

TB Annual Surveillance Report 2024

Supplemental Appendix

All data are preliminary and subject to change.

Table of Contents

S1-A. TB Disease Cases and Rates** in BC and Canada, 2015 to 2024	4
S1-B. TB Disease Cases by Sex and Age Group in BC, 2015 to 2024	4
S1-C. TB Disease Rates by Sex and Age Group in BC, 2015 to 2024	5
S2-A. Percentage of TB Disease Among Canadian Born Population by Age Group, 2015 to 2024	5
S2-B. Percentage of TB Disease Among Population Born Outside of Canada by Age Group, 2015 to 2024	6
S2-C. TB Disease Cases by Country of Birth and Health Authority in BC, 2015 to 2024	6
S3. TB Disease Cases by Site of Disease, 2015 to 2024	7
S4-A. Percentage of TB Disease Cases by Treatment Outcome, 2015 to 2023	7
S4-B. TB Disease Cases by Reason for Incomplete Treatment, 2015 to 2023	7
S4-C. Percentage of TB Disease Cases by Reason for Incomplete Treatment, 2015 to 2023	8
S5-A. TB Disease Cases with Drug Resistance, 2016* to 2024	8
S5-B. Percentage of TB Disease Cases with Drug Resistance, 2016* to 2024	8
S7-A. Mean, Median, Max, and Total Number of Contacts* Reported per Respiratory TB Disease Case in BC, 2015** to 2024	9
S7-B. Contacts of Respiratory TB Disease Cases in BC by Age Group, 2015* to 2024	9
S7-C. Percentage of Contacts of Respiratory TB Disease Cases in BC by Age Group, 2015* to 2024	9
S8-A. Contacts of Respiratory TB Disease Cases in BC by Country of Birth, 2015* to 2024	10
S8-B. Percentage of Contacts of Respiratory TB Disease Cases in BC by Country of Birth, 2015* to 2024	10
S9. Contact Tracing Indicators Among Contacts of Respiratory TB Disease Cases 5 Years and Older at 12 Weeks Post Source Case Diagnosis in BC, 2021 to 2023	10
S10. Contact Tracing Indicators Among Contacts of Respiratory TB Disease Cases* 5 Years and Older at 26 Weeks Post Source Case Diagnosis in BC, 2021 to 2023	11
S11. Contact Tracing Indicators Among Contacts of Respiratory TB Disease Cases* 5 Years and Older at Total Completion† Post Source Case Diagnosis in BC, 2021 to 2023	12
S12-A. Total Clients Started on TBI Therapy by Treatment Outcome, 2015 to 2023	12
S12-B. Percentage of Clients Started on TBI Therapy by Treatment Outcome, 2015 to 2023	13

Supplementary Data

S1-A. TB Disease Cases and Rates** in BC and Canada, 2015 to 2024

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
BC count	288	255	308	303	314	315	324	328	367	330
BC+	6.0	5.2	6.2	6.0	6.1	6.1	6.2	6.1	6.6	5.8
Canada**	4.6	4.9	5.0	4.8	5.1	4.7	4.9	5.1	5.5	NA

*All rates are per 100,000 population. *Population denominators from 2024 BC Statistics' Population Estimates. **Canadian rates from the Public Health Agency of Canada; Canadian 2024 rates were not available at the time of report publication.

S1-B. TB Disease Cases by Sex and Age Group in BC, 2015 to 2024

Sex	Age Group*	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Female	<1 Year	1	1	0	0	0	0	0	0	0	0
	1-4 Years	1	1	1	0	1	2	0	0	3	0
	5-9 Years	1	2	0	0	0	0	1	0	1	0
	10-19 Years	5	4	7	5	11	14	6	7	6	8
	20-39 Years	35	42	45	40	47	47	49	55	58	60
	40-59 Years	42	17	30	41	21	27	45	26	41	31
	60+ Years	68	52	60	53	66	57	60	68	60	49
Male	<1 Year	0	0	1	0	1	0	0	0	0	0
	1-4 Years	1	1	3	2	0	0	3	0	2	1
	5-9 Years	0	0	2	0	1	0	0	0	0	2
	10-19 Years	5	4	8	3	7	6	1	6	11	6
	20-39 Years	23	28	32	50	44	52	55	38	65	51
	40-59 Years	43	44	41	37	32	43	35	52	52	45
	60+ Years	63	59	78	72	83	67	69	76	68	77

*Age at time of diagnosis.

S1-C. TB Disease Rates by Sex and Age Group in BC, 2015 to 2024

Sex	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	7.1
	40-59 Years	5.9	2.4	4.2	5.9	3.0	3.9	6.5	3.7	5.8	4.3
	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	5.8
	40-59 Years	6.3	6.5	6.1	5.5	4.8	6.4	5.2	7.7	7.6	6.4
	60+ Years	11.8	10.6	13.6	12.1	13.5	10.6	10.6	11.4	9.9	10.9

*Age at time of diagnosis.

