Evaluation of the Public Health Agency of Canada's Sexually Transmitted Blood-Borne Infections Activities 2018-19 to 2022-23

Prepared by the Office of Audit and Evaluation
Health Canada and the Public Health Agency of Canada

Report
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TO PROMOTE AND PROTECT THE HEALTH OF CANADIANS THROUGH LEADERSHIP, PARTNERSHIP, INNOVATION AND ACTION IN PUBLIC HEALTH.
—Public Health Agency of Canada

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Table of Contents

List of Acronyms

CAF	HIV and Hepatitis C Community Action Fund
CCDIC	Centre for Communicable Diseases and Infection Control
FPT	federal, provincial and territorial
HRF	Harm Reduction Fund
IDVPB	Infectious Diseases and Vaccination Programs Branch
gbMSM	gay, bisexual and men who have Sex with Men
GoC	Government of Canada
G&Cs	Grants and Contributions
HBV	hepatitis B virus
HCV	hepatitis C virus
HIV	human immunodeficiency virus
HSV	herpes simplex virus
NML	National Microbiology Laboratory
NMLB	National Microbiology Laboratory Branch
PHAC	Public Health Agency of Canada
PT	provincial and territorial
PTs	provinces and territories
PWID	people who inject drugs
PWUS	people who use substances
PWLLE	people with lived and living experience
STBBI	sexually transmitted and blood-borne infections
STI	sexually transmitted infection
WHO	World Health Organization

EXECUTIVE SUMMARY

This report presents the findings of the evaluation of the Public Health Agency of Canada's (PHAC) sexually transmitted and blood-borne infections (STBBI) activities from 2018-19 to 2022-23. The evaluation focused on five areas: progress on attaining program goals, the extent to which the integrated approach has been effective at engaging and meeting the needs of key actors, the effectiveness of partnerships and communication mechanisms, data use to prioritize and plan program activities, and the impact of the COVID-19 pandemic on program delivery.

Program context

STBBIs such as human immunodeficiency virus (HIV), hepatitis C, and syphilis are a significant public health concern in Canada. In recent years, STBBI rates in Canada have either remained steady or increased.

In 2018, the federal, provincial, and territorial governments (FPT) launched the Pan-Canadian Framework for Action on STBBI, which set out an integrated approach for Canada to achieve global STBBI targets. The Government of Canada's Five-Year Action Plan on STBBI (2019-2024), published in 2019, outlined the federal government's priorities and its path to achieving the strategic goals under the Framework, which are to:

- Reduce the incidence of STBBI in Canada;
- Improve access to testing, treatment, and ongoing care and support; and
- Reduce stigma and discrimination that create vulnerabilities to STBBI.

Successful implementation of the Pan-Canadian Framework for Action on STBBI depends on collaboration between partners at various levels of government, in communities, and with Indigenous Peoples, as well as with health care and front-line service providers. PHAC coordinates the federal government's public health response to STBBI. The Infectious Diseases and Vaccination Programs Branch (IDVPB) is the lead on activities related to the prevention and control of STBBI, while the National Microbiology Laboratory Branch (NMLB) is the lead on laboratory and testing services. Over the five-year period covered by this evaluation, PHAC spent $252 million on STBBI activities. This includes $167 million for two Grants and Contributions (G&Cs) programs that fund the HIV and Hepatitis C Community Action Fund (CAF) and the Harm Reduction Fund (HRF), both of which provide funding for community programming and initiatives aimed at reducing the burden of STBBI in Canada.

What we found

PHAC, in collaboration with FPT partners, advanced the goals of the Framework and Action Plan despite delays caused by the COVID-19 pandemic. Notably, PHAC contributed to Canada's achievement of two out of the three HIV global testing and treatment targets for 2020, and one of the three 2025 targets.

Still, more needs to be done to improve access to prevention interventions and to address rising rates of STBBI, disproportionately higher infection rates in key populations, and continued stigma and discrimination that act as barriers to prevention, testing, treatment, and ongoing care and support. Canada has to make significant progress to achieve the global 2030 targets for other STBBIs.

Self-reported information from Grants and Contributions recipients suggest that projects funded between 2017 and 2022 were generally successful in achieving their expected outcomes, namely: increased knowledge of effective STBBI prevention measures, increased awareness and knowledge of risk factors, increased access to health, social, and support services, strengthened capacity

of target audiences to prevent infection and improve health outcomes, increased uptake of personal behaviours that prevent transmission, and enhanced application of knowledge in community-based interventions. It is important to note that, despite challenges faced during COVID, recipients of G&Cs funding pivoted to remote programming, meaningfully engaged people with lived experience, and were successful in achieving their objectives. Factors that contributed to achieving PHAC's goals included meaningful engagement with people with lived and living experience of STBBI as well as the integrated approach of addressing common risk factors and intervention opportunities. There is room for improvement in ensuring timely collation, analysis, synthesis, and dissemination of findings from recipients' performance measurement and evaluation reports.

PHAC effectively used partnerships and a variety of communication mechanisms to disseminate information to target audiences, including people living in Canada, health professionals, and key populations. External partners recommend increasing community consultations, particularly among people with lived and living experiences (PWLLE) of STBBI in key populations, to develop more relevant knowledge products.

PHAC uses epidemiological data from surveillance and research to address the needs of key populations and to inform decision making. However, STBBI surveillance faces similar limitations to those of other national surveillance systems, such as certain data gaps pertaining to socio-demographic and risk factor variables, an insufficiently flexible database infrastructure, and long timelines for data acquisition, processing, analysis, and publication. The STBBI program is working with various PHAC partners to improve the responsiveness of its surveillance systems, including through the Detect, Understand and Act Action Plan. There, however, continue to be opportunities to improve linkages between the STBBI surveillance programs and other sections to enhance using data to support decision making.

The COVID-19 pandemic delayed or paused many planned program activities, notably multilateral work to develop a national STBBI Indicators Framework. It also significantly affected the implementation and evaluation of G&Cs recipients' activities. Despite these challenges, PHAC and community-based partners pivoted to virtual activities and expanded testing access for hard-to-reach communities.

Recommendations

The evaluation findings discussed in this report led to the development of the following recommendations:

Recommendation #1
Enhance existing efforts, within PHAC's mandate, to respond to rates of STBBI in Canada.

Rates of infectious syphilis and other bacterial sexually transmitted infections (STI) have increased in the past decade, especially since 2017. Moreover, surveillance data shows that Canada still has significant progress to make to fulfill global commitments to reduce STI by 90% by 2030. Internal and external sources describe federal STBBI efforts as being mainly focused on HIV and viral hepatitis, with less of a focus on the bacterial STIs, despite continued high infection rates.

Recommendation #2
Identify opportunities to build on existing action, within PHAC's mandate, to address STBBI-related stigma among key populations.

One of the three strategic goals under the Pan-Canadian Framework for Action on STBBI and the Government of Canada's (GoC) Five-Year Action Plan on STBBI is to "Reduce stigma and discrimination that create vulnerabilities to STBBI". Over the past five years, PHAC has worked with community organizations and other partners to understand and address stigma faced by people who are vulnerable to or people with lived and living experience of an STBBI. Nonetheless, recent research and interviews with public health professionals show that stigma and discrimination continue to be a barrier to accessing STBBI-related testing and treatment.

Recommendation #3
Refine performance evaluation of grants and contributions recipients and collate, analyze, and disseminate evaluation findings in a timely fashion.

Recipients of PHAC grants and contributions are required to write and submit performance measurement and evaluation reports on their impact. These reports are submitted by funding recipients from across the country and are a rich source of information on project challenges, best practices, recommendations, and lessons learned. While there have been delays in receiving the final evaluation reports from the 2017-2022 funding cycle, at the time of conducting the evaluation, the Program had not completed the analysis and synthesis of results as well as the dissemination of findings. As well, it could ensure timely analysis and dissemination of evaluation findings to improve planning and decision-making by funding recipients and the Program.

As previously noted, recipients are required to self-assess their performance at meeting expected outcomes. PHAC could work with recipients to refine reporting requirements to collect more objective metrics. As well, it could ensure timely analysis and dissemination of evaluation findings to improve planning and decision-making by funding recipients and the Program.

Recommendation #4
Refine performance measurement approach for the renewed federal STBBI Action Plan in collaboration with partners.

The COVID-19 pandemic delayed the development of a national STBBI Indicators and Targets Framework which affected the performance measurement of the integrated approach, encapsulated in the Pan-Canadian Framework and the 2019-2024 STBBI Action Plan, over the evaluation period.

PHAC continues to work on finalizing the pan-Canadian STBBI Indicators and Targets Framework that will inform progress towards specific STBBI-related measures. PHAC also led the development of the renewed Action Plan and, with federal partners, identified indicators for each of the 49 federal actions outlined. Reporting on these action specific indicators will improve performance measurement and accountability under the renewed STBBI Action Plan (2024-2030).

Recommendation #5
Identify opportunities to strengthen engagement of key populations across program activities.

External partners and stakeholders are appreciative of PHAC's engagement efforts in recent years. Still, they would like to see more diverse community voices being consulted and for PHAC to continue working directly with key populations in developing STBBI knowledge products.

EVALUATION PURPOSE AND SCOPE

The evaluation covers PHAC's STBBI activities delivered by both the Infectious Diseases and Vaccination Programs Branch's (IDVPB) Centre for Communicable Diseases and Infections (CCDIC) and the National Microbiology Laboratory Branch (NMLB) from 2018-19 to 2022-23. This evaluation is an assessment of the performance of PHAC's STBBI activities, rather than an evaluation of the Pan-Canadian Framework for Action on STBBI and the Government of Canada's (GoC) Five-Year Action Plan. Given that the need to address STBBI in Canada and PHAC's role in doing so are well established, the evaluation did not address questions of relevance. The evaluation's objective is to assess PHAC's performance and provide information for decision making and program renewal.

The evaluation questions are:

1. What progress has been made to advance the attainment of the goals of the program, including the Pan-Canadian Framework for Action and the GoC Action Plan on STBBI, and meeting domestic as well as international commitments?
2. To what extent has the integrated STBBI approach been effective in engaging with and meeting the needs of key actors, particularly people living in vulnerable situations, and reducing STBBI-related stigma and discrimination?
3. Have partnerships with stakeholders and mechanisms for communication been effective and useful to facilitate the dissemination and the uptake of PHAC's STBBI-related knowledge products?
4. How are data, surveillance, and research used to prioritize and plan STBBI activities?
5. How has the COVID-19 pandemic affected the delivery of the program, and what are the learned lessons to advance work on STBBI in post COVID-19?

To address these questions, data was collected from reviews of literature, program documents, financial and performance data, and from interviews with internal and external partners and stakeholders. The evaluation also included a review of evaluation reports from 90 recipients of PHAC's Grants and Contributions program funded under the 2017-2022 funding cycle. Findings from the Action Plan renewal consultations, interviews, and surveys (hereafter referred to as Roundtables") convened by PHAC between March and May 2023 were also included, as these consultations elicited input on the renewal of the (2024-2030) Action Plan until 2030. Data was analyzed by triangulating information gathered from the different lines of evidence to increase the reliability and credibility of the conclusions. See Appendix 1 for further details on the evaluation's scope and methodology.

This evaluation builds on the findings of two evaluations conducted in 2018, before the integration of PHAC's STBBI activities: the *Evaluation of Viral Hepatitis and Sexually Transmitted Infection Activities at the Public Health Agency of Canada 2013-14 to 2017-18* and the *Horizontal Evaluation of the Federal Initiative to Adress HIV/AIDS in Canada 2013-14 to 2017-18*. PHAC's blood safety surveillance program is out of scope as that program was assessed under a recent evaluation: the *Evaluation of the Public Health Agency of Canada's Blood Safety Contribution program 2017-18 to 2020-21.*

PROGRAM DESCRIPTION

Context

Sexually transmitted and blood borne infections (STBBI) are infectious diseases transmitted sexually or through blood that pose a significant public health concern in Canada and worldwide.[1] They include the human immunodeficiency virus (HIV), hepatitis B and C, chlamydia, gonorrhea, syphilis and congenital syphilis, herpes simplex virus (HSV), and human papilloma virus (HPV). In recent years, STBBI infection rates in Canada have either remained steady or increased.[2]

The Government of Canada (GoC) has endorsed the United Nations Sustainable Development Goals, as well as the World Health Organization's (WHO) Global health sector strategies on, respectively, HIV, viral hepatitis, and other sexually transmitted infections (STI).[3] The WHO's strategy calls on countries to work towards the elimination of STBBI as a health concern by 2030.[4]

In 2018, federal, provincial and territorial (FPT) Ministers of Health, launched the Pan-Canadian Framework for Action on STBBI.[3] The Framework sets out an integrated approach for Canada to achieve global STBBI targets. The following year, 10 federal partners including PHAC published the GoC Five-Year Action Plan on STBBI, published in 2019.[5] The Action Plan outlines the federal government's priorities and path to achieving the strategic goals under the Framework, which are:

- Reduce the incidence of STBBI in Canada;
- Improve access to testing, treatment, and ongoing care and support; and
- Reduce stigma and discrimination that create vulnerabilities to STBBI.

Since 2023, PHAC has been leading the renewal of the GoC's Action Plan on STBBI. The renewed Action Plan, released on February 27, 2024, builds on the successes and lessons learned from a collective STBBI response and integrates new insights and approaches. The renewal process has involved broad consultations aimed at creating an Action Plan that is evidence-based, culturally sensitive, and that meets the diverse needs of people in Canada. Stakeholders consulted include federal partners, health care professionals, members and representatives of community-based organizations, researchers, activists, and members of key populations as defined in the Framework for Action on STBBI namely; people living with HIV or hepatitis C and related conditions, Indigenous Peoples, gay and bisexual men, people who use drugs (PWUD), transgender persons, people with experience in the prison environment, people from countries where HIV, HBV, and HCV are endemic, and people engaged in the sale, or purchase of sex.

Program profile

The goals and commitments described in the Framework for Action on STBBI and the Action Plan are shared across all levels of government and non-governmental partners including academia, the public health and health care sector, the general public, and people living with STBBI. However, PHAC coordinates the GoC's public health response to STBBI and reports on the Action Plan's progress.

