BC Status Report on the Tuberculosis (TB) Elimination Plan

Preliminary Data and Subject to Change

March 24, 2025

Provincial Health Services Authority

BC Centre for Disease Control
Provincial Health Services Authority

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Services Authority

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Context

The World Health Organization (WHO) "End TB Strategy" aims to end the global Tuberculosis (TB) epidemic by outlining the steps required for countries to achieve a 90% reduction in the incidence rate of TB and 95% reduction in TB deaths, compared to rates in 2015 (1). For Canada, a low incidence country with less than 10 TB cases per 100,000 people in 2015, the 2035 target was set to less than one TB case per 100,000 people (2). To eliminate TB in British Columbia (BC), efforts should focus on contact investigations, reducing transmission of TB disease, and treating TB infection among populations with a higher incidence of TB. This differs from approaches in nations with a higher incidence of TB disease (>100 per 100,000), where public health interventions tend to focus on finding active cases to decrease transmission and improving access to diagnosis and treatment of TB disease (3).

Objective

The BC Provincial Tuberculosis Committee has released a provincial *TB Elimination Plan* (4). For World TB Day on March 24, and in response to the global and national call to action, this surveillance report outlines 'Goal 1' of the *TB Elimination Plan* and provides a status update of the five objectives outlined under Goal 1. For the most recent data on TB in BC, see the BC Centre for Disease Control (BCCDC) Clinical Prevention Services Surveillance Report.

Background

Goal 1: Achieve a sustained reduction in TB incidence within the target populations

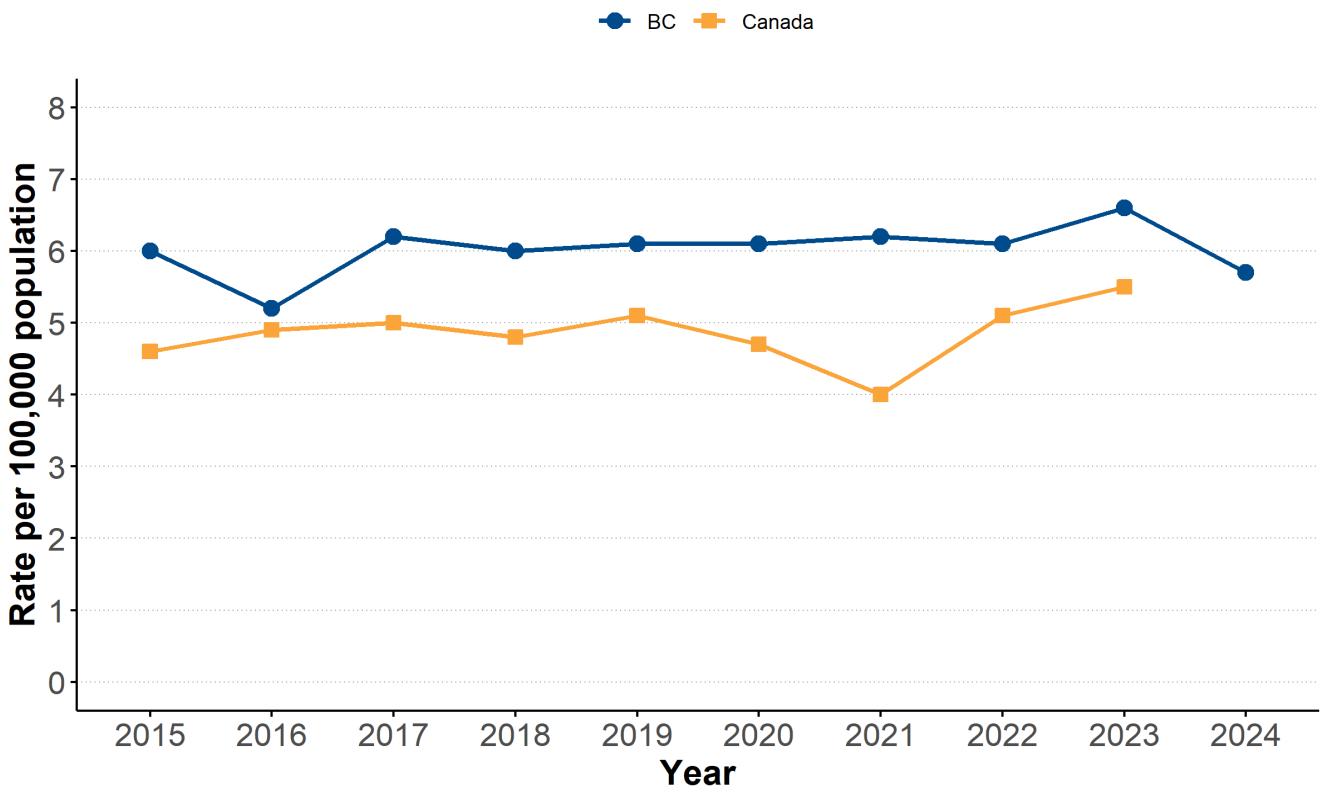
Rates of active TB disease in Canada are higher among populations who are impacted by colonization, stigma, and poverty, and among people who face barriers in accessing health care (5). First Nations and Inuit peoples, and people who were born in countries with a high incidence of TB have the highest rates of TB disease in Canada (5, 6). In BC, TB disease among people born outside of Canada is most often due to the reactivation of TB infection from a contact or infection that occurred in the country of origin (7).

