

# TUBERCULOSIS IN CANADA 2014

PRE-RELEASE



PROTECTING AND EMPOWERING CANADIANS TO IMPROVE THEIR HEALTH



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# TABLE OF CONTENTS

<b>ACKNOWLEDGEMENTS</b> . . . . .	<b>II</b>
<b>INTRODUCTION</b> . . . . .	<b>1</b>
<b>PRELIMINARY FINDINGS</b> . . . . .	<b>1</b>
NEW AND RE-TREATMENT CASES IN 2014 . . . . .	1
GEOGRAPHY . . . . .	2
SEX AND AGE . . . . .	2
ORIGIN . . . . .	2
DIAGNOSTIC CLASSIFICATION . . . . .	3
TREATMENT OUTCOMES FOR 2013 . . . . .	3
<b>CONCLUSION</b> . . . . .	<b>4</b>
<b>REFERENCES</b> . . . . .	<b>4</b>
<b>TABLES</b> . . . . .	<b>5</b>
<b>TABLE 1A:</b> Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 (all cases)—Canada and provinces/territories: 2004–2014 . . . . .	5
<b>TABLE 1B:</b> Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 (males)—Canada and provinces/territories: 2004–2014 . . . . .	6
<b>TABLE 1C:</b> Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 (females)—Canada and provinces/territories: 2004–2014 . . . . .	7
<b>TABLE 2:</b> Reported new active and re-treatment tuberculosis cases and incidence rates per 100,000 by age group—Canada: 2004–2014 . . . . .	8
<b>TABLE 3:</b> Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 by age group—Canada and provinces/territories: 2014 . . . . .	9
<b>TABLE 4:</b> Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 by origin—Canada and provinces/territories: 2014 . . . . .	10
<b>TABLE 5:</b> Reported new active and re-treatment tuberculosis cases and incidence rates per 100,000 by main diagnostic classification—Canada: 2004–2014 . . . . .	12
<b>TABLE 6:</b> Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 by main diagnostic classification—Canada and provinces/territories: 2014 . . . . .	13
<b>TABLE 7:</b> Treatment outcome—Canada and provinces/territories: 2013 . . . . .	14



## INTRODUCTION

Active tuberculosis (TB) disease is monitored at the federal level using the Canadian Tuberculosis Reporting System (CTBRS), a case-based surveillance system that maintains selected non-nominal data on people diagnosed with active TB disease. Provincial and territorial public health authorities voluntarily submit data on TB cases that meet the case definition for national-level surveillance to the CTBRS. Reports in the *Tuberculosis in Canada—Pre-release* series are published annually to facilitate timely availability of national-level data on TB.

*Tuberculosis in Canada 2014—Pre-release* provides a brief, initial overview of the preliminary number of reported new active and re-treatment TB cases and corresponding incidence rates in Canada for the most recent reporting year. The data presented were extracted from the CTBRS on October 30, 2015. All provinces and territories had the opportunity to validate their data.

The data presented in this abbreviated report are provisional and subject to change in future publications of the *Tuberculosis in Canada* surveillance report series. Differences between the data published in this report and the data published in previous national, provincial, and territorial surveillance reports may be due to reporting delays or differences in when the data were extracted from the various surveillance databases. Where differences exist between this report and provincial or territorial reports, use the data from the provincial and territorial reports.

Details on the CTBRS's methods, including information on national TB case definitions, data collection, quality control, analysis, and the classification and categorization of population subgroups are available in the *Tuberculosis in Canada 2012* surveillance report.<sup>1</sup>

## PRELIMINARY FINDINGS

### NEW AND RE-TREATMENT CASES IN 2014

In Canada, 1,568 cases of active TB disease were reported in 2014, representing a 5% decrease from the number of cases reported in 2013 and a corresponding decrease in the overall incidence rate of active TB disease from 4.7 per 100,000 to 4.4 per 100,000 (Table 1A).

Of the cases reported in 2014, 94% (1,468) were considered to be new cases in that the individuals diagnosed with TB had no documented evidence or history of previously diagnosed active tuberculosis (data not shown). Five percent (80) of the cases were reported as re-treatment cases, where individuals had a recorded history of a previous episode of TB disease.<sup>1</sup> For 1% of the cases reported in 2014, the history of previous TB disease was unknown. These relative percentages have remained consistent between 2004 and 2014 (data not shown).

<sup>1</sup> For more information and definitions of new and re-treatment TB disease, refer to *Tuberculosis in Canada 2012* at [www.phac-aspc.gc.ca/tbpc-latb/pubs/tbcan12/index-eng.php](http://www.phac-aspc.gc.ca/tbpc-latb/pubs/tbcan12/index-eng.php)

## GEOGRAPHY

In 2014, the TB incidence rates in the Atlantic provinces (New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island), Ontario, and Quebec were below the Canadian rate of 4.4 per 100,000 population (Table 1A). The incidence rates in all other provinces and territories were higher than the Canadian rate. Between 2004 and 2014, Nunavut had the highest annual incidence rate. In 2014, the incidence rate for Nunavut was 229.6 per 100,000 population (Table 1A).

