

# Testing Innovation: Addressing Gaps and Inspiring Innovation in STBBI Testing in Canada

## Public Health 2018 Pre-Conference Session Summary Report

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## 1. Introduction

In Canada and worldwide, sexually transmitted and blood-borne infections (STBBIs) continue to be a significant individual health issue and public health burden. Despite the fact that STBBIs are largely preventable, and in some cases curable, the burden of STBBIs remains a significant public health concern. Globally, the push to eliminate HIV, hepatitis C and other STIs as a public health threat by 2030 is an elusive goal. In 2015, Canada endorsed the UNAIDS 90-90-90 HIV target, namely that 90% of people living with HIV know their status, 90% of all people diagnosed with HIV are on treatment, and 90% of people on treatment reach viral suppression. In order for Canada to meet these commitments, there is an urgent need to reach the right people, at the right time, at the right place, with the most effective STBBI programs, including testing as a central component of the care cascade. Robust and accessible testing and linkages to services are gateways to prevention, treatment and care, and part of an effective, comprehensive strategy to address STBBIs in Canada.

On May 28, 2018, the Canadian Public Health Association (CPHA), CATIE, The Faculty of Health at Dalhousie University, the International Union for Sexually Transmitted Infections (IUSTI) Canada, l'Institut national de santé publique du Québec (INSPQ), and the National Collaborating Centre for Infectious Diseases (NCCID) organized a pre-conference session at Public Health 2018 in Montréal, Québec focused on addressing gaps in STBBI testing through innovative technology and/or service delivery. This session, which built on the pre-conference session *Setting the stage for sexual health in Canada* held at Public Health 2017 in Halifax, Nova Scotia, brought together roughly 25 professionals from government, non-governmental organizations, health care, academia and industry.

The learning objectives for the session were as follows:

- Identify gaps in our collective efforts to reach people living with STBBIs
- Apply implementation science to innovative programming approaches to STBBI testing
- Describe patient-centered access to STBBI testing services
- Assess national and provincial policy and programming gaps

The presentation slide decks from the session can be viewed here:

<https://www.cpha.ca/sites/default/files/uploads/resources/stbbi/stbbi-testing-innovation-slides.pdf>

## 2. Agenda & Proceedings

### ***Section 1: Setting the stage***

To set the context for the day, the pre-conference session began with a series of presentations from Dr. Jacqueline Gahagan, Dr. John Kim and Dr. Marc Steben outlining the various opportunities and challenges related to STBBI testing innovation in Canada. Following each presentation, session participants were provided with an opportunity to comment and/or ask questions.

Dr. Jacqueline Gahagan from Dalhousie University opened the session by acknowledging the Kanien'kehá:ka Nation as the traditional custodians of the land and by discussing some of the priority areas for action identified during the Public Health 2017 pre-conference session held in Halifax, Nova Scotia, including the need for a national sexual health promotion strategy incorporating STBBI testing as a key component. By reflecting on the work and leadership exerted in other jurisdictions, including Australia, the United States, the European Union/the European Economic Area and Scotland, Dr. Gahagan highlighted the need for Canada to move away from one-off interventions and towards a more

coordinated national strategy nested within an overarching and comprehensive sexual health approach and led through provincial/territorial initiatives. Specifically, Dr. Gahagan emphasized the need for national STBBI testing targets; the importance of partnership between government, industry, community and research; the need to expand the scope of practice for regulated health professionals (e.g., pharmacists) and non-health professionals (community and peer testers) to improve STBBI testing access for marginalized and non-urban populations; and the need to equitably expand access to existing and emerging technologies and service delivery models in Canada.