PHAC's STBBI activities are administered by two branches: the Centre for Communicable Diseases and Infection Control (CCDIC) within the Infectious Diseases and Vaccines Program Branch (IDVPB), and the National Microbiology Laboratory Branch (NMLB). IDVPB is the lead on activities related to prevention and control of STBBI, while the NMLB is the lead on STBBI laboratory and testing services (see Table 1). Planned spending for the period of 2018-19 to 2022-23 was approximately $247 million, while actual spending

was $252 million.[1] This includes funding for community-based projects through the HIV and Hepatitis C Community Action Fund (CAF) and the Harm Reduction Fund (HRF), two Grants and Contributions programs. Note that Gs&Cs projects reviewed as part of this evaluation took place between 2017 to 2022. Although expected outcomes have changed between the two cycles, the evaluations focussed on examining expected results from the first cycle since it overlapped with most of the reference period. See Appendix 2 for details of program activities and expenditures.

Table 1: Summary of PHAC's STBBI Activities

CCDIC-IDVPB	NMLB
• Conducts national surveillance and epidemiology activities. • Develops guidelines for professional public health practice. • Conducts regular solicitations for community-based projects. • Administrates grants and contributions funding for community-based projects. • Collaborates, engages and convenes domestic and international partners from within and across government and sectors to inform decision making in addressing infectious diseases and protecting public health. • Develops and maintains relationships with STBBI and related stakeholders and civil society, • Engage in research to support the development of evidence-informed policy. • Leads planning, performance measurement, and reporting.	• Delivers reference testing and diagnostic services, lab-based surveillance and outbreak response. • Advances national public health laboratory leadership and supports laboratory capacity for PT governments. • Conducts research and testing to advance laboratory science.

[1] These figures do not include time-limited funding like the $17.9 million spent on the HIV Self-Test kit initiative.

KEY FINDINGS

PHAC's STBBI activities cover a broad range of areas, including surveillance, research and knowledge mobilization, partnership building, administration of Grants and Contributions program, laboratory support and expertise, performance measurement, and progress monitoring. This section describes PHAC's performance in planned activity implementation, as well as Canada's progress toward the goals of the Pan-Canadian Framework Action and international commitments on STBBI.

Progress on the strategic goals and international commitments

Incidence rates of STBBI have either remained steady or increased in the evaluation period. There has been marked increase in the infections rates of the bacterial STIs, of syphilis, chlamydia, and gonorrhea, while rates of hepatitis B and C have seen comparatively smaller increases. While Canada achieved two out of the three HIV global testing and treatment targets for 2020, and one of the three 2025 targets, it made little progress in achieving international targets for other STBBI. Importantly, all provinces achieved this objective except for Saskatchewan and Manitoba.

STBBI incidence in Canada

Over the period covered by this evaluation, there was a general decline in newly reported cases of viral STBBI, although rates have increased between 2020 and 2021 for viral hepatitis and between 2020 and 2022 for HIV. Infection rates of syphilis and congenital syphilis significantly increased during the same period. The COVID-19 pandemic had an impact on demand for and access to STBBI service. While there was an observed reduction in infection rates for some STBBI between 2019 and 2020 before the pandemic, the rates of STBBI have increased in 2021 and 2022.[6]

- **HIV:** Overall, the rate of newly reported cases of HIV declined from 6.2 cases in 2018 to 4.7 per 100,000 in 2022 but, there was an 11.3 % increase between 2020 and 2021 and an increase of 24.9% between 2021 and 2022.[7] [8]
- **Hepatitis B**: In 2021, infection rates of hepatitis B (acute, chronic, and unspecified) were 9.2 cases per 100,000 people. Acute Hepatitis B rates are low and have remained steady over the last decade. Chronic hepatitis B infection rates have also been relatively low, but there was an 8% increase in rates between 2020 to 2021[9] The relatively low rates are attributable to routine immunization programs in all provinces and territories (PTs) since the early 1990s, and to improved blood screening and infection prevention and control practices in health care settings. [10]
- **Hepatitis C:** The total reported rates of hepatitis C markedly declined by 42.8% between 2018 and 2020, and increased slightly by 1.5% from 2020 to 2021.[11] Encouragingly, an estimated 74,500 people with chronic hepatitis C have been treated since the introduction of direct-acting antivirals in 2014.[12]

It should be noted that the three viral STBBIs saw a marked decline in new cases between 2019 and 2020. This may have been due in part to decreased demand for, and access to, STBBI testing services as a result of the COVID-19 pandemic. [6] Still, for these viral STBBIs, rates were beginning to drop in 2018, suggesting some progress on incidence reduction.

Meanwhile, rates of infection with the bacterial sexually transmitted infections (STI) have risen steadily over the last decade.

- **Chlamydia:** Chlamydia is the most commonly reported STI in Canada. Infection rates steadily increased from 303 to 371 cases per 100,000 population between 2012 and 2019. [13] [14]
- **Gonorrhea:** Gonorrhea is the second most commonly reported bacterial STI in Canada. The reported rate of gonorrhea infections is on the rise and has increased considerably from 37.5 to 84.2 per 100,000 people between 2012 and 2019. [14] Antimicrobial-Resistant gonorrhea (AMR) in Neisseria gonorrhoea is a public health concern and a growing threat to effective treatment.
- **Infectious syphilis:** Rates of infectious syphilis have increased substantially in the past decade from 9.7 to 38.8 per 100,000 people between 2012 and 2021. The United States, United Kingdom, and Australia have similarly reported rising rates of infectious syphilis.[15] The majority of syphilis cases occur among males, particularly among gay and bisexual-identifying men and other men who have sex with men (gbMSM), although there has been recent increased incidence among heterosexual populations and women.
- **Congenital syphilis:** Cases of syphilis among infants infected through transmission from a pregnant parent have increased substantially from only 7 confirmed cases in 2017 to 96 in 2021.[16]

Similar to viral STBBIs, newly reported cases of bacterial STIs dropped between 2019 and 2020, a reduction likely attributable to pandemic-related impacts on testing and diagnoses. However, for gonorrhea and syphilis, rates have been increasing again since 2020. Table 2 presents a summary of recent trends in infection rates, modes of transmission, and key populations affected.

Table 2: Overview of STBBI in Canada – Trends in reported cases pre-pandemic and post onset of pandemic

STBBI	Trend	Modes of transmission	Key populations affected
HIV	2017 to 2019 ↓ 14% 2019 to 2021 ↓30%	Sexual and blood borne	Gay, bisexual and other men who have sex with men (gbMSM), heterosexual males and females, people who inject drugs (PWID), Indigenous peoples, and Black populations
Hepatitis B	2017 to 2019 ↓ 4% 2019 to 2021 ↓31%	Sexual and blood borne	Migrants from hepatitis B-endemic countries, gbMSM, PWID, Indigenous Peoples, people who have experienced unstable housing and homelessness, people who have been incarcerated, and people who have engaged in sex work
Hepatitis C	2017 to 2019 ↓ 6% 2019 to 2021 ↓35%	Blood borne	PWID, people who are incarcerated, Indigenous peoples, immigrants from countries with high HCV prevalence, and gbMSM

Chlamydia	2017 to 2019 ↓ 7% 2019 to 2021 ↓26%	Sexual	Most commonly reported among young people under 30, rates are consistently higher among females than males. However, rates have risen at a faster pace for males, narrowing this gap.
Gonorrhea	2017 to 2019 ↑ 19% 2019 to 2021 ↓ 11%	Sexual	Females and males (rates increased more in males over the same period)
Infectious Syphilis	2017 to 2019 ↑ 120% 2019 to 2021 ↑ **21**%	Sexual and blood borne	Males (particularly gbMSM), reproductive-aged females
Congenital Syphilis	2017 to 2019 ↑ 519% 2019 to 2021 ↑ **114**%	Mother-to-child	Increasing rates of infectious syphilis in females have led to increase rates of congenital syphilis.

Source: Canadian Notifiable Disease Surveillance System, Public Health Agency of Canada. Retrieved October 2023.

Progress on international commitments

Canada's endorsement of the WHO's global targets to address HIV, viral hepatitis, and STI requires that it works towards the elimination of STBBI as a health concern by 2030. See Table 3 and Appendix 3 for global targets. PHAC's STBBI activities, along with that of PTs and partners, have resulted in Canada meeting some but not all international STBBI targets. This section summarizes national estimates of progress on these targets.

The global 90-90-90 target required that 90% of all people living with HIV know their status, 90% of those diagnosed receive antiretroviral treatment, and 90% of those on treatment achieve viral suppression by the end of 2020. The corresponding 95-95-95 target is expected to be achieved in 2025.[2] These targets represent progress in the HIV care continuum, a public health model that outlines the steps or stages people with HIV go through from initial diagnosis to achieving and maintaining viral suppression.

Table 3 summarizes Canada's international commitments on STBBI and the progress made so far.

Table 3: Canada's Progress on STBBI International Commitments

STBBI	Global Target	Notes on Canada's Progress
HIV	90-90-90 target by 2020 95-95-95 by 2025	Canada achieved 90-87-95 in 2020. Canada has also reached one of the targets for 2025, given that 95% of people on treatment in Canada have a suppressed viral load.
Chronic hepatitis B	30% reduction in new cases from 2015 to 2020 and 90% reduction	From 2015 to 2019, the number of newly reported chronic hepatitis B cases from all reporting PTs

	from 2015 to 2030	decreased by 7.5%. This decline in case count, while encouraging, is insufficient to achieve Canada's 90% decrease goal by 2030.
Hepatitis C	30% reduction in new cases from 2015 to 2020 and 90% reduction from 2015 to 2030	The case count increased by 5.0% from 2015 to 2019.
Bacterial STI (chlamydia, gonorrhea, and infectious syphilis)	90% reduction in rates by 2030	Incidence rates for the three STIs have increased steadily over the last decade.

As Table 3 shows, Canada met two of three of the 90-90-90 targets by the end of 2020. Of the 62,790 people living with HIV, an estimated 90% were diagnosed, and of these, 87% were estimated to be on treatment, with an estimated 95% of persons on treatment having achieved viral suppression. [17] Canada's 90-90-90 estimates lie within the range reported by other high-income countries such as the USA, France, Germany, Australia, the Netherlands, and Finland. [18] However, this result means that an estimated 16,690 people in Canada were not engaged or represented in the HIV care continuum in Canada. Individuals outside the care continuum present an important opportunity for intervention, both to assure better individual health outcomes and to reduce HIV transmission rates. [17] PHAC staff noted that there are challenges in reaching the remaining 5 to 10% because these represent populations being underserved and/or experiencing marginalization. Reaching these populations may require a different approach than what has been employed so far.

Canada has endorsed the WHO global targets of a 90% reduction in rates of viral hepatitis, chlamydia, gonorrhea, and syphilis, as well as a threshold of 50 or fewer cases of congenital syphilis per 100,000 live births by 2030. [4] As shown above, Canada has made some progress in reducing viral hepatitis, but rates have not diminished sufficiently to confidently meet 2030 global targets. Similarly, Canada is not currently on track to achieve the global targets for bacterial STI.

Access to testing and treatment services

Testing and diagnosis are important steps to linking people to prevention and treatment services. While PT governments and some other federal organizations like Indigenous Services Canada and Correctional Service Canada are directly responsible for the provision of health services, including STBBI testing and treatment services, PHAC has a role in creating an enabling environment for service improvements. Over the evaluation period, PHAC made substantial investments in activities aimed at expanding access to STBBI testing and treatment services. Through the Innovative Diagnostics Program — a $9.4 million investment by the GoC — scientists from PHAC's National Microbiology Laboratory (NML) assessed, validated, and implemented new laboratory methods and technologies for diagnosing and detecting STBBI.[19] These innovations in community-based and decentralized testing technology like Dried Blood Spot, HIV Self-Test, and Point of Care Testing (POCT) help mitigate some of the barriers that make testing inaccessible to some key populations. These factors include lack of access to healthcare providers, the need to travel to centralized testing facilities, long wait times to receive results, and concerns about confidentiality and stigma.[20]

In response to the COVID-19 pandemic, the NMLB partnered with Indigenous Services Canada and PT public health laboratory systems to establish a testing network that provided more than three million COVID tests to 400 Northern, Remote, and Isolated (NRI) communities, and multiple engagement activities were held to advance this work. In 2022, the initiative received $9.9 million in funding support from the Government of Canada to expand the testing network to include options for community-based STBBI testing for Indigenous communities. [20] The initiative supports the training of community organizations, verification and ongoing quality oversight for the use of decentralized testing techniques. [19] It also supports organizations and communities to purchase diagnostic test for screening, confirmatory testing and ongoing monitoring in the community.

In 2022-23, PHAC invested $8 million in funding to support the procurement and distribution of HIV Self-test kits (HIVST) through community-based organizations across Canada. A key component of PHAC's community-based HIVST initiative is to reach key populations considered hard to reach. Funding is provided to support organizations that have existing relationships with these populations and to expand the offer of testing through existing street and mobile outreach services, and other community-based events. By the end of 2022-23, almost 80,000 test kits had been distributed to over 200 community-based locations in Canada.

PHAC's efforts to expand access to STBBI services are not limited to testing and diagnosis. Through its Grants and Contributions program, the Agency provided supports funding to projects aimed at promoting linkages and enhancing client referrals to testing, prevention, treatment, care, and support services.

The NML is planning further tests and validations of rapid POCT for other STBBIs, including chlamydia and gonorrhea, while PHAC continues to work with communities and other federal partners to expand testing options through pilot trials of POCT for HIV, hepatitis C, and syphilis, as well as ongoing dried blood spot (DBS) testing and training.

While PHAC has worked with partners to ensure the deployment of culturally appropriate and decentralized testing services, it has yet to be determined to what extent these innovations result in improved diagnosis rates, access to treatment, and other benefits, including uptake of future and more frequent testing, reduction of stigma- related to STI and STI testing, and increased opportunities to provide prevention services to help people continue to have negative test results. This is largely because it is too early to report on the impact of these novel testing methods in Canada. However, there is evidence for the effectiveness of HIVST. A WHO review of 32 randomized controlled trials showed that, compared to standard facility-based testing, HIV self-testing increased uptake rates, had comparable proportions of people diagnosed and linked to care, did not lead to increased sexual risk behaviour among men who have sex with men, and was acceptable and feasible across populations and settings.[21]

Stigma and discrimination

Stigma and discrimination increase vulnerability to STBBI by creating additional barriers to accessing testing and treatment services. [22] PHAC conducted a series of surveys that asked key populations questions about access to STBBI-related services during COVID-19. Survey results showed that fear of stigma, discrimination, and violence continue to be barriers to care. As highlighted above, PHAC's work with community organizations and other partners to create an enabling environment for the deployment of culturally appropriate testing methods helps to address some of the privacy and confidentiality concerns associated with accessing testing in healthcare facilities.