## SEX AND AGE

Between 2004 and 2014, with a few exceptions<sup>ii</sup> males accounted for a larger percentage of reported cases than females (Table 1B, Table 1C). In 2014, males accounted for 56% (884) of the reported cases, corresponding to an incidence rate of 5.0 per 100,000 population (Table 1B). In comparison, females accounted for 44% (684) of all reported cases for an incidence rate of 3.8 per 100,000 population (Table 1C).

Between 2004 and 2014, TB incidence rates have remained stable or have declined slightly across age groups (Table 2). The most noticeable decrease in incidence rates has been in the 65 to 74 year age group, from a high of 8.0 per 100,000 population in 2004 to a low of 4.9 per 100,000 population in 2014.

In 2014, individuals aged 25 to 34 years represented the largest percentage of reported cases at 18% (283) (Table 2). However, older adults (75 years and over) had the highest disease burden with an incidence rate of 9.3 cases per 100,000 population. Children between 5 and 14 years old had the lowest incidence rate at 0.8 cases per 100,000 population.

## ORIGIN

Foreign-born individuals and Canadian-born Aboriginal people continued to be disproportionately represented among reported cases of TB in 2014 (Table 4). Data on origin were available for 99% (1,551) of the 1,568 cases reported in 2014. The foreign-born population, which represented approximately 22% of the total Canadian population in 2014, accounted for 69% (1,073) of reported cases of known origin with an incidence rate of 13.7 per 100,000 population. Canadian-born Aboriginal people made up 4% of the total Canadian population in 2014 but accounted for 21% (318) of reported cases of known origin, with a corresponding incidence rate of 20.4 per 100,000 population. Canadian-born non-Aboriginal people accounted for the lowest percentage of reported cases at 10% (160), for an incidence rate of 0.6 per 100,000 population (Table 4).

The distribution of TB cases across origin groups varied by province and territory. In 2014, the majority (92%) of the foreign-born cases reported were from Alberta, British Columbia, Ontario and Quebec. However, 85% of the Canadian-born Aboriginal cases were from Manitoba, the territories, Saskatchewan and Quebec (Table 4).

<sup>ii</sup> The ratio of males to females is more variable in provinces or territories with a low number of cases from year to year.



Canadian-born Aboriginal people comprise three distinct populations: First Nations, Inuit, and Métis. In 2014, of the 318 reported Canadian-born Aboriginal cases, 57% (181) were First Nations, 37% (119) were Inuit and 6% (18) were Métis (Table 4). The incidence rate among the Métis was 3.2 per 100,000 population, which was lower than the overall Canadian incidence rate of 4.4 per 100,000 population. By comparison, the incidence rate among First Nations, at 19.3 per 100,000 population, was about four times the overall Canadian rate. The highest incidence rate, however, was among the Inuit, at 198.3 per 100,000 population (Table 4).

Based on their country of birth, foreign-born cases were grouped into one of nine epidemiological regions as defined by the STOP-TB Partnership/World Health Organization.<sup>2</sup> Individuals born in the Western Pacific region countries accounted for the highest percentage of reported foreign-born cases in Canada (44%) (Table 4). Of these cases, 78% were from China and the Philippines (data not shown). However, the highest incidence rate, at 40.5 per 100,000 population, was observed for individuals born in the regions of Africa with a high HIV prevalence (AFR-High) (Table 4), with the greatest percentage (30%) from Ethiopia (data not shown).

## DIAGNOSTIC CLASSIFICATION

Active TB disease is classified as either respiratory or non-respiratory. Respiratory TB includes pulmonary TB, TB of the pleura, and TB of intrathoracic or mediastinal lymph nodes, larynx, nasopharynx, nose and sinuses. Primary disease<sup>iii</sup> is also captured under the respiratory classification. Non-respiratory TB refers to all other disease sites.<sup>3</sup> Between 2004 and 2014, respiratory disease accounted for 76% of all diagnosed TB cases in Canada; 24% were diagnosed with non-respiratory TB (Table 5). The percentage of cases diagnosed with pulmonary disease increased from 60% in 2004 to 69% in 2014 (Table 5). Peripheral lymph node TB remained the second most frequently reported diagnostic site.

Pulmonary TB, including TB of the lungs and conducting airways, accounted for the majority (69%) of reported cases in 2014 (Table 6). Across all provinces and territories, pulmonary disease was the most frequently reported diagnostic classification. Overall, 2% of reported cases were diagnosed with primary TB. However, 10% of the cases reported from Manitoba and 8% of those from Nunavut were diagnosed with primary TB.

## TREATMENT OUTCOMES FOR 2013

At the time the data were reported to the Public Health Agency of Canada (PHAC), details on treatment outcome were available for 97% (1,612) of all reported cases of active TB disease in 2013 (Table 7). Of the cases for which treatment outcome data were available:

- 82% (1,353) were cured or had completed treatment;
- 8% (126) died before or during treatment;
- 1% (20) moved outside of Canada before completing treatment;

<sup>iii</sup> A disease state characterized by pleuritis and pleural effusion, usually in an adolescent or young adult, but possibly in any age group, due to recent (within preceding 24 months) infection with *M. tuberculosis* complex.