S2-A. Percentage of TB Disease Among Canadian Born Population by Age Group, 2015 to 2024

Age Group*	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<1 Year	2.6	3.0	2.3	0.0	2.1	0.0	0.0	0.0	0.0	0.0
1-4 Years	2.6	6.1	6.8	0.0	0.0	4.1	4.3	0.0	13.2	2.9
5-9 Years	0.0	6.1	4.5	0.0	0.0	0.0	2.1	0.0	2.6	2.9
10-19 Years	10.3	3.0	9.1	0.0	8.5	10.2	2.1	4.3	2.6	5.7
20-39 Years	20.5	24.2	31.8	18.8	19.1	20.4	21.3	21.3	34.2	14.3
40-59 Years	35.9	27.3	29.5	40.6	29.8	36.7	38.3	34.0	23.7	45.7
60+ Years	28.2	30.3	15.9	40.6	40.4	28.6	31.9	40.4	23.7	28.6

*Age at time of diagnosis.

S2-B. Percentage of TB Disease Among Population Born Outside of Canada by Age Group, 2015 to 2024

Age Group*	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<1 Year	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-4 Years	0.4	0.0	0.4	0.7	0.0	0.0	0.4	0.0	0.0	0.0
5-9 Years	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.3
10-19 Years	2.4	3.3	4.2	3.0	5.3	5.7	2.2	3.9	4.9	4.1
20-39 Years	20.4	28.4	23.9	31.2	31.1	33.5	34.1	29.6	33.4	36.1
40-59 Years	28.2	23.2	22.0	24.2	14.4	19.8	22.5	21.8	25.5	20.4
60+ Years	48.2	45.0	49.4	40.9	48.9	41.1	40.9	44.6	36.2	39.1

*Age at time of diagnosis.

S2-C. TB Disease Cases 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	8	10	12	13	10	11	12	14	17	14
	Canadian Born	1	2	1	5	1	4	5	1	3	1
Fraser Health	Born Outside of Canada	113	115	133	146	146	148	162	170	169	178
	Canadian Born	10	8	18	18	19	23	12	9	11	10
Vancouver Coastal Health	Born Outside of Canada	110	78	106	93	87	94	83	74	109	85
	Canadian Born	13	13	13	4	11	11	9	17	13	11
Island Health	Born Outside of Canada	10	6	8	14	13	9	11	16	20	14
	Canadian Born	6	3	7	2	10	4	11	12	9	9
Northern Health	Born Outside of Canada	4	2	0	3	8	1	8	5	14	2
	Canadian Born	9	7	5	3	6	7	10	8	2	4

*Residence at time of diagnosis. Excludes missing and unknown geography (n=2).

S3. TB Disease Cases by Site of Disease, 2015 to 2024

Site of Disease	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Non-respiratory only**	72	55	67	70	67	63	70	81	79	65
Respiratory*	216	200	241	233	247	252	254	247	288	265

*Respiratory includes all cases defined as pulmonary, primary, miliary, and other pulmonary (see case definition). **Non-respiratory only includes cases with no respiratory site present but at least one non-respiratory site present (see case definition).

S4-A. Percentage of TB Disease Cases by Treatment Outcome, 2015 to 2023

Treatment Outcome*	2015	2016	2017	2018	2019	2020	2021	2022	2023
Treatment Completed	82	79	82	80	80	85	83	83	82
- Within 12 Months	65	64	70	71	65	68	76	74	75
- Greater Than 12 Months	16	14	12	9	15	17	8	9	7
Incomplete Treatment	3	3	6	3	7	5	3	3	4
Left Province During Treatment	3	7	2	5	5	2	3	4	4
Died During Treatment	10	10	6	8	6	6	8	8	5
No Treatment Documented	3	1	4	4	1	1	2	2	4

*Excluding those diagnosed post-mortem. See case definitions. Cases without documented treatment may include individuals for whom follow-up is ongoing, individuals who were not treated, and/or instances where treatment information was not adequately captured within Panorama; data remediation is routinely ongoing.

