

EPIDEMIOLOGICAL SUMMARY

Tuberculosis in Ontario: January 1, 2020 to December 31, 2024

Published: April 2025

Introduction

This report, to be published on a quarterly basis, provides an epidemiologic summary of active tuberculosis (TB) disease and latent TB infection (LTBI) in Ontario and includes information available from Ontario's integrated Public Health Information System (iPHIS) as of **April 7, 2025**.

The current provincial case definition for TB can be found in [Appendix 1 of the Infectious Disease Protocol for Tuberculosis](#).¹

For further information regarding TB, including signs, symptoms, and how to reduce the risk of infection, visit Public Health Ontario's (PHO) [Tuberculosis \(TB\) webpage](#).²

Surveillance data for active TB and latent TB infection reported between 2020 and 2022 should be interpreted with caution due to changes in the availability of health care, health seeking behaviour, public health follow-up, and case entry during the COVID-19 pandemic.

Key Messages

- The provincial quarterly incidence of active TB increased in 2024, continuing the trend that started in 2022. Quarterly incidence reached its highest rate since January 1, 2020 with 1.7 cases per 100,000 population in Q2 and Q3 (April to September) of 2024. Although the quarterly incidence declined in Q4 (October to December) compared to Q2 and Q3, the annual incidence in 2024 remains the highest in the last 5-year period.
- This increasing provincial trend in confirmed TB cases underscores the ongoing need for effective TB prevention and care as well as ongoing local and provincial surveillance to further understand the factors that may be contributing to these recent increases.
- The [In Focus](#) section of this quarter's report provides an in-depth analysis of Ontario's progress toward TB pre-elimination as outlined in the World Health Organization's (WHO) [End TB Strategy](#).³ At present, Ontario is not on track to reach TB pre-elimination by 2035. Reaching TB elimination in Ontario will require intensified and coordinated efforts to address the disproportionate and inequitable burden of disease among those born outside of Canada and within Canadian-born Indigenous populations, the latter of which needs to consider both the historical context and socio-economic factors.

- The COVID-19 pandemic coincided with a sharp decline in the number of provincial notifications of latent TB infection. The number of LTBI reported in Ontario has since increased to pre-pandemic levels. Further increases in the identification and diagnosis of LTBI represent additional opportunities for preventive treatment of LTBI to avert future active TB cases, an important step to meeting reduction targets for active cases. Addressing LTBI is a key component of the WHO's [Framework Towards TB Elimination in Low Incidence Countries](#).⁴

Highlights

Active TB

- Between January 1, 2020 and December 31, 2024, the quarterly incidence of active TB ranged from a low of 1.0 case per 100,000 population to a high of 1.7 cases per 100,000 population. ([Figure 1](#))
- Rates of active TB have been generally higher in males compared to females, with the quarterly incidence ranging between 1.1 to 2.0 cases per 100,000 population for males and between 0.7 to 1.5 cases per 100,000 population for females. ([Figure 2](#))
- Overall, adults 80 years of age and older had the highest rates of active TB (range: 1.1 to 4.2 cases per 100,000 population), followed by those 20-39 years of age (range: 1.3 to 2.4 cases per 100,000 population) and those 60-79 years of age (range: 0.9 to 2.0 cases per 100,000 population). ([Figure 3](#))
- Between January 1, 2024 and December 31, 2024 (i.e., the last 12 months), Porcupine Health Unit had the highest rate of active TB at 18.3 cases per 100,000 population, followed by Toronto Public Health, Peel Public Health, and Thunder Bay District Health Unit at 11.6, 10.3, and 9.4 cases per 100,000 population, respectively. ([Figure 4](#))
- Over the last five years (January 1, 2020 to December 31, 2024), the Toronto region has consistently had the highest quarterly rate of active TB (range: 2.0 to 3.5 cases per 100,000 population). ([Figure 5](#))

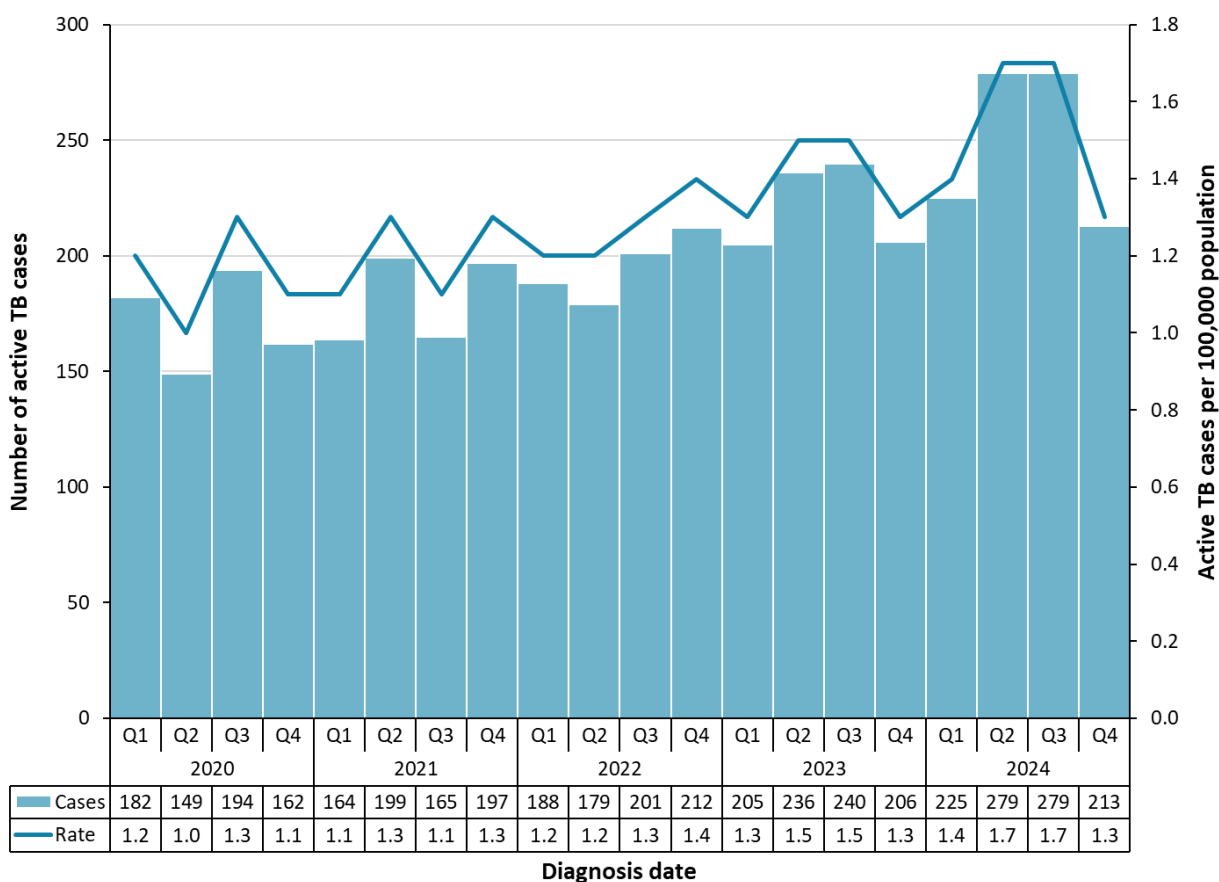
Latent TB Infection

- Following declines in notifications during the COVID-19 pandemic, LTBI rates have gradually increased, reaching an average quarterly rate of 13.5 infections per 100,000 population in the last 12 months. ([Figure 6](#))
- Rates of LTBI have been consistently higher in females compared to males. Since October 1, 2020 (i.e., following the sharp decrease observed at the start of the COVID-19 pandemic), the quarterly LTBI incidence has ranged from 7.8 to 18.2 infections per 100,000 population for females and between 4.5 to 10.8 infections per 100,000 population for males. ([Figure 7](#))
- Overall, those aged 20-39 years had the highest rates of LTBI which, since October 1, 2020, have ranged between 11.7 to 28.8 infections per 100,000 population. ([Figure 8](#))
- Between January 1, 2024 and December 31, 2024 (i.e., the last 12 months), Peterborough Public Health and Porcupine Health Unit had the highest rates of LTBI at 197.6 and 123.3 infections per 100,000 population, respectively. ([Figure 9](#))
- Since October 1, 2020, the quarterly incidence rates of LTBI have fluctuated widely across the regions, with the Eastern and North East regions reporting the highest rates, averaging 14.4 and 13.2 infections per 100,000 population, respectively. ([Figure 10](#))

Active TB

Quarterly Trends

Figure 1: Active TB Cases and Rates Per 100,000 Population by Diagnosis Date: January 1, 2020 to December 31, 2024

