

# A cross-jurisdictional review of HIV testing intervals for population groups at high risk of HIV infection

## Questions

- At what intervals do high-income jurisdictions encourage population groups at high risk of HIV infection to come forward for routine testing?

## Key Take-Home Messages

- Most guidelines recommend at least annual HIV testing of population groups at high risk of HIV infection. These include: men who have sex with men, transgender women and men, people who use injection drugs, African, Caribbean and Black communities, indigenous people, and women at risk.
- Some guidelines recommend more frequent testing (up to four times a year) for those who report increased risk behaviours (e.g., for men who have sex with men – any unprotected anal sex or use of recreational drugs during sex) (1–3).
- The U.S. Centers for Disease Control and Prevention (CDC) did not find sufficient evidence to recommend screening more frequently than at least once each year for asymptomatic sexually active men who have sex with men (4). At the same time, the CDC advises that each health care provider can consider the benefits of offering more frequent screening (e.g., once every three or six months) to individual men who have sex with men at increased risk for acquiring HIV infection, weighing their individual risk factors, local HIV epidemiology, and local testing policies (4, 5).
- Few guidelines provide recommendations about HIV testing frequency of transgender women and men, African, Caribbean and Black communities, indigenous people, and women at risk, but most usually recommend at least annual testing (3, 6–10).

## References

1. Sexually Transmissible Infections in Gay Men Action Group. Australian sexually transmitted infection & HIV testing guidelines 2014 for asymptomatic men who have sex with men. 2014. Available from: [https://stipu.nsw.gov.au/wp-content/uploads/STIGMA\\_Testing\\_Guidelines\\_Final\\_v5.pdf](https://stipu.nsw.gov.au/wp-content/uploads/STIGMA_Testing_Guidelines_Final_v5.pdf) Accessed April 24, 2019.
2. Templeton DJ, Read P, Varma R, Bourne C. Australian sexually transmissible infection and HIV testing guidelines for asymptomatic men who have sex with men 2014: A review of the evidence. *Sexual Health*. 2014;11(3):217–29.
3. National Institute for Health and Care Excellence (NICE). Public Health England. HIV testing: Increasing uptake among people who may have undiagnosed HIV. 2016. Available from: <https://www.nice.org.uk/guidance/ng60/resources/hiv-testing-increasing-uptake-among-people-who-may-have-undiagnosed-hiv-pdf-1837567043269> Accessed April 24, 2019.
4. DiNenno EA, Prejean J, Irwin K, Delaney KP, Bowles K, Martin T, et al. Recommendations for HIV screening of gay, bisexual, and other men who have sex with men — United States, 2017. *MMWR – Morbidity & Mortality Weekly Report*. 2017;66(31):830–2.

## The Issue and Why It's Important

HIV screening and testing are extremely important tools within the HIV prevention, engagement and care cascade. In Ontario, individuals are urged to test in the aftermath of a potential high-risk exposure to HIV at intervals of three weeks, six weeks and three months, however many individuals do not come forward following such exposures. Accordingly, this review was requested to investigate what routine guidelines have been established in other jurisdictions to promote frequent HIV testing for at-risk populations, particularly those involved in high-risk practices.

Although many guidelines have been developed to identify the ideal frequency of testing for different population groups, there are inconsistencies among them and the evidence base for some populations appear to be lacking (11). For example, the Public Health Agency of Canada recommends that individuals “involved in high risk practices should be screened for HIV at least annually” (12) but provides few details about testing frequencies among those population groups at high risk of HIV infection, stating that there is “insufficient evidence to provide recommendations for the exact frequency of HIV testing for each scenario due to the number of variables involved with each individual’s potential for exposure” (12). Nevertheless, the Public Health Agency of Canada states that people “with a negative test result who continue to engage in at-risk behaviours will benefit from more frequent retesting than individuals who consistently take measures to prevent HIV acquisition” (12).

To ensure the best use of available resources, it is important to determine the optimal intervals for HIV screening and testing (11), especially for population groups at high risk of HIV infection, such as men who have sex with men, transgender women and men, people who use injection drugs, African, Caribbean and Black communities, indigenous people, and women at risk.

## What We Found

This overview of HIV testing guidelines for various population groups at high risk of HIV infection in different high-income jurisdictions resulted in the following findings:

### Men who have sex with men

Most screening and testing frequency recommendations support at least annual HIV screening for men who have sex with men. This includes guidelines issued by the National Public Health Institute of Quebec (13), the British Columbia Office of the Provincial Health Officer (8, 14), the U.S. Centers for Disease Control and Prevention (4, 10), and the World Health Organization (7), as well as Ontario HIV Testing Frequency Guidelines (9), and the UK national guidelines (15).

