked treatment and HIV laboratory data;
- Provincial antiretroviral drug prescription data linked to HIV laboratory data;
- Unlinked data from drug prescription databases, laboratories, and HIV clinics;
- Cohorts of diagnosed persons engaged in HIV care.

¹ UNAIDS. 90-90-90 An Ambitious Treatment Target to Help End the AIDS Epidemic. Geneva, Switzerland: Joint United Nations Programme on HIV/AIDS; 2014.

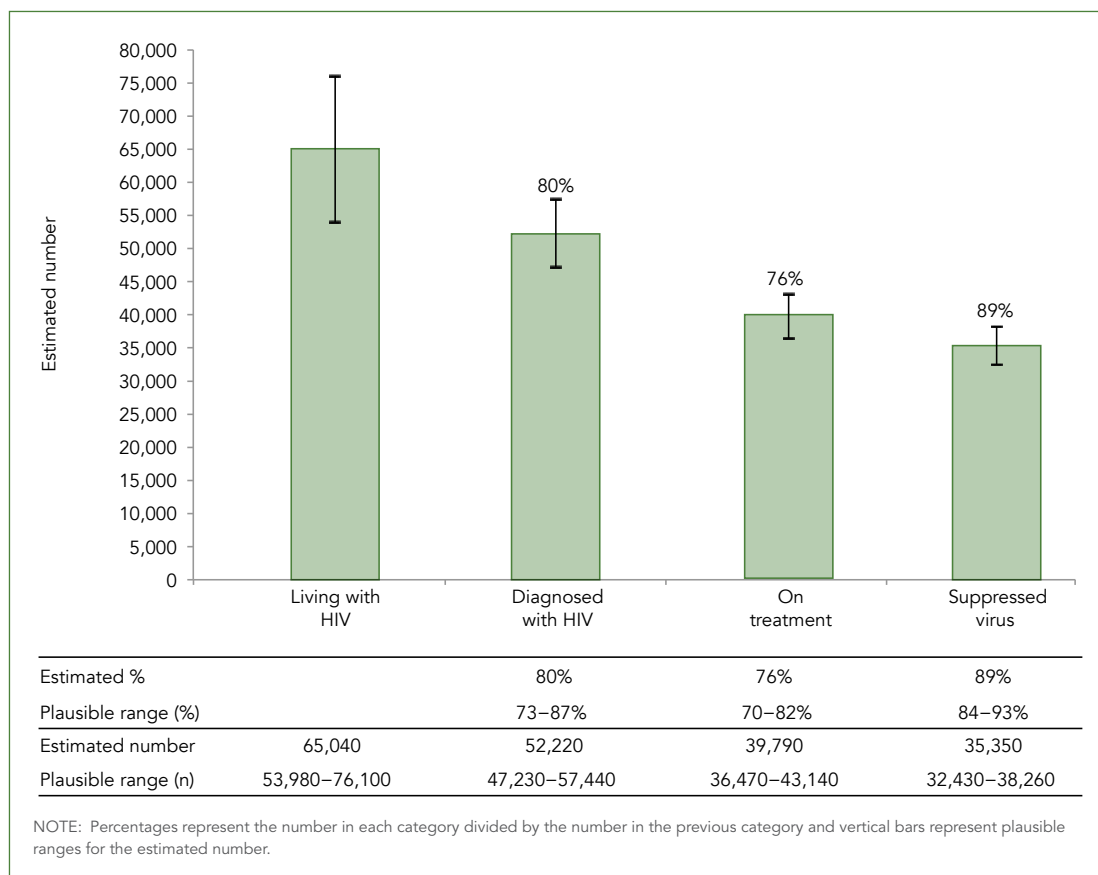


Standard definitions and templates were developed and adapted to suit the local situation in each jurisdiction. However, in some instances, adjustments were made to account for jurisdictional differences in the definitions of “on treatment” and “suppressed viral load”. Measures were refined through an iterative process with provinces and territories, particularly where adjustments were also necessary to account for uncertainty due to incomplete data or lack of representative data. Data systems, type of data available, and the capacity to link information from different sources varied across jurisdictions. The measures developed through this process should therefore be interpreted within the context of plausible

ranges around each 90-90-90 estimate, which reflect inherent uncertainty as a result of these measurement considerations and limitations.

The national 90-90-90 estimates were developed by weighting and rolling-up consensus-based estimates from each jurisdiction. It should be noted that in developing the national estimates, the estimated prevalence of persons living with HIV infection in Canada was revised downward slightly compared to previous estimates. This was due to a re-examination by some provinces of potential duplicates among historical HIV diagnoses and the use of revised estimates pertaining to mortality among HIV-infected persons.

FIGURE 1: Estimated number and percentage of persons living with HIV, diagnosed, on treatment, and virally suppressed in Canada at the end of 2014.



RESULTS

At the end of 2014, an estimated 65,040 persons (plausible range: 53,980 to 76,100) were living with HIV in Canada. Of persons living with HIV, an estimated 52,220 (plausible range: 47,230 to 57,440) were diagnosed, 39,790 (plausible range: 36,470 to 43,140) were on antiretroviral therapy, and 35,350 (plausible range: 32,430 to 38,260) had suppressed viral load. An estimated 80% (73% to 87%) of persons living with HIV were diagnosed, 76% (70% to 82%) of persons diagnosed with HIV were on treatment, and 89% (84% to 93%) of persons on treatment had suppressed viral load (Figure 1). Canada's 90-90-90 estimates lie within the range reported by other developed countries such as Australia, the United States, and the countries of Western Europe.

There are several factors associated with achieving each of the 90-90-90 targets. Reaching the first target will require efforts to increase the uptake of HIV testing by addressing issues such as risk perception, accessibility of services, community knowledge and awareness. The observation that the estimate of the second 90-90-90 target is the lowest of the three targets is also seen in other western countries. This may be related in part to the fact that the recommendation to treat all HIV-infected persons at diagnosis is relatively recent, and it takes time for both treating physicians and patients to adjust to this. Shifts toward earlier initiation of treatment, simplified and more tolerable regimens, and adherence support interventions will influence uptake of treatment over time. After starting treatment, many patients

remain engaged in HIV care and have follow-up services to monitor the effectiveness of therapy. This may explain why the estimate of the third 90-90-90 target is higher than the other two targets, and this is also seen in other western countries. However, social conditions related to poverty or addictions and a lack of access to support services can decrease the degree to which individuals remain engaged in care. Issues related to privacy and stigma may also impede access to and retention in care. Therefore, it is critical to continue to work towards creating supportive environments that address social determinants, decrease stigma and discrimination, and reduce barriers to prevention, treatment, care and support.

CONCLUSION

Canada has made great progress in addressing HIV/AIDS over more than three decades of responding to the epidemic. However, there is still work to do to reach the 90-90-90 targets by 2020. The Government of Canada is engaging with stakeholders and provincial and territorial governments to identify concrete actions with substantial impact on HIV and other sexually transmitted and blood borne infections in Canada to contribute towards achieving the 90-90-90 targets.

The Public Health Agency of Canada will continue to work closely with provinces and territories to refine the methodology and enhance data sources to improve the precision around the 90-90-90 estimates. Continued monitoring will help to more effectively target prevention and care programs where interventions are most needed.

Prepared by: Surveillance and Epidemiology Division
Professional Guidelines and Public Health Practice Division
Centre for Communicable Diseases and Infection Control
Public Health Agency of Canada