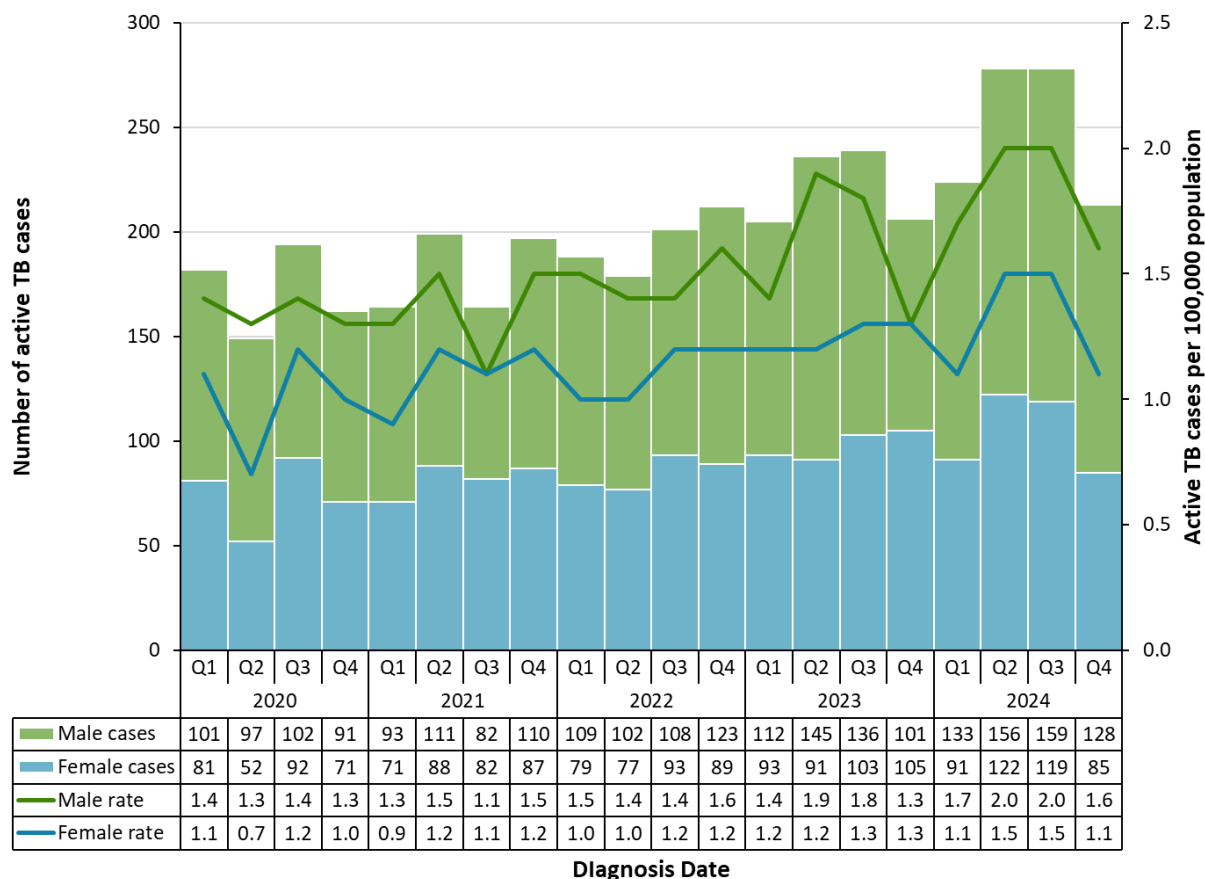


Data sources: Cases: Integrated Public Health Information System (iPHIS). Population denominators: Ontario. Ministry of Finance.⁵

Note: Q1=January 1-March 31; Q2=April 1-June 30; Q3=July 1-September 30; Q4=October 1-December 31

Sex and Age Group

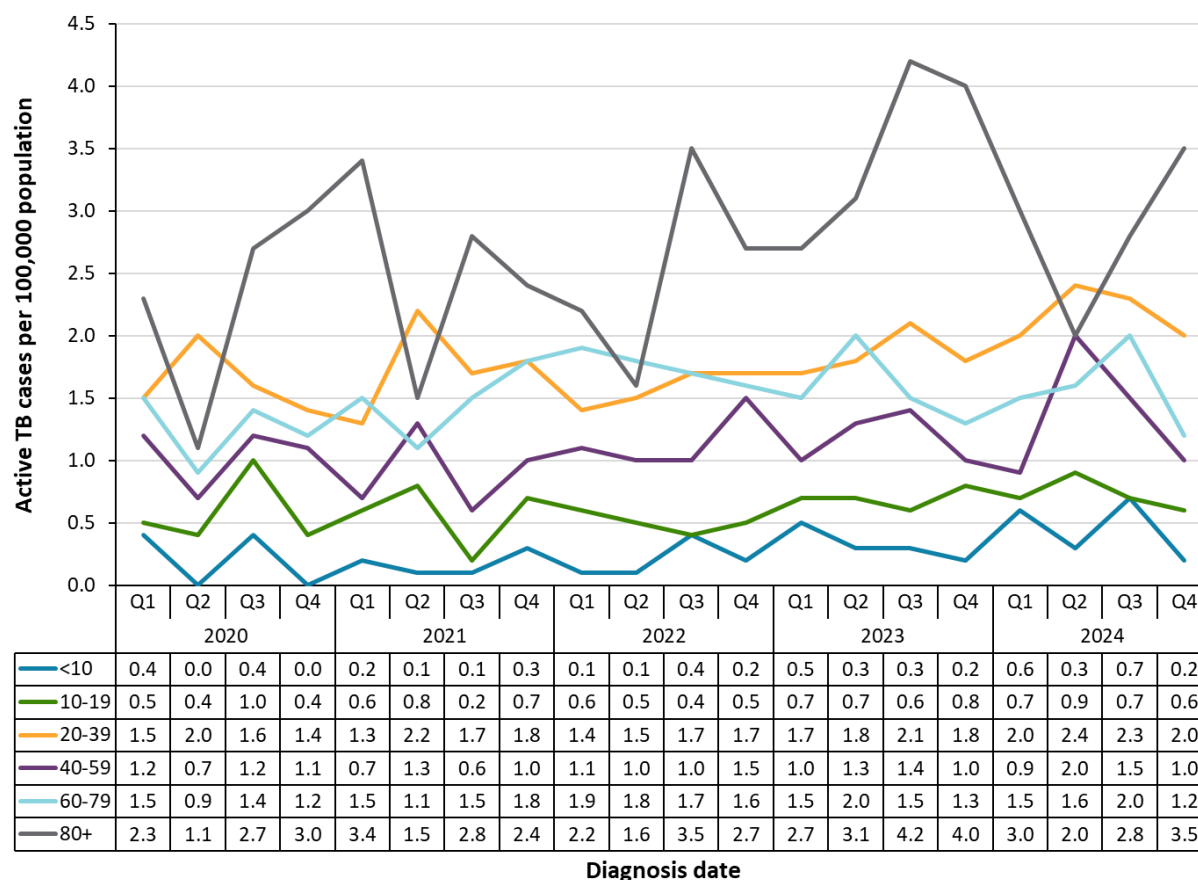
Figure 2: Active TB Cases and Rates Per 100,000 Population by Sex and Diagnosis Date: January 1, 2020 to December 31, 2024



Data sources: Cases: Integrated Public Health Information System (iPHIS) Population denominators: Ontario. Ministry of Finance.⁵

Notes: Q1=January 1-March 31; Q2=April 1-June 30; Q3=July 1-September 30; Q4=October 1-December 31. Excludes active TB cases that did not identify as male or female.

Figure 3: Active TB Rates Per 100,000 Population by Age Group (years) and Diagnosis Date: January 1, 2020 to December 31, 2024



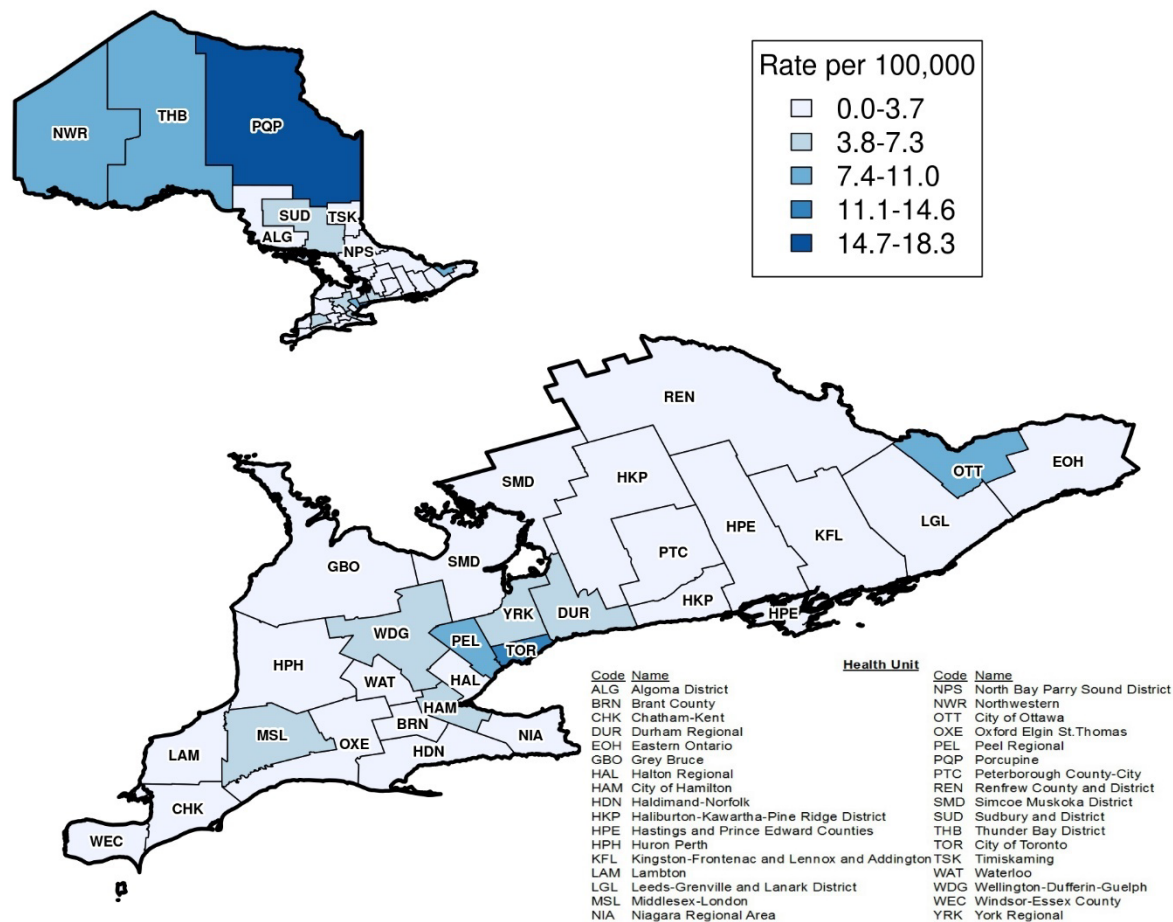
Data sources: Cases: Integrated Public Health Information System (iPHIS) Population denominators: Ontario. Ministry of Finance.⁵

Note: Q1=January 1-March 31; Q2=April 1-June 30; Q3=July 1-September 30; Q4=October 1-December 31.

Unknown ages were excluded from analyses.