Goal 1: Objective 1

Attain the pre-elimination target of an active TB case of 1 per 100,000 population by the year 2035, through targeted interventions, surveillance, and effective management strategies

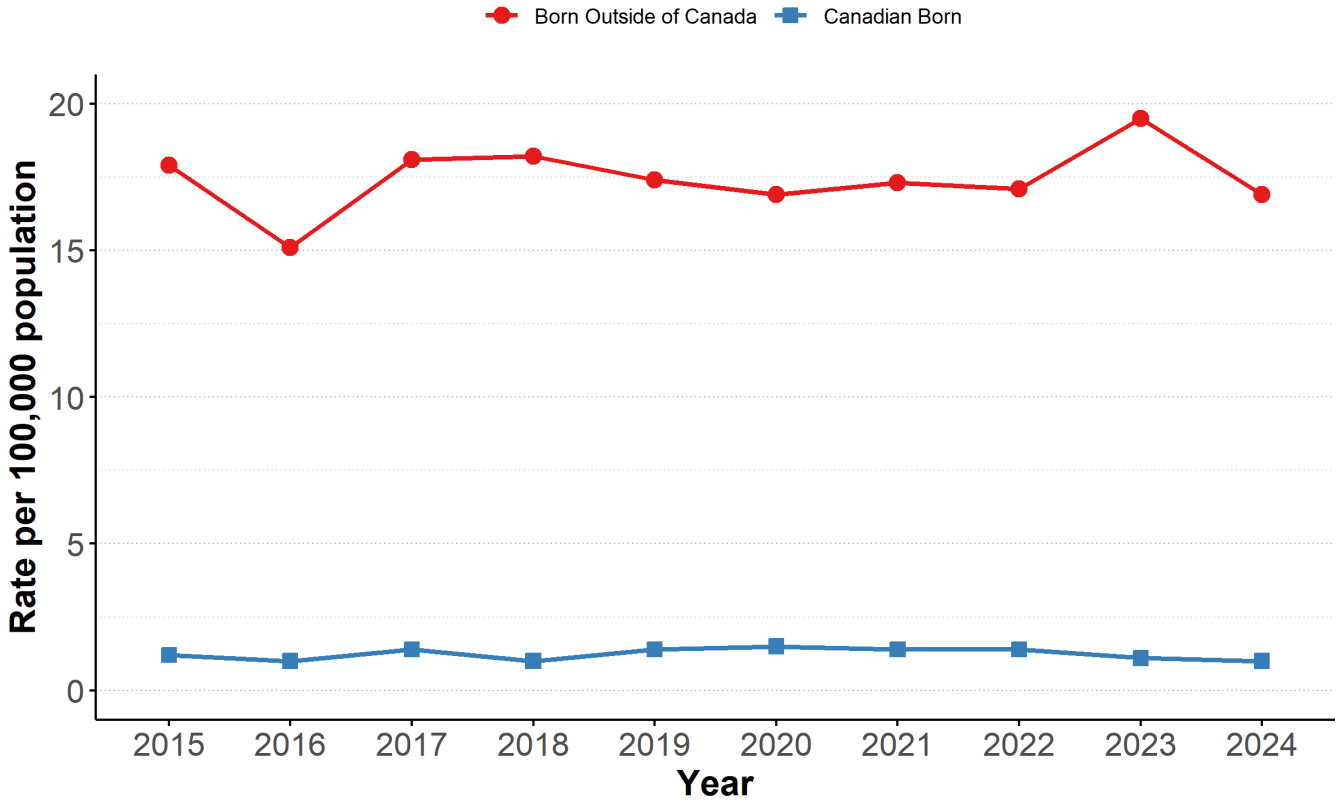
The rate of TB disease in BC was 5.7 per 100,000 people (326 cases) in 2024. This is comparable to the 2023 national rate of 5.5 per 100,000 people and lower than the 2023 rate of 6.6 per 100,000 people in BC (Figure 1). The incidence rate in 2024 is the lowest in BC since 2016. As in previous years, the rate of TB is higher among people born outside of Canada (16.9 per 100,000) compared to people born in Canada (1.0 per 100,000) in 2024 (Figure 2). Refer to Appendix (Tables 1-3) for a detailed breakdown of rates.

