

# TUBERCULOSIS IN CANADA 2013

PRE-RELEASE



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## INTRODUCTION

In Canada, 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 in order to facilitate timely availability of national level data on TB.

*Tuberculosis in Canada 2013 – Pre-release* provides a brief, initial overview of the preliminary number of reported active (new and re-treatment) TB cases and corresponding incidence rates in Canada for the most recent reporting year (2013). The data presented in this report were extracted from the CTBRS on September 30, 2014. All provinces and territories have reviewed and approved their data. The data presented in this abbreviated report are provisional

and subject to change prior to the release of *Tuberculosis in Canada*, a more comprehensive report that is published every three years.

Historical data presented in this report may vary from the data presented in previous national/provincial/territorial reports. Differences between the data published in this report and the data published in previous national/provincial/territorial surveillance reports may occur as a result of reporting delays or differences in the date the data were extracted from the various surveillance databases. Where differences exist between this report and recently published provincial or territorial reports, it is recommended that the data from the provincial and territorial reports be used.

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 2013

In Canada, 1,640 new active and re-treatment TB cases were reported in 2013, for a corresponding incidence rate of 4.7 per 100,000 population (Table 1A). This is comparable to both the number of TB cases reported in 2012 (n = 1,699) and the incidence rate for 2012 (4.9 per 100,000 population). The annual number of reported TB cases and the corresponding annual incidence rates have remained relatively stable between 2003 and 2013.

In 2013, British Columbia, Ontario, and Quebec, which together make up 75% of the total Canadian population, continued to account for the majority of reported TB cases (68%) in Canada (Table 1A).

In 2013, the incidence rates in the Atlantic provinces (New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island), Alberta, Ontario and Quebec were all equivalent to or below the Canadian rate of 4.7 per 100,000 population. No TB cases were reported

from Prince Edward Island in 2013. The incidence rates in all other provinces and territories were higher than the Canadian rate. Nunavut has consistently had the highest incidence rate; in 2013, the incidence rate was 143.3 per 100,000 population (Table 1A). The 2013 incidence rate was lower than the 2012 rate, at 230.5 per 100 000 population, and represented a difference of 29 fewer cases compared to 2012 (Table 1A). Between 2003 and 2013 there was little change in the overall distribution of cases by province or territory.

Similarly, there was little change in the overall distribution of cases by sex, age group, and diagnostic classification (Table 1B, Table 1C, Table 2 and Table 3). In 2013, males continued to account for a larger percentage of reported cases than females. Males accounted for 902 of the 1,640 reported cases (55% of the total number reported) which corresponds to an overall incidence rate of 5.2 per 100,000 population (Table 1B). In comparison, females accounted for 738 cases (45% of all reported cases) for a corresponding incidence rate of 4.2 per 100,000 population (Table 1C).

In 2013, individuals aged 25 to 34 years old represented the largest percentage of reported cases at 16%. However, the highest incidence rate was observed for those aged 75 years or older, at 9.3 per 100,000 population.

In 2013, 7% of reported cases were less than 15 years of age (Table 4).

Foreign-born individuals and Canadian-born Aboriginal people continued to be disproportionately represented among reported cases of TB in 2013. Data on origin was available for 1,611 (98%) of the 1,640 cases reported in 2013. The foreign-born population, which represented approximately 22% of the total Canadian population in 2013, accounted for 71% of reported cases of known origin ( $n = 1,146$ ), with a corresponding incidence rate of 14.8 per 100,000 population. Canadian-born Aboriginal people made up 4% of the total Canadian population in 2013 but accounted for 19% ( $n = 309$ ) of reported cases of known origin, with a corresponding incidence rate of 19.9 per 100,000 population. Canadian-born non-Aboriginal people accounted for the lowest percentage of reported cases at 10% ( $n = 155$ ) with a corresponding incidence rate of 0.6 per 100,000 population (Table 5).

The distribution of TB cases across origin groups varied by province and territory. In 2013, the majority of cases (> 60%) reported by Alberta, British Columbia, Ontario, and Quebec were foreign-born. Canadian-born Aboriginal people accounted for the majority (> 65%) of reported cases in Manitoba and Saskatchewan. In the territories (Northwest Territories, Nunavut, and Yukon), almost all (98%) reported cases were Canadian-born Aboriginal people (Table 5).

Canadian-born Aboriginal people comprise three distinct populations: First Nations, Inuit and Métis people.