- 1% (15) were reported as other (non-compliant, refused treatment, discontinued due to pregnancy, transfer to another province or reason was unspecified);
- 1% (17) absconded or were lost to follow-up;
- <1% (8) stopped treatment due to an adverse reaction;
- <1% (1) was reported as treatment failure; and
- 4% (72) were reported as treatment ongoing.

## CONCLUSION

Data from 2014 indicated a 5% decrease in the total number of cases of active TB disease in Canada relative to the number reported in 2013. Ongoing monitoring is needed to determine if this change indicates a declining trend. Overall, no changes were noted in the distribution of cases by age group and sex. Foreign-born individuals continued to account for the majority of reported TB cases in 2014. The incidence rate per 100,000 population was highest among Canadian-born Aboriginal people and in particular within the Inuit population where the incidence rate was 45 times higher than the overall Canadian rate. Pulmonary TB remained the most commonly reported site of disease in 2014, and available treatment outcome data for cases reported in 2013 indicated that 82% of cases had been cured or had completed treatment.

The findings from this analysis are provisional and will likely change over time. Updated case counts and incidence rates for 2014 will be presented in the next iteration of the *Tuberculosis in Canada* surveillance report.

## REFERENCES

- (1) Public Health Agency of Canada. *Tuberculosis in Canada 2012*. Ottawa (ON): Minister of Public Works and Government Services Canada; 2015.
- (2) Stop TB Partnership and World Health Organization. *The Global Plan to Stop TB 2006–2015*. Geneva (CH): WHO; 2006.
- (3) Menzies R, Wong T. *Canadian Tuberculosis Standards*. 7<sup>th</sup> ed. Canadian Thoracic Society; and the Public Health Agency of Canada; 2013.

**TABLE 1A:** Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 (all cases)—Canada and provinces/territories: 2004–2014†

REPORTING YEAR	CANADA	PROVINCE/TERRITORY													
		N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.	
2004	Cases	1,612	7	1	8	10	219	699	144	70	109	299	4	10	32
	Rate	5.0	1.4	0.7	0.9	1.3	2.9	5.6	12.3	7.0	3.4	7.2	12.7	23.1	107.2
2005	Cases	1,640	9	1	7	6	255	642	114	139	146	265	3	8	45
	Rate	5.1	1.7	0.7	0.7	0.8	3.4	5.1	9.7	14.0	4.4	6.3	9.4	18.4	148.3
2006	Cases	1,653	12	0	10	2	227	673	134	87	131	320	3	6	48
	Rate	5.1	2.4	0.0	1.1	0.3	3.0	5.3	11.3	8.8	3.8	7.5	9.3	13.9	155.8
2007	Cases	1,575	7	0	7	5	229	680	103	105	112	278	3	15	31
	Rate	4.8	1.4	0.0	0.7	0.7	3.0	5.3	8.7	10.5	3.2	6.5	9.2	34.6	98.7
2008	Cases	1,642	8	0	5	5	240	598	141	97	167	300	8	14	59
	Rate	4.9	1.6	0.0	0.5	0.7	3.1	4.6	11.8	9.5	4.6	6.9	24.2	32.3	185.0
2009	Cases	1,654	22	1	8	11	196	629	156	90	176	294	4	12	55
	Rate	4.9	4.3	0.7	0.9	1.5	2.5	4.8	12.9	8.7	4.8	6.7	11.9	27.8	168.7
2010	Cases	1,586	8	1	10	10	210	643	131	81	134	241	6	11	100
	Rate	4.7	1.5	0.7	1.1	1.3	2.6	4.9	10.7	7.7	3.6	5.4	17.3	25.4	299.8
2011	Cases	1,621	8	3	9	5	217	658	116	83	170	261	4	13	74
	Rate	4.7	1.5	2.1	1.0	0.7	2.7	5.0	9.4	7.8	4.5	5.8	11.3	29.9	216.4
2012	Cases	1,700	4	1	8	5	271	618	136	89	195	286	1	6	80
	Rate	4.9	0.8	0.7	0.8	0.7	3.4	4.6	10.9	8.2	5.0	6.3	2.8	13.7	230.4
2013	Cases	1,651	13	0	8	3	240	634	166	86	187	257	2	4	51
	Rate	4.7	2.5	0.0	0.8	0.4	2.9	4.7	13.1	7.8	4.7	5.6	5.5	9.1	143.9
2014	Cases	1,568	7	3	7	5	208	577	135	86	217	231	4	4	84
	Rate	4.4	1.3	2.1	0.7	0.7	2.5	4.2	10.5	7.6	5.3	5.0	11.0	9.2	229.6

**ABBREVIATIONS:** Alta., Alberta; B.C., British Columbia; Man., Manitoba; N.B., New Brunswick; N.L., Newfoundland and Labrador; N.S., Nova Scotia; Nvt., Nunavut; N.W.T., Northwest Territories; Ont., Ontario; P.E.I., Prince Edward Island; Que., Quebec; Sask., Saskatchewan; Y.T., Yukon.

† **SOURCE OF DENOMINATOR VALUES FOR RATE CALCULATION:** Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2004–2014 Updated postcensal estimates (Accessed 2015–03–11).