PHAC has funded anti-stigma activities and projects led by community-based organizations, provided research and evidence to support policy changes, and raised awareness about the negative impacts of stigma. Through its Grants and Contributions programs, the HIV and Hepatitis C Community Action Fund (CAF) and the Harm Reduction Fund (HRF), PHAC provides funding to HIV and Hepatitis C Community Action Fund (CAF) and the Harm Reduction Fund (HRF) community-based projects that seek to address stigma through campaigns, education of healthcare professionals, and promotion of non-stigmatizing language and attitudes. For example, in 2019-20 alone, 13 CAF projects focused on such activities. Some projects provided education to health professionals. In particular, project reports noted that healthcare professionals demonstrated improved attitudes and behaviours regarding STBBI and people living with them. In 2018, CAF announced funding for a campaign to reduce stigma, and to address its effects on HIV prevention, testing, and access to treatment among gay, bisexual and two-spirit men, and transgender people. The campaign that started in 2019 also promoted pre-exposure prophylaxis, the "Undetectable=Untransmittable" (U=U) campaign, and addressed stigmatizing attitudes and language related to HIV. In the same year, PHAC facilitated a knowledge-sharing workshop with 15 organizations funded under the HIV and Hepatitis C Community Action Fund (CAF). The workshop led to the creation of the HIV Stigma Community of Practice with over 175 members from 59 community-based organizations. At the AIDS 2022 conference, Canada endorsed the global declaration on U=U that commits Canada to integrating U=U messaging in the GoC's programs, policies, and communications materials.

The Agency also provided evidence to inform federal legislation and policies aimed at reducing stigma. In both 2018 and 2023, PHAC reviewed the latest evidence on HIV transmission and contributed to the Department of Justice directive that persons living with HIV should not be criminally prosecuted for failing to disclose their HIV status prior to engaging in sexual activity if they have maintained a suppressed viral load. Furthermore, PHAC funded research that contributed to Health Canada's approval, in June 2019, of a new guideline reducing the blood-donation deferral period for gbMSM from one year to three months.

PHAC also raised awareness about the negative impacts of stigma and discrimination through several public awareness activities and implemented guidance updates on use of stigmatizing language and promotion of culturally safe and stigma-free healthcare environments. To gain more insight into stigma and discrimination associated with STBBI, PHAC funds the Canadian HIV Stigma Index, a tool developed by and for people living with HIV to measure and gather evidence on the impacts of stigma and discrimination on people living with HIV. The Index aims to better understand the social determinants of HIV stigma, map out HIV stigma across lifespans and contexts, and mobilize actionable solutions to support people living with HIV.[23]

Despite these efforts and those of other partners, STBBI-related stigma remains an issue of concern. In a 2020 national forum on STBBI testing and linkages to care organized by PHAC and its partners, participants identified that Canada needs to "continue to address stigma within communities and health systems". A 2021 survey of African, Caribbean, and Black people in Canada on the impact of COVID-19 on access to STBBI-related services found that fear of, and concern about, experienced stigma and discrimination continue to be barriers to services.[6]

Impact of the COVID-19 pandemic

As previously shown, the COVID-19 pandemic had an impact on delivery of STBBI services by health providers. The pandemic limited access to and availability of services due to reduced hours of operations, public health restrictions, and staff re-assignments to the pandemic response.

A 2021 survey of service providers in Canada found that 66% of respondents reported a decrease in demand for their services and almost half (44%) of respondents experienced a reduced ability to deliver services.[24] Two other surveys from the same year focusing on people who use drugs and African, Caribbean, and Black communities confirmed there were barriers to accessing STBBI-related services during the pandemic.[6]

The evaluation found examples of adaptations and innovations made during the pandemic that helped ensure continued access to services. For instance, PHAC teams leveraged virtual solutions for continuing their work and most notably frontline service providers of CAF and HRF projects implemented service delivery innovations to ensure continued service provision. Examples of innovations include telephone or virtual services, mobile outreach, self-serve pick-up or drop-off of tests, and delivery of harm reduction supplies. A survey of service providers found that a large majority (81%) of respondents provided remote services from the beginning of the pandemic. Of these, 20% created new remote services for the first time and 46% created new remote services in addition to current existing services. However, external stakeholders acknowledged that while these innovations helped address some accessibility challenges faced by populations living in remote locations, other key populations, including African, Caribbean and Black communities, faced barriers in accessing virtual services due to inequitable access to technology.

Delays in establishing a National STBBI Indicators and Targets Framework: The pandemic negatively affected service delivery and performance reporting by community organizations as many experienced many of the same challenges faced by health care organizations, including operational restrictions and re-assignment of staff to the pandemic response. PHAC, PTs, and community organizations all had to pivot to respond to COVID-19 and the concurrent opioid overdose crisis, resulting in decreased focus on STBBI.

Previous program evaluations identified questions from external stakeholders on the integrated approach and how it would help achieve disease-specific targets and address stigma and discrimination. This resulted in a recommendation to simplify indicators in the STBBI performance measurement strategy, so as to facilitate performance measurement and reporting.

In 2019, PHAC initiated work on the development of a set of national STBBI indicators, including setting up a task group composed of federal, provincial, territorial, and Indigenous partners. However, this work was suspended for a time during the COVID-19 pandemic, as the Agency and its partners had limited capacity for non-COVID engagements. It was reinitiated in fall 2022, and the first out of three phases of indicator development is set to be completed in April 2024. As a result of this delay, there are gaps in performance measurement of the integrated approach encapsulated in the Pan-Canadian Framework and GoC Action Plan over the evaluation period. The pan-Canadian STBBI Indicators and Targets are intended to be a practical, appropriate, and relevant way to track progress on addressing STBBI nationally.

Opportunities for improvement

To ensure progress toward achievement of global STBBI targets, PHAC has worked with partners to expand access to testing and treatment, funded initiatives to address stigma and discrimination, and supported efforts to address rising STBBI infection rates but there are opportunities for improvement.

Rising incidence of STBBI

PHAC has worked extensively with partners to deploy decentralized testing techniques technologies like HIV self-testing to communities

around the country. There are opportunities, however, to strengthen links to treatment and care after testing and diagnosis. A review of GetaKit, Canada's first HIV self-test mail-out project found that, while the project increased testing uptake among communities with disproportionate HIV rates, it also increased testing rates among persons with a minimal risk of HIV infection. The authors called for a comprehensive strategy that includes clear criteria for decentralized testing and that integrates testing with affordable access to prevention and treatment services for key populations.[25] While the administration of health services is a provincial-territorial jurisdiction, PHAC plays a role in the development and implementation of guidelines on STBBI screening, testing, and treatment.

In addition, NMLB staff noted that the general lack of effective vaccines for STBBI, other than hepatitis B and some human papilloma virus types, bacterial STI have partly contributed to difficulties in curbing the increase in bacterial STI rates over the past decade. Communicable diseases have been effectively controlled by vaccines, with numerous success stories including smallpox, diphtheria, tetanus, polio, and COVID-19. Most recently, Health Canada authorized the vaccine Imvamune® for people at high risk of exposure to mpox, including gbMSM.[26]

The above are some of the opportunities for action to address rising infection rates. Within its mandate and as lead federal partner in the implementation of the Pan-Canadian Framework for Action on STBBI, PHAC can work with partners and stakeholders to identify such opportunities for action and work to prevent and control STBBI in Canada.

Ongoing stigma and discrimination

PHAC has funded and supported several activities aimed at addressing STBBI-related stigma and discrimination, but it remains a significant issue. PHAC can work with stakeholders, and key populations, including people with lived and living experience (PWLLE) of an STBBI, to develop comprehensive strategies for addressing stigma.

Internal interviewees noted that stigma and discrimination is more common among populations and communities with marginalized identities and requires a whole-of-government approach to address the political, social, economic, and judicial structures that perpetuate stigma and discrimination. Participants in the Action Plan renewal roundtables recommend that PHAC continue to fund and support education campaigns to further address stigma, with consideration paid to the disparate impact of stigma and discrimination on particular groups like older adults and persons with disabilities.

Other suggestions made by stakeholders for addressing stigma include:

- **Initiatives to address stigma and discrimination should be led by people with lived and living experience (PWLLE) of STBBI**: PWLLE are better able to advocate for themselves. PHAC is co-developing messages with communities to ensure that communications and messaging are tailored to the needs of key populations. See the section on *Dissemination and uptake of knowledge products*.
- **Address the political, economic, governance, and judicial structures that perpetuate stigma and discrimination**: This requires a whole-of -government approach and is not solely PHAC's responsibility. The federal government has an opportunity to lead these important conversations about stigma and discrimination associated with STBBI.
- **Bringing the provinces and territories (PTs) along**: The PTs have important roles to play in addressing stigma and discrimination. It is crucial that the federal effort is linked to actionable policies in the PTs. It is also important to have

conversations about affordable housing, minimum income, and the social drivers that make people vulnerable to STBBI.

- **Comprehensive education and awareness campaigns**: During the roundtable discussions, participants, including representatives from community-based organizations, suggested that the Framework's effectiveness in reducing stigma and discrimination could be improved by implementing comprehensive public education, awareness campaigns, and regular exposure.

Assessment of program progress on the three goals in the Framework was constrained by certain gaps and limitations in the Program's current performance measurement framework. Based on performance data analysis and discussions with program staff, many current program performance indicators and targets reflect long-term outcomes on incidence reduction. These indicators do not capture the wide range of activities directly delivered by the STBBI program, such as its Grants and Contributions community-based funding programs, guideline development, and anti-stigma campaigns. Additionally, several indicators were delayed or under review during the evaluation period, so no results were available. See Table 10 in Appendix 2. However, the Centre for Communicable Diseases and Infection Control (CCDIC) is in the process of finalizing a new logic model and performance measurement framework with more indicators for short-term and medium-term outcomes.

Effectiveness of the integrated approach to STBBI

PHAC formalized the integrated approach described in the Pan-Canadian Framework for Action on STBBI during the evaluation period. This approach is based on integrating prevention and control in recognition that STBBI occur disproportionately across common key populations, share common risk factors, transmission behaviours, and common transmission routes. Other features of the Integrated Framework are a shared responsibility among partners and stakeholders acting within their respective roles, a focus on key populations disproportionately affected by STBBI, and the social determinants of health which influence vulnerability to, and resilience against STBBI. [3] The guiding principles of this approach and the Framework for Action on STBBI include among others, meaningful engagement with PWLLE, moving towards truth reconciliation, a multisectoral approach, and health equity. The integrated approach is recognized as effective and appropriate by internal and external stakeholders.

Integration of Grants and Contributions program

PHAC funds two Grants and Contributions programs: the HIV and Hepatitis C Community Action Fund (CAF) and the Harm Reduction Fund (HRF). These funds support community-based projects aimed at preventing and increasing access to care and treatment for all STBBI, not just HIV and Hepatitis C. From 2018-19, PHAC invested between $26 and $28M annually under the CAF and $7M annually under the HRF to support community-based organizations.

Funding recipients developed and implemented a range of interventions aimed at specific key populations and target audiences, and reported on their ability to support the achievement of one or more of the following short and medium-term outcomes:

- increased knowledge of effective HIV, hepatitis C, and related STBBI intervention prevention evidence;
- increased awareness and knowledge of risk factors;
- strengthened capacity (skills, competencies, and abilities) of key populations and audiences to prevent infection and improve health outcomes;
- improved access to health, social, and support services;
- increased uptake of personal behaviours that prevent the transmission of HIV, hepatitis C, or related STBBIs; and
- enhanced application of knowledge in community-based interventions.

HRF and CAF recipients implemented a range of interventions which were constrained by COVID-19 related public health restrictions, but despite the challenges faced, the majority pivoted to remote programming, meaningfully engaged people with lived experience, and were largely successful in achieving their desired outcomes. See Table 4 for an overview of self-assessed performance, and Table 12 for details on key populations and target audiences represented in projects reviewed. It is noted that project recipients were asked to self-assess whether they met, partially met or did not meet their expected outcomes. The information about projects successes should be interpreted within that context. As well, reports for the 2017-2022 funding cycle provided information on activities and outcomes over the period. While 2017 is outside of the years examined in this report, it was not possible to exclude activities and outcomes achieved for that year from the analysis. Overall, according to the self-assessment, only a few recipients failed to achieve some or all of their expected outcomes.

Table 4: Summary of CAF and HRF outcomes achieved based on self-reporting by funding recipients

HRF Results	CAF Results
• About three quarter of outcomes were met. • About a quarter of outcomes were partially met. • Few outcomes were not met.	• About two third of outcomes were met. • About a third of outcomes were partially met. • Few outcomes were not met.

HRF recipients implemented a range of interventions, the majority of which were peer-led. Some interventions and their outcomes are briefly described below:

- One project aimed at training peer support educators in harm reduction interventions for people living with STBBI and their families failed to achieve any of its objectives. It faced ongoing challenges in the recruitment and retention of staff and was affected by COVID-19 public health restrictions. None of the 1,000 planned harm reduction interventions were carried out in the homes of 150 individuals living with HIV or hepatitis C and their relatives. It also was unable to implement two training sessions and a workshop aimed at building the skills of peer workers. With the Agency's approval, the project was terminated in 2021.
- A project aimed at reducing harms among people who use substances (PWUS) was self-assessed as partially successful in achieving its objectives and planned outcomes. It hired two street workers and a peer support worker to intervene with populations experiencing vulnerability by distributing safe consumption materials and conducting prevention interventions. The project conducted 10, 807 on-site interventions and reached 1, 642 PWUS. The self-assessed project report noted they only partially met objectives because the COVID-19 pandemic prevented a comprehensive assessment of the project, but verbal feedback obtained from people who inject drugs (PWID) suggested reduced sharing of consumption equipment and adoption of safer sexual practices.
- A peer-led project that included activities aimed at improving testing and treatment among participants surpassed its objectives and outcomes. It exceeded its target of reaching 250 PWUS by reaching 385 people. As well, 63% of respondents from the final project survey reported having increased knowledge and awareness of STBBI risk factors, which surpassed the 50% target. Fifty six percent of respondents from a behaviour change survey reported reduced risk-taking behaviour which is slightly above the target of 50%. Notably, 100% of the 73 participants who reported being in need of testing received it during the project's two-year duration. Of those tested, 12 individuals who wished to be supported during treatment received assistance with the coordination of transportation as well as with appointments booking and reminders.