In 2013, of the 309 reported Canadian-born Aboriginal cases, 200 (65%) were First Nations, 91 (29%) were Inuit and 18 (6%) were Métis. The incidence rate among the Métis was 3.3 per 100,000 population, which was lower than the overall Canadian incidence rate of 4.7 per 100,000 population. By comparison, the incidence rate in First Nations, at 21.8 per 100,000 population, was almost five times the overall Canadian rate. The highest incidence rate, however, was in the Inuit population, at 154.2 per 100,000 population (Table 5).

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 (42%). Of these cases, 75% were from China and the Philippines. However, the highest incidence rate, at 48.5 per 100,000 population, was observed for foreign-born individuals from the AFR-High region, primarily Ethiopia (Table 5).

Active TB disease is classified as either respiratory or non-respiratory. Respiratory TB includes pulmonary TB, TB of the pleura, the intrathoracic or mediastinal lymph nodes, or of the larynx, nasopharynx, nose or sinuses. Primary disease<sup>i</sup> is also captured under the respiratory classification. Non-respiratory TB refers to all other disease sites<sup>3</sup> As in recent years, 77% of cases were diagnosed with respiratory TB and 23% with non-respiratory TB in 2013 (Table 3, Table 6). Pulmonary TB, including TB of the lungs and conducting airways, accounted for the majority (67%) of reported cases in 2013 (Table 6).

<sup>i</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.

### Treatment Outcomes for 2012

Partial or complete treatment outcome data were available for 1,614 (95%) of the 1,699 reported cases of active TB disease in 2012. Of the remaining cases, treatment was reported as on-going for 72 and treatment outcome data were unknown for 12 (Table 7).

Of the 1,614 cases reported in 2012 for which treatment outcome data were available:

- 1,409 (87%) were reportedly cured or had completed treatment;
- 128 (8%) died before or during treatment;
- 26 (2%) moved outside of Canada before completing treatment;
- 24 (1%) had absconded or were lost to follow-up;
- 7 (0.4%) cases stopped treatment due to an adverse reaction, and
- 1 case reported treatment failure.

For the remaining 20 cases (1%) for which treatment outcome data were available, the treatment outcome was reported as "other." Of these, seven cases were non-compliant with the prescribed treatment regimen and no further information was available for the remaining 13 cases.

## CONCLUSION

As in 2012, preliminary data from 2013 indicate that there were no notable changes in the number of reported cases of TB or in the overall incidence rate in Canada. Similarly, no changes were noted in the distribution of cases by province or territory, or by age group and sex. Foreign-born individuals continued to account for the majority of reported TB cases, and the incidence rate per 100,000 population remained highest among Canadian-born Aboriginal people. Pulmonary TB remained the most commonly reported site of disease in 2013, and available treatment outcome data for cases reported in 2012 indicated that 87% 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 2013 will be presented in the next iteration of the *Tuberculosis in Canada* surveillance report.

**TABLE 1A:** Reported new active and re-treatment tuberculosis cases and incidence rates per 100,000 (all cases) – Canada and provinces/territories: 2003–2013\*†

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.	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.	
2003	Cases	1,631	7	3	6	12	257	693	127	91	110	305	1	12	7												
	Rate	5.2	1.3	2.2	0.6	1.6	3.4	5.7	10.9	9.1	3.5	7.4	3.2	28.2	23.9												
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	148.4												
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	1,644	8	0	5	5	240	600	141	97	167	300	8	14	59												
	Rate	4.9	1.6	0.0	0.5	0.7	3.1	4.7	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	1,699	4	1	8	5	271	617	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	13.8	230.5												
2013	Cases	1,640	13	0	8	3	237	624	169	85	187	257	2	4	51												
	Rate	4.7	2.5	0.0	0.9	0.4	2.9	4.6	13.4	7.7	4.6	5.6	5.4	9.2	143.3												

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 Territory.

\* 2013 data are provisional until the publication of the next *Tuberculosis in Canada* surveillance report.

† Source of denominator values for rate calculation: Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2003–2013 Updated postcensal estimates (Accessed 2014-03-11).

