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# TUBERCULOSIS IN CANADA



# 2008

PRE-RELEASE

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**La Tuberculose au Canada 2008 – Prédifusion**

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**TUBERCULOSIS**

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**IN CANADA**

**2008**

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**PRE-RELEASE**



## INTRODUCTION

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To facilitate an earlier release of *Tuberculosis in Canada, 2008*, the following 5 tables have been extracted from the Canadian Tuberculosis Reporting System (CTBRS) for the year 2008. Data included in this pre-release report should be considered provisional until publication of the full report, *Tuberculosis in Canada 2008*.

## HIGHLIGHTS

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In total, 1,600 new active and re-treatment tuberculosis (TB) cases (a rate of 4.8 per 100,000 population) were reported to the CTBRS in 2008. These preliminary data suggest that, relative to 2007, the number of cases reported increased by 1.5% from 1,577 to 1,600. The TB case rate in 2008 remained unchanged at 4.8 per 100,000 from that reported in 2007.

The three most populous provinces (British Columbia, Ontario and Quebec) which collectively made up 75% of Canada's population in 2008, accounted for 69% of the total number of reported cases. The highest rate, 184.4 cases per 100,000 population was reported in Nunavut. For New Brunswick and Nova Scotia the rate was less than 1 per 100,000 population. For Prince Edward Island, no TB cases were reported in 2008 (Table 1).

Individuals between the ages of 25 and 34 years made up the largest number of reported cases, accounting for 18% of the total. However, the corresponding case rate of 6.5 per 100,000 for this age group was surpassed by the age-specific rate 9.1 per 100,000 for those greater than 74 years of age (Table 2).

In 2008, foreign-born individuals accounted for 62% of all reported TB cases in Canada. Canadian-born non-Aboriginal and Canadian-born Aboriginal cases made up 13% and 21% of all reported cases, respectively (Table 3). However, the TB rate in the Canadian-born Aboriginal group continues to be the highest of the three groups, being almost 6 times greater than the overall Canadian rate.

Pulmonary TB, defined as tuberculosis of the lungs and conducting airways, was the most frequently reported main diagnostic site, representing 68% of all reported cases in 2008 (Table 4). There were a total of 58 cases of primary TB with 66% of these reported in the Canadian-born Aboriginal population. Of the 174 peripheral lymph node TB cases, 83% were diagnosed in foreign-born individuals (Table 5).

**Table 1**

**Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 - Canada and provinces/territories: 1998-2008**

Year of diagnosis		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.
1998	Cases	1,810	8	2	18	9	290	742	116	98	158	329	2	38	0
	Rate	6.0	1.5	1.5	1.9	1.2	4.0	6.5	10.2	9.6	5.5	8.3	6.4	93.1	0.0
1999	Cases	1,821	12	2	15	15	314	699	132	116	149	328	1	23	15
	Rate	6.0	2.3	1.5	1.6	2.0	4.3	6.1	11.6	11.4	5.0	8.2	3.2	56.6	55.9
2000	Cases	1,724	10	2	3	10	318	700	98	104	133	286	3	10	47
	Rate	5.6	1.9	1.5	0.3	1.3	4.3	6.0	8.5	10.3	4.4	7.1	9.9	24.7	170.9
2001	Cases	1,773	19	3	8	10	261	699	115	114	116	380	0	8	40
	Rate	5.7	3.6	2.2	0.9	1.3	3.5	5.9	10.0	11.4	3.8	9.3	0.0	19.6	142.2
2002	Cases	1,666	9	1	9	11	288	716	98	89	128	286	0	4	27
	Rate	5.3	1.7	0.7	1.0	1.5	3.9	5.9	8.5	8.9	4.1	7.0	0.0	9.6	93.7
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	1,613	7	1	8	10	219	700	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	1,641	9	1	7	6	255	643	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	1,654	12	0	10	2	228	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	1,577	7	0	7	5	229	683	103	106	112	276	3	15	31
	Rate	4.8	1.4	0.0	0.7	0.7	3.0	5.3	8.6	10.6	3.2	6.4	9.2	34.5	99.2
2008*	Cases	1,600	8	0	4	4	241	568	141	92	167	296	8	13	58
	Rate	4.8	1.6	0.0	0.4	0.5	3.1	4.4	11.7	9.1	4.7	6.8	24.1	30.0	184.4

\*Cases and rates for 2008 are provisional until publication of the *Tuberculosis in Canada - 2008* Annual Report.

