Benefits of opportunistic screening for sexually transmitted infections in primary care

Troy Grennan MD MSc, Darrell H.S. Tan MD PhD

Cite as: *CMAJ* 2021 April 19;193:E566-7. doi: 10.1503/cmaj.210604

See related article in English at www.cmaj.ca/lookup/doi/10.1503/cmaj.201967 and in French at www.cmaj.ca/lookup/doi/10.1503/cmaj.201967-f

An epidemic of the bacterial sexually transmitted infections (STIs) syphilis, chlamydia and gonorrhea is taking hold worldwide, with the World Health Organization estimating that nearly 1 million people are infected daily with a curable STI.[1] Canada has seen increases of more than 160% over the last decade.[2] A critical component of STI control is testing, but a paucity of evidence on how best to do this, particularly with respect to screening frequency, means recommendations on the topic are scarce.

In a related guideline issued by the Canadian Task Force on Preventive Health Care, Moore and colleagues provide a recommendation for screening for chlamydia and gonorrhea in primary care.[3] This publication updates national guidance on screening from the Public Health Agency of Canada,[4,5] as well as guidelines by the Canadian Task Force on the Periodic Health Examination,[6] which were last updated in 1996. The authors outline their rigorous use of the Grading of Recommendations Assessment, Development and Evaluation (GRADE)[7] system, a widely accepted methodology for the development of clinical practice guidelines, including a systematic review of the literature, a 2-phase patient engagement process, and a transparent discussion of the benefits, harms and implementation considerations.

Given the paucity of available data, the guideline provides only 1 conditional recommendation, based on very low-certainty evidence: primary care providers should, once yearly, opportunistically screen sexually active individuals younger than 30 years who are not known to be part of a high-risk group for chlamydia and gonorrhea. Its authors argue this screening may confer an "uncertain but potentially important" benefit, such as the prevention of pelvic inflammatory disease in females.

One strength of the recommendation is that the authors intentionally extend their screening recommendation to individuals up to age 29 years (compared with the previous cut-off of 25 yr), to ensure that those with the highest STI rates are captured. This increase is justified by data showing recent increases in rates of STIs among people aged 25–29 years. For example, since 2012, the rate of gonorrhea in Canada in this age range has consistently been higher than among people aged 15–19 years, with data from 2017 showing 264 cases per 100 000 population versus 151 per 100 000, respectively.[2]

KEY POINTS

- A paucity of evidence means that guidance on how to approach testing for common sexually transmitted infections (STIs) in primary care is sparse.
- The recommendation of a new guideline issued by the Canadian Task Force on Preventive Health Care — to screen, once yearly, sexually active people younger than 30 years for chlamydia and gonorrhea — is justified and welcome, and its benefits will extend beyond case-finding.
- Given that STIs are often asymptomatic, may lead to serious sequelae, generate substantial onward transmission, and can be an independent risk factor for HIV acquisition, the increased diagnostic yield resulting from opportunistic screening may be invaluable.
- Regular opportunistic screening also has the potential to normalize conversations about sexual health, sexual orientation and STIs between clinicians and patients and thereby reduce stigma.

Another strength is the authors' emphasis on an opportunistic approach to screening. Although the randomized controlled trials available did not explicitly examine this approach, such a strategy is logical because it capitalizes on existing health care interactions to seek health benefits that patients value. Experience from the HIV epidemic reinforces the value of an opportunistic approach; too often, our health system identifies people living with HIV for the first time at late stages of the disease, only to find that they had had multiple "missed opportunities" for diagnosis during earlier, unrelated health care encounters.[8,9] Given that STIs are often asymptomatic, may lead to serious sequelae (e.g., pelvic inflammatory disease, infertility, disseminated gonococcal infection), generate substantial onward transmission, and can be an independent risk factor for HIV acquisition,[10,11] the increased diagnostic yield resulting from such screening may be invaluable.

A final potential benefit of the authors' recommendation is its potential to normalize conversations about sexual health and STIs between clinicians and patients, which have long been marred by stigma and shame. Offering screening may help patients feel that they "have permission" to discuss health issues that may seem difficult to talk about. The guideline

All editorial matter in *CMAJ* represents the opinions of the authors and not necessarily those of the Canadian Medical Association or its subsidiaries.

 © 2021 CMA Joule Inc. or its licensors

authors' literature review identified stigmatization and anxiety about STI-related outcomes as one of the few adverse effects of STI screening. Yet, by intentionally asking about STI screening during unrelated health care encounters, clinicians can send powerful signals to their patients that may counteract stigma.[12]

Opportunistic STI screening in primary care settings represents an important step in the right direction. However, a shortcoming is that the guideline recommendation specifically excludes groups at higher risk for STI acquisition, begging the question: How will providers ever find those higher-risk individuals? For instance, several studies have shown that up to 90% of gay, bisexual and other men who have sex with men — a group disproportionately affected by STIs — often do not disclose their sexual orientation to their providers.[13] Recognizing the stigma associated with sexual health, providers should not only offer opportunistic STI screening to their lower-risk patients, but precede this offer with nonjudgmental efforts to ascertain the patient's true risk profile. In the absence of such a conversation, other aspects of sexual health for individuals at higher risk — such as HIV testing or the provision of extragenital (i.e., rectal or pharyngeal) testing for STIs — may be easily overlooked.