**TABLE 1B:** Reported new active and re-treatment tuberculosis cases and incidence rates per 100,000 (males) – Canada and provinces/territories: 2003–2013<sup>†</sup>

REPORTING YEAR	PROVINCE/TERRITORY													
	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.	Canada
2003	Cases	3	1	3	9	149	375	73	46	64	158	1	9	5
	Rate	1.2	1.5	0.7	2.4	4.0	6.2	12.6	9.3	4.0	7.7	6.3	40.7	32.9
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	176.1
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	312	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	300.7
2013	Cases	7	0	6	0	127	340	100	48	99	138	1	3	33
	Rate	2.7	0.0	1.3	0.0	3.1	5.1	15.9	8.6	4.8	6.1	5.4	13.4	179.1

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 Territory.

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† Source of denominator values for rate calculation: Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2003–2013 Updated postcensal estimates (Accessed 2014-03-11).

**TABLE 1C:** Reported new active and re-treatment tuberculosis cases and incidence rates per 100,000 (females) – Canada and provinces/territories: 2003–2013<sup>†</sup>

REPORTING YEAR	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.
2003	Cases	4	2	3	3	108	318	54	46	147	0	3	2
	Rate	1.5	2.8	0.6	0.8	2.9	5.1	9.2	2.9	7.1	0.0	14.7	14.2
2004	Cases	3	0	1	1	101	330	74	57	142	2	8	14
	Rate	1.1	0.0	0.2	0.3	2.7	5.3	12.5	3.6	6.8	13.0	38.4	97.5
2005	Cases	4	1	3	3	110	289	48	75	113	1	2	18
	Rate	1.5	1.4	0.6	0.8	2.9	4.6	8.1	4.6	5.3	6.4	9.6	123.3
2006	Cases	9	0	3	2	105	312	55	68	158	0	2	20
	Rate	4.7	0.0	0.6	0.5	2.7	4.9	9.2	4.0	7.4	0.0	9.7	134.2
2007	Cases	4	0	5	1	98	329	41	55	115	1	3	16
	Rate	1.5	0.0	1.0	0.3	2.5	5.1	6.8	3.2	5.3	6.3	14.4	105.5
2008	Cases	5	0	2	2	110	288	56	78	139	3	4	19
	Rate	1.9	0.0	0.4	0.5	2.8	4.4	9.3	4.4	6.3	18.6	19.1	123.8
2009	Cases	10	1	5	7	77	285	69	83	125	0	4	27
	Rate	4.3	1.4	1.0	1.8	1.9	4.3	11.3	4.6	5.6	0.0	19.1	171.9
2010	Cases	2	1	5	4	90	308	60	58	118	2	3	31
	Rate	0.8	1.4	1.0	1.0	2.3	4.6	9.8	3.2	5.3	11.8	14.3	192.6
2011	Cases	3	1	5	3	78	332	59	82	104	3	5	26
	Rate	1.1	1.4	1.0	0.8	1.9	4.9	9.5	4.4	4.6	17.3	23.6	157.7
2012	Cases	3	0	2	2	121	279	136	195	100	0	3	26
	Rate	1.1	0.0	0.4	0.5	3.0	4.1	21.6	10.2	4.4	0.0	14.1	155.3
2013	Cases	6	0	2	3	110	284	69	88	119	1	1	18
	Rate	4.2	0.0	0.4	0.8	2.7	4.1	10.8	4.4	5.2	5.5	4.7	104.9

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 Territory.

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TABLE 2: Reported new active and re-treatment tuberculosis cases and incidence rates per 100,000 by age group – Canada: 2003-2013†

REPORTING YEAR	TOTAL	AGE GROUP										
		<1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	
2003	Cases	7	34	41	198	332	277	207	154	178	203	
	Rate	2.1	2.5	1.0	4.6	7.7	5.3	4.4	4.7	8.1	10.8	
2004	Cases	6	33	45	198	323	272	198	167	177	193	
	Rate	1.8	2.4	1.1	4.6	7.5	5.3	4.1	4.9	8.0	10.0	
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	9.5	
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	10.7	
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	51	205	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	14	33	40	216	296	251	224	168	173	206	
	Rate	3.7	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	154	178	216	
	Rate	2.4	3.3	1.4	5.2	6.2	5.8	4.4	3.4	6.3	9.3	
2013	Cases	14	37	59	207	265	246	235	189	168	220	
	Rate	3.7	2.4	1.6	4.5	5.5	5.2	4.4	4.1	5.6	9.3	

\* 2013 data are provisional until the publication of the next *Tuberculosis in Canada* surveillance report.

† Source of denominator values for rate calculation: Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2003–2013 Updated postcensal estimates (Accessed 2014-03-11).