**TABLE 1B:** Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 (males)—Canada and provinces/territories: 2004–2014†

REPORTING YEAR	CANADA	PROVINCE/TERRITORY												
		N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.
2004	Cases	4	1	7	9	118	369	70	38	52	157	2	2	18
	Rate	1.6	1.5	1.5	2.4	3.2	6.0	12.0	7.7	3.2	7.6	12.5	8.9	116.2
2005	Cases	5	0	4	3	145	353	66	74	71	152	2	6	27
	Rate	2.0	0.0	0.9	0.8	3.9	5.7	11.3	15.0	4.2	7.3	12.3	26.6	171.7
2006	Cases	3	0	7	0	122	361	79	50	63	162	3	4	28
	Rate	1.2	0.0	1.5	0.0	3.2	5.8	13.4	10.2	3.6	7.7	18.2	17.8	176.0
2007	Cases	3	0	2	4	131	351	62	62	57	163	2	12	15
	Rate	1.2	0.0	0.4	1.1	3.4	5.6	10.5	12.5	3.2	7.7	12.0	53.3	92.4
2008	Cases	3	0	3	3	130	311	85	46	89	161	5	10	40
	Rate	1.2	0.0	0.7	0.8	3.4	4.9	14.3	9.1	4.9	7.5	29.5	44.6	241.7
2009	Cases	12	0	3	4	119	344	87	46	93	169	4	8	28
	Rate	4.7	0.0	0.7	1.1	3.1	5.4	14.5	8.9	5.0	7.7	23.2	36.0	165.8
2010	Cases	6	0	5	6	120	335	71	42	76	123	4	8	69
	Rate	2.3	0.0	1.1	1.6	3.1	5.2	11.7	8.0	4.0	5.5	22.6	36.0	399.8
2011	Cases	5	2	4	2	139	326	57	45	88	157	1	8	48
	Rate	1.9	2.8	0.9	0.5	3.5	5.0	9.3	8.4	4.6	7.0	5.5	35.8	271.1
2012	Cases	1	1	6	3	150	338	72	61	118	186	1	3	54
	Rate	0.4	1.4	1.3	0.8	3.7	5.1	11.6	11.2	6.0	8.2	5.4	13.4	300.5
2013	Cases	7	0	6	0	127	344	98	47	99	138	1	3	33
	Rate	2.7	0.0	1.3	0.0	3.1	5.2	15.6	8.4	4.9	6.1	5.4	13.4	179.9
2014	Cases	4	2	6	2	134	324	64	50	120	131	1	2	44
	Rate	1.5	2.8	1.3	0.5	3.3	4.8	10.0	8.8	5.7	5.7	5.4	9.0	232.0

**ABBREVIATIONS:** Alta., Alberta; B.C., British Columbia; Man., Manitoba; N.B., New Brunswick; N.L., Newfoundland and Labrador; N.S., Nova Scotia; Nvt., Nunavut; N.W.T., Northwest Territories; Ont., Ontario; P.E.I., Prince Edward Island; Que., Quebec; Sask., Saskatchewan; Y.T., Yukon.

† **SOURCE OF DENOMINATOR VALUES FOR RATE CALCULATION:** Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2004–2014 Updated postcensal estimates (Accessed 2015–03–11).

**TABLE 1C:** Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 (females)—Canada and provinces/territories: 2004–2014†

REPORTING YEAR	CANADA	PROVINCE/TERRITORY													
		N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.	
2004	Cases	765	3	0	1	1	101	330	74	32	57	142	2	8	14
	Rate	4.7	1.1	0.0	0.2	0.3	2.7	5.3	12.5	6.4	3.6	6.8	13.0	38.4	97.5
2005	Cases	732	4	1	3	110	289	48	65	75	113	1	2	18	
	Rate	4.5	1.5	1.4	0.6	2.9	4.6	8.1	13.0	4.6	5.3	6.4	9.6	123.2	
2006	Cases	771	9	0	3	105	312	55	37	68	158	0	2	20	
	Rate	4.7	3.5	0.0	0.6	2.7	4.9	9.2	7.4	4.0	7.4	0.0	9.7	134.2	
2007	Cases	711	4	0	5	98	329	41	43	55	115	1	3	16	
	Rate	4.3	1.5	0.0	1.0	2.5	5.1	6.8	8.5	3.2	5.3	6.3	14.4	105.5	
2008	Cases	756	5	0	2	110	287	56	51	78	139	3	4	19	
	Rate	4.5	1.9	0.0	0.4	2.8	4.4	9.3	10.0	4.4	6.3	18.6	19.1	123.8	
2009	Cases	737	10	1	5	77	285	69	44	83	125	0	4	27	
	Rate	4.3	3.8	1.4	1.0	1.9	4.3	11.3	8.5	4.6	5.6	0.0	19.1	171.9	
2010	Cases	721	2	1	5	4	90	308	60	58	118	2	3	31	
	Rate	4.2	0.8	1.4	1.0	2.3	4.6	9.8	7.4	3.2	5.3	11.8	14.3	192.6	
2011	Cases	739	3	1	5	3	78	332	59	82	104	3	5	26	
	Rate	4.3	1.1	1.4	1.0	1.9	4.9	9.5	7.1	4.4	4.6	17.3	23.6	157.7	
2012	Cases	706	3	0	2	2	121	280	64	77	100	0	3	26	
	Rate	4.0	1.1	0.0	0.4	3.0	4.1	10.2	5.2	4.0	4.4	0.0	14.1	155.1	
2013	Cases	748	6	0	2	3	113	290	68	88	119	1	1	18	
	Rate	4.2	2.2	0.0	0.4	2.8	4.2	10.7	7.1	4.5	5.2	5.6	4.7	105.3	
2014	Cases	684	3	1	1	3	74	253	71	36	97	100	3	40	
	Rate	3.8	1.1	1.3	0.2	1.8	3.6	11.0	6.5	4.8	4.3	16.8	9.3	227.0	