Geography

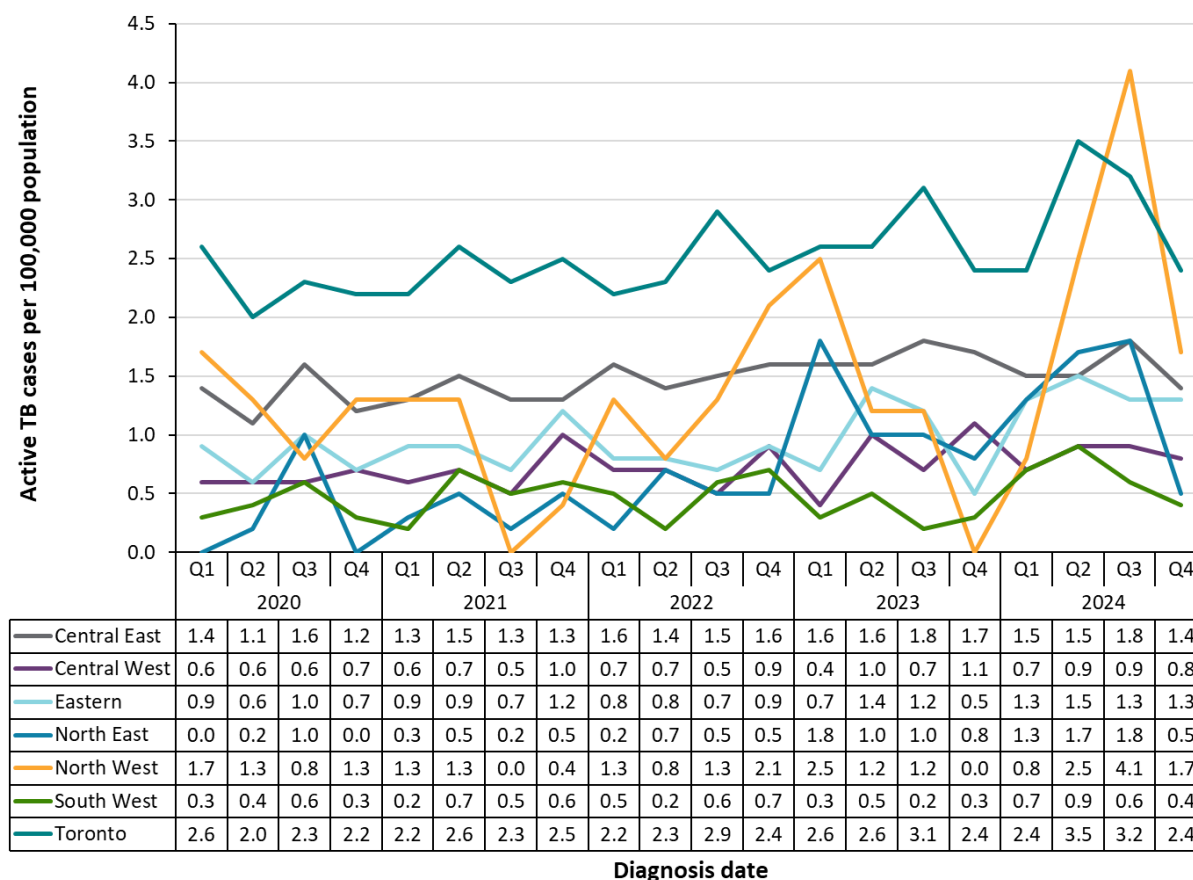
Figure 4: Active TB Rates Per 100,000 Population by Public Health Unit: January 1, 2024 to December 31, 2024 (i.e., last 12 months)



Data sources: Cases: Integrated Public Health Information System (iPHIS). Population denominators: Ontario. Ministry of Finance.⁵

Note: See [Appendix A](#) for the full list of public health unit names and their 3-letter abbreviations, as well as annual rates by PHU for the years 2019-2024.

Figure 5: Active TB Rates Per 100,000 Population by Provincial Region: January 1, 2020 to December 31, 2024



Data sources: Cases: Integrated Public Health Information System (iPHIS). Population denominators: Ontario. Ministry of Finance.⁵

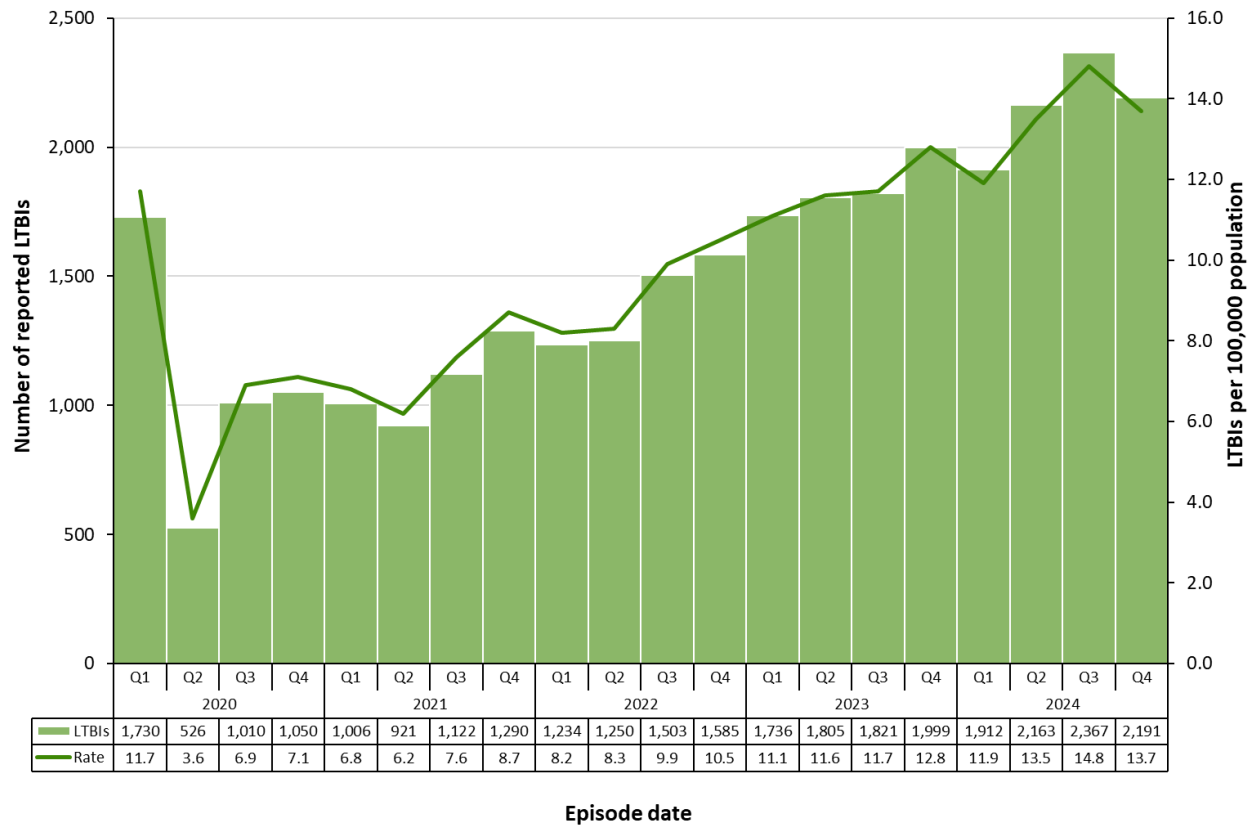
Notes: Q1=January 1-March 31; Q2=April 1-June 30; Q3=July 1-September 30; Q4=October 1-December 31

The public health units that make up each provincial region can be found in [Appendix A](#).

Latent TB Infections

Quarterly Trends

Figure 6: Reported LTBI Cases and Rates Per 100,000 Population by Episode Date: January 1, 2020 to December 31, 2024

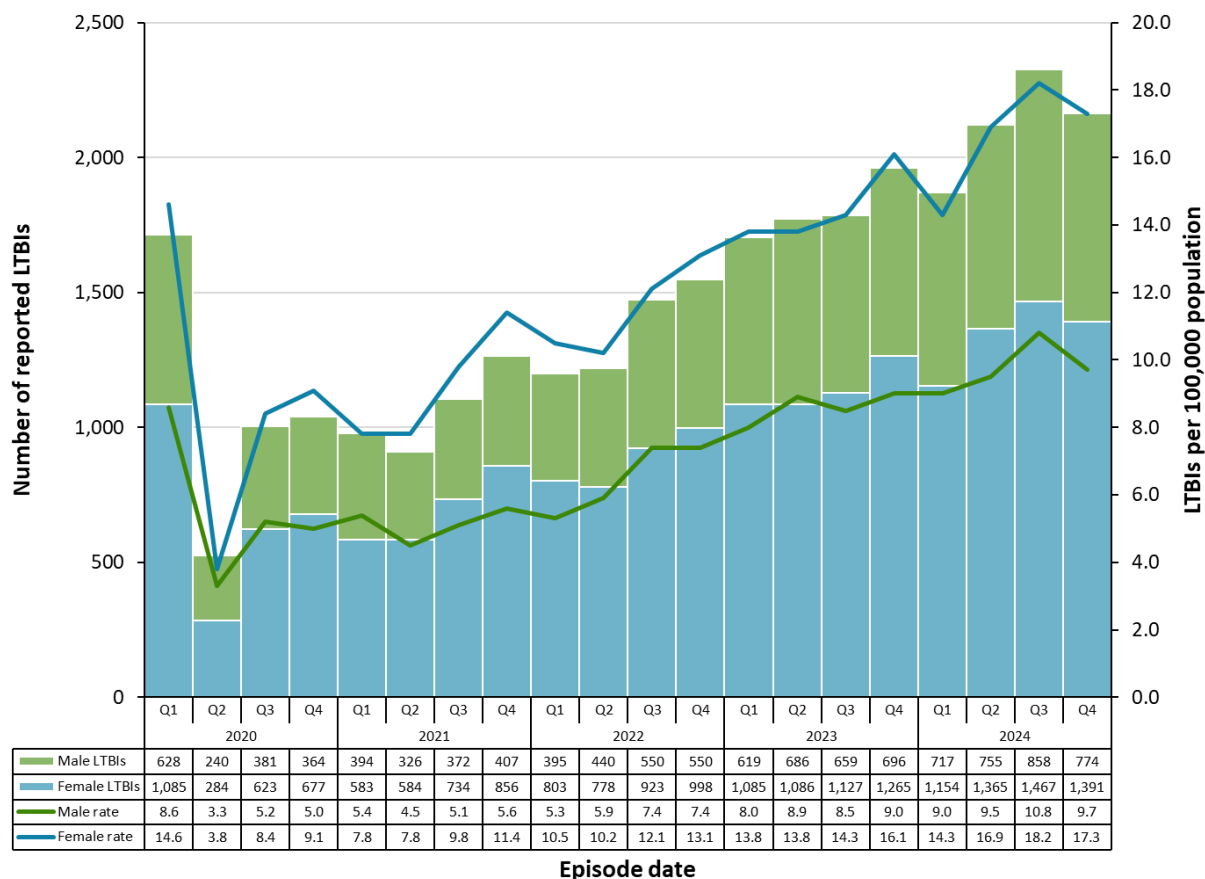


Data sources: LTBIs: Integrated Public Health Information System (iPHIS). Population denominators: Ontario. Ministry of Finance.⁵

Note: Q1=January 1-March 31; Q2=April 1-June 30; Q3=July 1-September 30; Q4=October 1-December 31

