BC Tuberculosis Strategic Plan

2012- 2021

Final Report

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Executive Summary

The BC Strategic Plan for Tuberculosis Prevention, Treatment and Control (the "Strategic Plan"), released in June 2012, is a 10 year policy framework to reduce the incidence and transmission of TB infection and ensure British Columbians are provided with state-of-the-art treatment and care if infection should occur.

The Strategic Plan supports and guides British Columbia's response to tuberculosis by focusing on five strategic goals: 1) reduce the incidence of active TB; 2) prevent transmission of TB by addressing social determinants of health; 3) prevent the progression of latent TB to active TB; 4) ensure a robust public health response to ongoing and outbreak needs; and 5) ensure state-of-the-art diagnosis, treatment, and care of active cases. In 2017, these actions were reviewed and re-prioritized during the TBSC Refresh Meeting. During this meeting, the priorities were identified as: 1) contact evaluation, 2) TB screening, 3) treatment of active and latent TB infection, 4) laboratory testing, 5) service provision, and 6) TB literacy.

Working towards the goals of the Strategic Plan has required engagement and strong collaborative partnerships. The BC TB Strategic Plan Committee (TBSC) includes representatives from partner organizations and is responsible for carrying out recommendations in the Strategic Plan, developing and implementing a work plan, and generating progress reports. The TBSC meets quarterly using a co-chair model throughout the 10 year period with regular updates to their Terms of Reference and Membership, and reports to the Communicable Disease Policy Advisory Committee (CDPAC). Detailed output from the work of this TBSC can be found in the Appendix with the following activities highlighted:

- Development of a surveillance framework with indicators; streamlined annual reporting; monthly/quarterly case counts; contact cascades
- Provincial outbreak protocol
- Continuity of care protocol
- Patient and provider education and training; evergreen Provincial TB Manual and DST; translated content; updated website
- Improvement in mycobacterial diagnostics including rapid molecular testing, prospective MIRU, whole genome sequencing and access to IGRA
- Low-risk screening activities addressed (e.g. screening upon entry to long-term care and of health care workers)
- Provincial CKD-TB screening program

Work of the TBSC has been challenged by Panorama implementation, variable data systems, and the dual COVID-19 and drug toxicity public health emergencies. Despite the work of the TBSC, there has been limited impact on key goals and milestones, in part because the majority of active TB cases are among people born or who have lived in countries in countries with high TB incidence. The TBSC is committed to continuing to work towards TB Elimination in BC in alignment with the WHO End-TB Strategy.

Introduction

In June 2012, the province's health authorities (including the First Nations Health Authority), BC Centre for Disease Control (BCCDC) (including the BC Public Health Laboratory) and the Ministry of Health, through the Communicable Disease Policy Advisory Committee (CDPAC), released the *BC Strategic Plan for Tuberculosis Prevention, Treatment and Control* (the "Strategic Plan"). This document described an operational strategy developed collaboratively by partners across the health system to reduce the burden of tuberculosis in British Columbia.

In October 2012, the BC TB Strategic Plan TBSC (TBSC) was formed and included representatives from all Health Authorities (including First Nations Health Authority), the BCCDC (including the BC Public Health Laboratory), and the Ministry of Health. Membership was cross-disciplinary with physicians, nurses, and epidemiologists involved in the work. TBSC reported to the BC Communicable Disease Policy Advisory Committee (CDPAC) and was responsible for coordinating the implementation of actions in the Strategic Plan and monitoring and evaluating the impact on the health of the population and the health system.[1] TBSC used an iterative process in developing a summary of priority actions taken from the TB Plan to form the basis of the work plan for its' inaugural year, 2012/2013. TBSC initially focused on 10 of the 18 priority actions identified in the Strategic Plan (see Appendix 1 for Priority Actions).

The TBSC identified challenges in implementing all priority actions and so, in 2017, the TBSC reviewed and re-prioritized actions during a TBSC Refresh Meeting. Following this meeting, the TBSC prioritized the following areas: 1) contact evaluation, 2) TB screening, 3) treatment of active and latent TB infection, 4) laboratory testing, 5) service provision, and 6) TB literacy.