**ABBREVIATIONS:** Alta., Alberta; B.C., British Columbia; Man., Manitoba; N.B., New Brunswick; N.L., Newfoundland and Labrador; N.S., Nova Scotia; Nvt., Nunavut; N.W.T., Northwest Territories; Ont., Ontario; P.E.I., Prince Edward Island; Que., Quebec; Sask., Saskatchewan; Y.T., Yukon.

† **SOURCE OF DENOMINATOR VALUES FOR RATE CALCULATION:** Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2004–2014 Updated postcensal estimates (Accessed 2015–03–11).

**TABLE 2:** Reported new active and re-treatment tuberculosis cases and incidence rates per 100,000 by age group—Canada: 2004–2014†

REPORTING YEAR	TOTAL	AGE GROUP										
		<1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75+	
2004	Cases	6	33	45	198	323	272	198	167	177	193	
	Rate	1.8	2.4	1.1	4.5	7.5	5.3	4.1	4.9	8.0	10.1	
2005	Cases	10	37	71	254	280	278	212	142	168	188	
	Rate	2.9	2.7	1.8	5.8	6.5	5.4	4.3	4.0	7.5	9.6	
2006	Cases	10	46	50	261	253	287	201	158	168	219	
	Rate	2.9	3.3	1.3	5.8	5.8	5.7	4.0	4.3	7.4	10.8	
2007	Cases	12	33	53	200	254	284	209	160	152	218	
	Rate	3.3	2.4	1.4	4.5	5.8	5.7	4.0	4.2	6.5	10.5	
2008	Cases	8	30	50	204	298	281	231	166	170	204	
	Rate	2.1	2.1	1.3	4.5	6.7	5.8	4.4	4.2	7.1	9.6	
2009	Cases	10	33	46	232	297	294	232	177	142	191	
	Rate	2.6	2.3	1.2	5.1	6.5	6.2	4.3	4.3	5.7	8.8	
2010	Cases	9	27	39	201	282	272	214	176	149	217	
	Rate	2.4	1.8	1.0	4.4	6.1	5.8	4.0	4.1	5.8	9.8	
2011	Cases	13	33	40	216	297	251	224	168	173	206	
	Rate	3.5	2.2	1.1	4.7	6.3	5.4	4.1	3.8	6.4	9.1	
2012	Cases	9	50	54	239	296	269	234	155	178	216	
	Rate	4.9	3.3	1.4	5.2	6.2	5.8	4.4	3.4	6.3	9.3	
2013	Cases	13	38	61	209	269	244	238	189	169	221	
	Rate	3.4	2.5	1.6	4.5	5.6	5.2	4.5	4.1	5.6	9.3	
2014	Cases	11	31	32	195	283	233	214	188	154	227	
	Rate	4.4	2.0	0.8	4.2	5.8	4.9	4.1	4.0	4.9	9.3	

† SOURCE OF DENOMINATOR VALUES FOR RATE CALCULATION: Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2004–2014 Updated postcensal estimates (Accessed 2015–03–11)

**TABLE 3:** Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 by age group—Canada and provinces/territories: 2014†

AGE GROUP	PROVINCE/TERRITORY										CANADA			
	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.		Y.T.	N.W.T.	Nvt.
<1	Cases	0	0	0	0	3	2	2	1	0	0	0	0	3
	Rate	0.0	0.0	0.0	0.0	3.4	1.4	12.4	6.5	0.0	0.0	0.0	0.0	340.1
1-4	Cases	0	0	0	0	5	9	5	4	4	1	0	0	3
	Rate	0.0	0.0	0.0	0.0	1.4	1.6	7.8	6.7	1.9	0.6	0.0	0.0	88.7
5-14	Cases	0	1	0	0	8	8	8	1	0	1	0	0	5
	Rate	0.0	6.3	0.0	0.0	1.0	0.5	5.0	0.7	0.0	0.2	0.0	0.0	70.2
15-24	Cases	195	2	0	1	27	67	18	20	27	15	0	0	17
	Rate	4.2	3.4	0.0	0.9	2.7	3.6	10.0	13.1	5.0	2.5	0.0	0.0	259.4
25-34	Cases	283	2	0	4	30	105	22	9	56	37	1	1	16
	Rate	5.8	3.2	0.0	3.5	2.7	5.7	12.4	5.4	8.0	5.9	19.3	13.5	256.2
35-44	Cases	233	2	0	2	34	69	30	16	41	21	1	0	17
	Rate	4.9	2.9	0.0	1.7	3.1	3.8	18.4	11.5	6.8	3.4	18.3	0.0	366.0
45-54	Cases	214	0	0	0	23	66	26	20	25	39	1	2	12
	Rate	4.1	0.0	0.0	0.0	1.9	3.2	14.6	13.4	4.3	5.7	17.4	31.0	301.7
55-64	Cases	188	1	0	1	22	79	14	10	19	34	0	0	7
	Rate	4.0	1.2	0.0	0.9	1.9	4.5	8.9	7.1	3.9	5.3	0.0	0.0	288.5
65-74	Cases	154	0	0	0	25	69	4	5	21	25	1	1	3
	Rate	4.9	0.0	0.0	0.0	3.1	5.8	3.9	5.9	7.8	5.7	37.2	52.7	296.7
75+	Cases	227	0	0	3	31	103	6	0	24	58	0	0	1
	Rate	9.3	0.0	0.0	5.2	5.1	10.8	7.1	0.0	12.0	16.9	0.0	0.0	297.6
TOTAL	Cases	1,568	7	3	7	208	577	135	86	217	231	4	4	84
	Rate	4.4	1.3	0.7	0.7	2.5	4.2	10.5	7.6	5.3	5.0	11.0	9.2	229.6