Sex and Age Group

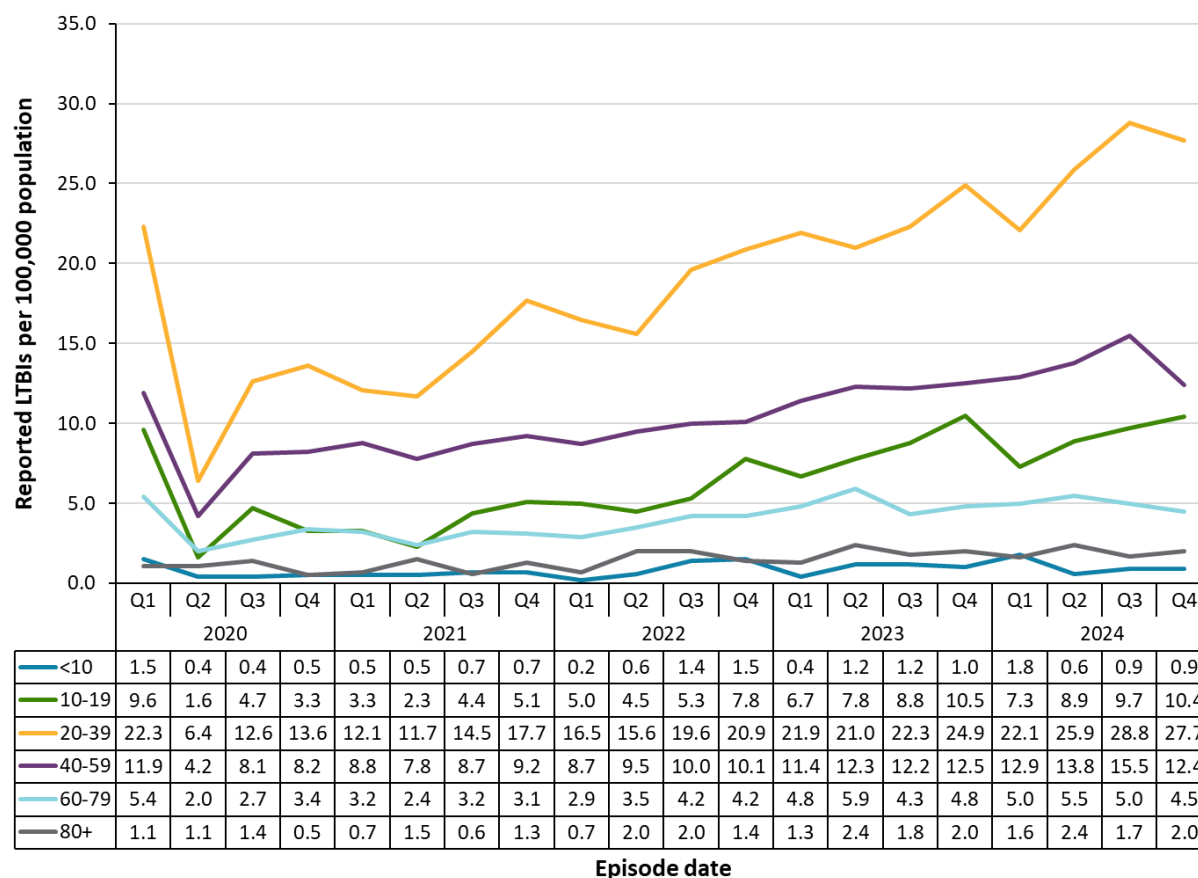
Figure 7: Reported LTBI Cases and Rates Per 100,000 Population by Sex and Episode Date: January 1, 2020 to December 31, 2024



Data sources: LTBI: Integrated Public Health Information System (iPHIS) Population denominators: Ontario. Ministry of Finance.⁵

Note: Q1=January 1-March 31; Q2=April 1-June 30; Q3=July 1-September 30; Q4=October 1-December 31. Excludes reported cases of LTBI that did not identify as male or female.

Figure 8: Reported LTBI Rates Per 100,000 Population by Age Group (years): January 1, 2020 to December 31, 2024



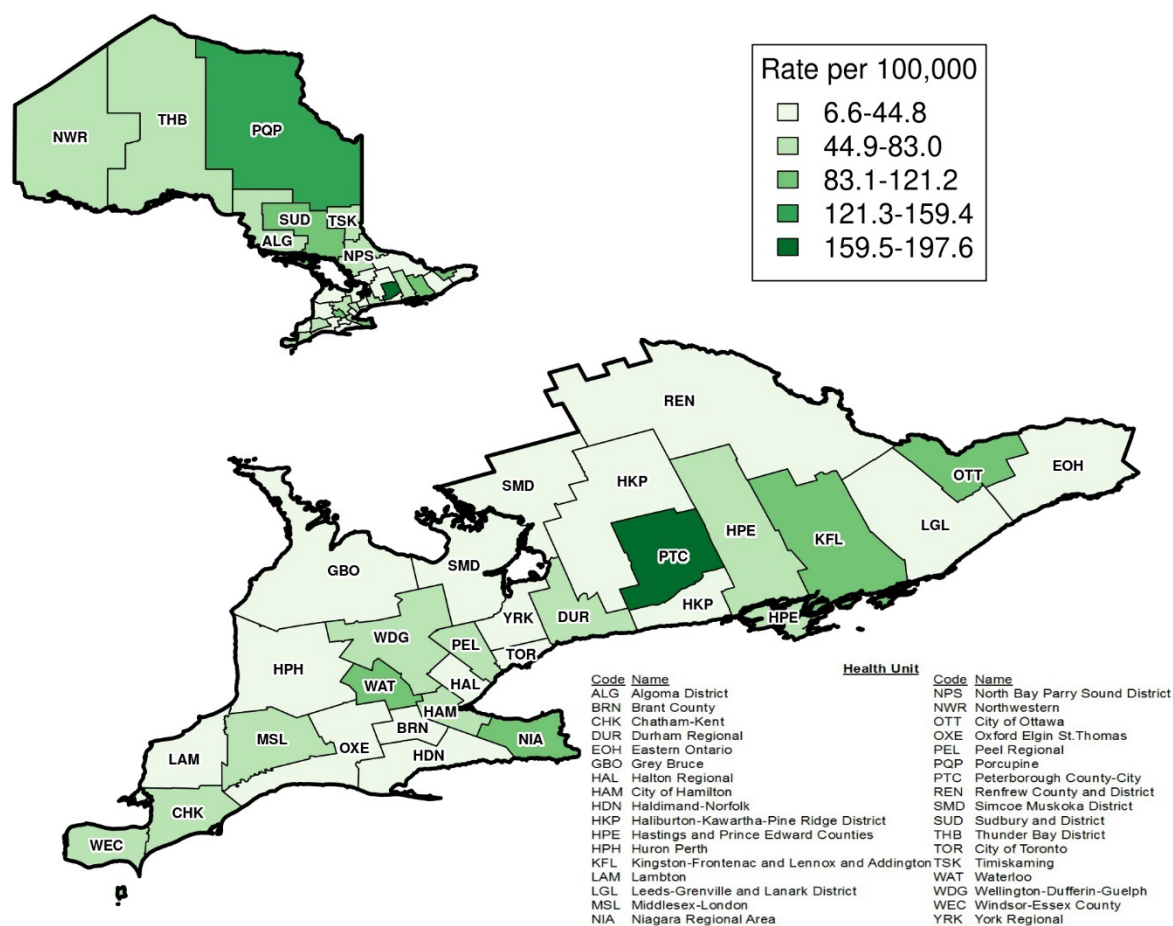
Data sources: LTBI: Integrated Public Health Information System (iPHIS). Population denominators: Ontario. Ministry of Finance.⁵

Note: Q1=January 1-March 31; Q2=April 1-June 30; Q3=July 1-September 30; Q4=October 1-December 31.

Unknown ages were excluded from analyses.

Geography

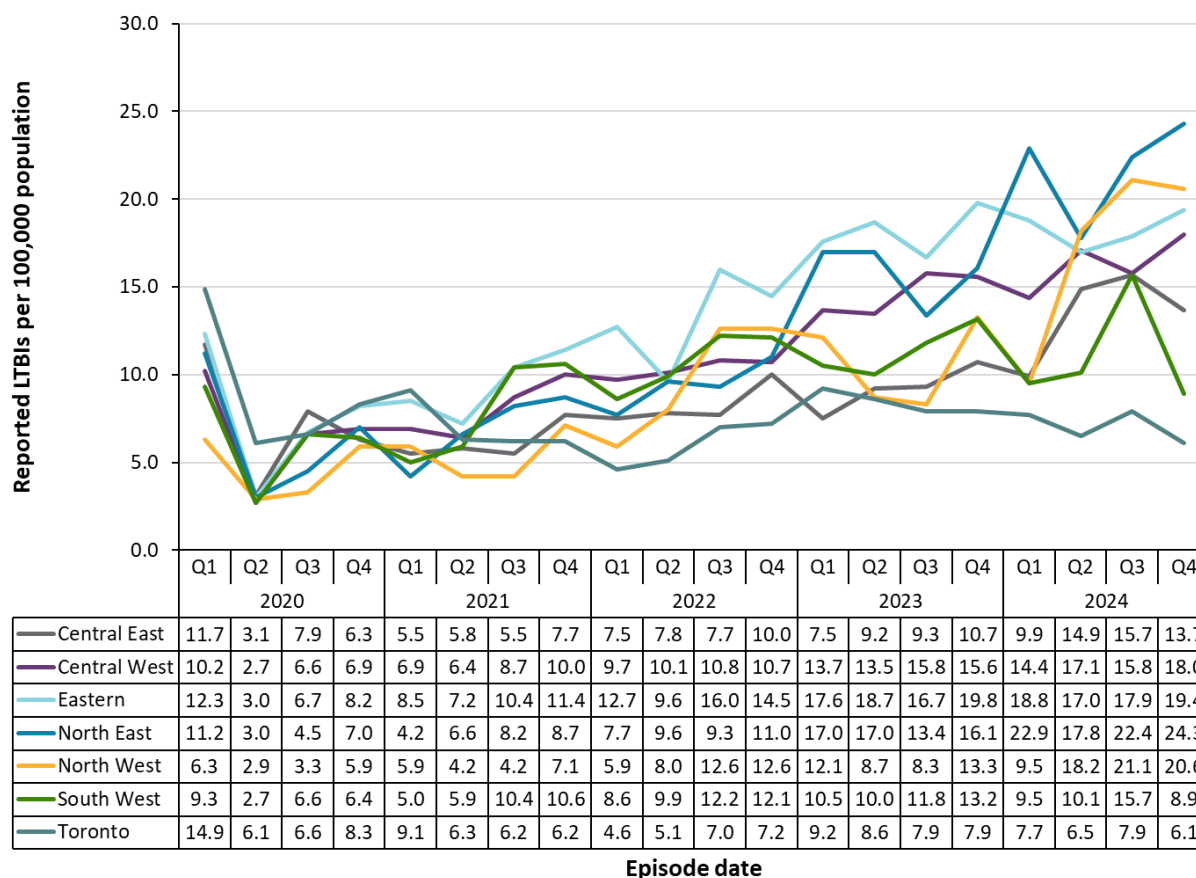
Figure 9: Reported LTBI Rates Per 100,000 Population by Public Health Unit: January 1, 2024 to December 31, 2024 (i.e., last 12 months)



Data sources: LTBI: Integrated Public Health Information System (iPHIS). Population denominators: Ontario. Ministry of Finance.⁵

Note: See [Appendix B](#) for the full list of public health unit names and their 3-letter abbreviations, as well as annual rates by PHU for the years 2019-2024.