Bacterial STIs remain a substantial global public health concern, yet basic questions — including who, when and how often to screen — remain unanswered. Indeed, the most concerning issue emerging from the work that informed the new guideline is the paucity of good-quality research on chlamydia and gonorrhea screening. Despite a comprehensive and methodologically rigorous approach to their systematic review, the authors were still left with few good-quality studies, many of which were not particularly applicable to real-world primary care settings (e.g., the use of mailed invitations to screening). The guideline developers should be lauded for undertaking such important work in an underinvestigated area, but their findings should also be a call to action for clinicians, researchers and public health professionals to make space for conversations about sexual health and STIs, and reprioritize these issues on their research agendas.

References

1. Unemo M, Bradshaw CS, Hocking JS, et al. Sexually transmitted infections: challenges ahead. *Lancet Infect Dis* 2017;17:e235-79.
2. Report on sexually transmitted infections in Canada, 2017. Ottawa: Public Health Agency of Canada; 2019, modified 2020 Jan. 27. Available: www.canada.ca/en/public-health/services/publications/diseases-conditions/report-sexually-transmitted-infections-canada-2017.html (accessed 2021 Mar. 12).
3. Moore A, Traversy G, Reynolds D, et al. Recommendations on screening for chlamydia and gonorrhea in primary care for individuals not known to be at high risk. *CMAJ* 2021;193:E549-59.
4. Section 2: Canadian guidelines on sexually transmitted infections: primary care and sexually transmitted infections. Ottawa: Public Health Agency of Canada; modified 2013 Feb. 1. Available: www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines/sexually-transmitted-infections/canadian-guidelines-sexually-transmitted-infections-17.html (accessed 2021 Mar. 12).
5. Chlamydia and LGV: screening and diagnostic testing. Public Health Agency of Canada; modified 2020 May 6. Available: www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines/chlamydia-lgv/screening-diagnostic-testing.html (accessed 2021 Mar. 12).
6. Davies HD, Wang EE. Periodic health examination, 1996 update: 2. Screening for chlamydial infections. Canadian Task Force on the Periodic Health Examination. *CMAJ* 1996;154:1631-4.
7. Atkins D, Best D, Briss PA, et al.; GRADE Working Group. Grading quality of evidence and strength of recommendations. *BMJ* 2004;328:1490.
8. Nanditha NGA, St-Jean M, Tafessu H, et al. Missed opportunities for earlier diagnosis of HIV in British Columbia, Canada: A retrospective cohort study. *PLoS One* 2019;14:e0214012.
9. Shaw S, Ireland L, Carnochan T, et al. A retrospective population-based examination of prescription drug usage prior to HIV diagnosis among HIV cases and their controls: the Missed Opportunity for Diagnoses Epidemiological Study (MODES) [conference]. Conference on Retroviruses and Opportunistic Infections; 2015 Feb. 23–26; Seattle, WA. Abstract 1054.
10. Cohen MS. Sexually transmitted diseases enhance HIV transmission: no longer a hypothesis. *Lancet* 1998;351(Suppl 3):5-7.
11. Fleming DT, Wasserheit JT. From epidemiological synergy to public health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV infection. *Sex Transm Infect* 1999;75:3-17.
12. Hood JE, Friedman AL. Unveiling the hidden epidemic: a review of stigma associated with sexually transmissible infections. *Sex Health* 2011;8:159-70.
13. Qiao S, Zhou G, Li X. Disclosure of same-sex behaviors to health-care providers and uptake of HIV testing for men who have sex with men: a systematic review. *Am J Mens Health* 2018;12:1197-214.

Competing interests: Troy Grennan reports being a site investigator for clinical trials sponsored by Gilead and Merck. Darrell Tan reports being a site principal investigator for clinical trials sponsored by GlaxoSmithKline. Dr. Tan's institution has received investigator-initiated grants from Gilead, AbbVie and ViiV.

This article was solicited and has not been peer reviewed.

Affiliations: British Columbia Centre for Disease Control (Grennan); Department of Medicine, Division of Infectious Diseases, University of British Columbia (Grennan), Vancouver, BC; Division of Infectious Diseases (Tan), St. Michael's Hospital; Department of Medicine (Tan), University of Toronto, Toronto, Ont.

Contributors: Both authors contributed to the conception and design of the work, drafted the manuscript, revised it critically for important intellectual content, gave final approval of the version to be published and agreed to be accountable for all aspects of the work.

Content licence: This is an Open Access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY-NC-ND 4.0) licence, which permits use, distribution and reproduction in any medium, provided that the original publication is properly cited, the use is noncommercial (i.e., research or educational use), and no modifications or adaptations are made. See: https://creativecommons.org/licenses/by-nc-nd/4.0/

Correspondence to: Troy Grennan, troy.grennan@bccdc.ca