**ABBREVIATIONS:** Alta., Alberta; B.C., British Columbia; Man., Manitoba; N.B., New Brunswick; N.L., Newfoundland and Labrador; N.S., Nova Scotia; Nvt., Nunavut; N.W.T., Northwest Territories; Ont., Ontario; P.E.I., Prince Edward Island; Que., Quebec; Sask., Saskatchewan; Y.T., Yukon.

† **SOURCE OF DENOMINATOR VALUES FOR RATE CALCULATION:** Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2004–2014 Updated postcensal estimates (Accessed 2015–03–11).





ORIGIN	CANADA										PROVINCE/TERRITORY												
	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	North†	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	North†	
AFR-High	Cases	100	0	0	2	0	20	40	4	27	3	0	0	0	2	0	20	40	4	27	3	0	0
	Rate	40.5	0.0	0.0	119.8	0.0	53.5	33.9	49.8	103.9	62.6	0.0	0.0	0.0	119.8	0.0	53.5	33.9	49.8	103.9	62.6	9.1	0.0
AFR-Low	Cases	28	0	0	0	1	11	5	3	6	1	0	0	0	0	1	11	5	3	6	1	0	0
	Rate	20.3	0.0	0.0	263.8	0.0	13.5	12.7	147.7	67.9	24.3	0.0	0.0	0.0	263.8	0.0	13.5	12.7	147.7	67.9	24.3	0.0	0.0
AMR	Cases	42	0	0	0	25	13	1	0	0	3	0	0	0	0	25	13	1	0	0	3	0	0
	Rate	4.6	0.0	0.0	0.0	11.1	2.5	3.6	0.0	0.0	5.4	0.0	0.0	0.0	0.0	11.1	2.5	3.6	0.0	0.0	5.4	0.0	0.0
EEUR	Cases	11	0	0	0	2	7	0	0	0	2	0	0	0	0	2	7	0	0	0	2	0	0
	Rate	3.0	0.0	0.0	0.0	2.6	3.5	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	2.6	3.5	0.0	0.0	0.0	5.3	0.0	0.0
EME & CEUR	Cases	34	0	0	0	3	22	0	0	2	7	0	0	0	0	3	22	0	0	2	7	0	0
	Rate	1.3	0.0	0.0	0.0	0.9	1.6	0.0	0.0	0.8	1.6	0.0	0.0	0.0	0.0	0.9	1.6	0.0	0.0	0.8	1.6	0.0	0.0
EMR	Cases	101	0	0	0	10	62	3	3	19	4	0	0	0	0	10	62	3	3	19	4	0	0
	Rate	12.8	0.0	0.0	0.0	5.5	14.1	33.1	38.2	24.9	6.1	0.0	0.0	0.0	0.0	5.5	14.1	33.1	38.2	24.9	6.1	0.0	0.0
SEAR	Cases	279	1	0	2	10	160	6	2	44	54	0	0	0	2	10	160	6	2	44	54	0	0
	Rate	31.9	90.4	0.0	70.4	0.0	21.0	30.2	34.9	49.9	30.6	0.0	0.0	0.0	70.4	0.0	21.0	30.2	34.9	49.9	30.6	0.0	0.0
WPR	Cases	474	1	2	1	32	199	26	8	87	114	3	0	0	1	32	199	26	8	87	114	3	0
	Rate	24.7	70.5	97.1	13.1	23.5	22.9	36.5	28.6	34.7	20.9	125.7	0	0	13.1	23.5	22.9	36.5	28.6	34.7	20.9	125.7	0
Unknown	Cases	4	0	0	0	1	1	1	0	1	0	0	0	0	0	1	1	1	0	1	0	0	0
	Rate	1,073	2	2	5	114	509	44	18	186	188	3	0	0	5	114	509	44	18	186	188	3	0
Total Foreign-born**	Cases	13.7	17.6	23.5	8.3	6.0	10.2	12.5	20.5	22.5	13.8	36.1	0	0	8.3	6.0	10.2	12.5	20.5	22.5	13.8	36.1	0
	Rate	17	0	0	0	6	11	0	0	0	0	0	0	0	0	6	11	0	0	0	0	0	0
Total††	Cases	1,568	7	3	7	208	577	135	86	217	231	92	0	0	7	208	577	135	86	217	231	92	0
	Rate	4.4	1.3	2.1	0.7	2.5	4.2	10.5	7.6	5.3	5.0	78.8	0	0	0.7	2.5	4.2	10.5	7.6	5.3	5.0	78.8	0