Figure 1. TB disease rates in BC and Canada*, 2015 to 2024



*Canadian rates from the Public Health Agency of Canada,[9,10] data not yet publicly available for 2024

Figure 2. TB disease rates by country of birth in BC, 2015 to 2024



Goal 1: Objective 2

Identify the feasible process or systems to share surveillance data with the regional health authorities and the First Nations Health Authority in a timely, consistent, and complete manner

The BCCDC maintains and distributes provincial TB disease and TB infection treatment data through internal and external surveillance reports. Clinically and laboratory confirmed active TB disease data are routinely shared with the First Nations Health Authority (FNHA), all five regional health authorities (Interior, Fraser, Vancouver Coastal, Island, and Northern Health), and Chief Medical Health Officers to support routine surveillance as well as regional outbreak detection and response measures. The BCCDC Public Health Laboratory notifies FNHA and regional health authorities of laboratory confirmed TB disease cases; data on phylogenetics and TB clusters are also shared bi-monthly to inform TB transmission and cluster identification throughout the province. The BCCDC routinely shares provincial surveillance data at the national level with the Public Health Agency of Canada (PHAC) while FNHA provides annual counts of active TB disease cases to Indigenous Services Canada.

Goal 1: Objective 3

Prioritize and systematically address TB incidence among population identified as a higher risk, through targeted interventions, enhanced surveillance, and tailored healthcare delivery strategies, aiming to reduce TB burden and disparities in affected communities

Higher rates of TB have been observed among people born outside of Canada, though these rates have been stable since 2017. The higher incidence in certain health regions can be explained by a larger proportion of the population being born in a country with a high burden of TB disease (Figure 3). Rates of TB disease among people born in Canada are lower (<2 per 100,000 people) and also differ by region (Figure 4). See Table 4 and 5 in the Appendix for complete breakdown of TB disease rates among priority populations in BC. Note that large fluctuations in incidence are due to small population counts.

Rates of TB disease among First Nations people have remained stable since 2015. In 2021, the incidence of TB disease among First Nations people in BC was 13.7 per 100,000 (8); this is higher than other residents born in Canada but lower than people born outside of Canada. FNHA TB Services provides a range of services tailored to First Nations communities and enhanced TB reduction strategies in areas with the highest incidence. This includes, but is not limited to, expanding interferon gamma release assay (IGRA) access and increasing outreach to decrease barriers to TB screening. For additional information on TB among First Nations people, see First Nations Health Authority Tuberculosis Services.