TABLE 3: Reported new active and re-treatment tuberculosis cases and incidence rates per 100,000 by main diagnostic classification – Canada: 2003–2013\*\*†

MAIN DIAGNOSTIC CLASSIFICATION		REPORTING YEAR											
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
Respiratory	Primary†	Cases	79	94	106	91	64	59	61	63	48	62	64
		Rate	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2
	Pulmonary§	Cases	992	965	982	1,132	1,034	1,147	1,125	1,042	1,099	1,146	1,105
		Rate	3.1	3.0	3.0	3.5	3.1	3.5	3.3	3.1	3.2	3.3	3.1
	Other respiratory**	Cases	63	90	113	85	94	78	97	102	83	97	92
		Rate	0.2	0.3	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.3
Nonrespiratory	Miliary	Cases	12	14	15	10	11	14	12	11	13	8	14
		Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Central nervous system	Cases	26	19	20	16	22	11	14	24	21	22	27
		Rate	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1
	Peripheral lymph nodes	Cases	247	251	242	192	202	182	207	198	222	204	174
		Rate	0.8	0.8	0.8	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.5
	Other††	Cases	169	179	162	127	148	153	138	146	135	159	164
		Rate	0.5	0.6	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.5
	Unknown	Cases	43	0	0	0	0	0	0	0	0	1	0
		Rate	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL	Cases	1,631	1,612	1,640	1,653	1,575	1,644	1,654	1,586	1,621	1,699	1,640
		Rate	5.2	5.0	5.1	5.1	4.8	4.9	4.9	4.7	4.7	4.9	4.7

\* 2013 data are provisional until the publication of the next *Tuberculosis in Canada* surveillance report.

† Source of denominator values for rate calculation: Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2003–2013 Updated postcensal estimates (Accessed 2014-03-11).

‡ 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 4: Reported new active and re-treatment tuberculosis cases and incidence rates per 100,000 by age group – Canada and provinces/territories: 2013†

AGE GROUP	PROVINCE/TERRITORY												
	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	4	1	0	2	2	0	0	3
	Rate	0.0	0.0	0.0	0.0	4.5	0.7	0.0	3.7	4.6	0.0	0.0	362.3
1-4	Cases	1	0	0	0	12	5	8	4	1	0	0	1
	Rate	5.1	0.0	0.0	0.0	3.4	0.9	12.6	1.9	0.6	0.0	0.0	30.4
5-14	Cases	1	0	0	0	12	15	7	9	9	0	0	2
	Rate	1.9	0.0	0.0	0.0	1.5	1.0	4.5	1.9	2.0	0.0	0.0	29.2
15-24	Cases	4	0	0	0	26	74	35	21	20	0	1	12
	Rate	4.5	0.0	0.0	0.0	2.6	4.0	19.6	3.9	3.4	0.0	14.5	183.3
25-34	Cases	2	0	3	1	44	94	28	43	23	0	0	8
	Rate	5.5	0.0	2.6	1.1	4.0	5.2	16.2	6.3	3.7	0.0	0.0	133.0
35-44	Cases	1	0	0	0	36	104	27	26	26	0	0	10
	Rate	1.4	0.0	0.0	0.0	3.4	5.7	16.8	4.5	4.2	0.0	0.0	222.0
45-54	Cases	2	0	1	0	25	94	26	24	39	1	1	9
	Rate	4.4	0.0	0.7	0.0	2.0	4.5	14.5	4.1	5.6	16.6	15.5	228.3
55-64	Cases	1	0	3	0	30	62	21	25	39	1	0	2
	Rate	4.1	0.0	2.1	0.0	2.7	3.6	13.6	5.4	6.2	18.7	0.0	84.7
65-74	Cases	0	0	0	1	19	72	11	18	41	0	1	2
	Rate	5.6	0.0	0.0	1.3	2.5	6.3	11.2	7.1	9.8	0.0	57.9	217.9
75+	Cases	1	0	1	1	29	103	6	15	57	0	1	2
	Rate	9.3	0.0	1.4	1.8	4.9	11.2	7.2	7.7	17.1	0.0	107.8	613.5
TOTAL	Cases	1,640	13	8	3	237	624	169	187	257	2	4	51
	Rate	4.7	2.5	0.0	0.4	2.9	4.6	13.4	4.6	5.6	5.4	9.2	143.3

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 Territory.

\* 2013 data are provisional until the publication of the next *Tuberculosis in Canada* surveillance report.

† Source of denominator values for rate calculation: Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2003–2013 Updated postcensal estimates (Accessed 2014-03-11).