5. DiNunno EA, Prejean J, Delaney KP, Bowles K, Martin T, Taylor A, et al. Evaluating the evidence for more frequent than annual HIV screening of gay, bisexual, and other men who have sex with men in the United States: Results from a systematic review and CDC expert consultation. *Public Health Reports*. 2018;133(1):3–21.

6. Workowski KA, Bolan GA, Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines, 2015. Available from: <https://www.cdc.gov/mmwr/pdf/rr/rr6403.pdf>. *Morbidity & Mortality Weekly Report Recommendations & Reports*. 2015;64(RR-03):1–137. Accessed April 24, 2019.

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8. British Columbia Office of the Provincial Health Officer. HIV testing guidelines for the province of British Columbia. 2014. Available from: <https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/hiv-testing-guidelines-bc.pdf> Accessed April 24, 2019.

9. Ontario Ministry of Health and Long-Term Care. Ontario HIV testing frequency guidelines: Guidance for counselors and health professionals. 2012. Available from: <https://www.catie.ca/ga-pdf.php?file=sites/default/files/HIV-testing-frequency-guidelines.pdf> Accessed April 24, 2019.

The European Centre for Disease Prevention and Control suggests that individual counselling and mapping of risk behaviour should be used for individual recommendations around frequency of testing for HIV (and other STIs), but that annual testing for sexually active men who have sex with men would be a minimum suggested interval for testing (16).

The Australian STI & HIV Testing Guidelines also recommend at least once a year testing for all men who have had any type of sex with another man in the previous year (1, 2). In addition to that, all men who have sex with men who fall into one or more categories should be offered testing up to four times a year: any unprotected anal sex, more than 10 sexual partners in six months, participation in group sex, or use of recreational drugs during sex (1, 2).

The UK's National Institute for Health and Care Excellence recommends that men who have sex with men should have "HIV and sexually transmitted infection tests at least annually, and every 3 months if they are having unprotected sex with new or casual partners" (3).

As some HIV providers offer more frequent screening to some men who have sex with men (e.g., every three or six months), in 2017 a Centers for Disease Control and Prevention work group conducted a systematic literature review and held four expert consultations to determine whether there was sufficient evidence to change the 2006 recommendation (i.e., at least annual HIV screening of men who have sex with men in clinical settings to more frequent screening) (4). In 2017, this work group concluded that the evidence remains insufficient to recommend screening more frequently than at least once each year for men who have sex with men (4, 5). Accordingly, the U.S. Centers for Disease Control and Prevention continues to recommend that clinicians screen asymptomatic sexually active men who have sex with men at least annually (4). At the same time, they recommend that each clinician consider the benefits of offering more frequent screening (e.g., once every three or six months) to individual men who have sex with men at increased risk for acquiring HIV infection, weighing their patients' individual risk factors, local HIV epidemiology, and local testing policies (4, 5).

## Transgender women and men

The U.S. Centers for Disease Control and Prevention recommends that clinicians should assess STI- and HIV-related risks for their transgender patients based on current anatomy and sexual behaviours (6). Because of the diversity of transgender persons regarding surgical affirming procedures, hormone use, and their patterns of sexual behaviour, providers must remain aware of symptoms consistent with common STIs and screen on the basis of behavioural history and sexual practices (6). The World Health Organization also recommends at least annual testing of transgender individuals (7).

10. Branson BM, Handsfield HH, Lampe MA, Janssen RS, Taylor AW, Lyss SB, et al. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. Available from: <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5514a1.htm>. Morbidity and Mortality Weekly Report: Recommendations and Reports. 2006;55(14):1-17. Accessed April 24, 2019.

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13. Institut national de santé publique du Québec, Sous-comité Optimiser le dépistage du VIH, Comité sur les infections transmissibles sexuellement et par le sang (ITSS). Optimiser le dépistage et le diagnostic de l'infection par le virus de l'immunodéficience humaine. 2011. Available from: [https://www.inspq.qc.ca/pdf/publications/1324\\_OptimiserDepistageDiagnosticInfectionVIH.pdf](https://www.inspq.qc.ca/pdf/publications/1324_OptimiserDepistageDiagnosticInfectionVIH.pdf). Accessed April 24, 2019.

14. Gustafson R, Ogilvie G, Moore D, Kendall P. New HIV testing guidelines in BC. Available from: [https://www.bcmj.org/sites/default/files/public/BCMj\\_56\\_Vol4\\_cdc\\_bc.pdf](https://www.bcmj.org/sites/default/files/public/BCMj_56_Vol4_cdc_bc.pdf). *BC Medical Journal*. 2014;56(4):172-3. Accessed April 24, 2019.