Figure 3. TB disease rates among people born outside of Canada by health authority*, 2015 to 2024

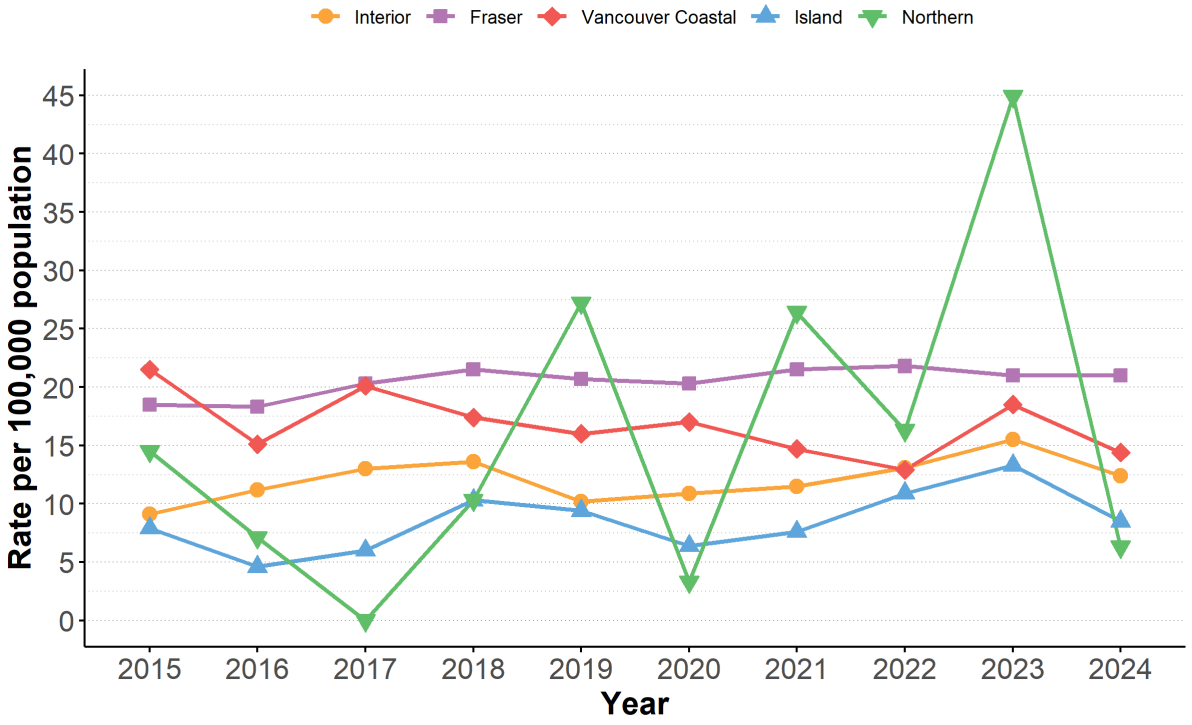
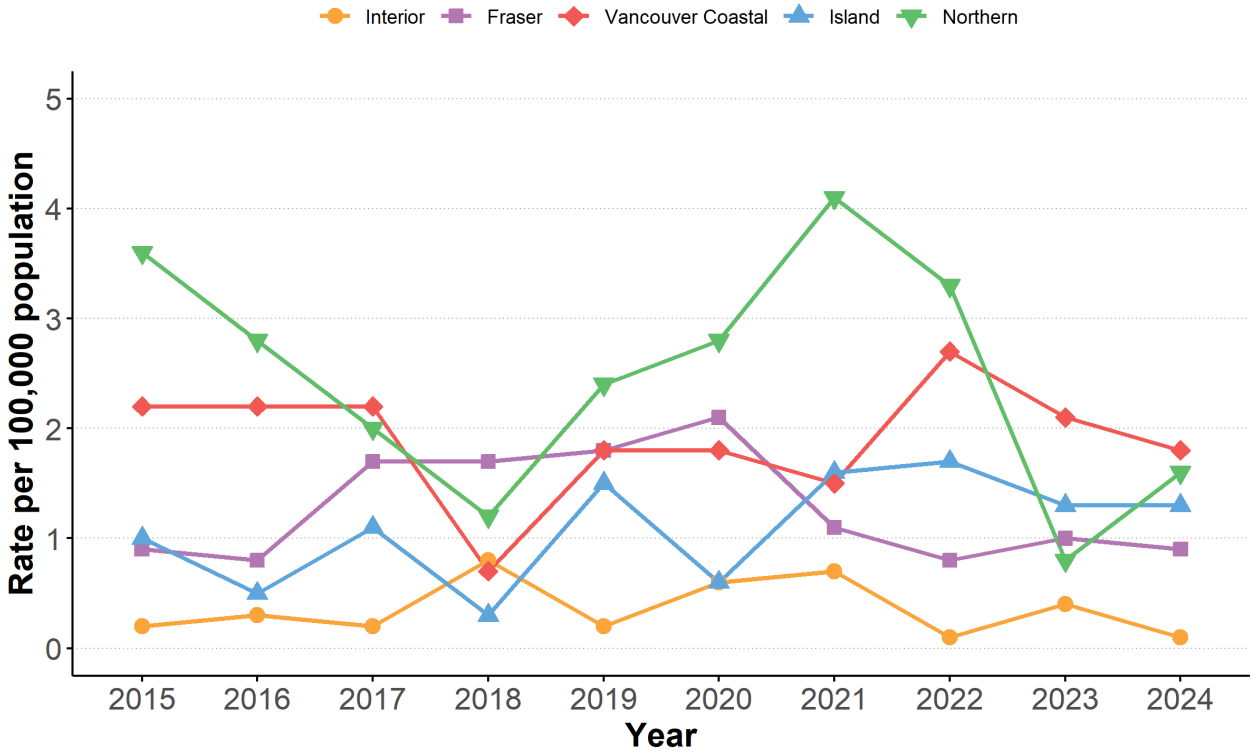