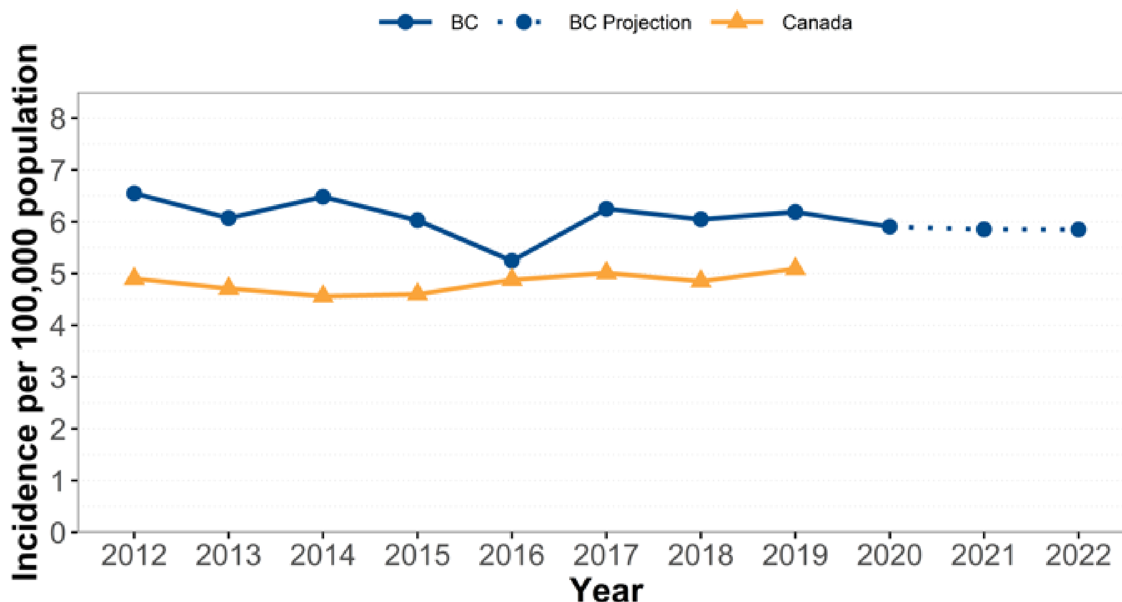
Progress on Milestones and Goals

In the TB Plan, Goals were initially used to focus and prioritize activities. Milestones were used by the TBSC to situate broadly the progress toward full implementation of the TB Plan. The three milestones and five goals were gleaned from several documents: the Guidance for Tuberculosis Prevention and Control in Canada (Public Health Agency of Canada), Health Canada's Strategy Against Tuberculosis for First Nations on Reserve, Strategic Planning for Tuberculosis (TB) Elimination in the United States and Prevention and Control of TB Globally (CDC, USA) and the World Health Organization STOP TB strategies.

Milestones 1: By 2022 British Columbia will reduce the incidence of active tuberculosis by 50 per cent.
Globally, active TB incidence has declined and the level of TB in Canada remains low. In keeping with global trends, the rate in BC has decreased over the past 20 years, yet the provincial rate remains consistently higher than many provinces, and the national incidence (Figure 1).

[1] The Terms of Reference and Membership of this TBSC are available for review upon request.

Figure 1. Active TB disease rates in BC and Canada*, 2012 to 2022**



*Canadian rates only available up to 2019.
** Rates projected for 2021 and 2022.

Milestone 2: By 2022 British Columbia will reduce the incidence of active tuberculosis in specific high risk and vulnerable groups, by 50 per cent

- Over 80% of active cases of TB in BC are diagnosed in persons born or who lived in countries with higher incidence of active TB. Nevertheless, several outbreaks of locally acquired TB have occurred over the last decade, particularly among people who are homeless or under-housed.
- Tuberculosis also disproportionately affects some First Nations communities. The average number of active TB cases reported annually among First Nations people living in communities is 8 (data from 2010-2020) with an average incidence of 10.0 per 100,000 population (from 2011-2020). In 2012, an exceptionally high number of cases were reported due to outbreak activity. This high count resulted in high incidence of active TB (32.4 per 100,000) in 2012. Incidence of active TB in 2020 was 8.0 per 100,000.

Milestone 3: By 2017, all performance targets from the Guidance for Tuberculosis Prevention and Control Programs in Canada will be reached

- TB Surveillance Working Group opted to focus attention on developing a contact evaluation cascade based on a quality improvement approach

Goal 1: Reduce incidence of active tuberculosis in British Columbia by 50 per cent by 2022 (to 3.1 per 100,000).

- The rate of active TB has decreased from 6.5 per 100,000 in 2012 to 6.0 per 100,000 in 2018.
- The rate of active TB in 2020 (preliminary data) is 5.9 per 100,000. The project trend for 2021 and 2022 is also 5.9 per 100,000.