TABLE 5: Reported new active and re-treatment tuberculosis cases and incidence rates per 100,000 by origin – Canada and provinces/territories: 2013\*

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†	
First Nations †	Cases	200	0	0	0	4	9	110	50	12	10	5											
	Rate	21.8	0.0	0.0	0.0	3.9	4.3	85.3	42.7	9.0	6.3	22.7											
First Nations with status	Cases	197	0	0	0	4	9	110	50	11	9	4											
	Rate	20.3	0.0	0.0	0.0	4.7	4.4	70.9	32.7	8.7	6.3	13.3											
First Nations with status— On reserve	Cases	145	0	0	0	3	7	84	40	9	2	0											
	Rate	28.8	0.0	0.0	0.0	5.2	7.3	89.1	53.9	12.0	3.0	0.0											
First Nations with status— Off reserve	Cases	49	0	0	0	0	2	26	10	2	7	2											
	Rate	10.6	0.0	0.0	0.0	0.0	1.9	42.7	12.7	3.9	9.2	15.7											
First Nations with status— Unknown	Cases	3	0	0	0	1	0	0	0	0	0	2											
	Rate	-	-	-	-	-	-	-	-	-	-	-											
First Nations, non-status	Cases	3	0	0	0	0	0	0	0	1	1	1											
	Rate	-	-	-	-	-	-	-	-	-	-	-											
Inuit §	Cases	91	6	0	0	34	0	0	0	0	0	51											
	Rate	154.2	120.0	0.0	0.0	261.5	0.0	0.0	0.0	0.0	0.0	150.0											
Métis §	Cases	18	0	0	0	0	0	3	9	4	2	0											
	Rate	3.3	0.0	0.0	0.0	0.0	0.0	3.4	15.5	3.5	2.3	0.0											
Total Aboriginal §	Cases	309	6	0	0	38	9	113	59	16	12	56											
	Rate	19.9	24.0	0.0	0.0	23.8	2.6	51.1	33.1	6.3	4.7	91.8											
Non-Aboriginal	Cases	155	3	0	3	36	42	12	3	12	42	0											
	Rate	0.6	0.6	0.0	0.4	0.5	0.5	1.4	0.4	0.4	1.4	0.0											
Aboriginal status unknown	Cases	1	0	0	0	1	0	0	0	0	0	0											
	Rate	-	-	-	-	-	-	-	-	-	-	-											
Total Canadian-born	Cases	465	9	0	3	75	51	125	62	28	54	56											
	Rate	1.7	1.7	0.0	0.3	1.1	0.5	11.9	6.1	0.9	1.7	52.4											

Canadian-born

ORIGIN	CANADA	PROVINCE/TERRITORY												
		N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	North†		
AFR-High	Cases	118	0	0	1	1	1	32	44	8	4	24	4	0
	Rate	48.5	0.0	0.0	58.2	105.7	86.2	37.7	100.5	103.5	56.9	12.2	0.0	
AFR-Low	Cases	26	1	0	0	0	12	8	1	0	3	1	0	
	Rate	18.9	583.2	0.0	0.0	0.0	14.8	20.4	47.8	0.0	34.7	24.1	0.0	
AMR	Cases	50	0	0	0	0	27	16	1	1	4	1	0	
	Rate	5.5	0.0	0.0	0.0	0.0	12.2	3.1	3.7	18.6	5.6	1.8	0.0	
EEUR	Cases	11	0	0	0	0	6	4	0	0	0	1	0	
	Rate	3.0	0.0	0.0	0.0	0.0	7.9	2.0	0.0	0.0	0.0	2.7	0.0	
EME & CEUR	Cases	33	0	0	0	0	8	16	1	0	4	4	0	
	Rate	1.3	0.0	0.0	0.0	0.0	2.4	1.2	1.5	0.0	1.6	0.9	0.0	
EMR	Cases	122	0	0	0	0	23	64	2	0	24	9	0	
	Rate	15.6	0.0	0.0	0.0	0.0	12.7	14.8	22.3	0.0	32.3	13.9	0.0	
SEAR	Cases	305	3	0	2	0	22	168	10	6	31	63	0	
	Rate	35.4	266.1	0.0	70.6	0.0	46.6	32.0	58.9	78.6	36.0	36.0	0.0	
WPR	Cases	476	0	0	2	0	30	227	21	12	69	114	1	
	Rate	25.2	0.0	0.0	25.9	0.0	22.2	26.4	29.9	43.5	28.2	21.1	41.6	
Unknown	Cases	5	0	0	0	0	0	4	0	0	0	1	0	
	Cases	1,146	4	0	5	1	160	551	44	23	159	198	1	
Total Foreign-born**	Rate	14.8	33.6	0.0	8.3	2.9	14.4	13.6	20.8	26.6	19.7	14.7	11.3	
	Cases	29	0	0	0	0	2	22	0	0	0	5	0	
TOTAL††	Cases	1,640	13	0	8	3	237	624	169	85	187	257	57	
	Rate	4.7	2.5	0.0	0.9	0.4	2.9	4.6	13.4	7.7	4.6	5.6	49.2	