S4-B. TB Disease Cases by Reason for Incomplete Treatment, 2015 to 2023

Documented Reason	2015	2016	2017	2018	2019	2020	2021	2022	2023
Drug Reaction/Intolerance	0	2	0	1	4	3	4	2	5
Lost to Follow Up	2	2	7	5	10	4	3	2	2
Non-Adherence	2	2	1	3	1	2	0	2	0
Other	0	0	1	0	5	4	1	1	3
Unknown	4	2	8	0	1	3	1	3	6

S4-C. Percentage of TB Disease Cases by Reason for Incomplete Treatment, 2015 to 2023

Documented Reason	2015	2016	2017	2018	2019	2020	2021	2022	2023
Drug Reaction/Intolerance	0.0	25.0	0.0	11.1	19.0	18.8	44.4	20	31.2
Lost to Follow Up	25.0	25.0	41.2	55.6	47.6	25.0	33.3	20	12.5
Non-Adherence	25.0	25.0	5.9	33.3	4.8	12.5	0.0	20	0.0
Other	0.0	0.0	5.9	0.0	23.8	25.0	11.1	10	18.8
Unknown	50.0	25.0	47.1	0.0	4.8	18.8	11.1	30	37.5

S5-A. TB Disease Cases with Drug Resistance, 2016* to 2024

Resistance	2016	2017	2018	2019	2020	2021	2022	2023	2024
Isoniazid Only	19	16	18	21	23	28	19	22	26
Rifampin Only	0	0	2	0	0	0	1	1	1
Multi-Drug**	3	2	1	2	2	1	5	5	4
Susceptible***	174	240	231	244	253	246	267	284	257
No Resistance Information Documented	59	50	51	47	37	49	36	55	42

*iPHIS data before 2016 was not available for reporting. **Multi-drug resistance is defined as resistance to both isoniazid and rifampin. ***Susceptible to isoniazid and rifampin.

S5-B. Percentage of TB Disease Cases with Drug Resistance, 2016* to 2024

Resistance	2016	2017	2018	2019	2020	2021	2022	2023	2024
Isoniazid Only	7.5	5.2	5.9	6.7	7.3	8.6	5.8	6.0	7.9
Rifampin Only	0.0	0.0	0.7	0.0	0.0	0.0	0.3	0.3	0.3
Multi-Drug**	1.2	0.6	0.3	0.6	0.6	0.3	1.5	1.4	1.2
Susceptible***	68.2	77.9	76.2	77.7	80.3	75.9	81.4	77.4	77.9
No Resistance Information Documented	23.1	16.2	16.8	15.0	11.7	15.1	11.0	15.0	12.7

*iPHIS data before 2016 was not available for reporting. **Multi-drug resistance is defined as resistance to both isoniazid and rifampin. ***Susceptible to isoniazid and rifampin.

S7-A. Mean, Median, Max, and Total Number of Contacts* Reported per Respiratory TB Disease Case in BC, 2015** to 2024

Measure	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Mean	10.3	9.4	10.3	10.2	8.9	5.2	6.0	4.0	5.8	5.4
Median	6.0	6.0	5.0	4.0	3.0	3.0	3.0	2.0	2.0	2.0
Max	99	89	234	98	216	44	78	36	206	271
Total	1864	1887	2476	2368	2199	1300	1530	992	1664	1438

* Excludes anonymous contacts. **Data before 2016 are from iPHIS.

S7-B. Contacts of Respiratory TB Disease Cases in BC by Age Group, 2015* to 2024

Age Group**	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<1 Year	20	31	21	26	18	24	19	24	26	17
1-4 Years	104	114	157	91	105	55	52	80	92	69
5-9 Years	66	87	68	76	45	53	54	34	48	42
10-19 Years	84	111	134	157	300	126	257	76	125	57
20-39 Years	537	578	756	882	681	453	483	326	522	509
40-59 Years	665	573	814	792	711	356	392	277	475	464
60+ Years	366	389	526	344	339	233	273	175	376	280
Unknown	22	4	0	0	0	0	0	0	0	0

*Data before 2016 are from iPHIS. **Age of contact at time of source TB case diagnosis.

S7-C. Percentage of Contacts of Respiratory TB Disease Cases in BC by Age Group, 2015* to 2024

Age Group**	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<1 Year	1.1	1.6	0.8	1.1	0.8	1.8	1.2	2.4	1.6	1.2
1-4 Years	5.6	6.0	6.3	3.8	4.8	4.2	3.4	8.1	5.5	4.8
5-9 Years	3.5	4.6	2.7	3.2	2.0	4.1	3.5	3.4	2.9	2.9
10-19 Years	4.5	5.9	5.4	6.6	13.6	9.7	16.8	7.7	7.5	4.0
20-39 Years	28.8	30.6	30.5	37.2	31.0	34.8	31.6	32.9	31.4	35.4

Age Group**	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
40-59 Years	35.7	30.4	32.9	33.4	32.3	27.4	25.6	27.9	28.5	32.3
60+ Years	19.6	20.6	21.2	14.5	15.4	17.9	17.8	17.6	22.6	19.5
Unknown	1.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

*Data before 2016 are from iPHIS. **Age of contact at time of source TB case diagnosis.