Dr. John Kim from the National Laboratory for HIV Reference Services offered his insight into possible strategies to move STBBI testing innovation forward in Canada. Most notably, Dr. Kim spoke to the potential of the WHO health technology assessment framework, a systematic and multidisciplinary process for evaluating the social, economic, organizational and ethical issues related to a health technology implementation in a country. By incorporating health technology assessment into STBBI testing decision-making, Dr. Kim argued that we could better assess potential societal impacts (e.g., quality of life) in addition to the economic impacts and in turn determine the effectiveness and appropriateness of various testing technologies for Canada (e.g., dried blood spot testing, multiplex testing, self-testing, etc.). Dr. Kim also presented the Public Health Agency of Canada's *Reducing the Health Impact of STBBIs by 2030: A Pan-Canadian Framework for Action*<sup>1</sup> which presents an overarching and comprehensive approach to STBBIs and has been endorsed by federal, provincial and territorial Ministers of Health. Lastly, Dr. Kim reminded participants that, in addition to HIV, innovation in STBBI testing must encompass other STBBIs, including HCV where successes are possible in light of new treatment options, and that linkage to care following testing cannot be overlooked if Canada is to achieve the global UNAIDS 90-90-90 HIV target.

Dr. Marc Steben from l'Institut national de santé publique du Québec highlighted some of the contextual factors impeding innovation in point-of-care-testing (POCT) testing for STBBIs in Canada based on a commentary Dr. Steben co-authored with Dr. Pant Pai for the National Collaborating Centre for Infectious Disease.<sup>2</sup> Specifically, Dr. Steben highlighted the limited opportunities in Canada for clinicians to diversify testing offer and discussed the following barriers to expanding opportunities for the benefit of public health: dependency on provincial/central laboratories for testing in community which introduces time delays and costs for obtaining test results in addition to increasing the potential for loss to follow-up; small market size resulting in limited choices, high costs of testing technologies and lapses in the supply chain; cumbersome regulatory processes resulting in high unit costs and implementation costs for POCT; lack of guidelines and screening policies that support integration of POCT into clinical decision-making and linkage to care; lack of training for health professionals that would support quality of testing; lack of diversity of technology approved for use in Canada, including self-tests and multiplex tests; limited opportunities for community engagement; and sparse research data related to POCT implementation, program evaluation and processes to maintain quality assurance. Overall, Dr. Steben stressed the necessity of a pan-Canadian approach involving a multitude of stakeholders in order to advance STBBI testing innovation in Canada.

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<sup>1</sup> For more information, see <https://www.canada.ca/en/public-health/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2018-44/issue-7-8-july-5-2018/article-5-framework-action-sexually-transmitted-blood-borne-infections.html>.

<sup>2</sup> See <https://nccid.ca/publications/poct-for-hiv-stbbi-an-analysis-of-contextual-factors-impeding-implementation-in-canada/>.

## **Section 2: Learning from STBBI testing innovations in other jurisdictions**

To learn from the successes of other jurisdictions, Mr. Nathan Sparling and Mr. Jeffrey Hirono from HIV Scotland were invited to discuss the factors that most contributed to the success of HIV testing scale-up in Scotland, and to offer their insight on Scotland's ongoing challenges and learnings. Mr. Sparling and Mr. Hirono provided some contextual information on the epidemiology of HIV in Scotland, noting that roughly 13% of people living with HIV in Scotland are unaware of their infection. They also presented the 2015-2020 update of Scotland's *Sexual Health and Blood Borne Virus Framework*<sup>3</sup> and shared some of the barriers to HIV testing in Scotland that the framework aims to overcome (e.g., lack of awareness amongst community about how to access services, negative experiences at service settings, high rates of HIV among people who inject drugs) as well as the various strategies implemented to increase access to HIV testing in Scotland (e.g., availability of HIV self-testing, diversification of testing opportunities for high-risk groups through POCT and self-testing, anti-stigma efforts including the Minister of Health's participation in HIV testing). Mr. Sparling and Mr. Hirono also presented the priority areas for action identified by HIV Scotland's Short Life Working Group on HIV Testing, including 1) National Health Service boards should meet existing standards for HIV testing and work in ways to provide evidence of continuous quality improvement and innovation; 2) people at risk of HIV should have increased access to testing; 3) people should have relevant and accurate knowledge of the modern day realities of HIV; and 4) the healthcare workforce should have access to the latest resources and information. They also highlighted the importance of political leadership and ministerial engagement in resolving system issues (i.e., bulk buying to improve supply chain management, subsidized cost of self-test and POCT for public, and development of guidelines as well as testing standards).