Similar to HRF projects, the recipient's final reports suggest that CAF projects were generally successful in achieving desired outcomes. Outcomes of two of those projects are outlined below as an example:

- A peer-led project aimed at promoting health, increasing STBBI prevention knowledge, and reducing sexual risk behaviour among gbMSM, trans, and non-binary youth supported 55 youth-led projects involving over 100 youth, held 6 in-person and 2 online Leadership Summits with over 280 youth participants, and over 275 youth participated in

the HIV 101 workshops. In 2017, the project reached 60 trans and non-binary youth. It strengthened their capacity to prevent infection and improve health outcomes by 300% but this decreased to 11% in 2022. The pandemic had a significant negative impact on youth participation. The project met its objectives in pre-pandemic years but failed to do so from 2021 to 2022.

- A project with the goal of increasing uptake of safer sex practices and access to STBBI testing among youth aged 13-29 from ethnocultural communities and gbMSM through the provision of education, met and exceeded its objectives. Among youth from ethnocultural communities, 77% reported an increased intention to get tested for HIV/STIs, with a target of 75%, and 90% reported increased capacity to make informed decisions about sex and relationships, with a target of 75%. Among young gbMSM, 98% reported increased capacity to make informed decisions about sex and relationships, with a target of 75%, and 91% of youth volunteers (peers) reported an enhanced ability to educate their peers, with a target of 75%.

Most projects achieved and, in some cases, surpassed their desired targets. Their success was due in part to the following factors:

- **Meaningful engagement of people with lived and living experience**: The vast majority of HRF projects and many CAF projects employed people with lived and living experience (PWLLE) as peer workers and volunteers in the project activity implementation, including outreach, workshops, referrals, and accompaniments to health, social, and support services, among others. Learning opportunities and other interventions offered by PWLLE ensure the provision of information that is both accessible and relevant to participants.
- **Prioritization of low-barrier interventions**: Barriers faced by participants and peer workers influence their participation, attendance, and work quality. Culturally competent peer-based learning opportunities conducted in accessible spaces were well attended and resulted in knowledge gains, particularly when honorariums, food, and transportation support were provided to meet basic needs and offset the complex access barriers faced by the target population. Mobile harm reduction units with expanded hours of service were successful in engaging a broader population of PWUS and those who face barriers to accessing traditional harm reduction spaces due to location, hours of operation, and stigma.
- **Provision of holistic supports:** A comprehensive approach to intervention design and delivery was recognized as a best practice by many projects. Holistic supports such as harm reduction interventions integrated into other social and health services were identified as crucial to promoting intervention uptake and to enhancing participants' overall support and care network. Such interventions not only address the needs of participants, but participants increased their likelihood to use them again. An HRF project that significantly surpassed its targets for reach and achieved its desired outcomes reported that the integrated model of harm reduction service delivery was offered alongside other supports like legal advocacy, counselling, benefits application help, and accompaniment to medical appointments. This helped build trust among participants and encouraged program attendance.
- **Pivot to virtual service delivery:** Intervention design changes were made necessary by public health measures during the COVID-19 pandemic, but these expanded the reach of many projects to those who previously could not participate in person due to privacy and confidentiality

concerns or were located in rural and hard-to-reach areas. For instance, one project aimed at educating 75 primary care providers to offer stigma-free health care services to key populations met and exceeded its objectives by training 500 providers who reportedly demonstrated enhanced application of knowledge in testing, treating, and managing STBBI. It achieved this through the use of virtual classrooms that allowed for the delivery of additional educational activities and helped expand the reach of the project to include pharmacists and other allied health professions and community services.

Impact of the COVID-19 pandemic

In spite of positive factors in project implementation, HRF and CAF projects still experienced significant challenges, many of which were due to the COVID-19 pandemic and the concurrent rapid increase in opioid-related harms, namely:

Service Delivery Challenges: The shift to virtual and remote programming expanded project reach and enhanced accessibility for some key populations, but also had a negative impact as many in-person activities like outreach, workshops, referrals, accompaniments to health, social, and support services, and others were suspended by some projects. Other service delivery challenges included the following:

- privacy and confidentiality concerns that deterred some participants from sharing sensitive information online;
- a preference for in-person gatherings among service users;
- fear of contracting COVID-19 where in-person activities were held;
- difficulties engaging participants during virtual training;
- screen fatigue; and
- pandemic fatigue.

These all made it difficult to recruit and retain participants for online programming.

Access to technology: The shift to virtual programming introduced a new barrier to participation, access to technology. The success or failure of virtual interventions is largely dependent on participants' level of access to technology. Individuals who lacked personal communication devices could not participate or turn to public libraries and community computer hubs, because they were closed. Challenges accessing technology particularly affected stakeholders and service users in rural and remote areas with limited internet and exacerbated existing participation disparities among this population.

Engagement of key actors

PHAC engaged extensively with key actors in the development and delivery of its STBBI activities during the evaluation period. During the 2020-21 and 2022-23 solicitations for the CAF and HRF, and for the GoC STBBI Action Plan Renewal, PHAC engaged with Indigenous partners, community-based organizations, and PWLLE to understand their needs. Additionally, projects proposals under both the HRF and CAF were reviewed by committees comprised of PWLLE, Indigenous peoples, researchers, community-based organizations, and front-line staff. Stakeholders generally expressed appreciation for PHAC's willingness to seek external feedback on program activities.

Other examples of PHAC's engagement with key actors include:

- The Public Health Network's Communicable Disease and Infectious Disease Steering Committee, where PHAC engages PTs to oversee the development of cohesive and responsive national approaches to communicable and infectious disease prevention and control.
- Within the Public Health Network, PHAC cochairs the FPT Syphilis Response Steering Committee, a federal-provincial-

territorial table that identifies challenges faced by jurisdictions and develops recommendations for action on national and PT policies, as well as guidelines and best practices for reducing the incidence and prevalence of infectious and congenital syphilis.

- Strategic engagements with stakeholders, including key populations and PWLLE of an STBBI, through a variety of mechanisms. For example, in the lead up to various awareness days and events, such as World AIDS Day, and international AIDS conferences, PHAC hosted roundtable meetings with stakeholders, PHAC senior management, and the Ministers of Health and of Mental Health and Addictions.
- PHAC also engages with organizations through bilateral meetings and meetings with representatives of regional organizations and community alliances. Ad hoc meetings with selected STBBI organizations are also used as a form of engagement, such as in response to correspondence or requests for a meeting with the Minister of Health, to seek advice on the impacts of an emerging virus on the STBBI community, among others. PHAC also hosts regular calls with a broad group of non-government and community-based organizations to share best practices and discuss key priorities.

Opportunities for improvement

Stakeholders see the integrated approach to STBBI formalized by PHAC as effective, but there are opportunities to further improve this approach, and the performance measurement and evaluation of funding recipients, as well as increase engagement with stakeholders, better delineate roles and responsibilities among federal partners, and identify distinct and collaborative actions across sectors.

Grants and Contributions program: The design and implementation changes executed by G&Cs funding recipients because of pandemic-related public health measures contributed to the achievement of their short- and medium-term outcomes, but the projects experienced significant challenges that must be addressed in the future.

- **Service Delivery**: Many, but not all, implementation challenges reported by CAF and HRF projects were a consequence of the shift to virtual service delivery. If projects maintain this model, as some have recommended, PHAC should work with recipients to explore creative ways of ensuring successful execution of virtual and in-person implementation and evaluation activities.
    - A recommendation for the establishment, by PHAC, of Communities of Practice (CoP) for both HRF and CAF was considered, but PHAC program staff have indicated that a CoP may not be feasible due to the large number of funding recipients and the kinds of projects they implement. However, starting in February 2024, PHAC is launching collaborative dialogue sessions that bring together HRF and CAF recipients who operate in the same area or with similar target populations. These sessions are intended to provide participants with opportunities to connect, seek support for common challenges, and share resources and lessons learned.
- **Performance measurement and evaluation challenges**: As programming has moved online, a vast number of projects across Canada have reported significant challenges with data collection and, consequently performance measurement and evaluation. Many projects could not adapt their data collection tools and processes as successfully as they had with program implementation for a few reasons, including:

- **Low survey response rates**: Difficulties conducting pre- and post-intervention surveys, owing to the transient nature of some program participants like persons experiencing homelessness, persons who are or who have been incarcerated, houselessness, incarceration (currently or previously), and those who engage with sex work and/or substance use.
- **Language and literacy barriers**: Many participants, such as new immigrants and individuals from ethnocultural communities, have limited or no written language comprehension in either French or English. In addition, some participants, particularly those with cognitive difficulties, struggle to use data collection tools and this negatively affected evaluation and performance measurement. In cases where projects offered support to participants, some chose not to ask for it because of the associated stigma, or because they did not want to compromise the confidentiality of their responses.
- **Involvement of external evaluators**: As a requirement of their funding, projects with durations of three or more years and with a funding value of $125,000 annually or greater are required to engage an external evaluator, not recipient staff, to conduct evaluations to avoid a conflict of interest. However, a few projects alluded to using recipient staff as evaluators, and in one case, it resulted in staff having limited capacity for project activities including data collection and performance measurement. Furthermore, while some projects successfully engaged external evaluators and firms, others had challenges, including limited adherence to the evaluation plan owing to inconsistent involvement of the evaluator, an external evaluator with whom the project lost contact, resulting in the loss of collected data, and lack of performance measurement instruments due to the absence of qualified external evaluators.
- **Use of proxy data to estimate project reach and impact**: Owing to the transitory nature of some participants, it was difficult for many projects to estimate the number of unique participants served or the impact of project activities. The 'drop-in' format of some activities did not allow for longitudinal assessment of changes in knowledge and behavior with the same individuals over time. To address these limitations, many projects opted to use proxy data like self-reported intentions to test in the next year as a proxy for testing rates, or the number of total site intervention, portal visits, or page views as indicators of project reach. In other cases where it became clear that participants were leaving to avoid completing evaluation surveys and answering sensitive questions, one project suspended some performance measurement activities and used proxy data instead.
- **Collation and dissemination of findings from evaluation reports of recipients:** Most CAF and HRF recipients submitted their evaluation reports by the end of 2022, yet the findings from these reports had not been analyzed, synthesized, nor disseminated at the time of this evaluation.

Opportunities to improve engagement

While external stakeholders are generally appreciative of PHAC's engagement efforts in recent years, they highlight some gaps in the types of stakeholders involved. Participants at the Action Plan renewal roundtables and external interviewees would like to see

more diverse community voices at consultation tables, such as frontline staff working in harm reduction, healthcare professionals, community representatives from remote organizations, people from African, Caribbean, and Black communities, First Nations, Inuit and Métis, as well as people with lived or living experience of STBBI from disproportionately affected populations.

There is evidence that program staff recognize this need and are taking steps to ensure broad and meaningful engagement. Program documents acknowledge the need to diversify stakeholder engagement to avoid fatigue and incorporate different community voices. They also describe program staff's intention to enhance engagement with members of key populations, PTs, and researchers in enhancing surveillance and in developing and disseminating guidelines for health professionals.

Delineation of Roles and Responsibilities: While external stakeholders have acknowledged the effectiveness of the integrated approach and PHAC's role in its implementation, they have also noted a limitation with the absence of clearly defined roles and responsibilities of all partners involved in the implementation of the STBBI framework of action. Furthermore, external stakeholders describe PHAC's current approach to STBBI as lacking cohesion. They recommend that the integrated approach extend beyond integration of diseases to a multisectoral approach with clear explanations of distinct and collaborative actions across related sectors.

The publication of the Government of Canada's Five-Year Action Plan in 2019 was intended to address these gaps and lay out the federal government's path to achieving the strategic goals under the Pan-Canadian Framework. However, many participants of the 2023 STBBI Action Plan renewal roundtables have expressed concerns about the lack of explicit measurable outcomes and targets in the Government's Action Plan. The published STBBI Action Plan should address stakeholder concerns by providing an annex outlining each government department's key actions and corresponding performance indicators.

Funding Alignment: Internal interviewees, as well as community and other external stakeholders participating in the Action Plan renewal roundtables felt that funding could be better aligned with disease burden in key populations. Although the CAF and HRF have expanded to include other STBBI besides HIV and Hepatitis C, internal interviewees describe federal efforts as still focused on HIV, with gaps in activities for the other STBBI. Participants in the roundtables highlighted the importance of tailored interventions to address unique aspects of each infection within the integrated approach. Stakeholders also suggest there are opportunities to better link funding with STBBI epidemiology and break silos between organizations working with similar populations or on the same issue. PHAC's funding review process used epidemiological data to ensure that funding allocation would align with disease burden and key populations disproportionately affected by STBBI.

Dissemination and uptake of knowledge products

PHAC effectively uses partnerships and various communication mechanisms to disseminate knowledge to target audiences, including Canadians, health professionals, and key populations. External partners recommend co-creation of knowledge products with key populations to ensure their relevance to target audiences. Stakeholders see CATIE, which is the national STBBI knowledge broker, as credible. However, there are concerns that a single knowledge broker may lack the expertise and knowledge of local

contexts required to develop resources relevant to every region in Canada.

Knowledge sharing facilitated by partnerships

The 2018 evaluation of PHAC's Viral Hepatitis and Sexually Transmitted Infection Activities found that awareness and uptake of STBBI knowledge products was high among health practitioners to reach the undiagnosed; however, the program could explore partnerships and mechanisms to facilitate dissemination to, and uptake of knowledge products by all intended target audiences.

Subsequently, the CCDIC published an STBBI knowledge mobilization strategy in July 2020 that outlined activities to improve capacity, engagement, impact, and performance measurement for knowledge mobilization. A review shows that several actions in the first phase (2020 – 21) have been implemented.

CCDIC and the NML work with numerous partners to develop and disseminate its knowledge products to a variety of target audiences, including key populations. Knowledge-sharing partners include other federal departments, community-based organizations, and academia. PHAC also works with knowledge brokers and organizations that serve to link knowledge produced with the end users or knowledge audiences. Through the CAF, PHAC funds CATIE to serve as the national STBBI knowledge broker, in addition to five other CAF projects with a primary focus on knowledge translation. The National Collaborating Centre for Infectious Disease receives PHAC funding outside of the STBBI program and is also a knowledge brokering partner that develops resources and conducts knowledge exchange between researchers, policy makers, and practitioners.