**Table 2**

**Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 by age group – Canada: 1998-2008**

Year of diagnosis		TOTAL	Age group										
			< 1	1 – 4	5 – 14	15 – 24	25 – 34	35 – 44	45 – 54	55 – 64	65 – 74	75 +	Age unk.
1998	Cases	<b>1,810</b>	20	60	72	187	314	308	184	174	235	256	0
	Rate	<b>6.0</b>	<b>5.8</b>	<b>3.9</b>	<b>1.8</b>	<b>4.6</b>	<b>7.0</b>	<b>5.9</b>	<b>4.5</b>	<b>6.6</b>	<b>11.0</b>	<b>16.0</b>	-
1999	Cases	<b>1,821</b>	32	55	61	205	340	253	193	173	244	265	0
	Rate	<b>6.0</b>	<b>9.5</b>	<b>3.7</b>	<b>1.5</b>	<b>5.0</b>	<b>7.7</b>	<b>4.8</b>	<b>4.6</b>	<b>6.3</b>	<b>11.4</b>	<b>16.1</b>	-
2000	Cases	<b>1,724</b>	17	50	44	207	316	279	208	160	204	239	0
	Rate	<b>5.6</b>	<b>5.0</b>	<b>3.4</b>	<b>1.1</b>	<b>5.0</b>	<b>7.3</b>	<b>5.3</b>	<b>4.8</b>	<b>5.7</b>	<b>9.5</b>	<b>14.0</b>	-
2001	Cases	<b>1,773</b>	11	33	70	180	325	289	207	183	219	256	0
	Rate	<b>5.7</b>	<b>3.3</b>	<b>2.3</b>	<b>1.7</b>	<b>4.3</b>	<b>7.5</b>	<b>5.5</b>	<b>4.6</b>	<b>6.3</b>	<b>10.1</b>	<b>14.5</b>	-
2002	Cases	<b>1,666</b>	11	43	45	211	314	264	202	161	199	216	0
	Rate	<b>5.3</b>	<b>3.4</b>	<b>3.1</b>	<b>1.1</b>	<b>4.9</b>	<b>7.3</b>	<b>5.0</b>	<b>4.4</b>	<b>5.2</b>	<b>9.2</b>	<b>11.9</b>	-
2003	Cases	<b>1,631</b>	7	34	41	198	332	277	207	154	178	203	0
	Rate	<b>5.2</b>	<b>2.1</b>	<b>2.5</b>	<b>1.0</b>	<b>4.6</b>	<b>7.7</b>	<b>5.3</b>	<b>4.4</b>	<b>4.7</b>	<b>8.1</b>	<b>10.8</b>	-
2004	Cases	<b>1,613</b>	6	33	45	198	324	272	198	167	177	193	0
	Rate	<b>5.0</b>	<b>1.8</b>	<b>2.4</b>	<b>1.1</b>	<b>4.6</b>	<b>7.5</b>	<b>5.3</b>	<b>4.1</b>	<b>4.9</b>	<b>8.0</b>	<b>10.0</b>	-
2005	Cases	<b>1,641</b>	10	38	71	254	279	278	212	143	168	188	0
	Rate	<b>5.1</b>	<b>2.9</b>	<b>2.8</b>	<b>1.8</b>	<b>5.8</b>	<b>6.4</b>	<b>5.4</b>	<b>4.3</b>	<b>4.0</b>	<b>7.5</b>	<b>9.5</b>	-
2006	Cases	<b>1,654</b>	10	46	51	261	253	287	201	158	168	219	0
	Rate	<b>5.1</b>	<b>2.9</b>	<b>3.3</b>	<b>1.3</b>	<b>5.8</b>	<b>5.8</b>	<b>5.7</b>	<b>4.0</b>	<b>4.3</b>	<b>7.4</b>	<b>10.7</b>	-
2007*	Cases	<b>1,577</b>	12	33	53	200	255	285	210	160	151	218	0
	Rate	<b>4.8</b>	<b>3.4</b>	<b>2.4</b>	<b>1.4</b>	<b>4.4</b>	<b>5.8</b>	<b>5.7</b>	<b>4.1</b>	<b>4.2</b>	<b>6.5</b>	<b>10.4</b>	-
2008*	Cases	<b>1,600</b>	8	30	50	198	293	272	222	165	165	197	0
	Rate	<b>4.8</b>	<b>2.2</b>	<b>2.1</b>	<b>1.3</b>	<b>4.4</b>	<b>6.5</b>	<b>5.6</b>	<b>4.2</b>	<b>4.2</b>	<b>6.9</b>	<b>9.1</b>	-

\* Cases and rates for 2008 are provisional until publication of the *Tuberculosis in Canada – 2008* Annual Report.

