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How frequently should people be tested for HIV?

By [Erica Lee](#)

HIV testing is the gateway to HIV diagnosis and engagement in treatment, care and support for people living with HIV. It is also the gateway to enhanced engagement in HIV prevention, care and support for people who test HIV negative but are at ongoing high risk of transmission.

One factor for service providers to consider when delivering or discussing testing is how often a client should be tested for HIV. This article summarizes the results from a systematic review examining testing frequency recommendations in Canadian and international HIV testing guidelines.¹

Why is the frequency of HIV testing important?

In Canada we are not doing well at diagnosing HIV and engaging people in treatment and care. According to recently revised 2014 estimates from the Public Health Agency of Canada (PHAC), about 13,000 of the 65,040 people living with HIV in Canada are unaware of their HIV status.² This represents about 20% of all people with HIV.

The importance of testing for HIV so that people are aware of their HIV infection as early as possible cannot be overstated, particularly given recent advances in our understanding of HIV treatment. Advances in treatment mean that people with HIV can live almost as long and as healthily as people who are uninfected.³ But to get the most out of treatment, however, research shows it needs to be started soon after someone is infected with the virus.⁴ Research also now tells us that the consistent and correct use of antiretroviral treatment (ART) by people living with HIV to maintain an undetectable viral load is a highly effective strategy to reduce the risk of the sexual transmission of HIV.^{5,6,7,8,9,10,11,12,13}

What kind of research does the systematic review include?

The systematic review sought to identify HIV testing frequency recommendations for different populations by reviewing HIV testing guidelines developed in Canada and internationally.¹

HIV testing guidelines support and standardize testing and are based on research and practice from the field. They may also take into consideration the local experience of HIV if the guidelines are informing services in a particular region. In addition to HIV testing frequency, guidelines can include recommendations on who to test, when to offer testing, pre- and post-test counselling, and legal and ethical issues such as consent and confidentiality.

The review was based on 34 guidelines. A guideline was included if it:

- Provided direction on how often HIV testing should occur. The direction could be in the form of a position, recommendation or guidance and could address testing for one or more specific population or the general

population.

- Was available in English or French.
- Was published from January 2000 to August 2015.

Characteristics of the guidelines included:

- The guidelines came from Canada, Africa, Asia, Australia, Europe, the United States and the World Health Organization. Sixty-five percent of the guidelines came from the United States or Europe.
- The guidelines were developed by government health departments and organizations and by expert groups such as associations of health professionals.
- The populations most commonly addressed were pregnant women, MSM and the general population.

Canadian guidelines included in the review were:

- [Human immunodeficiency virus: HIV screening and testing guide](#) ^{PDF} - PHAC, 2013
- [HIV testing guidelines for the province of British Columbia](#) ^{PDF} - British Columbia Office of the Provincial Health Officer, 2014
- [Saskatchewan HIV testing policy](#) ^{PDF} - Saskatchewan HIV Provincial Leadership Team, 2014
- [Ontario HIV testing frequency guidelines: guidance for counselors and health professionals](#) ^{PDF} - Ontario Ministry of Health and Long-Term Care, 2012
- [Optimiser le dépistage et le diagnostic de l'infection par le virus de l'immunodéficience humaine](#) ^{PDF} - Institut National de Santé Publique du Québec, 2011

What HIV testing frequencies did the guidelines recommend?

The review compared testing frequency recommendations by examining how often a given recommendation was made. The recommendations for pregnant women, MSM and the general population, the three groups most often addressed by the guidelines, were summarized individually. Common recommendations in other populations were also noted.

Pregnant women

Recommendations for pregnant women were found in 20 guidelines and included:

- Screening for HIV as early as possible during pregnancy (nine guidelines) such as at the first prenatal appointment (four guidelines)
- Routine testing (three guidelines)
- Re-testing in the third trimester regardless of the women's HIV risk (four guidelines) or repeat testing if the women's risk of infection is high (three guidelines)

Men who have sex with men

Recommendations for men who have sex with men were found in 19 guidelines and included:

- Testing at least annually (14 guidelines)
- Routine testing with no specific interval given (three guidelines)
- More frequent testing with no specific interval given due to insufficient evidence to inform a recommendation (two guidelines)

General population

Recommendations for the general population were found in 14 guidelines and included:

- Routine or normalized testing with no specific interval given (eight guidelines)
- A specific time interval such as every five years (two guidelines)

Four guidelines also noted there was insufficient evidence to inform a recommendation for a specific time interval for the general population.