S8-A. Contacts of Respiratory TB Disease Cases in BC by Country of Birth, 2015* to 2024

Country of Birth	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Born Outside of Canada	906	769	973	1177	758	620	703	468	715	580
Canadian Born	769	788	993	922	937	503	650	390	634	568
Missing**	189	330	510	269	504	177	177	134	315	290

*Data before 2016 are from iPHIS. **Unknown or undocumented country of birth.

S8-B. Percentage of Contacts of Respiratory TB Disease Cases in BC by Country of Birth, 2015* to 2024

Country of Birth	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Born Outside of Canada	48.6	40.8	39.3	49.7	34.5	47.7	45.9	47.2	43.0	40.3
Canadian Born	41.3	41.8	40.1	38.9	42.6	38.7	42.5	39.3	38.1	39.5
Missing**	10.1	17.5	20.6	11.4	22.9	13.6	11.6	13.5	18.9	20.2

*Data before 2016 are from iPHIS. **Unknown or undocumented country of birth.

S9. Contact Tracing Indicators Among Contacts of Respiratory TB Disease Cases 5 Years and Older at 12 Weeks Post Source Case Diagnosis in BC, 2021 to 2023

12 Weeks Post Source Case Diagnosis	Count		
Indicator	2021	2022	2023
Total number of contacts	1528	992	1661
Started initial assessment	799	640	1148
Completed initial assessment*	787	627	1127
- IGRA	112	30	33
- TST	444	384	847

12 Weeks Post Source Case Diagnosis	Count		
Indicator	2021	2022	2023
- XRay	231	213	247
Secondary cases	10	7	11
Positive screen**	107	129	208
- IGRA	35	12	13
- TST	72	117	195
Started treatment	14	26	24
Completed treatment	0	0	0

*Using earliest screening date. **For contacts with both IGRA and TST positive results, the IGRA date and result was used.

S10. Contact Tracing Indicators Among Contacts of Respiratory TB Disease Cases* 5 Years and Older at 26 Weeks Post Source Case Diagnosis in BC, 2021 to 2023

26 Weeks Post Source Case Diagnosis	Count		
Indicator	2021	2022	2023
Total number of contacts	1528	992	1661
Started initial assessment	1207	786	1390
Completed initial assessment*	1199	782	1380
- IGRA	342	40	42
- TST	521	481	1034
- XRay	336	261	304
Secondary cases	12	9	13
Positive screen**	182	183	295
- IGRA	97	32	34
- TST	85	151	261
Started treatment	54	81	102
Completed treatment	4	14	15

*Using earliest screening date. **For contacts with both IGRA and TST positive results, the IGRA date and result was used.

S11. Contact Tracing Indicators Among Contacts of Respiratory TB Disease Cases* 5 Years and Older at Total Completion† Post Source Case Diagnosis in BC, 2021 to 2023

Total Completion Post Source Case Diagnosis	Count		
Indicator	2021	2022	2023
Total number of contacts	1528	992	1661
Started initial assessment	1294	915	1474
Completed initial assessment*	1288	911	1464
- IGRA	390	43	42
- TST	546	576	1101
- XRay	352	292	321
Secondary cases	15	12	15
Positive screen**	195	241	334
- IGRA	106	51	47
- TST	89	190	287
Started treatment	121	145	188
Completed treatment	104	118	155

†Total completion is reported at 2 years post source case diagnosis for all indicators except for secondary case identification, which may be reported up to the date of data extraction. *Using earliest screening date. **For contacts with both IGRA and TST positive results, the IGRA date and result was used.

S12-A. Total Clients Started on TBI Therapy by Treatment Outcome, 2015 to 2023

Treatment Outcome	2015	2016	2017	2018	2019	2020	2021	2022	2023
Treatment Completed	599	454	504	618	584	526	568	632	844
- Within 6 Months	234	171	184	391	439	398	429	520	703
- Within 6 - 12 Months	349	276	310	222	143	121	131	105	138
- Greater Than 12 Months	16	7	10	5	2	7	8	7	3
Incomplete Treatment	260	221	182	212	181	116	96	131	156
Total	859	675	686	830	765	642	664	763	1000

S12-B. Percentage of Clients Started on TBI Therapy by Treatment Outcome, 2015 to 2023

Treatment Outcome	2015	2016	2017	2018	2019	2020	2021	2022	2023
Treatment Completed	69.7	67.2	73.5	74.4	76.4	81.9	85.5	82.9	84.4
- Within 6 Months	27.2	25.3	26.8	47.1	57.4	62.0	64.6	68.2	70.3
- Within 6 - 12 Months	40.6	40.9	45.2	26.7	18.7	18.8	19.7	13.8	13.8
- Greater Than 12 Months	1.9	1.0	1.5	0.6	0.3	1.1	1.2	0.9	0.3
Incomplete Treatment	30.3	32.7	26.5	25.5	23.7	18.1	14.5	17.2	15.6