Some notable examples of PHAC's knowledge dissemination activities with partners are described below:

- For the 2019 World AIDS Day, PHAC shared STBBI resources with national and regional organizations to promote on social media. This led to a 30% increase in views on the STBBI website landing page and a 238% increase in social media post views from the previous year.
- PHAC developed and distributed information products on congenital syphilis in response to the recent rise in cases among women and infants. To reach this target population, PHAC worked with 431 community organizations that provide prenatal services to distribute 20,000 fact sheets to women across Canada on preventing congenital syphilis.
- PHAC consulted with other federal departments, including Women and Gender Equality Canada and the LGBTQ Secretariat, and with key populations during the development of knowledge products to ensure they used appropriate and non-stigmatizing language.

Communication mechanisms for knowledge sharing

The Canada.ca website is the main communication platform for sharing knowledge products like surveillance reports and data, surveillance infographics, and diagnosis and treatment guidelines for public health professionals. In addition to using its website, PHAC promoted STBBI information to the public through posts and campaigns on social media. These include for key commemorative awareness days such as World AIDS Day, World Hepatitis Day and Sexual and Reproductive Health Awareness Week social media campaign, the 2019 anti-stigma "Undetectable=Untransmittable" social media campaign, and the March 2023 social media campaign to raise awareness on congenital syphilis. PHAC timed and targeted these campaigns strategically by holding the anti-stigma campaign at Pride events across Canada and targeting congenital syphilis awareness campaigns in the most affected jurisdictions. Furthermore, PHAC also facilitated in-person and virtual events, and published journal articles and press releases to share information.

Previous evaluations identified opportunities to improve knowledge dissemination of public health guidelines and to improve the usefulness of the mobile application for health professionals. Following a needs assessment for PTs and health professionals, the program made numerous updates to the content, layout, and searchability of its STBBI guidelines on Canada.ca, including improved compatibility with mobile phone browsers for the online version. In addition, a new version of the mobile app was launched in November 2022. The mobile app allows for offline use, increasing its accessibility in regions with limited internet access. To further increase reach of its updated guidelines, PHAC also funded the University of British Columbia to develop a free online STBBI screening learning module using guideline content, launched in late 2021. Examples of updated guides include:

- The Canadian Guidelines on Sexually Transmitted Infections, which now uses culturally appropriate and gender inclusive language and has been downloaded over 26,000 times;
- The Canadian Immunization Guide, which was updated to ensure the hepatitis B and HPV information was current and accessible for health professionals.[27]

PHAC employed communication mechanisms and tools tailored to target key populations. For example, during the 2022 mpox outbreaks in Canada which largely affected the gbMSM population, PHAC disseminated public health messaging on relevant social media apps like Grindr and rapidly connected with key community leaders to provide timely investments to community-based organizations who provided non stigmatizing, culturally appropriate messages in a rapid manner to their communities.

Impact of knowledge sharing

The evaluation found some evidence of the impact of partnerships and communication mechanisms on supporting knowledge dissemination and uptake, although data is limited.

A CATIE evaluation report from 2021 described that organization's continued success as the national STBBI knowledge broker in improving knowledge for people working in the STBBI-related fields. The report, based on a national survey, found that nearly all respondents (96%) reported increased knowledge of HIV and hepatitis C thanks to CATIE's services and resources. Almost all respondents (94%) had applied this knowledge in their work and the same proportion (94%) used the information from CATIE to educate others.[28] These findings are consistent with findings from an earlier survey in 2017.[29]

In 2019-20, PHAC hosted STBBI-related webinars that reached over 1,500 public health professionals across Canada. Nearly all respondents (95%) reported that the webinar content was useful for their work.

While there is evidence of increased awareness of, and access to knowledge products, the degree to which they led to behavioural changes among target audiences is not clear. PHAC previously engaged a consulting firm to assess the Agency's awareness campaigns which concluded that the impact of such campaigns is difficult to estimate. The challenges associated with estimating the impact of social marketing on behavioural change is not unique to PHAC or its STBBI activities. A systematic review of the effectiveness of health prevention initiatives that use social marketing techniques to drive behavioural change among the public found positive effects overall, but the effect size was not statistically significant.[30]

A review of program performance data shows that CCDIC has met some of its knowledge mobilization targets, but the program can do more to improve promotion of knowledge uptake. Refer to Table 10 in Appendix 2 for program performance indicators and data. For most fiscal years examined, CCDIC did not meet its targets for increasing knowledge among stakeholders. Moreover, these results were based on post-webinar surveys with low response rates, were affected by COVID-19, and covered a range of infectious disease

topics, not solely STBBI. This suggests that performance results do not accurately reflect a true picture. However, CCDIC is in the process of updating its performance measurement framework to better capture results for its activities, including STBBI-related knowledge sharing.

Opportunities for improvement

The evaluation identified opportunities for PHAC to improve the development and dissemination of its STBBI knowledge products according to best practices used previously by PHAC or by other jurisdictions.

Both internal interviewees and external roundtable participants suggest that PHAC could improve its messaging to key populations by co-creating messages directly with members of those communities, not just staff who work with them. The evaluation found examples of PHAC doing so in the past. In 2019, PHAC consulted with people living with HIV about communications on STBBI and their advice was incorporated in messaging for the U=U campaign. Interviewees suggest that PHAC could pursue more community consultations to facilitate the dissemination and uptake of information.

An internal assessment found mixed views on the effectiveness of the current model of having a single, national knowledge broker for STBBI. This role, currently occupied by CATIE, was seen as credible, adaptable, and capable of building strong partnerships. However, internal and external stakeholders expressed concern that the knowledge broker role should not be held by a single organization, which may not have sufficient expertise and knowledge of local contexts to develop resources relevant to every region of the country. PHAC staff note that CATIE forms partnerships with local organizations when it develops knowledge products.

Use of data to prioritize and plan activities

PHAC uses data from surveillance and research to inform decision-making and to address their needs of key populations. There are limitations to STBBI surveillance, like other public health surveillance systems, including data gaps on socioeconomic and sociodemographic variables, inflexibility of database infrastructures, and lengthy timelines for data acquisition, processing, analysis, and publication. The pandemic delayed some surveillance system improvements initiated by PHAC and affected the timeliness and accuracy of provincial data submission due to resources being diverted to the COVID-19 response. While the program is working with various PHAC partners to improve the responsiveness of its surveillance systems, there continue to be opportunities to improve linkages between the STBBI surveillance programs and other sections to enhance the use of data for decision making. Moreover, surveillance data shows that Canada still has significant progress to make in fulfilling global commitments to reduce STIs by 90% by 2030. Addressing data gaps will help ensure that progress on domestic and international commitments can be measured and monitored across key populations. As important as it is for Canada to meet its global targets, it is also important for targets to be achieved across key populations facing rising STBBI rates.

Use of data and research in decision making

IDVPB and NMLB collect data to track, monitor, and estimate trends in STBBI rates through several national surveillance systems, with data received from provincial and territorial public health authorities and laboratories. These include routine surveillance systems, which include the number of newly reported infections over a given period, along with basic demographic data. PHAC also conducts enhanced surveillance for certain infections to collect more detailed risk factors and key population-specific data.

Internal documents and interviewees describe many ways in which PHAC has used surveillance and epidemiological data to inform decision making and activity implementation. For example:

- PHAC reviewed epidemiologic characteristics of regional outbreaks to inform their response to requests for support from provinces and territories experiencing syphilis and mpox outbreaks.
- PHAC staff referred to epidemiological data on disproportionately affected populations, such as Indigenous and gbMSM populations, to inform funding allocations for recent funding cycles of the CAF and HRF.
- CCDIC used surveillance data to report on Canada's progress in achieving international commitments and goals.

PHAC has also conducted research to inform policies and programs to improve access to STBBI testing and to address stigma and discrimination against people living with STBBI. As mentioned earlier, for example, in order to provide public health evidence to the Department of Justice (DOJ) in relation to the overuse of the Criminal Code in cases of HIV non-disclosure, in 2018 PHAC published a systematic review to calculate the risk of sexual transmission of HIV. PHAC contributed evidence to inform the 2018 Department of Justice directive on prosecution of HIV non-disclosure as one example. In 2022, PHAC commissioned the Canadian Agency for Drugs and Technologies in Health (CADTH) to conduct a rapid review of evidence published since then. PHAC then undertook a meta-analysis of relevant studies from these two reviews, and provided updated advice to DOJ.

Additionally, PHAC initiated improvements in its collection and analysis of data to inform decision-making. For instance, PHAC

improved some of its surveillance data collection tools to better detect existing and new cases of STBBI, following consultations with PT stakeholders.

Building research knowledge and capacity

PHAC has helped expand research knowledge and capacity around STBBI. PHAC led or funded multiple research activities focused on key populations. For example:

- Between 2017 to 2019, PHAC, in partnership with regional health authorities, conducted 14 biobehavioural surveillance surveys across Canada as part of the Tracks program. These surveys focused on people who inject drugs, Indigenous Peoples at risk for HIV and hepatitis C, gbMSM, and people from HIV-endemic countries.
- PHAC conducted four national surveys to better understand the impact of the COVID-19 pandemic on access to and delivery of STBBI and harm reduction services for key populations, namely for African, Caribbean, and Black people in Canada, First Nations, Inuit, and Métis peoples, and people who use drugs or alcohol.[7]

PHAC has also supported internal research to build STBBI knowledge and inform program activities. For example:

- The NML advanced research on the validation and implementation of novel diagnostic tools, including point-of-care testing and dried blood spot specimen collection.
- Between 2018 and 2022, the NMLB produced 94 research publications relating to the prevention and prophylaxis of STBBI, with 1400 citations as of January 18, 2024.
- In 2019-20, PHAC improved the methodology for STBBI guideline development. This new methodology reflects best practices to ensure PHAC's guidance is credible and incorporates the latest scientific evidence.

Impact of the COVID-19 pandemic

The evaluation found that COVID-19 was a major impediment to obtaining timely and accurate data. PTs were delayed in submitting surveillance data due to resources being diverted to the COVID-19 response. At the same time, health facilities closures and fear of infection among the public meant fewer people were seeking testing at the onset of the pandemic, leading to lower reported STBBI rates that likely underestimate actual infection rates. Furthermore, some surveillance system improvement activities were put on pause during the pandemic, although documents show that PHAC made some progress on these improvements. Enhanced surveillance on infectious and congenital syphilis began in 2019 in response to rising rates and outbreaks declared in multiple regions of the country. In 2022, the HIV/AIDS surveillance system initiated a program review and renewal with PT and community partners. In addition, work that started pre-pandemic on updating case definitions for congenital syphilis and hepatitis C was renewed once the COVID-19 response became less preoccupying for those involved.

Despite these challenges, the pandemic also spurred improvements in PHAC's data collection and use. Following a review of pandemic preparations and activities, PHAC implemented the Detect, Understand and Act (DUA) Action Plan. The DUA Action Plan seeks to address challenges with current surveillance systems in terms of risk assessments, knowledge translation, and evaluations. The DUA Action Plan has already led to improvements through the creation of the Risk Assessment and Response Unit in CCDIC's STBBI surveillance division. This new program oversees the development and implementation of processes to detect and report on emerging infectious disease threats including, but not limited to STBBI. Interviews with internal partners described how this new unit has been helpful in enabling data sharing with other divisions to facilitate investigation of emerging STBBI outbreaks.

Opportunities for improvement

Strengthening national STBBI surveillance systems

The evaluation noted several opportunities to improve and strengthen national STBBI surveillance systems. These issues are consistent with those noted in other national public health surveillance systems.

Despite recent efforts to improve data disaggregation in some surveillance programs, document reviews, interviewees, and roundtable participants have all noted gaps in demographic and risk factor variables in surveillance data. Routine surveillance lacks sufficient data on key populations, including data on race and ethnicity, and Indigenous identity, as well as data on social determinants and risk factors. While some systems do incorporate additional demographic variables, data on these variables is not always available. One internal surveillance system technical review found that completion rates for race and ethnicity and risk factors and exposure variables are generally low. This lack of disaggregated data limits PHAC's ability to identify health impacts for disproportionately affected populations and to tailor activities and approaches to areas of greatest need.

Program staff have pointed out that this challenge will need to be addressed through FPT collaboration as, PHAC depends on the willingness and ability of PT and local health authorities to collect and share data. In some cases, concerns about privacy and data sovereignty limit the willingness of PTs to share data on key populations. Still, internal interviewees say there are opportunities for PHAC to support PT data collection. Most notably, some specifically recommended that PHAC could expand its deployment of field surveillance officers to more PTs. The STBBI Field Surveillance Program, originally established in 2000 to enhance national surveillance of STBBI, embeds federal epidemiologists within provincial public health authorities to support surveillance data collection, analysis, and sharing.[31] Field surveillance officers, given their longstanding relationship with provincial counterparts, have also contributed to other public health needs, such as providing epidemiological capacity for COVID-19 response and providing input on indicator development for the Pan-Canadian STBBI Framework for Action. Presently, the program covers only six out of the thirteen PTs.

In addition to issues with data gaps, both documents and interviewees highlight how lack of data standardization limits the usefulness of surveillance data. As there is no data sharing agreement outlining how data should be reported, PTs have different practices for reporting on data variables. This makes it time consuming for PHAC staff to process and analyze data to compare trends across jurisdictions and create an accurate and timely picture of STBBI epidemiology in Canada. A 2020 internal audit of PHAC's surveillance activities found that the lack of a formal data-sharing agreement with PTs continues to be a risk for PHAC in being able to deliver on its public health surveillance commitments.[32] In particular, the audit flagged challenges with the timely development of technical annexes under the Multilateral Information Sharing Agreement, which would have provided standards for the content and format of data shared by PT partners. While PHAC interviewees confirm that the Data, Surveillance and Foresight Branch is leading this work to establish a multilateral data sharing agreement with PTs, discussions are still ongoing.

Another area for improvement is the need for database modernization of the Canadian Notifiable Disease Surveillance System. According to documents and internal interviewees, the current database infrastructure lacks flexibility to meet user needs and does not easily facilitate data sharing and access. Current databases cannot be easily adapted to incorporate new variables or reporting changes from PTs and program staff, and often require IT support to perform routine functions.