**Table 3****Reported new active and re-treatment tuberculosis cases by origin – Canada and provinces/territories: 2008**

Birthplace			CANADA	Province/territory											
				N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	North*	
Canadian-born	Aboriginal	Cases													
	North American Indian		227	0	0	0	0	4	8	93	53	11	38	20	
	Status Indian		218	0	0	0	0	4	7	89	53	9	36	20	
	Non-Status		9	0	0	0	0	0	1	4	0	2	2	0	
	Métis		27	0	0	0	0	0	0	1	19	3	3	1	
	Inuit		87	2	0	0	0	22	3	0	0	1	1	58	
	<b>Total Aboriginal</b>		Cases	341	2	0	0	0	26	11	94	72	15	42	79
			Rate	28.2	8.7	0.0	0.0	0.0	24.2	4.6	51.2	44.3	7.7	21.3	130.2
	Non-Aboriginal		Cases	209	6	0	0	3	77	42	10	9	20	42	0
			Rate	0.8	1.3	0.0	0.0	0.4	1.2	0.5	1.2	1.1	0.7	1.5	0.0
<b>Total Canadian-born</b>	Cases	550	8	0	0	3	103	53	104	81	35	84	79		
	Rate	2.1	1.6	0.0	0.0	0.4	1.5	0.6	10.1	8.5	1.2	2.8	78.6		
Foreign-born (WHO regions)	Africa, high HIV prevalence	Cases	86	0	0	1	0	16	26	6	1	23	13	0	
	Africa, low HIV prevalence		22	0	0	0	0	8	6	0	1	5	2	0	
	American region – Latin American and Caribbean countries		59	0	0	0	1	28	24	1	0	3	2	0	
	Established market economies and Central Europe		57	0	0	0	0	7	29	0	1	7	13	0	
	Eastern Europe		16	0	0	0	0	4	5	1	0	2	4	0	
	Eastern Mediterranean		103	0	0	0	0	21	54	4	2	18	4	0	
	South-East Asia		222	0	0	1	0	9	132	3	1	28	48	0	
	Western Pacific		406	0	0	0	0	37	182	19	5	46	117	0	
	Unknown		14	0	0	0	0	2	9	3	0	0	0	0	
	<b>Total Foreign-born</b>		Cases	985	0	0	2	1	132	467	37	11	132	203	0
	Rate	13.3	0.0	0.0	3.1	2.8	12.7	11.6	20.4	16.8	21.4	15.3	0.0		
Unknown birthplace	Cases	65	0	0	2	0	6	48	0	0	0	9	0		
<b>TOTAL†</b>	Cases	1,600	8	0	4	4	241	568	141	92	167	296	79		
	Rate	4.8	1.6	0.0	0.4	0.5	3.1	4.4	11.7	9.1	4.7	6.8	73.2		

NOTE: Provincial/territorial data are suppressed and reported in aggregate form if the P/T population denominator for the cell is less than 40.

\* The origin for cases in the three territories (Yukon, Northwest Territories and Nunavut) has been aggregated to "North" to respect patient confidentiality. For a more detailed breakdown contact the respective territorial TB program.

† Cases for 2008 are provisional until publication of the *Tuberculosis in Canada – 2008* Annual Report.