Figure 10: Reported LTBI Rates Per 100,000 Population by Provincial Region: January 1, 2020 to December 31, 2024



Data sources: LTBI: Integrated Public Health Information System (iPHIS). Population denominators: Ontario. Ministry of Finance.⁵

Notes: Q1=January 1-March 31; Q2=April 1-June 30; Q3=July 1-September 30; Q4=October 1-December 31

The public health units that make up each provincial region can be found in [Appendix B](#).

In Focus: Using Program Performance Metrics to Measure Progress Toward TB Pre-Elimination in Ontario

Background

The End TB Strategy and Priority Actions for Low Incidence Countries

In 1993, the WHO declared TB to be a global public health emergency.⁶ More than 30 years later, despite numerous achievements resulting from intensified efforts and investments in TB prevention and care activities worldwide, the disease persists as a major public health problem. In 2023, close to 11 million new cases of TB were reported globally and more than 1.2 million people died of the disease – making it the number one cause of death due to a single infectious agent.⁷

Building on previous strategies and with a goal of ending the TB epidemic, the End TB Strategy was developed by the WHO and adopted by its 194 member nations at the 2014 World Health Assembly.³ One of its three key targets is to achieve a 90% reduction in the overall incidence of TB (compared to 2015 rates) by 2035.³ For countries that have already reached an incidence of less than 100 TB cases per million population ('low-incidence countries'), this strategy has been adapted into an 'Action Framework' outlining key interventions needed to progress towards pre-elimination and elimination of TB (defined as <10 and <1 TB cases per million population, respectively).⁴ Among the priority actions the framework endorses is the need to, 'Ensure continued surveillance, programme monitoring and evaluation and case-based data management.'

A Canadian Framework for TB Program Performance Monitoring

The updated *Canadian Tuberculosis Standards, 8th Edition* (CTBS) includes – for the first time – a chapter on TB program performance monitoring in the era of TB elimination.⁸ The authors, Heffernan et al, noted that several countries, including the United States, United Kingdom, Australia, and Brazil, have already implemented national TB performance monitoring frameworks.⁸ Furthermore, the United States has consistently reported the lowest TB incidence of the G7 countries (3.1 cases per 100,000 population in 2023) – a feat that has been partially attributed to the implementation of the National TB Indicators Project in 2012.^{7,9} In comparison, Canada had the 4th highest rate of TB at 5.8 cases per 100,000 population in 2023).

In the absence of a Canadian framework for TB program performance monitoring, Heffernan et al developed a list of 12 core indicators and key targets, building upon work initiated by the National Collaborating Center for Infectious Diseases in 2018.⁸ These 12 core indicators are grouped according to their overall objectives, including elimination, examination of immigrants and refugees, case management and treatment, and contact management.⁸ With respect to elimination, the proposed key indicator is, "Total annual incidence (crude) rate of tuberculosis (TB), all forms" and the corresponding target is an active case rate of 1/100,000 by 2035 (i.e., pre-elimination).⁸

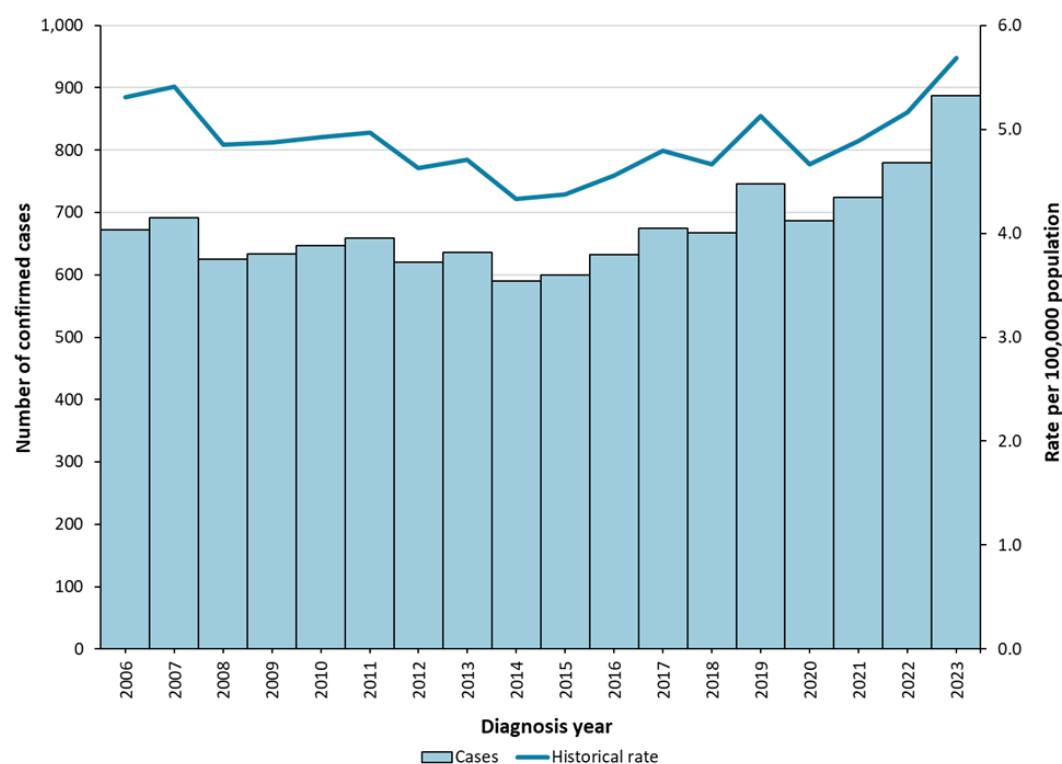
This In Focus highlights recent trends in the provincial epidemiology of TB and illustrates Ontario's progress toward the 2035 pre-elimination goal. The methods used for this analysis are described in [Appendix C](#).

Provincial Context

Recent Trends in TB 2006-2023

Between 2006 and 2014, the overall incidence of TB in Ontario decreased by almost 20%, from 5.3 to 4.3 cases per 100,000 population; since 2014, however, this downward trend has reversed ([Figure 11](#)). Over the last 10 years, provincial TB incidence rates have increased, on average, by more than 3% annually - ultimately reaching a 20-year high of 5.7 cases per 100,000 population in 2023. Based on preliminary year-to-date TB data for 2024, this upward trend is anticipated to continue with case counts having already exceeded those reported in 2023 by early December 2024.

Figure 11: Confirmed TB Cases and Rates per 100,000 Population by Year of Diagnosis: Ontario, January 1, 2006 to December 31, 2023



Data sources: Cases: Integrated Public Health Information System (iPHIS). Population denominators: Statistics Canada, Ontario Ministry of Finance.^{5,10}

Within Ontario, the vast majority of TB cases occur among individuals who were born outside of Canada. Between 2006 and 2023, 88.9% (range: 86.4%-91.7%) of all reported TB cases in the province occurred in people born outside of Canada; of these, 77.7% arrived from countries deemed by the WHO as having a high TB burden (i.e. ≥ 100 cases per million population).⁷

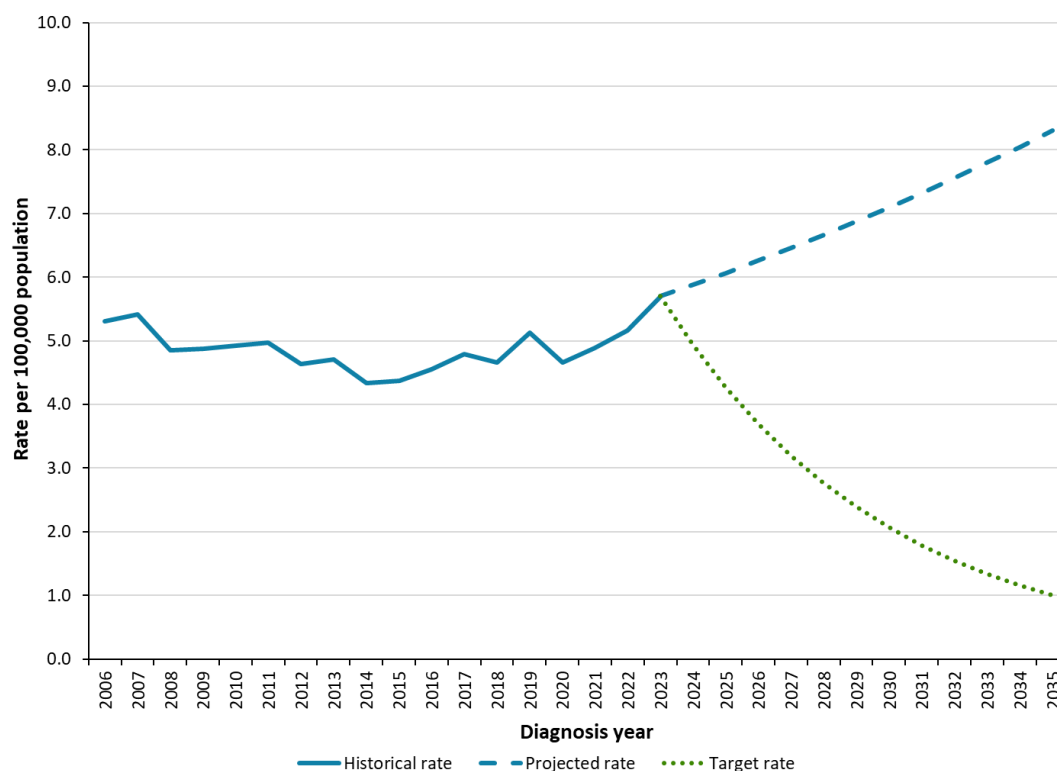
Persons born in Canada represented 9.1% (range: 6.5%-12.9%) of all TB cases reported in Ontario during this period; however, the burden of disease was disproportionately higher among those self-identifying as Indigenous. Among those born in Canada, Indigenous Ontarians accounted for 21.4% of TB cases reported between 2006-2023 despite representing, on average, only 4.1% of the provincial Canadian-born population during this period.¹²

Country of birth was unknown for the remaining 2.0% (range: 0.6%-5.7%) of all TB cases reported in Ontario between 2006 to 2023.