Finally, documents, roundtable reports, and interviews all point to challenges with the timeliness of surveillance data. As described earlier, there is typically a two-year lag between data collection by PTs and publication of a national surveillance report. Stakeholders believe this limits the program's ability to be responsive to changing epidemiology. Internal interviewees suggest that this delay is partly due to the lack of standardization of regional data. However, it should be noted that a review of comparable countries like the US, UK, and Australia show that these countries experience similar reporting lags.[33] [34] [35]

In addition to data standardization, internal documents describe opportunities to simplify analysis processes through automation and streamline the approval of products could improve timeliness.

Other opportunities to enhance use of data

Program documents and internal interviews describe opportunities to improve linkages between PHAC surveillance programs and other STBBI program sections. The recent use of surveillance data to inform Grants and Contributions funding decisions is an encouraging start. There are further opportunities to use surveillance data to inform other activities, such as the development of guidelines for health professionals and for laboratory.

Additionally, there may be a need to improve PHAC's capacity for more sophisticated analysis of surveillance data. Presently, PHAC's STBBI surveillance programs provide useful trend and descriptive analysis of national STBBI epidemiology. However, PHAC could improve its ability to synthesize more knowledge and data sources and provide more advanced analyses. Doing so could improve PHAC's ability to identify public threats, better inform programs and policies, and facilitate reporting on international commitments.

CONCLUSION AND RECOMMENDATIONS

Progress on the strategic goals and international commitments

Together with its partners, and despite the challenges caused by the COVID-19 pandemic, PHAC has made efforts to advance the goals of the Pan-Canadian Framework for Action and the Government of Canada's (GoC) Action Plan, although more work is needed in the following areas:

- **Reducing the incidence of STBBI in Canada:** While rates of viral hepatitis and HIV decreased pre-pandemic, there has been an increase since 2020. Moreover, rates of bacterial STI continue to rise. Importantly, these trends are not uniform; some key populations and provinces like Saskatchewan and Manitoba experience disproportionately higher rates or have seen smaller rate reductions. Stigma, barriers to testing, and challenges in affecting population-level behaviours are some reasons for the limited reductions in new cases.
- **Improving access to testing, treatment, and ongoing care and support:** PHAC has helped increase access to testing through the validation and implementation of innovative diagnostic tools, particularly for systemically marginalized communities. PHAC also funded community-based organizations to increase access to testing and facilitate linkages to STBBI-related services.
- **Reducing stigma and discrimination that create vulnerabilities to STBBI:** PHAC funded the development of anti-stigma resources and public awareness campaigns, conducted research to support anti-stigma policies, and supported global anti-stigma campaigns. There is limited data on the impact of these activities, though evidence suggests that stigma and discrimination continue to be a barrier to testing and treatment.

PHAC has also helped Canada meet a few of its international commitments. Canada achieved two out of the three 2020 targets and has already achieved one out of the three 2025 targets for HIV. However, the country still has significant progress to make to achieve the 2030 targets for other STBBI.

Effectiveness of the integrated approach to STBBI

Over the past five years, PHAC has formalized the integrated approach to addressing the prevention and control of STBBI. This approach is generally seen as effective and appropriate by internal and external stakeholders. In particular, the integration of grants and contributions has allowed PHAC to fund community-based organizations which meaningfully engage with key populations and strive to holistically address their needs.

However, funded organizations faced significant implementation and performance measurement challenges, owing to the shift to remote programming necessitated by pandemic restrictions. PHAC can help address these challenges by providing recipients with opportunities to meet and share best practices as well as collating, synthesizing, and disseminating evaluation report findings in a timely manner.

PHAC engaged with a wide range of key actors to develop and deliver activities in an integrated way. While external stakeholders are generally appreciative of PHAC's engagement efforts in recent years, they have also highlighted opportunities to better align funding with burden of disease, to diversify voices consulted, and to clearly delineate roles and responsibilities among federal partners for the implementation of the GoC Action Plan on STBBI.

Dissemination and uptake of knowledge products

PHAC has effectively used partnerships and a variety of communication mechanisms to disseminate information to target audiences, including the public, health professionals, and key populations. PHAC has worked with various partners to disseminate its STBBI knowledge products, resulting in increased views and downloads and in increased knowledge among frontline staff. The Canada.ca website is the main communication platform for sharing knowledge products, though PHAC also uses social media, hosts events, and funds knowledge brokers like CATIE. External stakeholders recommend more community consultations, particularly with people with lived experience from key populations, to develop more relevant knowledge products.

Use of data to prioritize and plan activities

PHAC has used data from surveillance and research to inform decision making and implementation of its STBBI programs and policies. PHAC has also supported research to address the needs of key populations and conducted internal research to address knowledge gaps. STBBI surveillance experiences limitations similar to other national surveillance systems, including certain data gaps, a database infrastructure that lacks flexibility to meet user needs, and long data analysis and publication timelines. However, new initiatives like the Detect, Understand and Act Action Plan and ongoing work through the Data, Surveillance and Foresight Branch to develop multilateral data sharing agreements can help address these challenges for the STBBI program.

Impact of COVID-19

The COVID-19 pandemic delayed or paused many of PHAC's STBBI activities, notably the multilateral work to develop a national STBBI Indicators Framework. Despite these delays, PHAC was able to pivot to virtual activities and expand testing access for hard-to-reach communities.

Recommendations

Analysis of the program's performance measurement data and discussions with program staff revealed limitations and gaps in the current program performance measurement framework. The current strategy focuses on long-term disease incidence indicators that do not adequately reflect the range of activities directly delivered by the STBBI program. In addition, several indicators were delayed or under review during the evaluation period, so no results were available. However, the Centre for Communicable Diseases and Infections Control (CCDIC) is in the process of finalizing a new logic model and performance measurement strategy that captures the breadth of PHAC's activities. Given that the program is addressing limitations to its current performance measurement framework, this area does not merit further recommendations for improvement.

In addition to findings related to performance measurement, the evaluation findings discussed in this report led to the development of the following recommendations.

Recommendation #1
Enhance existing efforts, within PHAC's mandate, to respond to rates of STBBI in Canada.

Rates of infectious syphilis and other bacterial STIs have increased in the past decade, especially since 2017. Moreover, surveillance data shows that Canada still has significant progress to make to fulfill global commitments to reduce STIs by 90% by 2030. Internal and external sources describe federal STBBI efforts as being mainly focused on HIV and hepatitis, with less of a focus on the bacterial STIs despite continued high infection rates.

Recommendation #2
Identify opportunities to build on existing action, within PHAC's mandate, to address STBBI-related stigma among key populations.

One of the three strategic goals under the Pan-Canadian Framework for Action on STBBI and the GoC Five-Year Action Plan on STBBI is to "Reduce stigma and discrimination that create vulnerabilities to STBBI." Over the past five years examined, PHAC has worked with community organizations and other partners to understand and address stigma faced by people living with STBBI. Nonetheless, recent research and interviews with public health professionals show that stigma and discrimination continue to be a barrier to accessing STBBI-related testing and treatment. Moving forward, PHAC aims to develop anti-stigma initiatives that acknowledge key populations' distinct lived and living experiences of discrimination, which differ based on overlapping and intersecting social identities (e.g., gender, age, race, ethnicity, Indigenous identity, sexual orientation, disability, geographic location) and broader systems of power.

Recommendation #3
Refine performance evaluation of grants and contributions recipients and collate, analyze, and disseminate evaluation findings in a timely fashion.

Recipients of PHAC grants and contributions are required to write and submit performance measurement and evaluation reports on their impact. These reports are submitted by funding recipients from across the country and are a rich source of information on project challenges, best practices, recommendations, and lessons learned. While there have been delays in receiving the final evaluation reports from the 2017-2022 funding cycle, at the time of conducting the evaluation, the Program had not completed the analysis and synthesis of results as well as the dissemination of findings. This suggests that improvements could be made to ensure that evaluation findings are summarized and shared with recipients in a timely manner.

A previously noted, recipients are required to self-assess their performance at meeting expected outcomes. PHAC could work with recipients to refine reporting requirements in order to collect more objective metrics. As well, it could ensure timely analysis and dissemination of evaluation findings to improve planning and decision-making by funding recipients and the Program.

Recommendation #4
Refine performance measurement approach for the renewed federal STBBI Action Plan in collaboration with partners.

The COVID-19 pandemic delayed the development of a national STBBI Indicators and Targets Framework which affected the performance measurement of the integrated approach, encapsulated in the Pan-Canadian Framework and the 2019-2024 STBBI Action Plan, over the evaluation period.

PHAC continues to work on finalizing the pan-Canadian STBBI Indicators and Targets Framework that will inform progress towards specific STBBI-related measures. PHAC also led the development of the renewed Action Plan, and with federal partners and identified indicators for each of the 49 federal actions outlined. Reporting on these action specific indicators will improve performance measurement and accountability under the renewed STBBI Action Plan (2024-2030).

Recommendation #5
Identify opportunities to strengthen engagement of key populations across program activities.

External partners and stakeholders are appreciative of PHAC's engagement efforts in recent years. Still, they would like to see more diverse representative, community voices being consulted, such as frontline staff working in harm reduction, healthcare professionals, community representatives at rural organizations, people from African, Caribbean, and Black communities, and people with lived experience of STBBI from disproportionately affected populations. They would also like to see PHAC continue working directly with key populations in developing STBBI knowledge products.

MANAGEMENT RESPONSE AND ACTION PLAN

Evaluation of the Public Health Agency of Canada's Sexually Transmitted Blood Borne Infections Activities

2018-19 to 2022-23

Recommendation 1 Enhance existing efforts, within PHAC's mandate, to respond to rates of STBBI in Canada.				
Management Response: Agreed, within CCDIC's mandate.				
Action Plan/Action Item(s)	Deliverable(s)	Expected Completion Date	Accountability	Resources
CCDIC will identify opportunities to enhance existing efforts to respond to STBBIs in Canada.	Renewed Government of Canada STBBI Action Plan 2024-2030 which outlines the Public Health Agency of Canada's STBBI related commitments and plans to accelerate action over the next 6 years. Revised congenital syphilis and hepatitis C case definitions. Invest in community-led and community-informed initiatives to address ongoing syphilis outbreaks in Canada. Review of national HIV surveillance system to identify areas of improvements in collaboration with PT surveillance partners.	March 31, 2024 April 30, 2024 March 31, 2025 March 31, 2025	DG – CCDIC VP – IDPVB	Existing budget and FTEs.

Recommendation 2 Identify opportunities to build on existing action, within PHAC's mandate, to address STBBI-related stigma among key populations.				
Management response: Agreed, within CCDIC's mandate.				
Action Plan/Action Item(s)	Deliverable(s)	Expected Completion Date	Accountability	Resources
CCDIC will continue to identify initiatives that contribute to reducing stigma among key populations, as stated in the Government of Canada's STBBI Action Plan 2024-2030.	Multi-pronged U=U knowledge mobilization and marketing campaign focussing on HIV-related stigma among key populations. Progress report on Government of Canada STBBI Action Plan 2024-2030 priority: Address STBBI-related stigma and discrimination that will be used to inform further action, including by partners and stakeholders. Publication of data on experiences of stigma among gay, bisexual, and other men who have sex with men and people who inject drugs that will be used to inform further action, including by partners and stakeholders.	March 31, 2024 March 31, 2025 March 31, 2025	DG – CCDIC VP – IDPVB	Existing budget and FTEs.

Recommendation 3 Refine performance evaluation of grants and contributions recipients and compile, analyze, and disseminate evaluation findings in a timely fashion.				
Management Response: Agreed, within CCDIC's mandate.				
Action Plan/Action Item(s)	Deliverable(s)	Expected Completion Date	Accountability	Resources
CCDIC, in consultation with stakeholders, will work to improve reporting tools used by funded organizations to collect and report on data on set targets and impacts in a timely fashion.	Streamlined reporting processes for funding recipients, developed and implemented through an internal performance measurement and evaluation review committee. Products (reports, infographics) summarizing data from CAF/HRF projects (from 2017-2022 and 2022-2027) against standardized performance measurement indicators generated from required reporting tools.	March 31, 2025 March 31, 2025	DG – CCDIC VP – IDPVB	Existing budget and FTEs.

Recommendation 4 Refine performance measurement approach for the renewed federal STBBI Action Plan in collaboration with partners.				
Management response: Agreed, within CCDIC's mandate.				
Action Plan/Action Item(s)	Deliverable(s)	Expected Completion Date	Accountability	Resources
CCDIC will enhance the performance measurement approach for the renewed STBBI Action Plan in collaboration with partners.	Publication of federal progress indicators for each action included in the Government of Canada's STBBI Action Plan 2024-2030.	March 31, 2024	DG – CCDIC VP – IDPVB	Existing budget and FTEs.

Recommendation 5 Identify opportunities to strengthen engagement of key populations across program activities.				
Management response: Agreed, within CCDIC's mandate.				
Action Plan/Action Item(s)	Deliverable(s)	Expected Completion Date	Accountability	Resources
CCDIC will engage with key populations and people who serve these populations, to strengthen engagement and inform program activities.	Consult stakeholders and partners on the development of a comprehensive stakeholder engagement approach across PHAC program activities. Comprehensive stakeholder engagement plan including population specific strategies (e.g., Indigenous-specific strategy).	November 30, 2024. March 31, 2025	DG – CCDIC VP – IDPVB	Existing budget and FTEs.

APPENDICES

Appendix 1 - Evaluation Description

Data Collection and Analysis Methods

The scope of the evaluation included PHAC activities related to STBBI from April 2018 to March 2023. The evaluation was designed to address PHAC's STBBI-related activities and outcomes and provide guidance to the program. The evaluation team collected and analyzed data using various sources and methods that were triangulated to improve the reliability and credibility of evaluation findings and conclusions.

Document and File Review

Program staff from the Centre for Communicable Diseases and Infections (CCDIC) of the Infectious Diseases and Vaccines Programs Branch IDVPB) and from the National Microbiology Laboratory Branch (NMLB) provided documents for evaluators for review. Evaluators also sought out additional program documents that were published online. In total, the evaluation team screened 291 documents and reviewed 120 of them in detail for findings organized by evaluation question. In addition, analysts reviewed 90 evaluation reports submitted grants and contributions recipients that received funding from the CAF/HRF 2017-2022 cycle.