**ABBREVIATIONS:** AFR-High, Africa high HIV prevalence; AFR-Low, Africa low HIV prevalence; Alta., Alberta; AMR, American Region—Latin American countries; B.C., British Columbia; EEUR, Eastern European Region; EME, Established Market Economies; CEUR, Central Europe; EMR, Eastern Mediterranean Region; Man., Manitoba; N.B., New Brunswick; N.L., Newfoundland and Labrador; N.S., Nova Scotia; Ont., Ontario; P.E.I., Prince Edward Island; Que., Quebec; Sask., Saskatchewan; SEAR, South-East Asian Region; WPR, Western Pacific Region.

† North includes Northwest Territories, Nunavut and Yukon

‡ **SOURCE OF DENOMINATOR VALUES FOR RATE CALCULATION FOR FIRST NATIONS ON AND OFF RESERVE:** Registered Indian Population, Household and Family Projections 2009–2034, AANDC, 2012. NOTE: First Nations population projections are only available for the Atlantic region which include N.L., N.B., N.S. and PEI combined therefore only one rate is given for the entire region.

§ **SOURCE OF DENOMINATOR VALUES FOR RATE CALCULATION FOR INUIT AND MÉTIS AND TOTAL ABORIGINAL:** Statistics Canada: Population Projections by Aboriginal Identity in Canada, 2006 to 2031, Catalogue number 91-552-X

\*\* **SOURCE OF DENOMINATOR VALUES FOR RATE CALCULATION FOR FOREIGN-BORN POPULATION:** Statistics Canada—Custom Tabulation—2011 National Household Survey.

†† **SOURCE OF DENOMINATOR VALUES FOR RATE CALCULATION:** Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2014 Updated postcensal estimates (Accessed 2015-03-11).

**TABLE 5:** Reported new active and re-treatment tuberculosis cases and incidence rates per 100,000 by main diagnostic classification—Canada: 2004–2014†

MAIN DIAGNOSTIC CLASSIFICATION		REPORTING YEAR											
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Respiratory	Primary*	Cases	94	106	91	64	59	61	63	48	62	65	37
		Rate	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1
	Pulmonary <sup>§</sup>	Cases	965	982	1,132	1,034	1,146	1,125	1,042	1,099	1,149	1,125	1,089
		Rate	3.0	3.0	3.5	3.1	3.4	3.3	3.1	3.2	3.3	3.2	3.1
	Other respiratory**	Cases	90	113	85	94	78	97	102	83	96	90	86
		Rate	0.3	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.2
Miliary	Cases	14	15	10	11	14	12	11	13	8	12	11	
	Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Non-respiratory	Central nervous system	Cases	19	20	16	22	11	14	24	21	22	27	19
		Rate	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1
	Peripheral lymph nodes	Cases	251	242	192	202	181	207	198	222	204	180	198
		Rate	0.8	0.8	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.5	0.6
	Other††	Cases	179	162	127	148	153	138	146	135	159	152	128
		Rate	0.6	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4
Unknown	Cases	0	0	0	0	0	0	0	0	0	0	0	
	Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	Cases	1,612	1,640	1,653	1,575	1,642	1,654	1,586	1,621	1,700	1,651	1,568	
	Rate	5.0	5.1	5.1	4.8	4.9	4.9	4.7	4.7	4.9	4.7	4.4	

† SOURCE OF DENOMINATOR VALUES FOR RATE CALCULATION: Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2004–2014 Updated postcensal estimates (Accessed 2015-03-11).

\* Primary includes primary respiratory tuberculosis and tuberculous pleurisy in primary progressive tuberculosis (ICD-9 codes 010.0-010.9; ICD-10 codes A15.7 and A16.7).

§ Pulmonary includes tuberculosis of the lungs and conducting airways which includes tuberculous fibrosis of the lung, tuberculous bronchiectasis, tuberculous pneumonia, tuberculous pneumothorax, isolated tracheal or bronchial tuberculosis, and tuberculous laryngitis (ICD-9 codes 011-011.9, 012.2, 012.3; ICD-10 codes A15.0-A15.3, A15.5, A15.9, A16.0-A16.2, A16.4, A16.9).

\*\* Other respiratory includes tuberculous pleurisy (non-primary) and tuberculosis of the intrathoracic lymph nodes, mediastinum, nasopharynx, nose (septum), and sinus (any nasal) (ICD-9 codes: 012.0, 012.1 and 012.8; ICD-10 codes: A15.4, A15.6, A15.8, A16.3, A16.5 A16.8).

†† Other includes tuberculosis of the intestines, peritoneum and mesenteric glands, bones and joints, genitourinary system, skin, eye, ear, thyroid, adrenal, and spleen.