## **Section 3: Innovative STBBI testing interventions in Canada**

Following the above-mentioned presentations, several professionals were invited to discuss interventions currently underway across the country that incorporate innovation in terms of STBBI testing technologies and service delivery models. Presenters were asked to utilize a program science lens and offer their insight on the factors that contributed to implementation successes.

### *Dr. Mark Gilbert, GetCheckedOnline*

Dr. Mark Gilbert from the BC Centre for Disease Control shared findings from the implementation of [GetCheckedOnline](#)<sup>4</sup>, a free and confidential online STI testing service initially launched in 2014 that allows people in British Columbia to download a lab requisition form and/or order a self-collection kit, take it to a nearby laboratory, and receive their result online or via the telephone, thereby reducing potential barriers to testing access. Evaluation findings demonstrate that *GetCheckedOnline* is an effective and scalable intervention. Dr. Gilbert discussed some of the factors that contributed to the success of *GetCheckedOnline*, including engagement of community and other key stakeholders at project outset, phased implementation, multiple implementation partners, commitment to research and evaluation, alignment with the STOP HIV/AIDS initiative in British Columbia, and risk identification and mitigation.

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<sup>3</sup> For more information, see <http://www.gov.scot/Resource/0048/00484414.pdf>.

<sup>4</sup> For more information, see [lovebytesresearch.com](http://lovebytesresearch.com).

*Dr. Reka Gustafson, STOP HIV/AIDS Initiative*

Dr. Réka Gustafson from Vancouver Coastal Health discussed lessons learned through the implementation of STOP HIV/AIDS<sup>5</sup>, a provincial HIV testing initiative meant to ameliorate early diagnosis and treatment of HIV in British Columbia. Dr. Gustafson outlined some of the factors that contributed to the initiative's success, including a commitment to evidence generation throughout all stages of implementation given the lack of local evidence on routine HIV testing, and the subsequent willingness to adapt the initiative in response to emerging evidence. Dr. Gustafson also spoke to the importance of a clear and clinically meaningful recommendation (e.g., for Vancouver Coastal Health, that all health care providers be aware of the HIV status of all patients under their care), government leadership and commitment, and an explicit implementation plan supported by champions from different departments. Several successes were highlighted, including sustained changes in HIV practice in acute and primary care, consistent declines in HIV diagnoses, and enhanced understanding of where HIV testing is most effective, namely community settings and acute care, and in particular emergency departments.

*Dr. Nikita Pant Pai, HIV self-testing*

Dr. Nikita Pant Pai from McGill University Health Centre discussed emerging evidence concerning the effectiveness and feasibility of HIV self-testing, a self-screening process whereby an individual performs an HIV test on their own, interprets the results and seeks linkages to counselling and care (note that self-tests are not yet approved for use in Canada). Dr. Pant Pai highlighted the global research evidence supporting HIV self-testing, including over 250 published and ongoing studies, as well as the global momentum for HIV self-testing, as demonstrated by the WHO's endorsement in 2017. Dr. Pant Pai also highlighted the HIVSMART!<sup>6</sup> Intervention, an open-source smartphone application/Internet-based strategy that facilitates HIV self-testing by providing the user with evidence-based information on HIV and a personalized risk profile, as well as images and videos to assist the user in completing a self-test, interpreting their results and linking to care. Findings from several studies, including two studies conducted in Canada with low-risk students at a Canadian university as well as at-risk men who have sex with men (MSM) in Montréal, showed that HIVSMART! and self-testing were well-received by study participants. Overall, Dr. Pant Pai stressed that HIV self-testing can help increase reach alongside conventional HIV testing strategies and that future work should focus on taking the strategy to scale (including approval and access to affordable HIV self-tests in Canada) and assessing factors that contribute to acceptability and sustainability.

*Dr. Jason Kielly, the APPROACH Study*

Dr. Jason Kielly from Memorial University shared findings from the APPROACH study, through which POCT HIV tests (the Health Canada approved INSTI HIV-1/HIV-2 antibody test<sup>7</sup>) were offered by pharmacists at two community pharmacies in both Newfoundland and Alberta. Dr. Kielly provided some insight into factors that contributed to intervention success, including, most notably, the involvement of Provincial Advisory Committees comprised of various stakeholders including people with living experience. Study findings demonstrated that study participants expressed a high degree of satisfaction with their pharmacy-based POCT HIV testing experience, and that the large majority of participants (99.2%) agreed that HIV testing should be made available in community pharmacies. Similarly, the pharmacists involved in the study expressed their satisfaction with the training received prior to intervention roll-out and felt adept at offering testing, counselling and linkages to care. Dr. Kielly

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<sup>5</sup> For more information, see <http://stophiv aids.ca/>.