Figure 4. TB disease rates among people born in Canada by health authority*, 2015 to 2024



*Residence at time of diagnosis

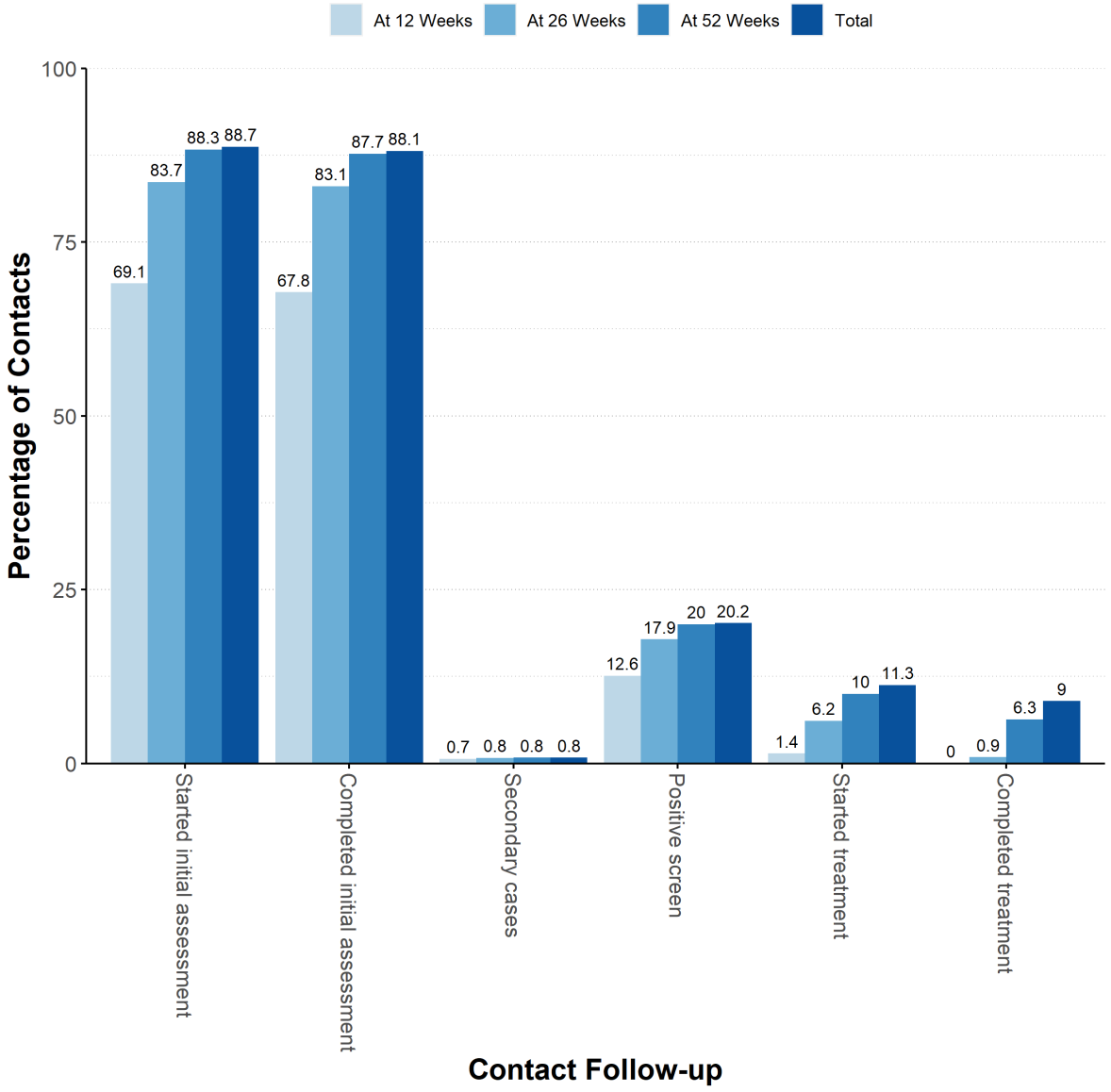
Goal 1: Objective 4

Detect and treat TB cases at an early stage to limit the extent of the disease and prevent transmission

Contact tracing is a fundamental element of TB elimination in regions with a low incidence of disease (3). The purpose of contact tracing is to identify secondary active TB disease and provide treatment for contacts with TB infection to prevent progression of the disease (3, 11, 12). Contact investigations are led by regional health authorities and FNHA. Contact tracing information provided to BCCDC TB Services varies by region and there is currently no provincial database that includes all contact tracing information across BC. For additional information on contact tracing in BC, see Contact Investigation in the TB Communicable Disease Control Manual (12).

In 2023, over 80% of contacts reported to BCCDC started and completed an initial TB assessment within a year of source case diagnosis. Of 332 positive screens (tuberculin skin test [TST] and IGRA positive), 50% started preventative treatment and, of those, 63% completed tuberculosis preventative treatment (TPT) within a year of source case diagnosis (Figure 5). Since 2020, there has been a consistent increase in TB infection treatment starts in BC (13). See Table 6 in Appendix for contact tracing indicator breakdown by year.

Figure 5. Contact tracing indicators among contacts of respiratory TB disease cases in BC aged 5 years and older by completion after source case diagnosis, 2023



Goal 1: Objective 5

Improve accessibility to testing for TB infection and preventative treatment

There are many options to treat TB infection, now known as tuberculosis preventive therapy (TPT). Regimens include four months of rifampin (e.g. 4R), 12 weekly doses of Isoniazid/Rifapentine (e.g. 3HP), and nine months of Isoniazid (e.g. 9H). The accessibility to short course therapy has likely influenced TPT treatment starts but most patients are still looking for shorter and safer regimens without side effects or the need for biomonitoring. Current TPT processes may also limit uptake for some patients (e.g. clinic hours, clinic location) and the lack of access to novel adherence tools makes follow-up labour intensive. New models of care, such as TPT screening and treatment in primary care or migrant care clinics, may better support patient care. While the current version of the TST remains the test of choice for many screening scenarios, IGRA testing is another option that can improve surveillance of screening activities and outcomes, based on the reporting of test results, as well as to monitor the impact on healthcare resources.

