

Time for HIV self-testing in Canada: a vision and an action plan

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■ Cite as: *CMAJ* 2020 November 2;192:E1367-8. doi: 10.1503/cmaj.201160

In 2020, compared against the Joint United Nations Programme on HIV/AIDS (UNAIDS) 95-95-95 targets for HIV elimination (95% tested for HIV, 95% treated and 95% retained in treatment), Canada stands at 86% tested, 81% treated, 91% retained in treatment.¹ Despite the availability of HIV testing, about 14%–20% of Canadians infected with HIV are not aware that they are infected.² Undetected HIV burden is high in specific populations such as Indigenous people, people who inject drugs, immigrants and men who have sex with men. The latest HIV surveillance data in Quebec reported that 25.5% of individuals who received a new diagnosis of HIV in 2018 had a CD4 level of less than 200/mm³.

Recently, the Canadian government announced a national 5-year action plan to fight HIV and sexually transmitted blood-borne infections (STBBIs), which followed a pan-Canadian framework. The framework encourages the use of person-centred approaches to improving access and uptake of HIV and STBBI testing by key populations. One such strategy, which would improve Canada's chances for HIV elimination, is HIV self-testing (HIVST).³

HIVST is a self-screening strategy whereby a person collects their own sample (saliva, blood or urine), performs an HIV self-test, interprets and records the results, and proactively seeks linkages to counselling, confirmatory testing and care.⁴ All reactive or positive self-test results require laboratory confirmation.

Globally, 2 HIVST strategies have been deployed: assisted or supervised HIVST, whereby self-testers are aided by counsellors, nurses or peer health care workers in a health care setting; and unassisted or unsupervised HIVST, whereby participants independently conduct self-testing in a private space (home, office, kiosk) and approach counsellors and clinics to proactively seek links to care.

World Health Organization guidelines propose HIVST as an alternative strategy to conventional laboratory testing.⁴ More than 250 studies conducted globally have shown that HIVST expands access to and improves the uptake of HIV testing, and increases test frequency, partner testing and referrals to friends and family.⁵ HIVST has also been shown to be cost-effective across many global settings.⁶ HIVST can increase demand for related services from those who test negative, such as access to pre-exposure prophylaxis (PrEP), partner referrals and partner notifications (of test status, PrEP and services).

KEY POINTS

- HIV self-testing (HIVST) is effective and is used in many countries.
- Canada lags behind by not making HIVST widely available.
- Rapid approval of proven and affordable oral, blood-based and urine-based self-tests for key priority populations is needed to achieve Canada's HIV testing targets.
- HIVST should be integrated within provincial HIV testing programs and in service delivery models that are centred on self-testers, and that involve pharmacies, online or smartphone-based applications, vending machines or community-based organizations.

HIVST is now available in the United Kingdom, France, the Netherlands, United States, Latvia, Spain, Kenya and South Africa, among other countries.³ HIVST guidelines have been drafted in more than 60 countries.³ Availability of HIVST has increased demand for innovative service delivery models such as counselling through smartphone applications or websites,^{7,8} delivery of medications by pharmacies or vending machines, and follow-up care through community outreach by community-based peer counsellors.⁹

In Canada, there are currently no approved HIV self-tests, no HIVST strategy and no HIVST-specific provincial or federal guidelines. Lack of funding, political will and oversight of HIV testing by public health laboratories could be cited as some of the reasons for delayed introduction of HIV self-tests.

In anticipation that Health Canada will soon approve oral and blood-based HIV self-tests,¹⁰ we suggest 4 factors that are important for optimal introduction of HIVST in Canada.

First, a number of HIV self-tests are available, which are prequalified by the World Health Organization, CE marked (indicating conformity with health, safety and environmental protection standards for products sold within the European Economic Area), or approved by the United States Food and Drug Administration. These tests should be considered for approval in Canada.¹¹ Rapid approval of oral, blood-based or new urine-based self-tests will increase the choice of test and may catalyze competition and decrease unit cost, thereby

affecting affordability and uptake by priority populations. Because positive HIVST results require a timely laboratory confirmatory test, HIVST results will need to be integrated into existing HIV testing algorithms.

Second, widespread availability of affordable self-tests should stimulate the development of service delivery models that centre on self-testers. These could be either standalone or integrated within available HIV testing programs. They could be operated through outreach centres, mobile vans, kiosks, community clinics, private clinics, pharmacies, vending machines, smartphone apps and outreach organizations. Adapting existing HIV testing models to establish linkages to clinical care for self-testers could improve quality, efficiency and sustainability. This will require sustained collaboration with private providers, pharmacies, community-based organizations, public clinics, test manufacturers and laboratories.¹²

Third, addressing the economics of integration of HIVST service delivery is key to sustainability. The Canadian health systems are largely operated provincially and combine public and private care. Successful integration of HIVST services will require the use of diverse public and private funding models; for example, perhaps establishing public reimbursement for low-income populations and a private payment system for high-income populations. Self-test kits could be priced between Can\$5 and \$15, like pregnancy tests. Other services required to optimize implementation of HIVST across Canada include linkages to reference laboratories for confirmatory testing in those who test positive; counselling; providers for treatment; and prevention services like PrEP, partner referrals and test notification for those who test negative.

Finally, large-scale Canadian trials and cost-effectiveness studies evaluating the implementation of HIVST are needed to guide the formulation of federal and provincial HIVST-specific policies and guidelines.

Introduction of HIVST in Canada should lead to better detection of HIV in underdiagnosed populations who currently face barriers to testing, as well as improve HIV management, bringing us closer to the UNAIDS 95-95-95 targets. This would be a historic milestone in the long journey toward controlling and ending the HIV epidemic in Canada.

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Competing interests: Nitika Pant Pai reports receiving grant funding for HIVSmart! (copyright no. 1105598, McGill University, 2013), an open access, global HIV self-testing digital application and program for HIV self-testing, from the Government of Canada (Grand Challenges Canada). Réjean Thomas reports receiving honoraria from Gilead, Merck and ViiV, for conference appearances and membership on advisory boards.

This article has been peer reviewed.

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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.

Funding: Nitika Pant Pai acknowledges the support of operating grants from the Canadian Institutes of Health Research (HHP-137872 and PJT-153149) and Fonds de recherche Santé Québec (Chercheur-boursier Senior Award).

Acknowledgements: The authors thank Nandi Belinsky and Angela Karellis for their help with formatting and references.

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