Other populations

Testing at least once a year was a common recommendation and was the most frequent recommendation for:

- People who use injection drugs (11 of 13 guidelines that mentioned this population)
- People with HIV-positive partners (six of seven guidelines)
- People with multiple sex partners (four of seven guidelines)
- Sex workers and their clients (four of four guidelines)
- Migrant people from HIV-endemic countries (three of four guidelines)
- Indigenous people (two of three guidelines)
- People with a partner of unknown status (two of two guidelines)

Recommendations for people who have been diagnosed with another sexually transmitted infection (STI) included routine testing (three guidelines) and re-testing after each new STI diagnosis (two guidelines).

Other populations mentioned in four or fewer guidelines included adolescents, prisoners and trans men and women. Recommendations for these populations were more varied, and included testing at least annually, routine testing and risk-based screening.

What are the implications of the review for HIV testing in Canada?

This review provides an international perspective that Canadian service providers can use alongside Canadian guidelines to inform evidence-based decisions on HIV testing frequency.

The five Canadian guidelines included shared similarities with the broader trends observed in the review. Based on how often a recommendation was made, common recommendations for specific populations from the review include:

Pregnant women

- Testing as early as possible during pregnancy – testing during the first prenatal visit was recommended in the Quebec, British Columbia and PHAC guidelines
- Re-testing during the third trimester or if a women’s risk of HIV is high – recommended in the British Columbia and PHAC guidelines

Men who have sex with men

- At least annual testing – recommended in the Quebec, Ontario and British Columbia guidelines

General population

- Normalized testing (for example, by including the consideration of HIV testing as part of routine care) with no specific interval given—recommended in the PHAC guidelines
- A specific time interval such as every five years—recommended in the British Columbia and Saskatchewan guidelines

Other populations

- People who use injection drugs
 - Annual testing – recommended in the Quebec, Ontario and British Columbia guidelines
- People with HIV-positive partners
 - Annual testing—recommended in the Quebec, Ontario, and British Columbia guidelines
- People with multiple sex partners
 - Annual testing—recommended in the Ontario and British Columbia guidelines
- Sex workers and their clients
 - Annual testing—recommended in the British Columbia guidelines
- Migrant people from HIV-endemic countries
 - Annual testing—recommended in the Ontario and British Columbia guidelines
- Indigenous people
 - Annual testing—recommended in the Ontario and British Columbia guidelines. Quebec recommended annual risk evaluation.

- People with a partner of unknown status
 - Annual testing—recommended in the Ontario guidelines

Finally, the recommendation of routine testing was noted in this review. The authors describe routine testing as “not recommending a specific testing interval but rather providing a recommendation to test everyone” which can happen along with more frequent testing for people at higher risk for HIV. While routine testing as noted is not a defined frequency interval, it suggests the importance of ongoing opportunities for testing as part of medical care.

When considering these recommendations it’s important to remember that:

- Some guidelines concluded there wasn’t enough evidence available to inform a defined testing interval for certain populations, including the general population. Further research is needed to help define specific HIV testing intervals for a wider range of populations.
- The guidelines were assessed and compared based on the number of times a recommendation was made and the consensus among guidelines. The guidelines themselves may be based on different types of evidence that impact the strength of their recommendations. The review did not assess the strength or weakness of the recommendations and how they were developed.
- The review only included guidelines available in English and French. Additional insights may be gained from recommendations developed in other languages.

What is a systematic review?

Systematic reviews are important tools for informing evidence-based programming. A systematic review is a critical summary of the available evidence on a specific topic. It uses a rigorous process to identify all the studies related to a specific research question. Relevant studies can then be assessed for quality and their results summarized to identify and present key findings and limitations. If studies within a systematic review contain numerical data, this data can be combined in strategic ways to calculate pooled estimates. Combining data to produce pooled estimates can provide a better overall picture of the topic being studied.

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About the author(s)

Erica Lee is the Information and Evaluation Specialist at CATIE. Since earning her Master of Information Studies, Erica has worked in the health library field, supporting the information needs of frontline service providers and service users. Before joining CATIE, Erica worked as the Librarian at the AIDS Committee of Toronto (ACT).

Produced By:



Canada's source for
HIV and hepatitis C
information

555 Richmond Street West, Suite 505, Box 1104
Toronto, Ontario M5V 3B1 Canada
Phone: 416.203.7122
Toll-free: 1.800.263.1638
Fax: 416.203.8284
www.catie.ca
Charitable registration number: 13225 8740 RR

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