Conclusion

The rate of TB disease in BC has been stable over the past decade, with a reported rate of 5.7 per 100,000 in 2024. Stagnant rates over the past eight years highlight a need for new public health approaches to reduce the burden of TB and work toward the national target of eliminating TB by 2035. Public health interventions should focus on identifying and treating TB infection in people born in countries with a higher TB burden, and preventing wider transmission of TB which is currently focused within households (e.g. routine contact follow-up) and among persons who are underhoused (e.g. active disease finding).

Key interventions include early detection and treatment of TB disease, increased access to TB infection treatment to prevent reactivation, and increased screening for TB infection particularly among higher risk groups and contacts of TB cases (2, 5). To increase access to TB treatment and screening among priority populations, there is a need to enhance low-barrier treatment options and centre community perspectives and experiences to improve services for people with TB (5, 7). Timely and consistent access to provincial TB data is required to monitor progress towards TB elimination in BC. BCCDC and provincial health partners are working to coordinate efforts across regional, provincial, and national jurisdictions, which is vital in addressing the burden of TB disease.

Appendices

Table 1. TB disease cases in BC, 2015 to 2024

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
BC	288	255	308	303	314	315	324	328	366	326

Table 2. TB disease rates*+ in BC and Canada, 2015 to 2024

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
BC+	6.0	5.2	6.2	6.0	6.1	6.1	6.2	6.1	6.6	5.7
Canada**	4.6	4.9	5.0	4.8	5.1	4.7	4.0	5.1	5.5	

*All rates are per 100,000 population
+Population denominators come from 2024 Population Estimates from BC Stats
**Canadian rates from the Public Health Agency of Canada,[9,10] data not yet publicly available for 2024

Table 3. TB disease rates*+ by country of birth in BC, 2015 to 2024

Country of Birth	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Born Outside of Canada	17.9	15.1	18.1	18.2	17.4	16.9	17.3	17.1	19.5	16.9
Canadian Born	1.2	1.0	1.4	1.0	1.4	1.5	1.4	1.4	1.1	1.0

*All rates are per 100,000 population
+Population denominators calculated using the 2011, 2016, and 2021 Census from Statistics Canada

Table 4. TB disease rates*+ by country of birth and health authority in BC, 2015 to 2024

Health Authority**	Country of Birth	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Interior Health	Born Outside of Canada	9.1	11.2	13.0	13.6	10.2	10.9	11.5	13.1	15.5	12.4
	Canadian Born	0.2	0.3	0.2	0.8	0.2	0.6	0.7	0.1	0.4	0.1
Fraser Health	Born Outside of Canada	18.5	18.3	20.3	21.5	20.7	20.3	21.5	21.8	21.0	21.0
	Canadian Born	0.9	0.8	1.7	1.7	1.8	2.1	1.1	0.8	1.0	0.9
Vancouver Coastal Health	Born Outside of Canada	21.5	15.1	20.1	17.4	16.0	17.0	14.7	12.9	18.5	14.4

Health Authority**	Country of Birth	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	Canadian Born	2.2	2.2	2.2	0.7	1.8	1.8	1.5	2.7	2.1	1.8
Island Health	Born Outside of Canada	7.9	4.6	6.0	10.3	9.4	6.4	7.6	10.9	13.3	8.5
	Canadian Born	1.0	0.5	1.1	0.3	1.5	0.6	1.6	1.7	1.3	1.3
Northern Health	Born Outside of Canada	14.5	7.1	0.0	10.3	27.2	3.3	26.4	16.3	44.9	6.3
	Canadian Born	3.6	2.8	2.0	1.2	2.4	2.8	4.1	3.3	0.8	1.6