Goal 2: Prevent transmission of tuberculosis within BC, in part by addressing social determinants of health such as housing, mental health and addictions treatment.

- Indicators for this goal were not developed as data sources for social determinants of health need to be identified

Goal 3: Prevent the development of active tuberculosis in those with latent tuberculosis infection, especially in new migrants from high prevalence countries.

- *In 2017 71% of those starting LTBI treatment were born outside of Canada, up from 64% in 2011; unfortunately, the proportion of immigrants who are screened for LTBI is unknown*

Goal 4: Ensure that the public health tuberculosis response is robust, timely and able to meet ongoing and outbreak needs.

- A Provincial TB Outbreak protocol was developed;

Goal 5: Ensure state-of-the-art laboratory programs, treatment, and care of people who develop tuberculosis to improve outcomes and reduce the risk of spread.

- Priorities for service provision and laboratory were addressed in the initial and refresh phases of the Strategic Plan; see Appendix

Status of Priority Actions

To meet the goals of the Strategic Plan, the TBSC identified eighteen priority actions. Over the subsequent years, activities have focused on those priority actions that came out of the TBSC Refresh Meeting with less emphasis on indicators. These priority actions can be summarized into the following areas:

- Contact Evaluation
- TB Screening
- Active TB and Latent TB Infection
- Labs
- Service Provision
- TB Literacy

The majority of activities are complete. Detailed descriptions of the work under each area can be found in Appendix 1 with links to the work plan.

Challenges and Successes

The TBSC has identified a number of challenges to the implementation of the TB Plan. Significant effort was dedicated to aligning differing expectations of members, facilitating communication pathways to relevant stakeholders, and overcoming logistical constraints including infrastructure and surveillance/clinical systems. Working without dedicated funding or consistent secretariat support has been difficult, especially given emerging and competing public health priorities over the past years (Ebola, measles, influenza and most recently, the overdose crisis and COVID-19). The ongoing impact of PANORAMA implementation on activities of the TB Strategic Plan must be acknowledged. PANORAMA go-live was in March 2016 and participating agencies continue to struggle with the day-to-day impact on workload, efficiency, and access to data. There are also additional challenges when considering information sharing across health authorities with variable systems, particularly in light of the lack of dedicated funding.

It should also be noted that we are embedded in a system that is largely out of our control. Immigration, housing, along with healthcare access, funding and usage all contribute to TB rates, but we only control a limited pool of funding and influence which can be used for TB screening and diagnoses. In the absence of input into larger structural economic, social and demographic forces, our ability to impact many of the goals and milestones of TB is limited.

Despite these challenges, the TBSC has maintained quarterly meetings throughout the decade-long plan. The co-chair model has remained collaborative and has seen representation from Interior Health, Fraser Health and Vancouver Coastal. Membership of the TBSC has expanded to include public health partners from the Yukon Territory, and is multi-disciplinary including trainees whenever possible. TBSC engagement allowed for extensive re-prioritization of activities over time and solid work plan outputs. The strength of the TBSC was no better realized than during the initial stages of the COVID pandemic when TB stakeholders got together quickly to identify gaps in public health follow-up and develop attainable solutions to ensure British Columbians affected by TB continued to receive appropriate care. After 18 months of the pandemic, the process of contact investigation was transferred back to VCH and FHA through a collaborative and seamless process. These are a few examples of how the TBSC structure facilitated and fostered collegiality and partnerships.

Recommendations

In preparation for the end of the TB Strategic Plan, committee members have flagged a number of activities (grouped together under priority areas) to focus on post-plan. These include the following short-term priorities building on the pre-existing collaboration and output from quarterly TBSC meetings:

- Contact Evaluation
    - Establish common data set (and/or database) for evaluation of contact tracing
    - Ongoing MIRU support for North and clusters in identified First Nations communities.
    - Genomic outcomes and interventions
- TB Screening
    - Engage with high risk groups (e.g. CKD, contacts) to better understand decision-making on LTBI treatment
    - Engage the community voice, best exemplified by High Priority community strategic plan created October 2021.
- Active TB and Latent TB Infection
    - Compile examples of catastrophic costs/impacts of TB diagnosis to clients and families
    - Explore virtual care options for TB/LTBI treatment outside of the Provincial TB Clinics
    - Explore COVID19 strategies/supports for people dealing with insecure housing, unemployment, substance use, or mental health issues that could be leveraged for TB
    - Increasing DOPT workers to support treatment of LTBI with a focus on strategies to increase uptake.
    - Optimize incentives, outreach and social supports, and referrals to primary care, with efforts to decrease barriers and facilitate post-TB care
- Labs
    - Continue to optimize IGRA access for Northern and remote communities. Increased IGRA access close to First Nations communities has helped greatly in facilitating testing.
    - Optimize access to IGRA where indicated
    - Prevent repeat procedures for TB diagnosis
- Service Provision
    - Integration of TRC and anti-racism, specifically anti-Indigenous racism work into provincial TB programming and the TBSC
    - Work to identify client perspective and opportunities to include patients' voices.
    - Continue to support/revise the service agreement with FNHA/BCCDC as needed
    - Support seamless transition of FNHA TB case management between all RHA and FNHA program ensuring a consistent pathway for all RHA, including discharge planning