Progress Toward Pre-Elimination

In order to reach the pre-elimination target of one case per 100,000 population by 2035, Ontario will need to achieve a more than 13% annual reduction in its overall TB incidence over the next 12 years (i.e., from 5.7 cases per 100,000 population in 2023) (Figure 12). Based on projected population data from Statistics Canada, Ontario's population is estimated to reach 18,812,129 by the year 2035;¹¹ this would equate to a total of 188 reported TB cases in 2035 ($188/18,812,129 = 1.0$ cases/100,000 population). If the overall proportion of TB cases accounted for by each of the sub-populations in the years from 2006-2023 remains consistent, this would result in a total of 167 cases in persons born outside of Canada, 17 cases among those born in Canada (13 non-Indigenous and 4 Indigenous) and 4 cases with unknown origin.

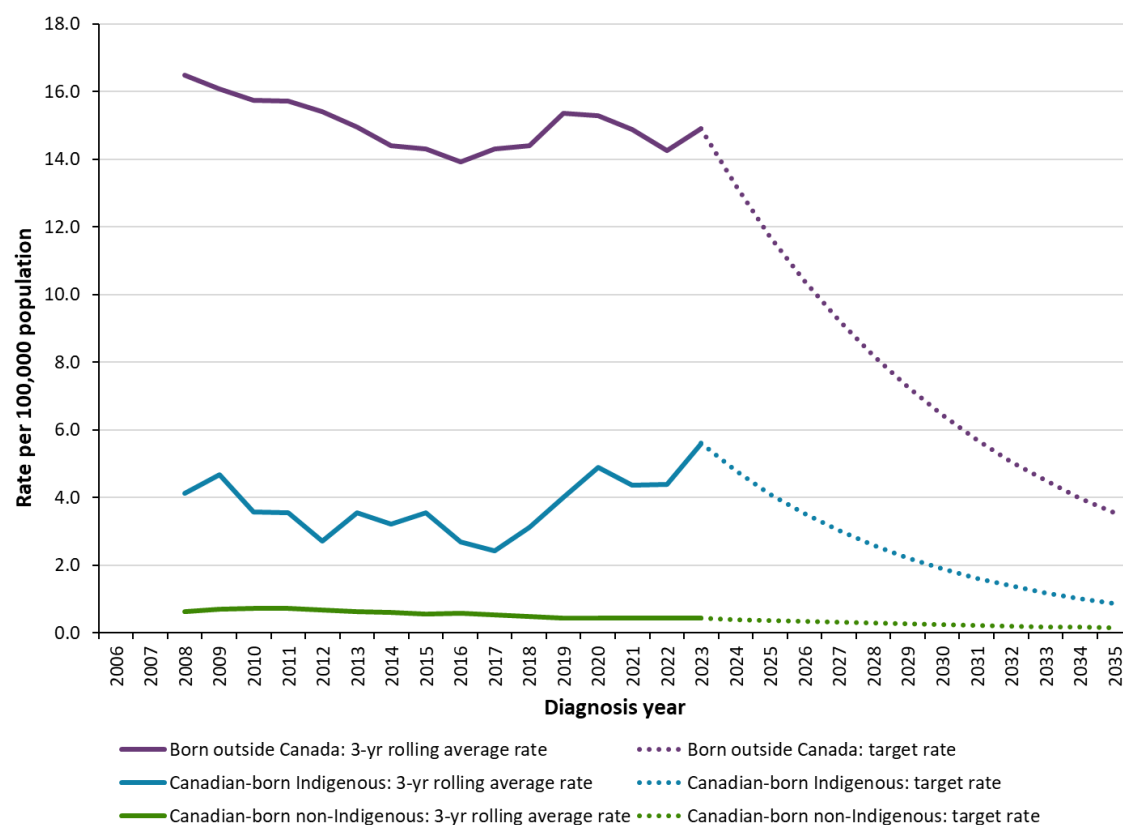
Figure 12: Historical, Projected, and Pre-Elimination Target TB Rates per 100,000 Population by Diagnosis Year: Ontario, 2006-2035



Data sources: Cases: Integrated Public Health Information (iPHIS). Population denominators: Statistics Canada, Ontario Ministry of Finance.^{5,10}

For non-Indigenous Canadian-born individuals in Ontario, the target of pre-elimination has already been reached with incidence rates averaging 0.56 cases per 100,000 population (range: 0.42-0.74) between 2006 and 2023 (Figure 13). In order for the overall provincial TB incidence to reach 1/100,000 population, however, Canada will need to achieve considerably decreased rates, including for both those born outside of the country and Canadian-born Indigenous peoples. Based on projected population estimates and case counts described earlier, the TB incidence among those born outside of Canada will need to decline from 16.7 in 2023 to 3.5 in 2035, while for Canadian-born Indigenous individuals, the incidence will need to decrease from 8.1 in 2023 to 0.9 in 2035.

Figure 13: Three-Year Rolling Average Historical, Projected, and Pre-Elimination Target TB Rates per 100,000 Population by Diagnosis Year and Sub-Population: Ontario, 2006-2035



Data sources: Cases: Integrated Public Health Information (iPHIS). Population denominators: Statistics Canada.¹¹⁻¹⁸

Conclusion

Reaching TB elimination in Ontario will require intensified and coordinated efforts to address the disproportionate and inequitable burden of disease among those born outside of Canada and within Canadian-born Indigenous populations, the latter of which needs to consider both the historical context and socio-economic factors. One component of these efforts includes ongoing monitoring of TB activity in Ontario, including through future PHO quarterly epidemiological reports.

Technical Notes

Data Sources

Case Data

- The data for the main portion of this report were based on information entered in the Ontario Ministry of Health (MOH) integrated Public Health Information System (iPHIS) database as of **April 7, 2025 at 9:00a.m.**
- The data for the “In Focus” portion of this report were based on information entered in the Ontario Ministry of Health (MOH) integrated Public Health Information System (iPHIS) database as of **December 4, 2024 at 9:00a.m.**
- iPHIS is a dynamic disease reporting system that allows ongoing updates to previously entered data. As a result, data extracted from iPHIS represent a snapshot at the time of extraction and may differ from previous or subsequent reports.

Ontario Population Data

- Population estimates used to calculate rates per 100,000 population were calculated using the Ontario population estimates for 2018-2022 and population projections for 2023-2024 sourced from the Ontario Ministry of Finance.

Data Caveats

- Data reported between 2020 and 2022 should be interpreted with caution. Both testing and iPHIS data entry practices were likely impacted by the COVID-19 pandemic response.
- These data only represent confirmed cases of tuberculosis (TB) and latent TB infection (LTBI) reported to public health and recorded in iPHIS. As a result, all case counts are subject to varying degrees of underreporting due to a variety of factors, such as disease awareness and medical care seeking behaviours that may depend on severity of illness, clinical practices, and changes in laboratory testing and reporting behaviours.
- This report includes data up to the end of the quarter that finished three months prior to data extraction because active TB and LTBI counts and corresponding data can take several months to stabilize.
- Only TB and LTBI cases meeting the confirmed case classification as listed in the [Ontario MOH surveillance case definitions](#)¹ are included in the reported case counts.
 - Changes to provincial surveillance case definitions and disease classifications have occurred over the years and thus may impact the analysis and interpretation of trends over time. Cases are classified in iPHIS based on the Ontario MOH surveillance case definitions in use at the time the case was identified.
 - PHO's technical report, "[Factors Affecting Reporting Diseases in Ontario: Case Definition Changes and Associated Trends 1991-2016](#)"¹⁹ and its associated [appendix](#)²⁰ provide more detailed information on this topic.

- TB cases are reported based on the Diagnosis Date. LTBI are reported based on the Episode Date, which is an estimate of the onset date of disease for a case. In order to determine this date, the following hierarchy exists in iPHIS: Onset Date > Specimen Collection Date > Lab Test Date > Reported Date.
- For example: If an Onset Date exists, it will be used as the Episode Date. If Onset Date is not available, then the next available date in the hierarchy (i.e., Specimen Collection Date) will be used, and so on.
- Case counts by geography are based on the diagnosing health unit (DHU). DHU refers to the case's public health unit of residence at the time of illness onset or report to public health and not necessarily the location of exposure.
- The public health units that make up each geographic region can be found in [Appendix A](#).
- Cases for which the Disposition Status was reported as ENTERED IN ERROR, DOES NOT MEET DEFINITION, DUPLICATE-DO NOT USE, or any variation on these values, were excluded from this analysis.
- The potential for duplicates exists because duplicate sets were not identified and excluded unless they were already resolved at either the local or provincial level prior to data extraction from iPHIS.