*All rates are per 100,000 population
+Population denominators calculated using the 2011, 2016, and 2021 Census from Statistics Canada
**Residence at time of diagnosis

Table 5. TB disease rates*+ by sex and age group in BC, 2015 to 2024

Gender	Age Group**	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Female	<1 Year	4.6	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1-4 Years	1.1	1.1	1.1	0.0	1.1	2.2	0.0	0.0	3.4	0.0
	5-9 Years	0.9	1.7	0.0	0.0	0.0	0.0	0.8	0.0	0.8	0.0
	10-19 Years	2.0	1.6	2.8	2.0	4.3	5.5	2.4	2.6	2.2	2.9
	20-39 Years	5.5	6.5	6.8	5.8	6.6	6.5	6.7	7.3	7.3	7.0
	40-59 Years	5.9	2.4	4.2	5.9	3.0	3.9	6.5	3.7	5.8	4.1
	60+ Years	11.4	8.4	9.4	8.0	9.6	8.1	8.2	9.1	7.8	6.2
Male	<1 Year	0.0	0.0	4.3	0.0	4.5	0.0	0.0	0.0	0.0	0.0
	1-4 Years	1.1	1.0	3.1	2.1	0.0	0.0	3.2	0.0	2.2	1.1
	5-9 Years	0.0	0.0	1.6	0.0	0.8	0.0	0.0	0.0	0.0	1.5
	10-19 Years	1.9	1.5	3.0	1.1	2.6	2.2	0.4	2.1	3.8	2.0
	20-39 Years	3.6	4.2	4.7	7.0	6.0	6.9	7.2	4.8	7.8	5.7
	40-59 Years	6.3	6.5	6.1	5.5	4.8	6.4	5.2	7.7	7.5	6.4
	60+ Years	11.8	10.6	13.6	12.1	13.5	10.6	10.6	11.4	9.9	10.8

*All rates are per 100,000 population
+Population denominators come from 2024 Population Estimates from BC Stats
**Age at time of diagnosis

Table 6. Contact tracing indicators among contacts of respiratory cases* in BC aged 5 years and older by completion at 52 weeks after source case diagnosis, 2021 to 2023

52 Weeks Post Source Case Diagnosis	Count			Percentage^		
Indicator	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
Number of contacts	**1528**	**990**	**1658**	**100.0**	**100.0**	**100.0**
Started initial assessment	**1283**	**883**	**1464**	**84.0**	**89.2**	**88.3**
Completed initial assessment*	**1277**	**879**	**1454**	**83.6**	**88.8**	**87.7**
- IGRA	387	43	42	25.3	4.3	2.5
- TST	541	550	1094	35.4	55.6	66.0
- XRay	349	286	318	22.8	28.9	19.2
Secondary cases	**13**	**10**	**14**	**0.9**	**1.0**	**0.8**
Positive screen**	**195**	**220**	**332**	**12.8**	**22.2**	**20.0**
- IGRA	106	45	46	6.9	4.5	2.8
- TST	89	175	286	5.8	17.7	17.2
Started treatment	**107**	**125**	**166**	**7.0**	**12.6**	**10.0**
Completed treatment	**58**	**76**	**105**	**3.8**	**7.7**	**6.3**

*Using earliest screening date
**For contacts with both IGRA and TST positive results, the IGRA date and result was used
^Percentage of total contacts reported

Data Sources

Panorama

TB data presented in this report were extracted from Panorama on March 3, 2025.

Population Data

Population data for the general BC population, including age, sex, and health authority, were derived from the BC Population Estimates published by BC Stats on February 9, 2025. Population data for people born outside of Canada and people born in Canada were estimated using the 2011, 2016, and 2021 Census Program data from Statistics Canada. Estimates for people born outside of Canada were calculated based on the sum of “immigrant” and “non-permanent resident” counts, while Canadian born estimates were based on the “non-immigrant” counts. For the years between the census, populations were projected assuming proportional annual change.

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