In addition, the TBSC is committed to shifting the activities of the group to focus on TB elimination. In May 2014, the World Health Assembly ratified the post-2015 global End TB strategy, which aims to reduce global TB incidence by 90% before 2035. This plan requires aggressive reductions in TB incidence even in low TB incidence countries such as Canada and calls for reframing away from TB control and towards TB elimination activities. The WHO has targeted TB elimination for more than 30 countries including Canada with a "pre-elimination" phase of <10 cases per million per year by 2035 with full elimination by 2050 of <1 case per million per year. BC is uniquely poised to pursue a TB elimination framework. With our resources and partnerships, we believe that BC and the TB Strategic Committee can act as a model for TB prevention and elimination in Canada and globally.

Acknowledgements

The membership of the TB Strategic Committee would like to acknowledge all current and past members of the Committee, members of sub-working groups, secretariat support, trainee involvement, and outside consultants who have supported the work of the Strategic Plan.

Appendix 1: TBSC Priority Actions (*10 Flagged Priorities)

Articulate and align roles and responsibilities

• Work with the Primary Care and Public Health Tripartite Strategy Council to ensure collaborative service planning for First Nations in the context of the Framework Agreement and the Tripartite First Nations Health Plan.*

• As a tool to achieve many of the action and goals within the plan, each regional health authority and the BCCDC will develop service level agreements that define service level and resource allocation expectations of each party, including lab efficiencies.*

Enhance surveillance capacity

• Formalize a TB surveillance network that enables assessment of performance targets.

• Formalize a process that communicates TB data between the BCCDC, Provincial Health Labs and regional health authorities in a timely manner.

• Establish a TB surveillance lead in each regional health authority.

• Establish tripartite protocols regarding Aboriginal TB surveillance data management.

Improve monitoring and evaluation

• Develop monitoring and scientific evaluation priorities and review them biannually.*

• Develop a mechanism for sharing monitoring and evaluation results with stakeholders.*

Improve occupational health screening

• Reassess the occupational health and safety screening policy to identify workers or volunteers that warrant screening.*

• Improve the recording and monitoring of occupational safety screening results.

Increase engagement, screening and treatment in high risk populations

• Utilize the BC Centre for Disease Control TB Manual, Canadian TB Standards and ATS Guidelines as resources to implement comprehensive screening for TB and LTBI.*

• Improve TB screening and identify and implement strategies to improve LTBI therapy adherence in high risk populations through active scientific evaluation, engagement and input from community stakeholders.

Improve laboratory capacity

• Develop the BC Public Health Lab Network to empower work with regional health authority microbiology labs on better testing (for both TB and LTBI cases).*

• Support improvements needed to provide an appropriate level of enhanced molecular testing.*

Improve health literacy activities

• Broaden provincial awareness of TB and reduce associated stigma through community strategies including the promotion of regular events such as World TB Day (March 24th), Aboriginal-specific events and annual health/services fairs for new immigrants put on by MOSAIC and SUCCESS.

• Identify existing TB educational programs for health care practitioners that may be adapted for use in BC*

Improve contract tracing and outbreak investigation

• Develop a protocol to identify clusters versus outbreaks; manage and evaluate response to TB outbreaks and ensure a timely and seamless approach to TB outbreak management.*

• Increase the use of the standardized contact tracing approach outlined in the BCCDC TB Control Manual.*

Improve the management of active tuberculosis

• Develop guidelines for responding to people at high risk for non-adherence.

• Expand DOT (directly observed therapy) TB treatment programs

• Incorporate DOT TB treatment into other drug treatment platforms, e.g. for HCV, HIV, STIs, and the provision of methadone.

• Explore the feasibility of including TB in provincial Chronic Disease Management Initiative.