**TABLE 6:** Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 by main diagnostic classification—Canada and provinces/territories: 2014†

MAIN DIAGNOSTIC CLASSIFICATION		PROVINCE/TERRITORY										CANADA			
		N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.	
Respiratory	Primary*	0	0	0	0	5	6	13	4	1	1	0	0	0	7
	Rate	0.0	0.0	0.0	0.0	0.1	0.0	1.0	0.4	0.0	0.0	0.0	0.0	0.0	19.1
Pulmonary§	Cases	5	2	3	5	158	381	94	57	132	179	2	1	70	
	Rate	0.9	1.4	0.3	0.7	1.9	2.8	7.3	5.1	3.2	3.9	5.5	2.3	191.3	
Other respiratory**	Cases	1	0	2	0	11	31	9	5	15	7	0	0	5	
	Rate	0.2	0.0	0.2	0.0	0.1	0.2	0.7	0.4	0.4	0.2	0.0	0.0	13.7	
Miliary	Cases	11	0	0	0	1	4	1	2	1	2	0	0	0	
	Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	
Non-respiratory	Central nervous system	19	0	0	0	2	8	0	2	4	1	0	1	1	
	Rate	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.0	0.0	0.0	2.7	
Peripheral lymph nodes	Cases	198	0	1	2	12	86	13	10	40	31	1	2	0	
	Rate	0.6	0.0	0.7	0.2	0.1	0.6	1.0	0.9	1.0	0.7	2.7	4.6	0.0	
Other††	Cases	128	1	0	0	19	61	5	6	24	10	1	0	1	
	Rate	0.4	0.2	0.0	0.0	0.2	0.4	0.4	0.5	0.6	0.2	2.7	0.0	2.7	
Unknown	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	Cases	1,568	7	3	7	208	577	135	86	217	231	4	4	84	
	Rate	4.4	1.3	2.1	0.7	2.5	4.2	10.5	7.6	5.3	5.0	11.0	9.2	229.6	

**ABBREVIATIONS:** Alta., Alberta; B.C., British Columbia; Man., Manitoba; N.B., New Brunswick; N.L., Newfoundland and Labrador; N.S., Nova Scotia; Nvt., Nunavut; N.W.T., Northwest Territories; Ont., Ontario; P.E.I., Prince Edward Island; Que., Quebec; Sask., Saskatchewan; Y.T., Yukon.

† **SOURCE OF DENOMINATOR VALUES FOR RATE CALCULATION:** Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2014 updated postcensal estimates. (Accessed 2015-03-11).

‡ Primary includes primary respiratory tuberculosis and tuberculous pleurisy in primary progressive tuberculosis (ICD-9 codes 010.0-010.9; ICD-10 codes A15.7 and A16.7).

§ Pulmonary includes tuberculosis of the lungs and conducting airways which includes tuberculous fibrosis of the lung, tuberculous bronchiectasis, tuberculous pneumonia, tuberculous pneumothorax, isolated tracheal or bronchial tuberculosis, and tuberculous laryngitis (ICD-9 codes 011-011.9, 012.2, 012.3; ICD-10 codes A15.0-A15.3, A15.5, A15.9, A16.0-A16.2, A16.4, A16.9).

\*\* Other respiratory includes tuberculous pleurisy (non-primary) and tuberculosis of the intrathoracic lymph nodes, mediastinum, nasopharynx, nose (septum), and sinus (any nasal) (ICD-9 codes: 012.0, 012.1 and 012.8; ICD-10 codes: A15.4, A15.6, A15.8, A16.3, A16.5, A16.8).

†† Other includes tuberculosis of the intestines, peritoneum and mesenteric glands, bones and joints, genitourinary system, skin, eye, ear, thyroid, adrenal, and spleen.

TABLE 7: Treatment outcome—Canada and provinces/territories: 2013

PROVINCE/ TERRITORY	TOTAL	TREATMENT OUTCOME											
		Cure	Treatment completed without culture	Death during treatment	Transferred	Treatment ongoing	Absconded	Failure	Treatment discontinued due to adverse event	Other	Unknown		
Newfoundland and Labrador	13	2	10	0	0	0	0	0	0	0	1	0	0
Prince Edward Island	0	0	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	8	1	3	2	1	0	0	0	0	0	0	1	0
New Brunswick	3	0	3	0	0	0	0	0	0	0	0	0	0
Quebec	240	39	110	14	5	58	1	0	0	0	0	2	11
Ontario	634	0	520	59	6	14	8	0	1	0	1	0	26
Manitoba	166	86	64	12	0	0	3	0	0	0	1	0	0
Saskatchewan	86	0	68	3	0	0	5	0	0	0	0	8	2
Alberta	187	45	130	6	4	0	0	0	0	0	0	2	0
British Columbia	257	4	219	27	4	0	0	0	2	0	0	1	0
Yukon	2	0	2	0	0	0	0	0	0	0	0	0	0
Northwest Territories	4	3	0	1	0	0	0	0	0	0	0	0	0
Nunavut	51	31	13	2	0	0	0	0	0	0	3	1	0
CANADA	1,651	211	1,142	126	20	72	17	1	8	15	8	15	39