**Table 4****Reported new active and re-treatment tuberculosis cases and incidence rate per 100,000 by main diagnostic site - Canada: 1998-2008**

Main diagnostic site			Year of diagnosis										
			1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Respiratory	Primary*	Cases	130	154	99	121	88	79	94	106	91	64	58
		Rate	0.4	0.5	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.2	0.2
	Pulmonary†	Cases	1,071	1,105	1,068	1,134	1,023	963	935	960	1,017	1,013	1,080
		Rate	3.6	3.6	3.5	3.7	3.3	3.0	2.9	3.0	3.1	3.1	3.2
	Other respiratory‡	Cases	63	62	64	52	57	64	98	117	102	99	80
		Rate	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.2
Nonrespiratory	Miliary	Cases	30	25	26	14	18	20	30	24	22	22	44
		Rate	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	CNS	Cases	24	15	16	17	20	26	19	20	22	22	12
		Rate	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
	Peripheral lymph node	Cases	276	244	258	235	242	249	251	246	241	208	174
		Rate	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.5
	Other§	Cases	190	189	163	181	193	193	185	168	158	149	152
		Rate	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
Unknown	Cases	26	27	30	19	25	37	1	0	1	0	0	
	Rate	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	
TOTAL**		Cases	1,810	1,821	1,724	1,773	1,666	1,631	1,613	1,641	1,654	1,577	1,600
		Rate	6.0	6.0	5.6	5.7	5.3	5.2	5.0	5.1	5.1	4.8	4.8

\* Primary includes primary respiratory tuberculosis and tuberculous pleurisy in primary progressive tuberculosis, (ICD-9 codes 010.0-010.9; ICD-10 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: 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 intestines, peritoneum and mesenteric glands, bones and joints, genitourinary system, skin, eye, ear, thyroid, adrenal and spleen.

\*\* Cases for 2008 are provisional until publication of the *Tuberculosis in Canada - 2008* Annual Report.

**Table 5****Reported new active and re-treatment tuberculosis cases by birthplace and main diagnostic site – Canada: 2008**

Birthplace		TOTAL	Main diagnostic site							
			Respiratory			Nonrespiratory				Unknown
			Primary*	Pulmonary†	Other respiratory‡	Miliary	CNS	Peripheral lymph node	Other§	
Canadian-born	Aboriginal									
	North American Indian	227	28	162	19	4	1	8	5	0
	Status Indian	218	28	154	19	4	1	8	4	0
	Non-Status	9	0	8	0	0	0	0	1	0
	Métis	27	5	20	0	0	0	1	1	0
	Inuit	87	5	74	1	6	1	0	0	0
	<b>Total Aboriginal</b>	<b>341</b>	<b>38</b>	<b>256</b>	<b>20</b>	<b>10</b>	<b>2</b>	<b>9</b>	<b>6</b>	<b>0</b>
	Non-Aboriginal	209	6	154	8	8	1	15	17	0
	<b>Total Canadian-born</b>	<b>550</b>	<b>44</b>	<b>410</b>	<b>28</b>	<b>18</b>	<b>3</b>	<b>24</b>	<b>23</b>	<b>0</b>
Foreign-born (WHO regions)	Africa, high HIV prevalence	86	2	58	5	2	0	7	12	0
	Africa, low HIV prevalence	22	0	12	1	1	0	3	5	0
	American region – Latin American and Caribbean countries	59	1	41	2	1	0	6	8	0
	Established market economies and Central Europe	57	1	38	2	1	0	6	9	0
	Eastern Europe	16	0	15	0	0	1	0	0	0
	Eastern Mediterranean	103	0	59	4	0	1	18	21	0
	South-East Asia	222	1	133	15	6	0	40	27	0
	Western Pacific	406	2	272	20	9	2	62	39	0
	Unknown	14	2	6	1	1	0	3	1	0
	<b>Total Foreign-born</b>	<b>985</b>	<b>9</b>	<b>634</b>	<b>50</b>	<b>21</b>	<b>4</b>	<b>145</b>	<b>122</b>	<b>0</b>
Unknown birthplace	65	5	36	2	5	5	5	7	0	
<b>TOTAL **</b>	<b>1,600</b>	<b>58</b>	<b>1,080</b>	<b>80</b>	<b>44</b>	<b>12</b>	<b>174</b>	<b>152</b>	<b>0</b>	

\* Primary includes primary respiratory tuberculosis and tuberculous pleurisy in primary progressive tuberculosis, (ICD-9 codes 010.0-010.9; ICD-10 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: 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 intestines, peritoneum and mesenteric glands, bones and joints, genitourinary system, skin, eye, ear, thyroid, adrenal and spleen.

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