The National Institute for Health and Care Excellence recommends offering HIV testing to everyone who has not previously been diagnosed with HIV and who is a transgender woman who has sex with men and has not had an HIV test in the previous year (3).

## People who use injection drugs

Most guidelines (Quebec, Ontario, British Columbia, U.S. Centers for Disease Control and Prevention, World Health Organization) recommend HIV testing among people who use injection drugs at least annually (7–10, 13). The European Monitoring Centre for Drugs and Drug Addiction recommends that testing is offered to people who use injection drugs at least once every six to 12 months (17).

The National Institute for Health and Care Excellence recommends offering routine HIV testing to everyone who has not previously been diagnosed with HIV and who reports a history of injection drug use (3).

## African, Caribbean and Black communities

British Columbia recommends routine HIV testing (every year) to all patients aged 18 to 70 years who belong to populations with a “higher burden of HIV infection” (8, 14). “Populations with a higher burden of HIV infection” include people from endemic countries defined as those of the Caribbean and sub-Saharan Africa (along with men who have sex with men, people who inject drugs, people who work in the sex trade, and Aboriginal people) (8). Ontario HIV Testing Frequency Guidelines also recommend HIV testing every 12 months (9)

The National Institute for Health and Care Excellence recommends that “black African men and women should have an HIV test and regular HIV and sexually transmitted infection tests if having unprotected sex with new or casual partners” (3).

## Indigenous (Aboriginal) peoples

At least annual HIV screening is recommended for Indigenous peoples by Ontario HIV Testing Frequency Guidelines (9) and the British Columbia Office of the Provincial Health Officer (8), whereas Quebec recommends annual risk evaluation (11, 13).

## At-risk women

Ontario HIV Testing Frequency Guidelines note that some women are at increased risk of HIV either because they are members of high risk populations or have partners who are at risk for HIV infection, and/or are disproportionately affected by the social determinants of health (9). For these women (including sex workers or persons who exchange sex for money or those who have sex with multiple partners), most guidelines recommend at least annual HIV

15. British HIV Association, British Association of Sexual Health and HIV, British Infection Society. UK national guidelines for HIV testing 2008. 2008. Available from: <https://www.bhiva.org/file/RHNUJgIseDaML/GlinesHIVTest08.pdf>. Accessed April 24, 2019.

16. European Centre for Disease Prevention and Control. HIV and STI prevention among men who have sex with men. 2015. Available from: <https://ecdc.europa.eu/sites/portal/files/media/en/publications/Publications/hiv-sti-prevention-among-men-who-have-sex-with-men-guidance.pdf>. Accessed April 24, 2019.

17. European Monitoring Centre for Drugs and Drug Addiction. Guidelines for testing HIV, viral hepatitis and other infections in injecting drug users. 2010. Available from: [http://www.emcdda.europa.eu/attachements.cfm/att\\_118462\\_EN\\_TD3009243ENC\\_web.pdf](http://www.emcdda.europa.eu/attachements.cfm/att_118462_EN_TD3009243ENC_web.pdf) Accessed April 24, 2019.

testing (7–10), whereas the National Public Health Institute of Quebec recommends “more frequent” testing (13).

## Factors That May Impact Local Applicability

Guidelines and recommendations included in this review have been developed in high income settings. Because of similar HIV epidemics and HIV testing availability, the findings could be relevant for the Ontario context. Nevertheless, some significant differences remain across different jurisdictions, such as organization and delivery infrastructure, as well as policies and procedures of HIV testing. In addition, characteristics of some of Ontario’s population groups at high risk of HIV infection are not directly comparable to the similar populations from other jurisdictions. Because of the above reasons, when developing HIV testing frequency recommendations, the characteristics of local epidemics should be taken into consideration.

## What We Did

We searched Medline (including Epub Ahead of Print and In-Process & Other Non-Indexed Citations) using a combination of text terms (HIV and test\*) and title terms (guideline\* or recommend\*). Searches were conducted on October 26, 2018 and results limited to English articles published from 2010 to present. Reference lists of identified guidelines, literature reviews and systematic reviews, as well as web-sites of U.S. Centers for Disease Control and Prevention, European Centre for Disease Prevention and Control, World Health Organization and U.S. Preventive Services Task Force were also searched. The search yielded 323 references from which 17 were included.

## Rapid Response: Evidence into Action

The OHTN Rapid Response Service offers quick access to research evidence to help inform decision making, service delivery and advocacy. In response to a question from the field, the Rapid Response Team reviews the scientific and grey literature, consults with experts, and prepares a brief fact sheet summarizing the current evidence and its implications for policy and practice.

### Suggested Citation

Rapid Response Service. A cross-jurisdictional review of HIV testing intervals for population groups at high risk of HIV infection. Toronto, ON: Ontario HIV Treatment Network; April 2019.

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