References

1. Ontario. Ministry of Health. Ontario public health standards: requirements for programs, services and accountability. Infectious disease protocol. Appendix 1: case definitions and disease-specific information. Disease: Tuberculosis. Effective: May 2022 [Internet]. Toronto, ON: King's Printer for Ontario; 2022 [cited 2025 Apr 7]. Available from: <https://files.ontario.ca/moh-ophs-tuberculosis-en-2022.pdf>
2. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Tuberculosis (TB) [Internet]. Toronto, ON: King's Printer for Ontario; 2024 [updated 2024 Dec 13; cited 2025 Apr 7]. Available from: <https://www.publichealthontario.ca/en/diseases-and-conditions/infectious-diseases/respiratory-diseases/tuberculosis>
3. World Health Organization (WHO). The end TB strategy [Internet]. Geneva: WHO; 2015 [cited 2025 Apr 7]. Available from: <https://www.who.int/teams/global-tuberculosis-programme/the-end-tb-strategy>
4. World Health Organization (WHO). Framework towards TB elimination in low-incidence countries [Internet]. Geneva: WHO; 2014 [cited 2025 Jan 15]. Available from: <https://www.who.int/publications/i/item/9789241507707>
5. Population Reporting. Population projections public health unit, 2023-2046 [data file]. Toronto, ON: Ontario. Ministry of Finance [producer]; Toronto, ON: Ontario. Ministry of Health, IntelliHealth Ontario [distributor]; [extracted 2025 Apr 7].
6. World Health Organization (WHO). TB: a global emergency, WHO report on the TB epidemic [Internet]. Geneva: WHO; 1994 [cited 2025 Apr 7]. Available from: <https://iris.who.int/handle/10665/58749>
7. World Health Organization (WHO). Global tuberculosis report 2024 [Internet]. Geneva: WHO; 2024 [cited 2025 Apr 7]. Available from: <https://www.who.int/teams/global-tuberculosis-programme/tb-reports/global-tuberculosis-report-2024>
8. Heffernan C, Haworth-Brockman M, Plourde P, Wong T, Ferrara G, Long R. Chapter 15: Monitoring tuberculosis program performance. Can J Respir Crit Care Sleep Med. 2022;6(sup1):229-41. Available from: <https://doi.org/10.1080/24745332.2022.2035123>
9. Heffernan C, Long R. Would program performance indicators and a nationally coordinated response accelerate the elimination of tuberculosis in Canada?. Can J Public Health. 2019;110:31-5. Available from: <https://doi.org/10.17269/s41997-018-0106-x>
10. Population Reporting. Population estimates county/municipality, 1986-2022 [data file]. Ottawa, ON: Statistics Canada, Government of Canada [producer]; Toronto, ON: Ministry of Health, IntelliHealth Ontario [distributor]; [extracted 10 Jun 2024].
11. Statistics Canada. 2006 census of population, catalogue no. 92-594-WXE [Internet]. Ottawa, ON: Government of Canada; 2007 [cited 26 Feb 2025]. Available from: <https://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-594/index.cfm?Lang=E>
12. Statistics Canada. 2006 census of population, catalogue no. 97-557-XCB2006008 [Internet]. Ottawa, ON: Government of Canada; 2009 [cited 27 Feb 2025]. Available from: <https://www12.statcan.gc.ca/census-recensement/2006/dp-pd/tbt/Rp-eng.cfm?TABID=2&LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GK=0&GRP=1&PID=89425&PRID=0&PTYPE=88971,97154&S=0&SHOWALL=0&SUB=723&Temporal=2006&THEME=72&VID=0&VNAMEE=&VNAMEF=>

13. Statistics Canada. 2011 national household survey, catalogue no. 99-011-X2011007 [Internet]. Ottawa, ON: Government of Canada; 2013 [cited 27 Feb 2025]. Available from: <http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/index.cfm?Lang=E>
14. Statistics Canada. 2011 national household survey, catalogue no. 99-010-X2011026 [Internet]. Ottawa, ON: Government of Canada; 2011 [cited 27 Feb 2025]. Available from: <https://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/dt-td/Lp-eng.cfm?LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=0&GK=0&GRP=0&PID=0&PRID=0&PTYPE=105277&S=0&SHOWALL=0&SUB=0&Temporal=2013&THEME=95&VID=0&VNAMEF=MEE=&VNAMEF=>
15. Statistics Canada. 2016 census of population, catalogue no. 98-510-X2016001 [Internet]. Ottawa, ON: Government of Canada; 2018 [cited 27 Feb 2025]. Available from: <http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/abpopprof/index.cfm?Lang=E>
16. Statistics Canada. 2016 census of population, catalogue no. 98-400-X2016184 [Internet]. Ottawa, ON: Government of Canada; 2016 [cited 27 Feb 2025]. Available from: <https://www150.statcan.gc.ca/n1/en/catalogue/98-400-X2016184>
17. Statistics Canada. 2021 census of population, catalogue no. 98-510-X2021001 [Internet]. Ottawa, ON: Government of Canada; 2023 [cited 27 Feb 2025]. Available from: <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/ipp-ppa/index.cfm?Lang=E>
18. Statistics Canada. 2021 census of population, catalogue no. 98-26-00092021001 [Internet]. Ottawa, ON: Government of Canada; 2024 [cited 27 Feb 2025]. Available from: <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/ipp-ppa/index.cfm?Lang=E>
19. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Factors affecting reportable diseases in Ontario (1991-2016) [Internet]. Toronto, ON: Queen's Printer for Ontario; 2018 [cited 2025 Jan 15]. Available from: <https://www.publichealthontario.ca/-/media/documents/F/2018/factors-reportable-diseases-ontario-1991-2016.pdf>
20. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Appendix: factors affecting case definition changes in Ontario (1991-2016) [Internet]. Toronto, ON: Queen's Printer for Ontario; 2018 [cited 2025 Jan 15]. Available from: https://www.publichealthontario.ca/-/media/documents/a/2018/appendix-factors-reportable-diseases-ontario-1991-2016.pdf?sc_lang=en

Appendix A: Active TB Cases and Rates

Table A1: Active TB Case Counts and Rates Per 100,000 Population by Public Health Unit, Region and Year: Ontario, 2020-2024

Public Health Unit	3-Letter Code	2020 n (rate)	2021 n (rate)	2022 n (rate)	2023 n (rate)	2024 n (rate)
Durham Region Health Department	DUR	10 (1.4)	15 (2.1)	25 (3.4)	30 (3.9)	38 (4.9)
Haliburton, Kawartha, Pine Ridge District Health Unit	HKP	0 (0.0)	2 (1.0)	0 (0.0)	0 (0.0)	1 (0.5)
Peel Public Health	PEL	145 (9.3)	156 (10)	175 (10.9)	197 (11.7)	181 (10.3)
Peterborough Public Health	PTC	4 (2.7)	1 (0.7)	3 (2.0)	3 (1.9)	5 (3.2)
Simcoe Muskoka District Health Unit	SMD	10 (1.7)	5 (0.8)	4 (0.6)	9 (1.4)	13 (1.9)
York Region Public Health	YRK	64 (5.3)	59 (4.9)	69 (5.6)	74 (5.9)	64 (5.0)
CENTRAL EAST	n/a	233 (5.3)	238 (5.3)	276 (6.1)	313 (6.6)	302 (6.2)
Brant County Health Unit	BRN	0 (0.0)	3 (1.9)	3 (1.9)	2 (1.2)	4 (2.4)
City of Hamilton Public Health Services	HAM	25 (4.3)	20 (3.4)	25 (4.2)	24 (3.9)	34 (5.4)
Haldimand-Norfolk Health Unit	HDN	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.6)	0 (0.0)
Halton Region Public Health	HAL	17 (2.8)	24 (3.9)	17 (2.7)	25 (3.9)	18 (2.8)
Niagara Region Public Health	NIA	9 (1.9)	9 (1.8)	12 (2.4)	19 (3.7)	14 (2.7)
Region of Waterloo Public Health and Emergency Services	WAT	15 (2.5)	17 (2.8)	22 (3.5)	16 (2.4)	22 (3.1)
Wellington-Dufferin-Guelph Public Health	WDG	6 (1.9)	6 (1.9)	6 (1.9)	10 (3.0)	13 (3.9)
CENTRAL WEST	n/a	72 (2.5)	79 (2.7)	85 (2.9)	98 (3.2)	105 (3.3)
Ottawa Public Health	OTT	53 (5.1)	61 (5.8)	60 (5.6)	69 (6.3)	94 (8.4)
Eastern Ontario Health Unit	EOH	1 (0.5)	2 (0.9)	0 (0.0)	2 (0.9)	1 (0.4)
Hastings Prince Edward Public Health	HPE	3 (1.7)	3 (1.7)	1 (0.6)	1 (0.6)	5 (2.7)
Kingston, Frontenac, Lennox & Addington Public Health	KFL	5 (2.4)	4 (1.9)	2 (0.9)	5 (2.3)	8 (3.6)

Public Health Unit	3-Letter Code	2020 n (rate)	2021 n (rate)	2022 n (rate)	2023 n (rate)	2024 n (rate)
Leeds, Grenville & Lanark District Health Unit	LGL	1 (0.6)	1 (0.5)	0 (0.0)	0 (0.0)	1 (0.5)
Renfrew County and District Health Unit	REN	0 (0.0)	0 (0.0)	1 (0.9)	0 (0.0)	1 (0.9)
EASTERN	n/a	63 (3.3)	71 (3.6)	64 (3.2)	77 (3.8)	110 (5.3)
Algoma Public Health	ALG	0 (0.0)	1 (0.9)	2 (1.7)	1 (0.8)	2 (1.6)
North Bay Parry Sound District Health Unit	NPS	2 (1.5)	0 (0.0)	1 (0.7)	0 (0.0)	1 (0.7)
Porcupine Health Unit	PQP	5 (5.9)	6 (7.1)	8 (9.4)	22 (25.4)	16 (18.3)
Public Health Sudbury & Districts	SUD	0 (0.0)	2 (1.0)	0 (0.0)	3 (1.4)	13 (5.9)
Timiskaming Health Unit	TSK	0 (0.0)	0 (0.0)	0 (0.0)	2 (5.8)	0 (0.0)
NORTH EAST	n/a	7 (1.2)	9 (1.6)	11 (1.9)	28 (4.7)	32 (5.3)
Northwestern Health Unit	NWR	6 (7.4)	1 (1.2)	8 (9.8)	8 (9.7)	7 (8.5)
Thunder Bay District Health Unit	THB	6 (3.8)	6 (3.8)	5 (3.2)	4 (2.5)	15 (9.4)
NORTH WEST	n/a	12 (5.0)	7 (2.9)	13 (5.5)	12 (5.0)	22 (9.1)
Chatham-Kent Public Health	CHK	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.9)	0 (0.0)
Grey Bruce Health Unit	GBO	0 (0.0)	1 (0.6)	0 (0.0)	1 (0.5)	0 (0.0)
Huron Perth Public Health	HPH	0 (0.0)	1 (0.7)	0 (0.0)	0 (0.0)	3 (1.9)
Lambton Public Health	LAM	1 (0.8)	0 (0.0)	1 (0.7)	1 (0.7)	1 (0.7)
Middlesex-London Health Unit	MSL	15 (2.9)	20 (3.9)	23 (4.3)	9 (1.6)	32 (5.5)
Southwestern Public Health	OXE	1 (0.5)	3 (1.3)	2 (0.9)	4 (1.7)	0 (0.0)
Windsor-Essex County Health Unit	WEC	11 (2.6)	11 (2.6)	8 (1.8)	9 (2.0)	15 (3.2)
SOUTH WEST	n/a	28 (1.6)	36 (2.1)	34 (1.9)	25 (1.4)	51 (2.7)
Toronto Public Health	TOR	272 (9.1)	284 (9.6)	297 (9.8)	334 (10.7)	375 (11.6)
TORONTO	n/a	272 (9.1)	284 (9.6)	297 (9.8)	334 (10.7)	375 (11.6)
TOTAL	n/a	687 (4.7)	724 (4.9)	780 (5.2)	887 (5.7)	997 (6.2)