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

\* 2013 data are provisional until the publication of the next iteration of the Tuberculosis in Canada surveillance report.

† 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 that includes N.L., N.B., N.S. and P.E.I. 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, 2013 Updated postcensal estimates (Accessed 2014-03-11).

**TABLE 6:** Reported new active and re-treatment tuberculosis cases and incidence rates per 100,000 by main diagnostic classification – Canada and provinces/territories: 2013<sup>†</sup>

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	Cases	4	0	1	1	13	14	10	3	9	3	0	1	5
	Rate	0.8	0.0	0.1	0.1	0.2	0.1	0.8	0.3	0.2	0.1	0.0	2.3	14.0
Pulmonary <sup>§</sup>	Cases	1,105	6	4	2	144	410	121	71	100	199	2	3	43
	Rate	3.1	1.1	0.4	0.3	1.8	3.0	9.6	6.4	2.5	4.3	5.4	6.9	120.8
Other respiratory <sup>**</sup>	Cases	92	0	1	0	15	23	17	1	18	15	0	0	2
	Rate	0.3	0.0	0.1	0.0	0.2	0.2	1.3	0.1	0.4	0.3	0.0	0.0	5.6
Miliary	Cases	14	1	0	0	5	5	0	0	1	2	0	0	0
	Rate	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Central nervous system	Cases	27	0	0	0	1	18	2	1	3	2	0	0	0
	Rate	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0
Nonrespiratory	Cases	174	1	1	0	26	87	10	4	30	15	0	0	0
	Rate	0.5	0.2	0.0	0.1	0.3	0.6	0.8	0.4	0.7	0.3	0.0	0.0	0.0
Other <sup>††</sup>	Cases	164	1	0	1	33	67	9	5	26	21	0	0	1
	Rate	0.5	0.2	0.0	0.1	0.4	0.5	0.7	0.5	0.6	0.5	0.0	0.0	2.8
TOTAL	Cases	1,640	13	8	3	237	624	169	85	187	257	2	4	51
	Rate	4.7	2.5	0.0	0.4	2.9	4.6	13.4	7.7	4.6	5.6	5.4	9.2	143.3

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 Territory.

\* 2013 data are provisional until the publication of the next iteration of the *Tuberculosis in Canada* surveillance report.

† Source of denominator values for rate calculation: Statistics Canada, Demography Division, Demographic Estimates Section, July Population Estimates, 2013 updated postcensal estimates. (Accessed 2014-03-11).

‡ 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: 2012

	TREATMENT OUTCOME										
	TOTAL	Cure	Treatment completed without culture	Death during treatment	Transferred	Treatment ongoing	Absconded	Failure	Treatment discontinued due to adverse event	Other	Unknown
CANADA	1,699	328	1,081	128	26	72	24	1	7	20	12
Newfoundland and Labrador	4	1	2	1	0	0	0	0	0	0	0
Prince Edward Island	1	1	0	0	0	0	0	0	0	0	0
Nova Scotia	8	0	6	0	1	1	0	0	0	0	0
New Brunswick	5	2	1	1	0	1	0	0	0	0	0
Quebec	271	71	174	17	2	5	1	0	0	1	0
Ontario	617	0	464	50	13	63	9	0	0	11	7
Manitoba	136	64	62	5	3	1	0	0	0	1	0
Saskatchewan	89	75	0	7	0	0	7	0	0	0	0
Alberta	195	45	125	12	3	1	2	0	1	1	5
British Columbia	286	14	220	34	4	0	3	1	5	5	0
Yukon	1	0	1	0	0	0	0	0	0	0	0
Northwest Territories	6	3	2	1	0	0	0	0	0	0	0
Nunavut	80	52	24	0	0	0	2	0	1	1	0

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