<sup>6</sup> For more information, see [http://nitikapantpai.com/wp-content/uploads/2014/03/HIVSmart\\_Poster.jpg](http://nitikapantpai.com/wp-content/uploads/2014/03/HIVSmart_Poster.jpg).

<sup>7</sup> For more information, see <http://biolytical.com/products/insti-hiv-1hiv-2/>.

discussed the potential scalability of pharmacy-based HIV POCT in Canada, as well as potential barriers and opportunities (e.g., concerns related to scope of practice, remuneration and workflow of pharmacists; need for a better understanding of how to reach priority populations; stigma, etc.).

### **Moderated panel discussion**

Following their respective presentations, the four presenters were invited to participate in a moderated panel discussion to further elucidate potential opportunities for STBBI testing in Canada. Some key themes from this discussion included:

- The benefit of involving a diversity of stakeholders, including people with living experience and Provincial Laboratories, to help guide the planning, implementation and evaluation of innovative STBBI testing technologies and/or service delivery models;
- The appetite amongst both service providers and the general public for opportunities to diversify the testing offer in a variety of non-health care settings in Canada and globally;
- The necessity of ensuring that enough time and resources are set aside for ongoing training of professionals and allied non-professionals involved in implementing and evaluating innovative STBBI testing technologies or delivery models; and
- The importance of linking STBBI testing interventions with available supports and treatment options in the community.

### ***Section 4: Leveraging opportunities in Canada to advance STBBI testing innovation***

Following the moderated panel discussion, workshop participants were invited to ask questions of the session presenters and to share their insight on potential opportunities to advance STBBI testing innovation in Canada, with a focus on the partnerships needed, implementation considerations, and the factors that might facilitate or hinder the success of innovative testing technologies or service delivery models. Several key issues were raised, including:

- The need to move away from silos of data and enhance data sharing amongst all stakeholders involved in STBBI prevention and care across the country;
- The need to consider how human behaviour of both providers and clients/patients impacts testing rates, rather than focusing exclusively on innovative technologies or delivery methods when considering how to increase access and uptake of STBBI testing in Canada;
- The importance of advocating for systems changes (e.g., national HIV testing standards for health care professionals) rather than one-off pilot interventions;
- The potential to apply lessons learned from innovative HIV testing interventions to other STBBIs and in particular HCV; and
- The need to involve industry and regulatory bodies in future dialogue.

### **3. Conclusion**

Overall, the session was well-received by workshop participants, as evidenced by responses to evaluation questionnaires<sup>8</sup> and in conversations with participants and presenters following the session. Several key themes emerged that should be taken into consideration for all future knowledge exchange events related to STBBI testing in Canada, including, for example, the need to involve industry in future dialogue, the need to focus on other STBBIs in addition to HIV, and the importance of focusing on

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<sup>8</sup> Note that five participants completed the evaluation questionnaire. Overall, respondents reported an increase in their knowledge and understanding on various issues related to STBBI testing following their participation in the session.

linkage to care in addition to testing access in order for Canada to achieve the global UNAIDS 90-90-90 HIV target.

With the recent release of the Public Health Agency of Canada's *Pan-Canadian STBBI Framework for Action*, the timing is right for a national 'call to action' bringing community, research, government and industry partners together to mobilize on issues related to STBBI testing innovation and access. In an effort to reach the undiagnosed and to help reduce the burden of STBBIs, several efforts are already underway to bring partners from across Canada, the US and the UK together to discuss the future of testing in the Canadian context with the hope of seeing additional testing innovations becoming available in the next several years, including self-testing and multiplex testing. In addition, plans are in place to develop a national research grant to look at advancing STBBI testing innovation in Canada. These efforts will collectively move Canada toward the crucial goal of addressing the current gaps in STBBI testing programs, services and approaches.