Interviews

Interviews were conducted with 25 key informants between June and July 2023. Interviewees included 20 internal stakeholders to PHAC and 5 external stakeholders, including non-governmental organizations, provincial representatives, experts, and academics. Thematic analysis of interview notes was conducted in NVivo 12. External views were supplemented with feedback from the Action Plan Renewal roundtables.

Academic and Grey Literature Review

A focused review of academic and grey literature was conducted to inform evaluation findings.

Performance Measurement Data Review

CCDIC-IDVPB and NMLB provided performance measurement data from 2018 to 2021-22, which the evaluation team analyzed to identify key trends and assess outcomes. Performance data for 2022-23 was not published at the time of this evaluation report.

Financial Data Review

Financial data was provided by CCDIC-IDVPB and NMLB and verified by the Chief Financial Officer and Corporate Management Branch. The evaluation team reviewed financial data on salary, operations and maintenance, and grants and Contributions funding for planned and actual program expenditures for the evaluation period.

Action Plan Renewal Roundtables

From March 2023, to September 2023, CCDIC convened STBBI partner stakeholders from around the country to participate in a series of engagements aimed at eliciting views on the renewal of the Action Plan until 2030. Data was collected through a series of surveys, interviews, and roundtable meetings. OAE reviewed and analyzed data from engagements that took place between March and May 2023, which included input from over 400 people across 39 events and 378 survey responses, totaling 1,260 contributions.

As with all evaluations, there are limitations and considerations that may affect the validity and reliability of findings. Table 5 below outlines the limitations encountered during this evaluation, and the mitigation strategies that were put in place

Table 5: Limitations and Mitigation Strategies

Limitation	Impact	Mitigation Strategy
Limited primary data was collected from direct beneficiaries of funded activities.	Interviews with direct beneficiaries, particularly from key populations, of funded community-based activities were not conducted as part of primary data collection. More interviews with these stakeholders could have provided greater insight into the performance of funded activities.	• The evaluation reviewed program documents and feedback from the Action Plan Renewal roundtable, which included 11 population-specific roundtables involving 202 participants across Canada.
The COVID-19 pandemic delayed the development of a national STBBI Indicators and Targets Framework making it challenging to assess the program's performance.	The National STBBI Indicators and Targets are intended to support the measurement and reporting of progress against the strategic goals of the Framework for Action on STBBI and international commitments.	• PHAC produced some reports on international commitments. These reports and other sources of data reported by PHAC were used to review and report progress. • Triangulation methods were used to corroborate literature and document reviews.
Performance data was incomplete, with limited indicators specific to STBBI.	Analysis was limited by lags between data collection and release. Data analysis on some key indicators over time was not possible, making it challenging to evaluate progress in the last five years.	• Analysis was done with available data. • Data on infection rates was pulled from Notifiable Diseases Online, an interactive tool that uses data from the Canadian Notifiable Disease Surveillance System. • Triangulation methods were used to corroborate key findings, including literature and document reviews, and publicly available data.
Information on effectiveness in achieving outcomes is based on a self-assessment conducted by funding recipients. In light of this, the results in Table 4 and Table	Qualitative data obtained from recipient evaluation reports suggest that many were successful in achieving their objectives.	• Triangulation methods were used to strengthen the outcome data with qualitative data, where possible.

11 are to be interpreted with caution.		

Evaluation Lenses and Government Priorities

The Government of Canada is committed to ensuring public policies address systemic inequities and disparities in Canadian society by applying an intersectional perspective to its decision making. To this effect, the evaluation applied several lenses and frameworks to assessing the effectiveness of PHAC's STBBI activities, including those of the Centre for Communicable Diseases and Infections (CCDIC) of the Infectious Diseases and Vaccines Programs Branch IDVPB) and the National Microbiology Laboratory Branch (NMLB). These were:

Sex and Gender Based Analysis Plus (SGBA Plus) Lens: The evaluation acknowledged how certain populations are disproportionately affected by STBBI and considered how structural and social determinants of health can impact exposure, risk of infection and resilience to infection. The evaluation considered areas where PHAC has been successful or could improve activities to support the needs of key populations disproportionately affected by STBBI.

United Nations Sustainable Development Goals (SDGs): The evaluation considered the extent to which PHAC's activities and grants and contributions programs to the Pan-Canadian Sexually Transmitted and Blood-borne Infections Framework for Action supports SDG 3 to "ensure healthy lives and promote well-being for all at all ages." Specifically, the evaluation looked at STBBI-related progress within Target 3.3,"By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases." and 3.7, "By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes."[36]

Quality of Life (QoL) Framework for Canada: The evaluation examined the extent to which the PHAC's STBBI activities addressed the Health domain in the QoL Framework, with an emphasis on health status and access to care. The evaluation also considered indicators under the domains of Prosperity and Good Governance, including discrimination and unfair treatment.

Truth and Reconciliation Commission (TRC) Calls to Action: The evaluation acknowledged that Indigenous populations are disproportionately affected by STBBI due to stigma and discrimination, social and systemic factors that have placed Indigenous populations at greater risk of exposure to STBBI, and to unequal access to testing and care. The evaluation considered the TRC Calls to Action around the role of the federal government in addressing health inequities within health systems for Indigenous Peoples in Canada. The evaluation considered PHAC's activities in relation to the GoC Action Plan on STBBIs and looked at key federal priorities which include a commitment to move toward truth and reconciliation with First Nations, Inuit, and Métis Peoples, dismantling stigma and discrimination, and community innovation.[5]

Evaluation Governance

To conduct this evaluation, OAE worked closely with two program representatives, one each from the two branches involved in the STBBI program: IDVPB and NMLB. The scope for this evaluation was shared secretarially with the Performance Measurement and Evaluation Committee (PMEC) at the Public Health Agency in May 2023. OAE presented the preliminary findings to PMEC in October 2023 and the final evaluation report in March 2024 before seeking final approval from the President of PHAC.

Appendix 2 - PHAC's STBBI Activities and Expenditures

Program Description

PHAC's STBBI activities are administered by two branches: the Infectious Diseases and Vaccines Program Branch (IDVPB) and National Microbiology Laboratory Branch (NMLB). IDVPB is the lead on activities related to prevention and control of STBBI, while the NMLB is the lead on STBBI laboratory and testing services.

Within the IDVPB, the Programs has three functional program areas that administer STBBI-related activities as Table 6 shows.

Table 6: IDVPB STBBI divisions and their responsibilities

Division	Program	Responsibilities
Sexually Transmitted Blood-Borne Infections Surveillance Division	STBBI Surveillance, Estimates and Guidance	• Collects and reports on STBBI surveillance data shared by provincial and territorial (PT) public health authorities and other data providers through: ▪ Routine surveillance: HIV, hepatitis B and C, chlamydia, gonorrhea, syphilis ▪ Enhanced surveillance: gonorrhea and infectious & congenital syphilis; biobehavioural among key populations (gay- and bisexual-identifying men, and other men who have sex with men - gbMSM, people who inject drugs - PWID) ▪ Estimates (incidence, prevalence, care continuum for HIV and hepatitis B and C) and reporting on Canada's progress towards global elimination targets (e.g., HIV 95-95-95 targets) • Supports development of evidence-informed guidance for STI screening, diagnosis and treatment, and for HIV and Hepatitis C resources for health care providers, public health professionals, and PT programs.
	Blood Safety and Surveillance	• Manages the Blood Safety Surveillance system to support monitoring of: ▪ Transfusion-transmitted injury ▪ Transfusion errors and adverse events ▪ Cells, tissue, and organ transplantation • Supports PTs to carry out related surveillance activities using the following surveillance systems: ▪ Transfusion Error Surveillance System ▪ Transfusion Transmitted Injuries Surveillance System ▪ Cells, Tissues and Organs Surveillance System
	Risk Assessment and Response	• Supports signal detection and risk assessment and response across CCDIC (STBBI, tuberculosis, and health care-associated infections)

		• Reports ongoing and emerging infectious disease threats related to STBBI, tuberculosis, healthcare-associated infections in Canada and abroad, and develops the CCDIC's capacity to respond to emerging infectious disease threats.
	Programs and Partnership Division	• Coordinates the overall implementation of the Goc Action Plan, including PHAC's activities, convenes PHAC/AP partners, conducts STBBI policy work, and coordinates stakeholder engagement ▪ Convened stakeholders to support the renewal of the Government of Canada STBBI Action Plan • Reports on progress on the five-year action plan on STBBI • Responsible for the development of a Pan-Canadian Indicators Framework on STBBI • Development of STBBI policy agenda • Administration of the CAF & HRF

National Microbiology Laboratory Branch (NMLB): The NMLB informs public health action through the delivery of innovative approaches to advance laboratory science, testing services, laboratory-based surveillance, outbreak response, and national public health laboratory leadership. The NMLB also offers specialized testing and development of innovative tools as a national service, or to be transferred to provincial, territorial, and municipal governments to improve public health laboratory response capacity across Canada.

The key sections and units within NMLB that undertake activities that contribute to STBBI products and services are described in Table 7.

Table 7: NMLB STBBI divisions, sections, and responsibilities

Division	Section	Responsibilities
Bacterial Pathogens, AMR, and Wastewater	Syphilis Diagnostics and Vaccine Preventable Bacterial Diseases Section	• Provides laboratory leadership in the detection, identification, prevention, and control of syphilis through reference and diagnostic services. • Undertakes surveillance and research activities for monitoring disease incidences and patterns, detecting vaccine-resistant mutant strains, monitoring and detecting changes in molecular epidemiology and participating in disease outbreak response. • Provides reference diagnostics, conducts national surveillance, monitors antimicrobial susceptibilities, and provides outbreak support and research activities on bacterial sexually transmitted infections, including Neisseria gonorrhoeae, Mycoplasma, and Ureaplasma. • Monitoring the incidence of diseases to provide early warning of changing disease patterns (e.g., emerging antimicrobial resistance, possible outbreaks, increases in disease prevalence).
	Streptococcus	• Provides reference diagnostics, conducts national surveillance, monitors antimicrobial susceptibilities, and provides outbreak support and research activities on streptococcus.

Sexually Transmitted Blood-Borne Infections	Blood borne Pathogens and Hepatitis Section	• Provides serological and molecular reference services for infections caused by the hepatitis A, B, C, D, and E viruses, human herpesvirus-8, as well as consultation on diagnostics issues, outbreak, and trace-back investigations, and develops tests for the detection of other potential blood-borne pathogens. • Conducts research to address questions on hepatitis infections, including prevention, in Canada and throughout the world, with a focus on countries where viral hepatitis is endemic, in order to mitigate the risk of importation into Canada through immigration.
	National Laboratory for HIV Genetics Section	• Performs specialized genetic analysis of HIV to support HIV drug resistance surveillance. • Develops new methodologies to enhance the resolution of standard epidemiology in tracking HIV transmission. • Explores new molecular and serological methods for determining the recency of infection. • Develops standardized, low-cost HIV specimen collection and analytic methods for HIV drug resistance monitoring in remote locations, including dried blood spots and advanced liquid stabilization media.
	National Laboratory for HIV Immunology Section	• Provides proficiency testing programs for diagnostic and prognostic tests for HIV disease. • Provides leadership on how to best measure markers of HIV disease progression. • Conducts research on ways to stop HIV transmission and progression to AIDS to expand the knowledge base of HIV/AIDS in the international scientific community, including research on immune control of HIV disease progression, HIV vaccines and therapeutics, mucosal immunity or resistance to HIV transmission, and studies to both monitor and improve long term health outcomes and comorbidities in HIV infected subjects.
	National Laboratory HIV Reference Services Section	• Provides highly specialized diagnostic and consultative services to provincial, national and international partners for HIV and Human T-Lymphotropic Virus (HTLV) testing. • Provides quality assurance and external quality control monitoring programs for HIV and HTLV serology, and HIV viral load testing. • Conducts research to support development of improved diagnostic and prognostic testing methodologies. • Provides leadership and assistance to all external and internal stakeholders through knowledge translation.
	Viral Sexually Transmitted Diseases Section	• Carries out reference and research for HPV, herpes simplex virus, human polyomavirus and other human herpesviruses, and chlamydia. • Activities include testing for surveillance, molecular epidemiology, genotyping, and comparative genomics.

		• Studies of viruses, antiviral resistance, transplantation-related testing for herpesviruses, investigations of encephalitis, and serology to improve the diagnosis and treatment of viral STI.

Program Funding

Program spending over the evaluation period amounted to $252 million of the planned $246 million. IDVPB's spending on the program was approximately $205 million, while NMLB's was $47 million. The figures below do not include non-program investments like the time-limited funding of $17.9 million ($8M for CCDIC and $9.9M for NML) and the HIV Self-Test kit initiative.

Table 8: Variance between Planned and Actual Spending (2018-19 to 2022-23)

	Planned Spending ($)				Actual Spending ($)				Variance	
Fiscal Year	**Salary***	**Grants and Contributions**	**Operation and Maintenance (O&M)&/ Capital****	**Total**	**Salary***	**Grants and Contributions**	**O&M/ Capital****	**Total**	**Planned Minus Actual**	**% of Planned Spent**
2018-19	9,967,625	32,419,000	4,287,476	46,674,101	8,165,340	31,695,718	5,880,027	45,741,085	933,016	98.00
2019-20	9,802,749	33,419,000	4,005,839	47,227,588	9,982,065	32,803,507	5,579,177	48,364,749	-1,137,161	102.41
2020-21	9,948,832	33,944,000	4,126,339	48,019,171	9,508,156	32,634,812	10,381,621	52,524,589	-4,505,418	109.38
2021-22	5,521,326	33,419,000	773,746	39,714,072	9,769,217	33,161,569	5,653,913	48,584,699	-8,870,627	122.34
2022-23	11,984,724	35,774,000	17,285,293	65,044,017	12,388,973	36,895,804	7,566,268	56,851,045	8,192,972	87.40
Total	47,225,256	**168,975,000**	30,478,693	246,678,949	49,813,751	**167,191,410**	35,061,006	**252,066,167**	-5,387,218	102.18

Table 9: Actual Spending by Branch (2018-19 to 2022-23)

Fiscal Year	Salary* ($)	Grants & Contributions ($)	O&M/Capital** ($)	Total ($)
CCDIC-IDVPB				
2018-19	5,077,334	31,695,718	1,545,475	38,318,527
2019-20	5,988,552	32,803,507	1,382,415	40,174,474
2020-21	5,402,385	32,634,812	1,104,366	39,141,563
2021-22	6,925,861	33,161,569	358,823	40,446,253
2022-23	8,953,493	36,895,804	743,034	46,592,331
All Years	**32,347,625**	**167,191,410**	**5,134,113**	**204,673,148**
NMLB				
2018-19	3,088,006	-	4,334,552	7,422,558
2019-20	3,993,513	-	4,196,762	8,190,275
2020-21	4,105,771	-	9,277,255	13,383,026
2021-22	2,843,356	-	5,295,090	8,138,446
2022-23	3,435,480	-	6,823,234	10,258,714
All Years	**17,466,126**	**N/A**	**29,926,893**	**47,393,019**
Grand Total	**49,813,751**	**167,191,410**	**35,061,006**	**252,066,167**

Source: Office of the Chief Financial Officer, PHAC

* Salary includes contributions to employee benefits plan.