• Allocate resources to improve management of TB in high risk populations

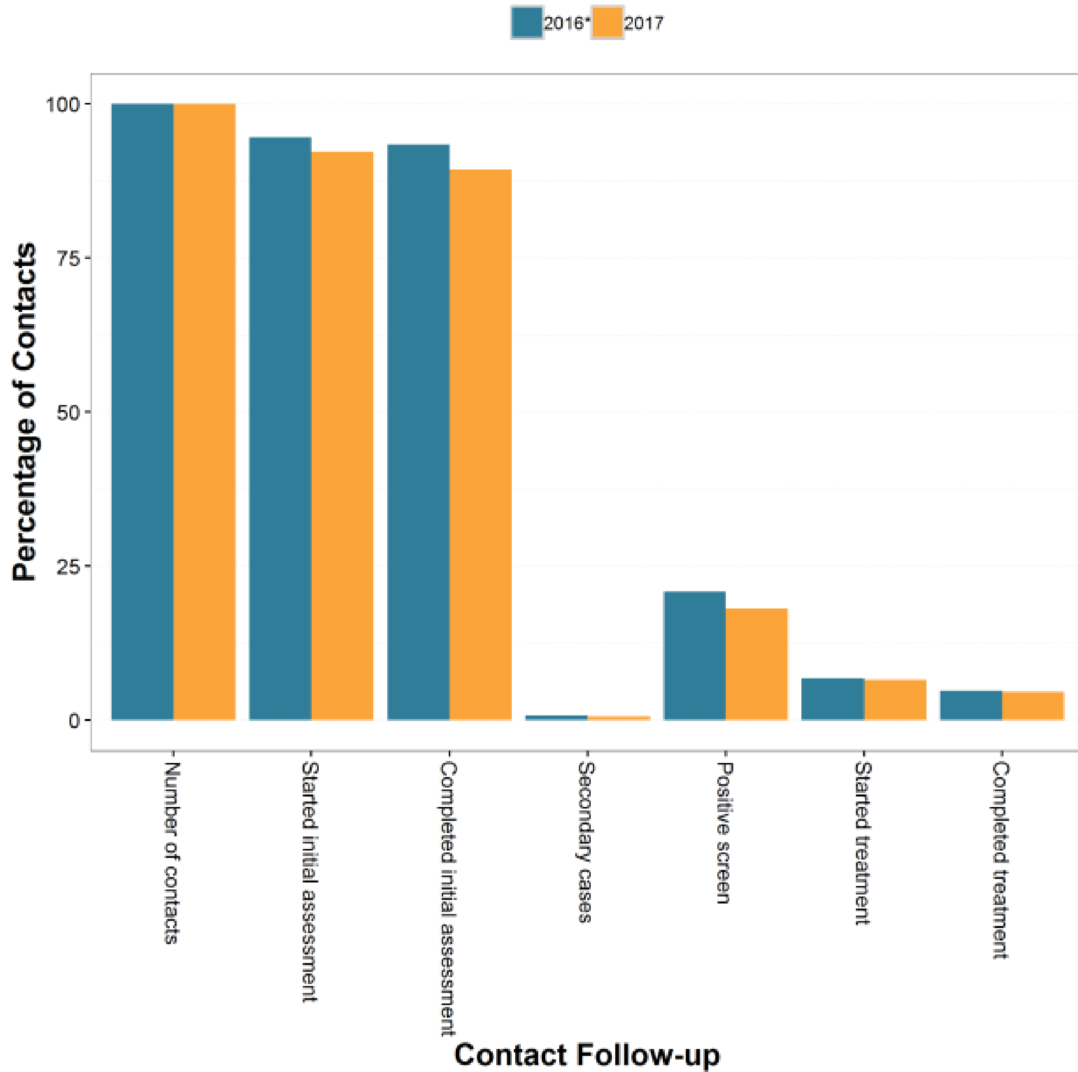
• Ensure that hospitals, correctional facilities, and public health work together to put community follow-up plans in place prior to individuals being discharged or released.*

Appendix 2: TBSC Work Plan (updated as of October 2021)

Please see accompanying Excel file titled “TBSC Work Plan 2017-2021 Final Report”

Appendix 3: Cascades of Care – Contact Example

68. Contact Tracing Indicators Among Contacts* of Respiratory Cases in BC Aged 5 Years and Older by Completion (Total) After Source Case Diagnosis, 2016 to 2017**



*Only includes source cases reported since Panorama implementation (i.e., since March 12, 2016)
**Percentage of total contacts reported