Data sources: Cases: iPHIS. [Database; extracted 7 Apr 2025]. Population denominators: Ministry of Finance.¹

Appendix B: Reported Latent TB Infections and Rates

Table A2: Reported Latent TB Infections and Rate Per 100,000 Population by Public Health Unit, Region and Year: Ontario, 2020-2024

Public Health Unit	3-Letter Code	2020 n (rate)	2021 n (rate)	2022 n (rate)	2023 n (rate)	2024 n (rate)
Durham Region Health Department	DUR	166 (23.3)	191 (26.2)	330 (44.3)	371 (48.6)	542 (69.4)
Haliburton, Kawartha, Pine Ridge District Health Unit	HKP	8 (4.2)	12 (6.2)	11 (5.6)	17 (8.6)	34 (16.9)
Peel Public Health	PEL	804 (51.6)	622 (39.7)	767 (48.0)	777 (46.0)	1,394 (79.0)
Peterborough Public Health	PTC	20 (13.5)	43 (29.0)	93 (61.6)	222 (143.8)	311 (197.6)
Simcoe Muskoka District Health Unit	SMD	58 (9.6)	40 (6.5)	45 (7.1)	57 (8.7)	65 (9.7)
York Region Public Health	YRK	229 (19.1)	191 (15.8)	259 (21.2)	282 (22.6)	285 (22.4)
CENTRAL EAST	n/a	1,285 (29.1)	1,099 (24.6)	1,505 (33.1)	1,726 (36.7)	2,631 (54.3)
Brant County Health Unit	BRN	20 (13.0)	12 (7.6)	37 (23.0)	64 (38.7)	73 (43.1)
City of Hamilton Public Health Services	HAM	199 (34.1)	247 (42.0)	320 (53.6)	410 (67.1)	379 (60.7)
Haldimand-Norfolk Health Unit	HDN	2 (1.7)	6 (4.9)	5 (4.0)	3 (2.4)	11 (8.4)
Halton Region Public Health	HAL	123 (20.2)	144 (23.4)	138 (22.0)	173 (27.0)	265 (40.5)
Niagara Region Public Health	NIA	123 (25.5)	170 (34.9)	215 (43.3)	322 (63.1)	476 (91.1)
Region of Waterloo Public Health and Emergency Services	WAT	238 (39.4)	264 (43.2)	383 (60.4)	564 (83.6)	626 (88.4)
Wellington-Dufferin-Guelph Public Health	WDG	51 (16.3)	85 (26.9)	128 (39.8)	257 (78.1)	224 (66.6)
CENTRAL WEST	n/a	756 (26.4)	928 (32)	1,226 (41.4)	1,793 (58.6)	2,054 (65.3)
Ottawa Public Health	OTT	411 (39.3)	603 (57.3)	698 (65.1)	990 (90.1)	1,122 (99.7)
Eastern Ontario Health Unit	EOH	8 (3.7)	5 (2.3)	10 (4.5)	16 (7.1)	15 (6.6)
Hastings Prince Edward Public Health	HPE	29 (16.8)	35 (20.0)	67 (37.8)	108 (59.6)	120 (65.0)
Kingston, Frontenac, Lennox & Addington Public Health	KFL	114 (54.5)	71 (33.8)	252 (117.9)	320 (146.8)	206 (92.9)

Public Health Unit	3-Letter Code	2020 n (rate)	2021 n (rate)	2022 n (rate)	2023 n (rate)	2024 n (rate)
Leeds, Grenville & Lanark District Health Unit	LGL	14 (7.8)	6 (3.3)	9 (4.9)	13 (7.0)	13 (6.9)
Renfrew County and District Health Unit	REN	5 (4.6)	11 (10.0)	10 (9.0)	25 (22.5)	31 (27.8)
EASTERN	n/a	581 (30.1)	731 (37.5)	1046 (52.8)	1,472 (72.8)	1,507 (73.1)
Algoma Public Health	ALG	28 (23.8)	17 (14.5)	36 (30.3)	61 (50.1)	102 (82.3)
North Bay Parry Sound District Health Unit	NPS	32 (24.7)	36 (27.5)	55 (40.9)	82 (59.5)	70 (49.9)
Porcupine Health Unit	PQP	16 (18.9)	24 (28.4)	38 (44.7)	75 (86.6)	108 (123.3)
Public Health Sudbury & Districts	SUD	65 (31.7)	75 (36.4)	83 (39.8)	148 (69.0)	227 (103.7)
Timiskaming Health Unit	TSK	6 (17.6)	7 (20.3)	7 (20.2)	12 (34.5)	23 (65.7)
NORTH EAST	n/a	147 (25.7)	159 (27.7)	219 (37.7)	378 (63.5)	530 (87.5)
Northwestern Health Unit	NWR	24 (29.5)	18 (22.0)	31 (37.8)	38 (46.3)	41 (49.9)
Thunder Bay District Health Unit	THB	20 (12.7)	33 (21.2)	62 (39.7)	64 (40.4)	127 (79.4)
NORTH WEST	n/a	44 (18.4)	51 (21.4)	93 (39.0)	102 (42.4)	168 (69.4)
Chatham-Kent Public Health	CHK	6 (5.6)	12 (11.1)	20 (18.3)	30 (27.1)	92 (82.1)
Grey Bruce Health Unit	GBO	2 (1.1)	4 (2.2)	21 (11.5)	13 (7.0)	19 (10.0)
Huron Perth Public Health	HPH	7 (4.8)	17 (11.5)	15 (10.0)	22 (14.3)	26 (16.6)
Lambton Public Health	LAM	24 (18.1)	25 (18.9)	35 (26.1)	41 (29.9)	47 (33.6)
Middlesex-London Health Unit	MSL	199 (39.0)	307 (59.5)	374 (70.3)	364 (65.1)	315 (54.1)
Southwestern Public Health	OXE	18 (8.2)	28 (12.5)	27 (11.8)	41 (17.5)	50 (20.9)
Windsor-Essex County Health Unit	WEC	172 (40.2)	159 (37.3)	267 (61.2)	325 (71.8)	284 (60.9)
SOUTH WEST	n/a	428 (24.9)	552 (31.8)	759 (42.8)	836 (45.6)	833 (44.2)
Toronto Public Health	TOR	1,075 (36.0)	819 (27.7)	724 (23.9)	1,054 (33.6)	910 (28.2)
TORONTO	n/a	1,075 (36.0)	819 (27.7)	724 (23.9)	1,054 (33.6)	910 (28.2)
TOTAL	n/a	4,316 (29.3)	4,339 (29.3)	5572 (36.9)	7,361 (47.2)	8,633 (53.9)

Data sources: LTBI: iPHIS. [Database; extracted 7 Apr 2025]. Population denominators: Ministry of Finance.¹

Appendix C: Methods for In Focus: Using Program Performance Metrics to Measure Progress Toward TB Pre-Elimination in Ontario

Historical and Projected TB Incidence Rates

All confirmed cases of TB diagnosed in Ontario between January 1, 2006 and December 31, 2023 were extracted from the province's electronic surveillance system (the integrated Public Health Information System [iPHIS]). Total annual case counts, by year of diagnosis, were stratified by country of birth and Indigenous identity (i.e., born outside of Canada, Canadian-born: non-Indigenous, Canadian-born: Indigenous, and unknown) based on available client demographic data. Provincial population estimates¹⁰ (for 2006-2022) and projections⁵ (for 2023) were used as the denominator to calculate overall annual TB incidence rates for Ontario.

Projected TB incidence rates were estimated by first determining the annual average rate of change for the most recent 10-year period (i.e., 2014-2023) and then applying this rate of change prospectively for the years 2024 to 2035. The annual average rate of change was calculated using the following formula:

$$[(P_n/P_o)^{1/N} - 1] \times 100$$

In this formula, P_n represents the rate at the beginning of the time interval, P_o represents the rate at the end of the time interval, and N reflects the number of years in the time interval.

Pre-Elimination Target Incidence Rates: Ontario Overall

The annual average rate of change needed to reach the pre-elimination target incidence rate by 2035 was calculated, using the formula described above, where P_n was the provincial TB incidence in 2023, P_o was the target TB incidence for 2035 (1.0/100,000), with a time interval (N) of 12 years. The resulting percent change was then applied, beginning with the TB incidence in 2023, to calculate the annual target incidence rates from 2024 to 2035.

Population projections⁵ for the years 2024 to 2035 were then used to determine the annual number of TB cases that would correspond to the provincial target incident rate (i.e., 2035 target # cases/2035 projected population = 1.0/100,000).

Pre-Elimination Target Incidence Rates: By Population Groups

Population-specific denominators were sourced from Statistics Canada's census data for the years 2006, 2011, 2016, and 2021 to calculate annual incidence rates for each population group for the years 2006 to 2023 (e.g., 2006 census data on the number of Ontarians born outside of Canada was used as the denominator to calculate incidence rates for the years 2006-2010, 2011 census data was used as the denominator for the years 2011-2015, etc.). Three-year rolling average incidence rates were calculated for each population group for the years 2006 to 2023, to account for fluctuations in rates due to small counts and denominators

The annual proportion of TB cases diagnosed in Ontario by population group (i.e., born outside of Canada, Canadian-born, non-Indigenous, and Canadian-born, Indigenous) was calculated and averaged for the years 2006 to 2023. These population-specific averages were then applied to the target number of cases for the year 2035 (as described above) to determine the number of cases each of these population groups would need to reach in order for the overall provincial incidence to reach 1.0/100,000 in 2035. Using the target case counts and population denominators, the 2035 target incidence rate for each population group was then determined and used to calculate the annual average rate of change needed to achieve this target rate.

Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Tuberculosis in Ontario: January 1, 2020 to December 31, 2024. Toronto, ON: King's Printer for Ontario; 2025.

Disclaimer

This document was developed by Public Health Ontario (PHO). PHO provides scientific and technical advice to Ontario's government, public health organizations and health care providers. PHO's work is guided by the current best available evidence at the time of publication. The application and use of this document is the responsibility of the user. PHO assumes no liability resulting from any such application or use. This document may be reproduced without permission for non-commercial purposes only and provided that appropriate credit is given to PHO. No changes and/or modifications may be made to this document without express written permission from PHO.

Public Health Ontario

Public Health Ontario is an agency of the Government of Ontario dedicated to protecting and promoting the health of all Ontarians and reducing inequities in health. Public Health Ontario links public health practitioners, front-line health workers and researchers to the best scientific intelligence and knowledge from around the world.

For more information about PHO, visit publichealthontario.ca.