** O&M/Capital includes Public Service and Procurement Canada accommodations costs.

Program Performance

Table 10: Program Performance Information Profile Indicators and Results, 2018-19 to 2021-22

✓ = target met ⧗ = in progress ✗ = target not met

	Status of target based on acceptable target range				
	2018-19	**2019-20**	**2020-21**	**2021-22**	**2022-23**
% of individuals living with HIV who know their status	✓	No data collected*	✓	No data collected*	No data available^
% of individuals living with HIV who know their status that are receiving treatment	✓	No data collected*	✓	No data collected*	
% of individuals living with HIV who know their status that are receiving treatment and have suppressed the HIV virus	✓	No data collected*	✓	No data collected*	
Rate per 100,000 of new diagnosed cases of Hepatitis C	⧗	⧗	⧗	⧗	
Rate per 100,000 of new diagnosed cases of Gonorrhea	⧗	⧗	⧗	⧗	
Rate per 100,000 of new diagnosed cases of Chlamydia	⧗	⧗	⧗	⧗	
Rate per 100,000 of new diagnosed cases of Human Immunodeficiency Virus (HIV)	⧗	⧗	⧗	⧗	
% of stakeholders applying knowledge in the practice of public health	✓	✓	Indicator under review**	Indicator under review**	
% of stakeholders increasing knowledge	✓	✗	✗	Indicator under review**	

*Data is collected every two years for this indicator.
**Indicator is being reviewed for refinement. No data is being collected.
^Performance data for 2022-23 has not yet been published.

Table 11: Key Populations and Target Audiences represented in CAF and HRF Projects

Key Population	# of Projects Targeting Key Population		
	HRF	CAF	Total
Indigenous Peoples	4	14	18
Gay, bisexual and other men who have sex with men (gbMSM)	4	17	21
Transgender people	3	8	11
Youth	2	15	17
People who use drugs	41	9	50
People living in or recently released from correctional facilities	2	5	7
People from countries where HIV, hepatitis B (HBV) or hepatitis C (HCV) are endemic	1	2	3
People engaged in the sale, trade or the purchase of sex	6	1	7
Other populations targeted in HRF & CAF Projects:			
People who are homeless	5	-	5
LGBTQIA2+	2	6	8
Women	4	3	7
African, Caribbean and Black (ACB) individuals	1	7	8
Individuals from ethnocultural communities	-	11	11
People living with HIV and/or Hepatitis C and/or other STBBIs	-	13	13
Adults living with cognitive disabilities	-	1	1
Target Audiences			
Health Care Professionals	3	8	11
Public Health workers	0	5	5
Leaders and Decision Makers	0	2	2
Service providers (unspecified)	6	11	17
Peer workers/leaders	3	2	5

Key Population	# of Projects Targeting Key Population		
	HRF	CAF	Total
Policy makers	1	1	2
Knowledge Networks	1	1	2
Community-Based Organizations	0	4	4
Police	0	1	1
Criminal Defence Lawyers	0	1	1

Appendix 3 – Global STBBI Targets

Table 12: Global STBBI Targets for 2020 and 2030

By 2020	By 2030
HIV	
• 90% of people living with HIV know their status • 90% of people living with HIV who know their status are receiving treatment • 90% of people on treatment have suppressed viral loads • Fewer than 500,000 new HIV infections • Elimination of HIV-related discrimination	• Zero new HIV infections • Zero AIDS-related deaths • Zero discrimination
Hepatitis	
• 30% reduction in new cases of chronic viral hepatitis B and C infections • 10% reduction in hepatitis B and C deaths • 30% of viral hepatitis B and C infections are diagnosed • Five million people receiving hepatitis B treatment, and three million people receiving hepatitis C treatment • Achieve and maintain up-to-date 90% coverage for vaccination of hepatitis B vaccine (three doses)	• 90% reduction in new cases of chronic viral hepatitis B and C infections • 65% reduction in hepatitis B and C deaths • 90% of viral hepatitis B and C infections are diagnosed • 80% of eligible people receiving hepatitis B and C treatment
Sexually transmitted infections	
No targets.	• 90% reduction of T. pallidum incidence globally • 90% reduction in N. gonorrhoeae incidence globally • 50 or fewer cases of congenital syphilis per 100,000 live births in 80% of countries • Sustain 90% national coverage, and at least 80% in every district, or equivalent administrative unit, for countries where the human papillomavirus vaccine (HPV) is part of their national immunization program

Endnotes

1. World Health Organization. Sexually transmitted infections (STIs). Accessed August 10, 2023. https://www.who.int/news-room/fact-sheets/detail/sexually-transmitted-infections-(stis)

2. Public Health Agency of Canada. Estimates of HIV incidence, prevalence and Canada's progress on meeting the 90-90-90 HIV targets. Published July 17, 2018. Accessed August 10, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/summary-estimates-hiv-incidence-prevalence-canadas-progress-90-90-90.html

3. Public Health Agency of Canada. Reducing the health impact of sexually transmitted and blood-borne infections in Canada by 2030: A pan-Canadian STBBI framework for action. Published June 29, 2018. Accessed August 10, 2023. https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/reports-publications/sexually-transmitted-blood-borne-infections-action-framework.html

4. World Health Organization. Global health sector strategy on Sexually Transmitted Infections, 2016-2021. Published 2016. Accessed September 13, 2023. https://www.who.int/publications-detail-redirect/WHO-RHR-16.09

5. Public Health Agency of Canada. Accelerating our response: Government of Canada five-year action plan on sexually transmitted and blood-borne infections. Published July 19, 2019. Accessed August 10, 2023. https://www.canada.ca/en/public-health/services/reports-publications/accelerating-our-response-five-year-action-plan-sexually-transmitted-blood-borne-infections.html

6. Public Health Agency of Canada. Survey on the impact of COVID-19 on access to STBBI-related services, including harm reduction services, for African, Caribbean and Black people in Canada. Published September 29, 2022. Accessed August 17, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/survey-impact-covid-19-access-stbbi-harm-reduction-services-african-caribbean-black-people.html

7. Public Health Agency of Canada. HIV in Canada: 2021 surveillance highlights. Published December 1, 2022. Accessed October 18, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/hiv-2021-surveillance-highlights.html

8. Public Health Agency of Canada. HIV in Canada: 2022 Surveillance highlights. Published December 1, 2023. Accessed December 18, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/hiv-2022-surveillance-highlights.html

9. Public Health Agency of Canada. Hepatitis B in Canada: 2019 surveillance data. Published July 14, 2021. Accessed August 17, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/hepatitis-b-2019-surveillance-data.html

10. Public Health Agency of Canada. Report On Hepatitis B and C Surveillance in Canada: 2019. Published January 17, 2022. Accessed August 17, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/report-hepatitis-b-c-canada-2019.html

11. Public Health Agency of Canada PHA of. Hepatitis C in Canada: 2020 surveillance data update. Published March 3, 2023. Accessed September 6, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/hepatitis-c-canada-2020-surveillance-data-update.html

12. Popovic N, Williams A, Périnet S, et al. National Hepatitis C estimates: Incidence, prevalence, undiagnosed proportion and treatment, Canada, 2019. *Can Commun Dis Rep*. 2022;48(11/12):540-549. doi:10.14745/ccdr.v48i1112a07

13. Public Health Agency of Canada. Chlamydia, gonorrhea and infectious syphilis in Canada: 2020 (infographic). Published February 13, 2023. Accessed September 12, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/chlamydia-gonorrhea-infectious-syphilis-canada-2020-infographic.html

14. Public Health Agency of Canada. Chlamydia, gonorrhea and infectious syphilis in Canada: 2021 surveillance data update. Published October 13, 2023. Accessed October 19, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/chlamydia-gonorrhea-infectious-syphilis-2021-surveillance-data.html

15. Aho J, Lybeck C, Tetteh A, et al. Rising syphilis rates in Canada, 2011–2020. *Can Commun Dis Rep*. 2022;48(23):52-60. doi:10.14745/ccdr.v48i23a01

16. Public Health Agency of Canada. Infectious syphilis and congenital syphilis in Canada, 2021, CCDR 48(11/12). Published December 14, 2022. Accessed September 12, 2023. https://www.canada.ca/en/public-health/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2022-48/issue-11-12-november-december-2022/infectious-congenital-syphilis-canada-2021.html

17. Public Health Agency of Canada. Estimates of HIV incidence, prevalence and Canada's progress on meeting the 90-90-90 HIV targets, 2020. Published July 25, 2022. Accessed September 11, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/estimates-hiv-incidence-prevalence-canada-meeting-90-90-90-targets-2020.html

18. Public Health Agency of Canada. Canada's progress towards global HIV targets (90-90-90), 2020. Published July 11, 2022. Accessed August 11, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/canada-progress-towards-global-hiv-targets-90-90-90-2020.html

19. Government of Canada I. Getting Away from the Point: Dried Blood Spot testing for blood borne diseases. Published July 22, 2019. Accessed February 12, 2024. https://science.gc.ca/site/science/en/blogs/science-health/getting-away-point-dried-blood-spot-testing-blood-borne-diseases

20. The Northern, Remote and Isolated Indigenous Communities Initiative: Community-based testing from COVID-19 to HIV and STBBI. CATIE Blog. Published February 15, 2023. Accessed October 7, 2023. https://blog.catie.ca/2023/02/15/the-northern-remote-and-isolated-indigenous-communities-initiative-community-based-testing-from-covid-19-to-hiv-and-stbbi/

21. World Health Organization. *WHO RECOMMENDS HIV SELF TESTING – EVIDENCE UPDATE AND CONSIDERATIONS FOR SUCCESS*.; 2019. https://iris.who.int/bitstream/handle/10665/329968/WHO-CDS-HIV-19.36-eng.pdf?sequence=1

22. Public Health Agency of Canada. 2020-2022 Progress Report on Sexually Transmitted and Blood Borne Infections (STBBI). Published May 25, 2023. Accessed August 10, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/2020-2022-progress-report-action-plan-sexually-transmitted-blood-borne-infections.html

23. REACH Nexus. The Canadian HIV Stigma Index Project: Ontario Implementation. https://www.reachnexus.ca/case-study-print/the-canadian-hiv-stigma-index-project-ontario-implementation

24. Public Health Agency of Canada. Survey on the impact of COVID-19 on the delivery of STBBI prevention, testing and treatment, including harm reduction services, in Canada. Published March 3, 2022. Accessed October 19, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/survey-impact-covid-19-delivery-stbbi-prevention-testing-treatment.html

25. O'Byrne P, Musten A. HIV self-testing: what GetaKit can tell us about Canada's $8 million one-time investment. *Can J Public Health*. 2023;114(5):867-871. doi:10.17269/s41997-023-00768-3

26. Public Health Agency of Canada. NACI updated monkeypox immunization statement, June 10, 2022: Summary. Published July 4, 2022. Accessed September 22, 2023. https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/guidance-imvamune-monkeypox/summary-june-10-2022.html

27. Public Health Agency of Canada. 2019-2020 Progress report for the Government of Canada action plan on sexually transmitted and blood-borne infections. Published July 4, 2022. Accessed August 10, 2023. https://www.canada.ca/en/public-health/services/publications/diseases-conditions/2019-2020-progress-report-action-plan-sexually-transmitted-blood-borne-infections.html

28. Evaluation of the impact of CATIE's programs and services. CATIE - Canada's source for HIV and hepatitis C information. Published July 29, 2022. Accessed September 21, 2023. https://www.catie.ca/evaluation-of-the-impact-of-caties-programs-and-services

29. Public Health Agency of Canada. Evaluation of Viral Hepatitis and Sexually Transmitted Infection Activities at the Public Health Agency of Canada 2013-14 to 2017-18. Published September 26, 2019. Accessed August 11, 2023. https://www.canada.ca/en/public-health/corporate/transparency/corporate-management-reporting/evaluation/report-evaluation-viral-hepatitis-sexually-transmitted-infection-activities-2013-2014-2017-2018.html

30. Roger A, Dourgoudian M, Mergey V, Laplanche D, Ecarnot F, Sanchez S. Effectiveness of Prevention Interventions Using Social Marketing Methods on Behavioural Change in the General Population: A Systematic Review of the Literature. *Int J Environ Res Public Health*. 2023;20(5):4576. doi:10.3390/ijerph20054576

31. Public Health Agency of Canada. Sexually transmitted and blood-borne infections surveillance resources and publications. Published December 21, 2022. Accessed September 21, 2023. https://www.canada.ca/en/public-health/services/surveillance/sexually-transmitted-blood-borne-infections.html

32. Public Health Agency of Canada. Audit of Surveillance Activities. Published September 18, 2020. Accessed September 21, 2023. https://www.canada.ca/en/health-canada/corporate/transparency/corporate-management-reporting/internal-audits/surveillance-activities.html

33. Centres for Disease Control and Prevention. Sexually Transmitted Disease Surveillance, 2021. Published April 11, 2023. Accessed October 12, 2023. https://www.cdc.gov/std/statistics/2021/default.htm

34. Migchelsen SJ, Enayat Q, Harb AK, et al. Sexually transmitted infections (STIs): annual data tables. GOV.UK. Published June 6, 2023. Accessed October 12, 2023. https://www.gov.uk/government/statistics/sexually-transmitted-infections-stis-annual-data-tables

35. Sexually transmissible infections | Kirby Institute. Accessed October 12, 2023. https://data.kirby.unsw.edu.au/STIs

36. United Nations Department of Economic and Social Affairs. Goal 3 | Department of Economic and Social Affairs. Accessed January 29, 2024. https://sdgs.un.org/goals/goal3